



PAUL R. LEPAGE  
GOVERNOR

STATE OF MAINE  
MAINE DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY  
BOARD OF PESTICIDES CONTROL  
28 STATE HOUSE STATION  
AUGUSTA, MAINE 04333-0028

WALTER E. WHITCOMB  
COMMISSIONER  
HENRY S. JENNINGS  
DIRECTOR

**BOARD OF PESTICIDES CONTROL**

**February 17, 2016**

**Room 118  
Marquardt Building  
32 Blossom Lane, Augusta, Maine**

**AGENDA  
9:00 AM**

1. Introductions of Board and Staff

2. Minutes of the January 11, 2017 Board Meeting

Presentation By: Megan Patterson  
Manager of Pesticide Programs

Action Needed: Amend and/or Approve

3. Dow AgroSciences Request for 24(c) Registration for GoalTender™ Herbicide

At the request of Maine Cooperative Extension and broccoli growers, Dow AgroSciences is requesting an extension of the Special Local Need [24(c)] Registration ME090002 to continue the use GoalTender™ herbicide (oxyfluorfen, EPA #62719-447) for post-emergent weed control on broccoli. Where the number of herbicides available to manage weeds in broccoli is limited, this product remains the only alternative for post emergence control of broadleaf weeds that escape preemergent herbicide treatment.

Presentation By: Mary Tomlinson  
Pesticides Registrar/Water Quality Specialist

Action Needed: Approve/Disapprove 24(c) Registration Request

4. Gowan Company, Inc., Request for FIFRA Section 24(c) Registration for Malathion 8 Flowable on Cane Berries

Gowan Company, Inc., is requesting a Special Local Need [24(c)] Registraton to increase the number of allowable applications of Gowan Malathion 8 Flowable agricultural insecticide to control spotted wing drosophila (SWD) on cane berries. This request is supported by University of Maine Blueberry Extension Specialists David Handley and David Yarborough. Research indicates

that Gowan Malathion 8 Flowable is highly effective against the SWD and the extra application will be critical to controlling this invasive pest. In addition, Gowan Malathion 8 Flowable offers growers the advantage of very short preharvest and reentry intervals. Available data indicate that residues are expected to be below the established tolerance.

Presentation By: Mary Tomlinson  
Pesticides Registrar/Water Quality Specialist

Action Needed: Approve or disapprove the request

5. Board Discussion about the Use of Unmanned Aircraft to Conduct Aerial Pesticide Applications

The Board's staff has received an inquiry about the potential use of an unmanned aircraft (drone) to conduct aerial pesticide applications to control browntail moths. To date, drones have never been permitted to apply pesticides in Maine and the Federal Aviation Administration has only permitted use in a few locations nationwide. This is a completely new type of application equipment and many questions have arisen about the safety, efficacy and propriety of the use of drones. The Board will discuss the use of aerial drones to apply pesticides in Maine.

Presentation By: Megan Patterson  
Manager of Pesticide Programs

Action Needed: Provide Direction to the Staff

6. Review of the BPC Budget

At the January 11, 2017 the Board discussed the annual operating budget. Several questions were raised that required further clarification. The staff will present information pertaining to those questions.

Presentation By: Ann Gibbs  
Director, Division of Animal and Plant Health

Action Needed: None – Informational Only

7. Rulemaking Timeline and Potential Rulemaking Topics

At the December 16, 2017 meeting the Board expressed interest in initiating rulemaking around Chapter 29, Section 5 regarding browntail moth. Since rulemaking is expensive and time-consuming the Board generally tries to group rulemaking initiatives. The staff will present a timetable of possible hearing dates and a list of rulemaking idea which the Board or staff has previously identified.

Presentation By: Anne Chamberlain  
Policy & Regulations Specialist

Action Needed: Determine Whether to Initiate Rulemaking and Schedule a Hearing

8. Consideration of Consent Agreement with Alfred Fugazzi, Stone Wall Farms of Lincoln, Maine

The Board's Enforcement Protocol authorizes staff to work with the Attorney General and negotiate consent agreements in advance on matters not involving substantial threats to the environment or public health. This procedure was designed for cases where there is no dispute of material facts or law, and the violator admits to the violation and acknowledges a willingness to pay a fine to resolve the matter. This case involves the use of a pesticide to kill crows in a manner inconsistent with the label.

Presentation By: Raymond Connors  
Manager of Compliance

Action Needed: Approve/Disapprove the Consent Agreement Negotiated by Staff

9. Other Old or New Business

- a. Policy—Definition of Biological Pesticide as it Relates to Chapter 29 Section 5
- b. Policy on Allowable Pesticides for the Control of Browntail Moth Within 250 feet of Marine Waters
- c. Variance for control of invasive plants on the Maine Audubon East Point Sanctuary property in Biddeford Pool.
- d. LD 174 An Act To Limit the Use of Pesticides on School Grounds
- e. LD 418 An Act To Educate the Public on the Proper Use of Pesticides and To Promote Promote Integrated Pest Management Using Existing Resources
- f. Email from Jody Spear
- g. Letter from Wendell Caler

10. Schedule of Future Meetings

March 31, 2017, May 12, 2017, June 23, 2017, and August 4, 2017 are tentative Board meeting dates. The Board will decide whether to change and/or add dates.

- The March 31, 2017 meeting will be at the Portland Flower Show
- Room 118 Marquardt is not available on August 4

Adjustments and/or Additional Dates?

11. Adjourn

**NOTES**

- The Board Meeting Agenda and most supporting documents are posted one week before the meeting on the Board website at [www.thinkfirstspraylast.org](http://www.thinkfirstspraylast.org).
- Any person wishing to receive notices and agendas for meetings of the Board, Medical Advisory Committee, or Environmental Risk Advisory Committee must submit a request in writing to the Board's office. Any person with technical expertise who would like to volunteer for service on either committee is invited to submit their resume for future consideration.

- On November 16, 2007, the Board adopted the following policy for submission and distribution of comments and information when conducting routine business (product registration, variances, enforcement actions, etc.):
  - *For regular, non-rulemaking business*, the Board will accept pesticide-related letters, reports, and articles. Reports and articles must be from peer-reviewed journals. E-mail, hard copy, or fax should be sent to the Board's office or [pesticides@maine.gov](mailto:pesticides@maine.gov). In order for the Board to receive this information in time for distribution and consideration at its next meeting, all communications must be received by 8:00 AM, three days prior to the Board meeting date (e.g., if the meeting is on a Friday, the deadline would be Tuesday at 8:00 AM). Any information received after the deadline will be held over for the next meeting.
- During rulemaking, when proposing new or amending old regulations, the Board is subject to the requirements of the APA (Administrative Procedures Act), and comments must be taken according to the rules established by the Legislature.



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**BOARD OF PESTICIDES CONTROL**

**January 11, 2017**

**Kennebec/Penobscot Room  
Augusta Civic Center  
76 Community Drive, Augusta, Maine**

**DRAFT MINUTES  
BOARD MEETING 3:00-4:00 PM  
PUBLIC FORUM 4:00-5:00 PM  
BOARD MEETING 5:00-6:00 PM IF NEEDED**

Present: Flewelling, Granger, Jemison, Morrill, Stevenson

1. Introductions of Board and Staff

- The Board, Staff, and AAG Mark Randlett introduced themselves
- Staff Present: Connors, Couture, Hicks, Nelson, Tomlinson

Department Update on the Status of the Board Director Position

Presentation By: Ann Gibbs  
Director, Animal and Plant Health

- Gibbs informed the Board that there was no new information regarding the vacant Director position. She explained they are still waiting for the Governor to sign off so that the hiring process can begin.

2. Minutes of the December 16, 2016 Board Meeting

Presentation By: Megan Patterson  
Manager of Pesticide Programs

Action Needed: Amend and/or Approve

Presentation was provided by Ann Gibbs.

- **Flewelling/Stevenson: Moved and seconded to adopt the minutes**
- **In Favor: Unanimous**

3. Request from Maine Migrant Health Program and Eastern Maine Development Corporation to Help Support a Worker Safety Training Program for Summer 2017

Since 1995 the Board has supported a Migrant and Seasonal Farmworker Safety Education program. During 2016, 704 individuals received Worker Protection Standard training, 704 individuals received take-home exposure training, and 698 received heat stress training. This represents a 228% increase over the number of farm workers trained in 2015. Funding to support this effort is being requested in the amount of \$3,860, a 5% increase over the amount requested last year. The funding has been accounted for in the Board's FY'17 budget.

Presentation By: Chris Huh, Program Manager, Farmworkers Jobs Program,  
Eastern Maine Development Corporation  
  
Elizabeth Charles McGough, Director of Outreach, Maine Migrant Health Program

Action Needed: Discussion and Determination if the Board Wishes to Fund this Request

- Huh stated that 2016 was an extremely successful year for the Migrant and Seasonal Farmworker Safety Education program, and they substantially surpassed their training goals. Huh added that Maine Migrant Health's (MMH) excellent planning to get everything in place played a large role in allowing them to greatly exceed their goal. MMH also had an experienced outreach staff member who had done the work the previous year and had all the contacts in place. Huh stated that they had learned a lot about anticipating the growers' needs and learning what times/days of the week were most convenient for the growers. They also included educational giveaways this year such as water bottles, bandanas, etc. Huh concluded that they are excited for the coming year and their goals will be similar to last year's.
- McGough told the Board she had spoken with Patterson about the funding of this outreach position in memory of Carol Eckert. She stated that Eckert had learned of MMH through her time on the BPC and helped out as a volunteer clinician for them. McGough added that they would be honored to receive this funding in honor of Eckert. Morrill agreed this is an excellent idea, it was discussed at the last Board meeting and it is an initiative that was near and dear to Eckert.
- McGough suggested two funding levels. The first was that an additional \$1,000 could be used to purchase items, such as bandanas and water bottles, with Eckert's name on them to give away to farm workers upon completion of the safety training. Another idea McGough offered was for an additional \$1,500 to be used to increase the hourly rate of the summer staff person to make their wage commensurate with that of other staff and make recruiting easier. The money would also go toward funding some of the overnight accommodations incurred by trainers as they travel around the state.
- Jemison asked if the individual that conducted the training this past summer would be returning next summer and whether they were a native English or native Spanish speaker. McGough replied that the individual had committed to working through 2017, but because of his level of experience, he would not be the main trainer. Instead they plan to hire an individual that he will train. McGough added that they recruit for individuals bilingual in English and Spanish, but typically it has been a native English speaker due to our demographics in Maine.
- Morrill stated the total funding amount with the two additions would be \$6,630, which is still less than a 50% increase. Jemison asked if there were available funds in the budget. Morrill and Gibbs confirmed that there were funds to cover the cost. Morrill added that this meshes well with the Board's mission on education and stated that the Board appreciates all of McGough's and Huh's hard work.

- **Jemison/Granger: Moved and seconded to fund the initial request and the two additional levels in honor of Carol Eckert for an extra \$2,500**
- **In Favor: Unanimous**

4. Discussion of a ‘Statute of Limitations’ on the Pursuit of Complaints by the Board

At the December 16, 2016 Meeting the Board ratified a consent agreement with Jasper Wyman & Son, of Milbridge, Maine. Darin Hammond, the Senior Manager of Farm Operations, attended the meeting as a representative for the company. On December 22, 2016 Hammond sent a letter to the Board expressing his concerns regarding the Board’s investigation of complaints associated with pesticide applications made more than a year before the complaint was filed.

Presentation By:       Darin Hammond  
                                   Manager of Farm Operations, Jasper Wyman & Son

Action Needed:         Discussion of a ‘Statute of Limitations’ for Investigation of Complaints

- Hammond stated the reason he wrote the Board was because he felt the consent agreement at the December Board meeting may have raised questions. Hammond said if an individual is unhappy with an applicator, they can file a false claim against them. Hammond said that the complaint from which the recent consent agreement originated was filed 20 months after the application was made, and no complaint had been made when Wyman’s mowed the area, only after they sprayed it. Hammond suggested the Board create a statute to set a limit on how long after an application a complaint can be made, unless the complaint is associated with a public health concern. Hammond told the Board that regarding the recent consent agreement, he did not feel Wyman’s was at fault and that there needs to be a method to allow a person can address the Board, before a complaint becomes a consent agreement, if they feel they are being wrongly accused.
- Randlett responded that individuals are able to come before the Board if they disagree with a consent agreement and then that individual’s case is presented to the Board. Connors added that he thinks that process is written on the cover letter mailed with all consent agreements.
- In regard to a statute of limitations, Randlett responded that with state agencies and civil actions in Maine there are generally no limits on civil violations. Randlett advised the Board not to consider developing any limiting policy to put restrictions on Board or staff to investigate or pursue action against an alleged violation. He added that there are times when it would be appropriate and necessary to pursue complaints that are greater than 20 months old. Randlett told Board members if a statute of limitations was enacted by them, it would be ineffectual and unenforceable because the Attorney General’s office would not be bound by it. He concluded that a statute would not be wise and he would investigate a complaint past a statute if it was in the interest of the public to do so.
- Stevenson told Hammond that at the last meeting the Board was ready to debate that consent agreement until they realized Wyman’s had already signed it. Flewelling added that the Board may have refused it but that Hammond told them to go forward with it. Morrill explained that in the last two years there had been a number of unique circumstances where a consent agreement was not signed and the Board decides not to pursue it further, and they have also rejected signed, paid consent agreements and sent a refund back to the individual. Hammond thanked the Board for listening and stated it was good to get clarification that he can come before the Board to dispute a complaint.

5. Discussion of Board Approved Products for Control of Browntail Moth within 250 feet of Marine Waters

On January 25, 2008, the Board adopted Section 5 of Chapter 29 which regulates the use of insecticides used to control browntail moth within 250 feet of marine waters. Section 5 limits insecticide active ingredients to those approved by the Board. Since that time, a number of newer chemistries have been registered for use and far more data is available on the efficacy of many products. On November 4, 2016 and December 16, 2016 the Board discussed the browntail moth populations and the available products. Subsequently, the staff was directed to update the list of approved products for browntail moth control. The Board will now consider the list.

Presentation By:       Lebelle Hicks  
                                  Pesticide Toxicologist

Action Needed:         Amend or Approve the List of Products for Browntail Moth Control

- Hicks looked at EPA's most recent toxicity information and compared that with label use rate directions to help determine modified risk quotients for those chemistries that could be used on browntail moth. Hicks created two tables detailing the results. Morrill asked about the difference between the two tables. Hicks responded that Table One lists chemistries with a modified risk quotient of 500 or below, except for permethrin which is above 500 for freshwater. Table Two lists the chemistries that have a modified risk quotient greater than 500, except for cyfluthrin and acephate which are 93 and 454, respectively, for freshwater.
- Morrill asked Hicks to explain the last column of the tables which listed some of the chemistries as "not registered for this use." Hicks replied that that column referred to each chemistry's registration status during the 2006 ERAC, and that each of the compounds considered are currently registered for use on moths. Morrill asked if we could delete the last column to eliminate confusion about these active ingredients being registered for browntail moth. Hicks responded that the column could be removed.
- Morrill asked why permethrin is in the first table with a freshwater modified risk quotient of 833 and also why acephate is in Table Two with 454 for freshwater. Hicks responded that acephate's modified risk quotient was close to 500, so that is why it was included in Table Two. Hicks explained that she placed permethrin in Table One because it was used during the last outbreak and it has food crop sites on the label. Hicks added that it is the Board's call to move permethrin to Table Two if they wish.
- Jemison stated that for the purpose of preventing resistance he would like to know what groups these chemistries are in. Hicks stated she selected compounds from different groups for that reason and then went through the two tables and named each chemistry's group.
- Morrill asked if there was any further discussion and if Jemison had concerns about the list. Jemison said he does not because the licensed applicators out there know what is approved and hopefully they will know to rotate what they use. Hicks reminded the Board that this is just between the 50'-250' zone.
- Katy Green asked if *Bt* had been considered for the list. Hicks answered that if they get data showing that *Bt* is efficacious it can be added to the list. Green noted that the list included only one chemistry for an organic option. Hicks stated that that is correct, in this 50'-250' zone for foliar applications only, and this list does not include other types of applications, like injections.
- Randlett asked if the list would be posted on the website. Morrill asked that staff send the info out to applicators.



- **Jemison/Flewelling: Moved and seconded to approve the chemistries in Table One, except for permethrin, for use in the 50'-250' area from the mean high tide mark, in Accordance with Chapter 29 Section 5 for control of browntail moths.**
- **In Favor: Unanimous**

6. Discussion of Interpretation of the Definition of 'Biological' within Chapter 29

On January 25, 2008, the Board adopted Section 5 of Chapter 29 which regulates insecticides used to control browntail moth within 250 feet of marine waters. On November 4, 2016 and December 16, 2016 the Board discussed browntail moths and the definition of 'biological' pesticides. When the rule was originally written, strains of *Bacillus thuringiensis* (*Bt*) were the only 'biological pesticide' active ingredients available and labeled for use on browntail moth. Since that time, a number of questions have arisen relative to other products which may qualify as 'biological'. Subsequently, the staff was directed to prepare an interpretation of 'biological' to clarify which products fall under that exemption.

Presentation By: Megan Patterson  
 Manager of Pesticide Programs

Action Needed: Accept/Reject the Proposed Interpretation of 'Biological'

Presentation provided by Ann Gibbs.

- Gibbs read the two definitions submitted in the Board packet. Gibbs stated the first definition was thought to be more inclusive, encompassing organisms and products derived from those organisms. The second definition limits products to organism based.
- There is a consensus among the Board that definition one is the better choice.
  - **Jemison/Flewelling: Moved and seconded to accept definition one of 'biological'**
  - **In Favor: Unanimous**
- Stevenson noted that definition one stated that active ingredients are limited to organisms and their biochemical derivatives, and asked if that included inert ingredients. Hick's stated that it did not include inert ingredients.
- There was a discussion about ensuring that the definition they adopt not allow chemistries that would be harmful to aquatic invertebrates.
- Morrill clarified that this definition would only apply to Chapter 29 and be pertinent only when making an application for browntail moth within 0'-50' of the water. It was suggested to word the definition so that any biological organism is permissible, but any biological derivatives would require approval from the Board, in the form of a list, similar to the rule for the 50'-250' zone. Randlett stated this would be acceptable. Hicks said there is no efficacy data on *Bt*, but she is comfortable with Spinosad from the information gathered during the risk assessment. She is not aware of any marine data for Azadirachtin. Jemison asked if Hicks had asked the manufacturer. She replied that she had not, but she will do that and get back to the Board. Staff will bring a policy and list to the next meeting.
  - **Jemison/Flewelling: Moved and seconded to amend motion to accept definition one of biological with a wording change so that it reads that a biological pesticide "includes any microbial pesticide that contains the micro-organism and biological derivatives as approved by the Board"**
  - **In Favor: Unanimous**

7. Review of BPC Budget

At the December 16, 2016 Meeting, the Board suggested that a review of the Board's annual operating budget may be timely. The staff will present information pertaining to the current budget and an overview of the budget process.

Presentation By: Megan Patterson  
Manager of Pesticide Programs

Action Needed: Review of BPC Budget

Presentation provided by Ann Gibbs.

- Gibbs provided Board members with a copy of the budget which was just presented by the Governor two days ago. Gibbs directed the Board to look at the revenue versus expenditures and pointed out that they are very close and there is only about \$20k in excess.
- Flewelling asked what the 'legislative transfer of revenue' line with a total of \$135k referred to. Gibbs answered that that money goes to University of Maine Cooperative Extension.
- Gibbs explained the 'DICAP transfer' is something the Board has no control over, and that a certain percentage of all dollars have to go to this to 'keep the lights on'.
- Gibbs told the Board she is not completely familiar with this budget, but any specific questions that she cannot answer she will find the answer. Granger asked who was supported by the \$277,444 on line 32 in the 'dedicated Non-BPC' column. Gibbs stated it may be the full-time positions, but she will verify that.
- Morrill stated that approximately \$520k is listed as being spent on non-BPC expenditures, which is interesting. Morrill asked what the 'transfers' line under the 'dedicated non-BPC' column refers to. Gibbs responded that she will look into this.
- Stevenson asked what additional staff are funded by the Board. Gibbs replied there is an apiarist, state horticulturalist, two assistant horticulturalists, and an IPM Coordinator. Morrill stated the importance of knowing what positions were funded and where. He commented that the Board is also funding the director's position which is currently vacant.
- Several additional questions were asked and Gibbs recapped the questions the Board would like answered:
  - Why is so much DICAP being taken out?
  - Exactly whose salaries are paid under the 'personal services' group?
  - How many positions are currently unfilled?
  - What specifically is line 40 and what does it cover?
  - What specifically is line 85 and what does it cover?
  - Clarification on the numbers that make up line 64
  - Entire 'Non-dedicated BPC' column needs explanation
  - Is there any available cash on hand?
- Morrill concluded that he looks forward to continuing this discussion next meeting and getting more clarity on the budget. He requested staff keep the budget on the agenda for the next meeting.

8. Other Old or New Business

- a. Legislative Report on Water/Sediment Sampling
- b. Update on Homeowner Education Activities
  - Morrill stated this memo was included in the Board packet and if the audience has ideas for educating the public to please send those ideas to the Board.

- c. Updated Memo Detailing Sampling Results from Gulf of Maine Coastal Pesticide Study
  - Tomlinson corrected the duplicate columns that were discussed at the December Board meeting.
- d. Letter from Jody Spear
- e. Letter from Paul Schlein
  - Morrill stated that the Board also received letters from MOFGA and NRC which continued the discussion that the Board compile and release data for pesticide sales and use in Maine. Morrill added that the Board has discussed this many times and it is good to keep this topic on the forefront and we need to begin the discussion on narrowing the focus on what data to select. He suggested tasking a group with narrowing the data collection to a specific charge that is manageable. Granger suggested a member of the Board be in the group. Stevenson added that getting clarification on what there is for money in the budget will help them decide how much can be put into data collection.
  - Green asked for clarification that the Board was saying a group would be formed. Morrill stated it was a suggestion and he would first like to mine down into the info and get clarity on what to collect data on. Green stated they would like data collected on the active ingredients on the list in their letter. Hicks stated there should be set criteria for putting together a list of active ingredients on which to collect data. She also had concerns that there were no fungicides on the list, of which there are some with chronic and environmental risk. Morrill responded that he agreed that a set criteria for a list should be part of the discussion and he hesitates to make it an agenda item until they have time to think about it some more and come up with a definitive end goal. Stevenson seconded that they need time to plan strategically; they just saw this year's budget and the Board needs to set priorities for the upcoming year. Morrill stated that the Board recognizes the current method of data collection is not working for some folks and they need to find a way to get more meaningful data. Hicks offered to put together a spreadsheet that has environmental fate parameters and the likelihood of an active ingredient ending up in the sediment. Stevenson suggested also having a discussion around using Pega to collect data.
  - Green responded that the point of their letter and the list was to get some forward movement on this issue because they have repeatedly been told by staff that the task of collecting the data was too onerous. Green asked the Board how they are fulfilling their mandate of reducing pesticide use if we do not know what is being used. Randlett stated the statute directs the Board is to 'minimize reliance', not 'reduce use'.
  - Granger commented that reducing the amount of use would be best done by using our money to educate and promote IPM, rather than counting pounds of active ingredient used. Reducing reliance is not as simple as counting pounds of pesticide used. Morrill stated that data collection should parallel homeowner education. Green asked the Board if collecting pounds was not the way to do it, then what was. Morrill replied that the Board does not have that answer yet and we need to narrow down the focus of what we want answered and determine what we can do with the budget we have.

9. Schedule of Future Meetings

February 17, 2017; March 31, 2017; and May 12, 2017 are tentative Board meeting dates. The Board will decide whether to change and/or add dates.

Adjustments and/or Additional Dates?

- **The Board added June 23, 2017 and August 4, 2017 as tentative Board meeting dates**

10. Adjourn

- **Flewelling/Granger: Moved and seconded to adjourn at 5:33**
- **In Favor: Unanimous**



STATE OF MAINE  
DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY  
BOARD OF PESTICIDES CONTROL  
28 STATE HOUSE STATION  
AUGUSTA, MAINE 04333

PAUL R. LEPAGE  
GOVERNOR

To: Board of Pesticides Control Members  
From: Mary Tomlinson, Pesticides Registrar  
Re: EPA Special Local Need (SLN) [24(c)] request to extend the use of GoalTender herbicide,  
EPA Reg. No. 62719-447, for post-emergence broadleaf weed control in broccoli  
Date: February 6, 2017

\*\*\*\*\*  
Please find enclosed the above-referenced FIFRA Section 24 (c) label for your consideration. You approved the initial application of GoalTender herbicide, EPA Reg. No. 62719-447, (active ingredient oxflurofen) for post-emergence broadleaf weed control in broccoli in March 2009.

This request is to extend the use through 2020. According to Jim Dwyer, Crops Specialist at the University of Maine Cooperative Extension, and Emily Smith of Smith Farm, this is the only herbicide available to broccoli growers for post-emergent weed control in this crop. Of particular concern is the control of hairy nightshade which serves as an important alternate host for the late blight *Phytophthora infestans* in potatoes. Broccoli may be grown in rotation with potatoes; therefore, control of hairy nightshade may reduce the need for fungicide use on potatoes.

Your package includes the additional following documents for your review:

- State product container label
- Letter of support from James Dwyer dated December 12, 2016
- Letter of support from Emil Smith, Smith Farm

Please review these materials and contact me at (207) 287-7544 if you have any questions.

HENRY JENNINGS, DIRECTOR  
90 BLOSSOM LANE, DEERING BUILDING



PHONE: (207) 287-2731  
WWW.THINKFIRSTSPRAYLAST.ORG

# FIFRA 24(c) Special

## Local Need Label



Dow AgroSciences

Dow AgroSciences LLC

9330 Zionsville Road

Indianapolis, IN 46268-1054 USA

### GoalTender<sup>®</sup>

EPA Reg. No. 62719-447

24(c) Special Local Need Registration SLN ME090002

**For Postemergence Use in Broccoli**  
**(For Distribution and Use Only in the State of Maine)**

**Expiration date:** This label expires and must not be distributed or used in accordance with this SLN registration after December 31, 2020.

#### Conditions and Risks of Use for Special Local Need

**USE OF GoalTender<sup>®</sup> HERBICIDE (THE "PRODUCT") ON BROCCOLI (THE "CROP") FOR THIS SPECIAL LOCAL NEED MAY RESULT IN CROP INJURY, CROP YIELD REDUCTION AND/OR CROP LOSS AS FURTHER DISCUSSED BELOW. READ AND UNDERSTAND THESE CONDITIONS AND RISKS OF USE FOR SPECIAL LOCAL NEED BEFORE USING THE PRODUCT ON THE CROP.**

This Product is available for use in the manner described in this Supplemental Labeling on the basis that, in the sole opinion of the user, the benefits and utility derived from the use of the Product on the Crop outweigh the potential risk of Crop injury, Crop yield reduction or Crop loss. The decision to use this Product in the manner described in this Supplemental Labeling must be made by each individual user on the basis of anticipated benefits versus (i) the potential risk of Crop injury, Crop yield reduction and Crop loss, (ii) the severity of the target pest infestation, (iii) the cost and availability of alternative pest controls and (iv) any other relevant factors.

**By purchasing the Product for use, or using the Product, in the manner described in this Supplemental Labeling, you acknowledge and accept that, to the extent permitted by law:**

- (1) you assume all risk of Crop injury, Crop yield reduction and Crop loss;
- (2) Dow AgroSciences does not make, and do not authorize any agent or representative to make, any representations or recommendations regarding the use of this Product on the Crop other than the statements on this Supplemental labeling;
- (3) Dow AgroSciences does not make, and does not authorize any agent or representative to make, any warranties, express or implied, with respect to the use of the Product on the Crop and disclaim all warranties, expressed or implied, including any implied warranty of merchantability;
- (4) Dow AgroSciences disclaims all liability for any damages, losses, expenses, claims or causes of actions arising out of or relating to Crop injury, Crop yield reduction and/or Crop loss;
- (5) these Conditions and Risks of Use for Special Local Need supersede any contrary representations or recommendations by Dow AgroSciences, or its respective agents or representatives, and any provisions in or on any Product literature or labeling including any provisions on the label affixed to the Product container.

**If these Conditions and Risks of Use for Special Local Need are not acceptable, the unopened Product may be returned to the seller for a refund or used for a different labeled use in accordance with the label affixed to the Product container.**

**These Conditions and Risks of Use for Special Local Need are required by Dow AgroSciences and not specified by the US EPA or the State of Maine.**

#### ATTENTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

- This label must be in the possession of the user at the time of pesticide application.
- Read this SLN labeling and the label affixed to the container for GoalTender™ herbicide before applying. All applicable use directions, precautions and restrictions on this SLN labeling and the label affixed to the product container must be followed.

## Directions for Use

GoalTender® herbicide may be applied as a broadcast or directed spray for the postemergence suppression/control of susceptible broadleaf weed species in direct-seeded or transplanted broccoli.

**Crop Tolerance Information:** Broccoli are tolerant to postemergence applications of GoalTender; however, under certain conditions, GoalTender can cause severe crop injury. Application to crops grown under very mild (cool, cloudy) conditions can produce leaf cupping, crinkling, stunting, or necrotic lesions. When injury occurs, it is usually limited to the treated leaves with new leaves emerging undamaged. Delay in crop development and/or maturity, and yield reduction can result under these conditions.

Do not use GoalTender on plants that are weakened or are under stress due to temperature, disease, fertilizer, soil, salts, nematodes, insects, pesticides, drought, excessive moisture, flooding, or soil crusting.

**Application Rate, Timing and Method of Application:** Apply GoalTender as a broadcast postemergence application at the rate of 4 to 6 fl oz per acre (0.125 to 0.188 lb active). GoalTender may also be applied as a directed application at a rate of 4 to 8 fl oz per acre (0.125 to 0.25 lb active). Directed applications are those where spray mixtures are applied in such a way as to minimize contact to crop leaves, directing the spray toward the soil at the base of the crop.

For direct-seeded crops apply when the crop reaches a minimum of four true leaves. For transplanted crops apply after a minimum of two weeks after planting.

For postemergence use in broccoli do not mix GoalTender with adjuvants (oils, surfactants), liquid fertilizer or pesticides.

Apply only with ground equipment in a spray volume of 20 gallons or more of water per acre. Increase the spray volume to ensure complete and uniform coverage as weed height and density increases. Use a low-pressure sprayer equipped with flat fan nozzles operated at the manufacturer's recommended pressure.

**Weeds Controlled or Suppressed Postemergence:** GoalTender provides postemergence control/suppression of the following weeds when used at recommended dosages:

Common Name	Scientific Name
burning nettle	<i>Urtica urens</i>
cheeseweed (Malva)	<i>Malva parviflora</i>
nightshade, black	<i>Solanum nigrum</i>
pigweed, redroot	<i>Amaranthus retroflexus</i>
purslane, common	<i>Portulaca oleracea</i>
shepherdspurse	<i>Capsella bursa-pastoris</i>
sowthistle, annual	<i>Sonchus oleraceus</i>

**Cultural Considerations:** Best weed control results when GoalTender is applied to young (1-4 leaf), actively growing weeds.

### Use Restrictions

In addition to the General Use Restrictions in the product label for GoalTender, the following use restrictions must be observed:

- For direct-seeded crops, do not apply more than 8 fl oz per acre (0.25 lb active) per crop as a post emergence treatment.

- For transplanted crops, do not apply more than 8 fl oz per acre (0.25 lb active) per crop as a post-transplant treatment. If a pre-transplant (preplant) treatment has previously been made, the combination of pre- plus post-transplant treatments must not exceed 16 fl oz per acre per season (0.5 lbs active).
- Do not add any adjuvant or liquid fertilizer to the spray mixture.
- For postemergence use in broccoli do not mix GoalTender with adjuvants (oils, surfactants), liquid fertilizer or pesticides.
- Do not apply within 35 days of harvest.
- Do not apply when weather conditions favor drift. Avoid drift to all non-target areas. GoalTender is phytotoxic to susceptible plant foliage.
- **Chemigation:** Under this SLN label, do not apply this product through any type of irrigation system.
- Avoid application if heavy rainfall is predicted to occur within 24 hours after planned application.
- The use directions under this SLN label supersede the Section 3 label prohibitions for broccoli.
- Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

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R204-089

Approved: \_\_/\_\_/\_\_

Replaces: R204-051





THE UNIVERSITY OF  
**MAINE**  
Cooperative Extension  
*Potato Program*

P.O. Box 727 • Presque Isle, ME 04769 • (207) 764-3361 • Fax:(207) 764-3362

December 12, 2016

Mary Tomlinson  
Pesticide Registrar/Water Quality Specialist  
Maine Board of Pesticides Control  
28 State House Station  
Augusta, ME 04333

Dear Mary:

Weed control for broccoli producers in Maine can be very challenging. The materials available for weed control are very limited. In reviewing the 2016-2017 New England Vegetable Recommendations, there are no post-emergent herbicides listed for broccoli production.

The Special Local Needs Registration for the post-emergent application of the herbicide GoalTender provides Maine broccoli producers with an important weed management tool. The Special Local Needs Registration for GoalTender herbicide with the active ingredient Oxflorfen is the only option for broccoli producers to apply a post-emergent herbicide when needed to suppress or control weeds in a post-emergent situation.

I did inquire from one producer if any crop injury had been observed with the use of GoalTender and was told that no crop injury has been observed when this product has been used as a post-emergent herbicide in broccoli.

I fully support the renewal of the Special Local Needs Registration for the herbicide GoalTender manufactured by Dow AgroSciences for post-emergence use in broccoli here in the State of Maine.

Sincerely,

James D. Dwyer  
Crops Specialist

[www.maine potatoipm.com](http://www.maine potatoipm.com) [www.umext.maine.edu](http://www.umext.maine.edu)

The University of Maine and the U.S. Department of Agriculture cooperating.  
Cooperative Extension provides equal opportunities in programs and employment.

*A Member of the University of Maine System*

December 2, 2016

To Whom It May Concern:

In 2009, the Maine Board of Pesticide Control approved a Special Local Needs (SLN) registration for use of GoalTender, EPA registration # 62719-447 in broccoli for post emergence broadleaf weed control.

As a broccoli grower in Maine, we can attest that the need for the SLN on GoalTender as a post emergent product does still exist. It is still the only alternative for post emergence weed control available for Maine broccoli growers. We respectfully request for the SLN to be reviewed and extended prior to the 2017 crop season. It may deem beneficial in the essence of time management and multiple review processes to label GoalTender indefinitely or more permanently as an alternative for Maine growers.

Thank you for your time and efforts in this matter. If you have any questions or concerns that we could address as a grower, please feel free to include us in the discussion.

Thank You,  
Emily G Smith  
[emily@smithsfarm.com](mailto:emily@smithsfarm.com)  
207-768-1311



Dow AgroSciences

# GoalTender®

## HERBICIDE

**Use Directions For:** artichokes (globe), broccoli/cabbage/cauliflower, cacao, citrus (nonbearing), coffee, conifer (seedbeds, transplants, container stock) and selected deciduous trees, cotton, cottonwood, eucalyptus, fallow bed, (cotton/soybeans) garbanzo beans, garlic, guava (Hawaii only), horseradish, jojoba, mint, onions, onions grown for seed, papaya (Hawaii only), taro, treefruit/nut/vine

**Active Ingredient**

oxyfluorfen: 2-chloro-1-(3-ethoxy-4-nitrophenoxy)4-(trifluoromethyl) benzene.....	41%
Other Ingredients.....	59%
Total.....	100%

Contains 4 pounds active ingredient per gallon

**Shake Well Before Using**

**Keep Out of Reach of Children**

# CAUTION

For additional Precautionary Statements, First Aid, Storage and Disposal and other use information see inside this label.

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-447

2M

2N

EPA Est. 070989-MO-001; 34704-MS-1  
900-020771 / 00251180

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Produced for  
Dow AgroSciences LLC  
9330 Zionsville Road  
Indianapolis, IN 46268

## NET CONTENTS 1 GAL



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## Precautionary Statements

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### Hazards to Humans and Domestic Animals

# CAUTION

Avoid contact with skin or clothing.

### Personal Protective Equipment (PPE):

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.

**Mixers, loaders and applicators using engineering controls (see Engineering Controls requirements below) must wear:**

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves such as Nitrile, Butyl, Neoprene, and/or Barrier Laminated when mixing and loading
- Chemical-resistant apron when mixing and loading

**All other mixers, loaders, applicators and other handlers must wear:**

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves (such as Nitrile, Butyl, Neoprene, and/or Barrier Laminated)
- Protective eyewear (goggles of face shield)
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when exposed to the product concentrate

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**Engineering Controls:** Mixers and loaders supporting ground applications to cotton, must use a closed system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)], and must:

- Wear the personal protective equipment required above for mixers/loaders using engineering controls
- Wear protective eyewear if the system operates under pressure, and
- Be provided and have immediately available for use in case of emergency, such as a broken package, spill, or equipment breakdown, coveralls and chemical-resistant footwear.

Handlers performing applications to corn must use an enclosed cab that meets the definition in the Worker Protection Standard for agricultural pesticides [40 CFR 170.240(d)(5)] for dermal protection. In addition, such applicators must:

- Wear the personal protective equipment required above for applicators using engineering controls
- Be provided and must have immediately available for use in an emergency when they must exit the cab in the treated area: coveralls, chemical-resistant gloves, chemical-resistant footwear, and chemical-resistant headgear, if overhead exposure.
- Take off any PPE that was worn in the treated area before reentering the cab, and
- Store all such PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab.

Pilots must use an enclosed cockpit in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)];

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### User Safety Recommendations

**Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove contaminated clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## Environmental Hazards

This product is toxic to aquatic invertebrates and wildlife. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. See Directions for Use for additional restrictions. Do not contaminate water when disposing of equipment wash water or rinseate.

## Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

## Agricultural Use Requirements:

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours, except for the following:

- Onions, garlic and horseradish: The REI is 48 hours

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

## Non-Agricultural Use Requirements:

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

**Do not enter or allow others to enter until sprays have dried.**

## Storage and Disposal:

Do not contaminate water, food or feed by storage or disposal

**Pesticide Storage:** Keep from Freezing. Store above 32°F

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. After rinsing, offer for recycling if available available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

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## PRODUCT INFORMATION

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GoalTender® herbicide is a selective herbicide for postemergence and preemergence residual weed control in labeled crops. Directions provided in the General Use Information section of this label apply to all uses of this product. Use directions for listed crops are provided in the Crop-Specific Use Directions section of this label.

### Use Restrictions

**The following use restrictions apply to all labeled uses of GoalTender (Refer to directions for use for individual crops for additional crop-specific use restrictions.):**

- Do not graze or harvest plants from areas treated with GoalTender for feed or forage.
- Apply GoalTender only with ground equipment unless otherwise specified in crop-specific use directions.
- GoalTender is phytotoxic to plant foliage. Avoid accidental spray contact or drift with established crops. Do not apply when weather conditions favor drift to non-target areas.
- Some labeled crops are tolerant to over-the-top applications of GoalTender if applied during dormancy. Do not make over-the-top applications unless specifically allowed in crop-specific use directions.
- Do not treat ditch banks or waterways with GoalTender or contaminate water used for irrigation or domestic purposes.
- Do not apply GoalTender in enclosed greenhouses as foliage injury will result.

### Spray Drift Buffer Restrictions

- A 25 foot vegetative buffer strip must be maintained between all areas treated with this product and lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.
- Do not allow spray to drift from the application site and contact people, structures people may occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.
- For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy when wind speed is 10 mph or

less at the application site as measured by an anemometer.

- Use coarse spray according to ASAE 572 definition for standard nozzles or VMD of 475 microns for spinning atomizer nozzles.
- The applicator also must use all other measures necessary to control drift.

### Rotation Crop Restrictions

- Do not rotate to small-grain crops (includes barley, buckwheat, corn, pearl millet, proso millet, oats, popcorn, rice, rye, sorghum, triticale, wheat, wild rice) within 10 months following an application of GoalTender.
- Do not direct seed any crop, other than a crop labeled for use with GoalTender, within 60 days following application.
- Do not transplant seedlings of crops, other than crops labeled for use with GoalTender, within 30 days following application.
- **IMPORTANT: Unless otherwise specified elsewhere in this label or Dow AgroSciences supplemental label or product bulletin, treated soil must be thoroughly mixed to a depth of 4 inches after harvest (or abandoning) of the treated crop but prior to planting of the rotational crop. Failure to achieve thorough and complete mixing or to follow the required minimum plant-back interval may result in crop injury, stand reduction and/or vigor reduction of the plant-back crop.** See specific fallow bed labeling instructions for required treatment-to-planting intervals following application of GoalTender to fallow beds or fallow fields.

### Weeds Controlled

Common Name	Scientific Name
ageratum	<i>Ageratum conyzoides</i>
amaranth, spiny	<i>Amaranthus spinosus</i>
balsamapple	<i>Momordica charantia</i>
barnyardgrass	<i>Echinochloa crus-galli</i>
(watergrass) †	
bedstraw, catchweed	<i>Galium aparine</i>
bittercress, lesser	<i>Cardamine oligosperma</i>
bluegrass, annual †	<i>Poa annua</i>
buckwheat, wild	<i>Polygonum convolvulus</i>
burclover	<i>Medicago hispida</i>
buttercup, smallflower	<i>Ranunculus abortivus</i>
buttonweed	<i>Borreria laevis</i>
camphorweed	<i>Heterotheca subaxillaris</i>

## Weeds Controlled (Cont.)

### Common Name

canarygrass (annual)  
 carpetweed  
 cheeseweed (malva)  
 clover, red †  
 clover, white †  
 cocklebur, common  
 crabgrass, large (hairy) †  
 crotalaria  
 croton, tropic  
 cudweed, narrowleaf  
 eveningprimrose, cutleaf  
 fiddleneck, coast †  
 filaree, broadleaf  
 filaree, redstem  
 filaree, whitestem  
 fireweed (from seed)  
 flixweed  
 foxtail, giant †  
 foxtail, green  
 foxtail, yellow  
 geranium, Carolina  
 goosegrass †  
 groundcherry, cutleaf  
 groundcherry, Wright  
 groundsel, common  
 henbit  
 horseweed (maretail)  
 jimsonweed  
 johnsongrass, seedling  
 knotweed, prostrate  
 ladysthumb (smartweed)  
 lambsquarters, common  
 lettuce, prickly  
 (china lettuce)  
 mallow, little (malva)  
 mayweed (dog fennel)  
 minerslettuce  
 morningglory species,  
 annual  
 morningglory, ivyleaf †  
 morningglory, tall †  
 mustard, black  
 mustard, blue  
 (purple mustard)  
 mustard, common yellow  
 mustard, hedge  
 mustard, tumble  
 (Jim hill mustard)  
 mustard, wild

### Scientific Name

*Phalaris canariensis*  
*Mollugo verticillata*  
*Malva parviflora*  
*Trifolium pratense*  
*Trifolium repens*  
*Xanthium pensylvanicum*  
*Digitaria sanguinalis*  
*Crotalaria species*  
*Croton glandulosus*  
*Gnaphalium falcatum*  
*Oenothera laciniata*  
*Amsinckia intermedia*  
*Erodium botrys*  
*Erodium cicutarium*  
*Erodium moschatum*  
*Epilobium angustifolium*  
*Descurainia sophia*  
*Setaria faberi*  
*Setaria viridis*  
*Setaria lutescens*  
*Geranium carolinianum*  
*Eleusine indica*  
*Physalis angulata*  
*Physalis wrightii*  
*Senecio vulgaris*  
*Lamium amplexicaule*  
*Conyza canadensis*  
*Datura stramonium*  
*Sorghum halepense*  
*Polygonum aviculare*  
*Polygonum virginicum*  
*Chenopodium album*  
*Lactuca serriola*  
  
*Malva parviflora*  
*Anthemis cotula*  
*Montia perfoliata*  
*Ipomoea species*  
  
*Ipomoea hederacea*  
*Ipomoea purpurea*  
*Brassica nigra*  
*Chorispora tenella*  
  
*Brassica campestris*  
*Sisymbrium officinale*  
*Sisymbrium altissimum*  
  
*Brassica kaber*

### Common Name

nettle, burning  
 nightshade, American  
 black  
 nightshade, black  
 nightshade, hairy  
 oats, wild  
 orach, red  
 oxalis (bermuda buttercup)  
 panicum, fall  
 pepperweed, Virginia  
 pepperweed, yellowflower  
 pigweed, prostrate  
 pigweed, redroot  
 pimpernel, scarlet  
 poinsettia, wild  
 puncturevine  
 purslane, common  
 pusley, florida  
 ragweed, common  
 redmaids  
 rocket, London  
 ryegrass, Italian  
 sage, lanceleaf  
 sandbur, field  
 sandspurry, red  
 sesbania, hemp  
 shepherdspurse †  
 sicklepod  
 sida, prickly (teaweed)  
 signalgrass, broadleaf  
 smartweed, pennsylvania  
 sorrel, red (from seed)  
 sowthistle, annual  
 speedwell, birdseye  
 spurge, garden  
 spurge, prostrate ††  
 spurge, spotted ††  
 spurry, corn  
 tansymustard  
 thistle, bull ††  
 thistle, Russian  
 velvetleaf  
 witchgrass  
 witchweed  
 woodsorrel, common  
 yellow ††

### Scientific Name

*Urtica urens*  
*Solanum americanum*  
  
*Solanum nigrum*  
*Solanum sarrachoides*  
*Avena fatua*  
*Atriplex rosea*  
*Oxalis pes-caprae*  
*Panicum dichotomiflorum*  
*Lepidium virginicum*  
*Lepidium perfoliatum*  
*Amaranthus blitoides*  
*Amaranthus retroflexus*  
*Anagallis arvensis*  
*Euphorbia heterophylla*  
*Tribulus terrestris*  
*Portulaca oleracea*  
*Richardia scabra*  
*Ambrosia artemisiifolia*  
*Calandrinia caulescens*  
*Sisymbrium irio*  
*Lolium multiflorum*  
*Salvia reflexa*  
*Cenchrus incertus*  
*Spergularia rubra*  
*Sesbania exaltata*  
*Capsella bursa-pastoris*  
*Cassia obtusifolia*  
*Sida spinosa*  
*Brachiaria platyphylla*  
*Polygonum pensylvanicum*  
*Rumex acetosella*  
*Sonchus oleraceus*  
*Veronica persica*  
*Euphorbia hirta*  
*Euphorbia supina*  
*Euphorbia maculata*  
*Spergularia arvensis*  
*Descurainia pinnata*  
*Oxalis vulgare*  
*Salvia kali*  
*Abutilon theophrasti*  
*Panicum capillare*  
*Striga asiatica*  
*Oxalis stricta*

† Highest rate and/or multiple applications may be required for acceptable control.

†† Preemergence control only



## Application Methods and Cultural Practices

### Preemergence Weed Control

Apply the specified rate in a broadcast spray volume of water per acre using calibrated spray equipment capable of uniform application to the soil surface. Seedling weeds are controlled as they come in contact with the soil-applied herbicide during emergence. Preemergence weed control is most effective when GoalTender is applied to soil surfaces that are clean (free of crop or weed residues or clippings) and weed-free. Prior to application, weed or crop residues should be removed by thorough incorporation into the soil using tillage equipment or by blowing the area to be treated. At least 0.25 inch of irrigation or rainfall is required to activate GoalTender and should occur within 3 or 4 weeks after application. For optimum results, GoalTender should be applied to prepared beds or soil surfaces that will be left undisturbed during the time period for which weed control is desired. Cultural practices that disturb or redistribute surface soil following treatment with GoalTender such as cutting water furrows will reduce weed control effectiveness.

**Application Rates and Rate Ranges:** Where rate ranges are given, use the lower rate in the rate range on coarse texture soils with less than 1% organic matter and lighter weed infestations. Use higher rates in the rate range on medium to fine texture soils, soils containing greater than 1% organic matter, heavy weed infestations, or for extended residual preemergence weed control.

### Postemergence Weed Control

Apply the specified rate in a broadcast spray volume of 20 or more gallons of water per acre (a minimum 10 gallons if applying GoalTender in tank mix with glyphosate). Because GoalTender is a contact herbicide, complete and uniform coverage of weed foliage is essential for optimum postemergence control. Increase the spray volume to ensure complete and uniform coverage as weed height and density increases or in the presence of heavy trash (weed or crop residue). Postemergence applications of GoalTender are most effective when made to weeds at the seedling stage. Applications made later than the 4-inch or 4 leaf stage may result in partial control or suppression. Postemergence applications should be made to seedling grasses not exceeding the 2-leaf stage. The addition of 0.25% v/v (2 pints per 100 gallons of spray) of an 80% active nonionic surfactant,

labeled for application to growing crops, will enhance herbicidal effectiveness in controlling emerged weeds.

**Postemergence Application Rates:** Where a rate range is given, use a higher rate in the rate range for heavy weed infestations, weeds in advanced stages of growth or for extended residual preemergence weed control following control of existing emerged weeds.

### Ground Application

**Ground Broadcast:** Apply GoalTender using conventional low-pressure ground spray equipment with flat fan spray nozzles. Follow manufacturer's recommendation for spraying pressure and boom height. An off-center (OC) nozzle positioned at the end of the boom may be desired. Check calibration of spray equipment before each use.

**Directed Sprays:** Apply GoalTender as a coarse low-pressure spray in a spray volume of 20 or more gallons of spray per acre (broadcast basis). Follow manufacturer's recommendations for nozzle spacing and operating pressure. Spray should be directed toward the soil at the base of the crop. In row crops, use a minimum of 2 flat fan nozzles per row (one on each side) and for optimum spray coverage use 4 flat fan nozzles per row (two on each side). The 2 forward nozzles should point forward and downward while the rear nozzles should point to the rear and downward. With either sprayer system, nozzles should be adjusted to cover the weed foliage but minimize contact with the crop. Do not apply with hollow cone nozzles.

**IMPORTANT: GoalTender is a contact herbicide. Contact of sprays or drift with foliage or green stems can cause severe crop injury. Use directed sprays and spray shields and/or leaf lifters as necessary to minimize contact of spray or drift with crop foliage or stems. Young green stems of woody plants are also susceptible to injury from spray contact. Potential for injury to woody stems diminishes with loss of green color and the development of relatively impervious non-living corky tissue (bark) on the surface of the stem.**

**Band Application:** Application rates listed in this label are for broadcast application. For band application, the rate per broadcast acre should be reduced according to the following formula:

$$\begin{array}{l} \text{Band Width} \\ \text{(in inches)} \end{array} \times \begin{array}{l} \text{Rate per} \\ \text{Row Width} \\ \text{(in inches)} \end{array} \text{ Broadcast Acre} = \begin{array}{l} \text{Amount Needed} \\ \text{per Acre for} \\ \text{Banded Application} \end{array}$$

## Spot Application

For spot application, apply sprays uniformly to soil for preemergence weed control or on a spray-to-wet basis for postemergence weed control. Mix the required amount of GoalTender with the recommended specified amount of water. For preemergence weed control, use one-half to one gallon of spray per 1000 sq ft. For postemergence weed control use

a minimum of 1 gallon of spray per 1000 sq ft and add an 80% nonionic surfactant at the rate of 0.5 fl oz (1 Tbs) per gallon of spray. If making spot applications within an established crop, use coarse low-pressure sprays and direct the spray to the soil beneath the plants. To avoid crop injury, do not allow spray to contact leaves and stems of herbaceous plants or leaves or green stems of woody plants.

**Amount of GoalTender Required to Treat 1000 sq ft at Specified Application Rate**

0.25 pt/acre	0.5 pt/acre	1.0 pt/acre	1.5 pt/acre	2.0 pt/acre	4.0 pt/acre
0.1 fl oz (2.75 ml)	0.2 fl oz (5.5 ml)	0.4 fl oz (11 ml)	0.55 fl oz (16.5 ml)	0.75 fl oz (22 ml)	1.5 fl oz (44 ml)

1 pint = 16 fl oz; 1 fl oz = 29.6 (30) ml

## Aerial Application

Use aerial boom equipment designed for use with herbicides and a minimum spray volume of 10 gallons per acre (5 gallons per acre if tank mixed with glyphosate). **Do not aerially apply GoalTender unless crop-specific use directions specifically allow and provide directions for aerial application.**

**AVOID DRIFT: Exercise extreme care to avoid herbicide contact with any desirable dormant or non-dormant crop, plant, tree or vegetation as severe injury may result. Extreme care must be exercised to prevent spray drift that could result in damage to other crops or desirable vegetation. Adhere to the following guidelines when aerial applications are to be made.**

### Spray Drift Management (Aerial Application):

Avoiding spray drift at the application site is the responsibility of the applicator. The potential for spray drift is controlled by the interaction of many equipment- and weather-related factors. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.

2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator must adhere to the following requirements when GoalTender is aerially applied:

1. Do not apply when the wind direction is not stable, when inversion conditions exist, or when wind velocity exceeds 10 mph.
2. When wind speeds are 5 mph or less, maintain a minimum downwind buffer zone of at least 1/2 mile from all crops and desirable vegetation, except the following:  
Maintain a minimum downwind buffer zone of:
  - 150 feet from dormant treefruit/nut/vine crops and overwintering sugar beets.
  - 650 feet from garlic, jojoba, legumes, onions, pastures, small grains, seedling sugar beets, and non-targeted vegetable fallow beds.
3. When wind speeds are between 5 and 10 mph, downwind buffer zones in excess of those listed above are suggested.
4. For upwind and side borders, maintain a minimum buffer zone of 150 feet from any non-targeted vegetable fallow bed, crop, or desirable vegetation.

The use of a drift control agent may be required by local regulations. However, the drift control agent may decrease the weed control effectiveness.

**Important:** Aerial applicators must be familiar with the label for GoalTender and follow all applicable use precautions. Applying GoalTender in a manner other

than specified in this label is done at the user's risk. Users are responsible for all loss or damage resulting from aerial spraying. In addition, aerial applicators should follow all applicable state and local regulations and ordinances. In interpreting the label and local regulations, the most restrictive limitations apply.

## Chemigation Instructions

Do not apply this product through any irrigation system unless the instructions for chemigation are followed. **Do not apply GoalTender through chemigation equipment unless chemigation is allowed by Crop-Specific Use Directions.**

Apply this product only through sprinkler (center pivot, solid set, portable lateral, or low-volume (micro-sprinkler)), drip (trickle), or flood (basin) irrigation systems. Refer to use directions for specific crops for instructions as to which type of irrigation system may be used. Do not apply this product through any other type of irrigation system.

- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

## Sprinkler Chemigation (Foliar Spray Uses)

For sprinkler irrigation, sufficient water should be applied at the beginning of the irrigation period to insure uniform wetting of the plant and/or soil surfaces. Meter GoalTender into the sprinkler irrigation system at a continuous uniform rate during the middle 1/3 of the irrigation period to allow for uniform distribution to target weeds and/or soil surface. Continue irrigation during the final 1/3 of the irrigation period to insure proper flushing of the irrigation system. During sprinkler irrigation,

sufficient water should be applied to insure water penetration to a depth of two inches.

**AVOID DRIFT: Extreme care must be exercised to prevent spray drift that could result in damage to other crops or desirable vegetation. Use the following guidelines when applications of GoalTender are made through sprinkler irrigation equipment:**

1. Do not apply when the wind direction is not stable, when inversion conditions exist, or when wind velocity exceeds 10 mph.
2. When wind speeds are 5 mph or less, maintain a minimum downwind buffer zone of at least 1/2 mile from all crops and desirable vegetation, except for the following:  
Maintain a minimum downwind buffer zone of:
  - 150 feet from dormant treefruit, dormant vines and overwintering sugar beets.
  - 650 feet from garlic, jojoba, legumes, onions, pastures, small grains, seedling sugar beets and vegetable fallow beds.
3. When wind speeds are between 5 and 10 mph, downwind buffer zones in excess of those listed above are suggested.
4. For upwind and side borders, maintain a minimum buffer zone of 150 feet from any vegetable fallow bed, crop, or desirable vegetation.

To apply a pesticide using sprinkler chemigation, the chemigation system must meet the following specifications:

- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch, which will stop

the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

## **Flood (Basin) Chemigation (Soil Drench Uses)**

GoalTender should be continuously metered into the water during the entire irrigation period. Agitation in the pesticide supply tank is suggested. Best weed control results from GoalTender applied through flood (basin) irrigation systems are obtained when a uniform distribution and flow of irrigation water is maintained over level land.

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain functional automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure

decreases to the point where pesticide distribution is adversely affected.

- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

## **Drip (Trickle) Chemigation (Soil Drench Uses)**

To achieve optimum distribution of GoalTender in the soil surface, meter GoalTender at a continuous uniform rate during the middle 1/3 of the irrigation period. For best results, GoalTender should be uniformly distributed across the wetted area to help reduce the "ring effect" of weed escapes. Continue irrigation during the final 1/3 of the irrigation period to insure proper flushing of the irrigation system.

To apply a pesticide using drip (trickle) chemigation, the chemigation system must meet the following specifications:

- The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pipe and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

## Chemigation Calibration: For Low-Volume Sprinklers (Micro-sprinklers) and Drip (Trickle) Irrigation Systems

Calculation of use rate is based on wetted area around emitters - NOT on grove acres. To determine correct amount of GoalTender, use the following formula:

1. Treated area per each emitter = A

$$A = 3.14 \times (\text{radius} \times \text{radius})$$

**Example:** If the average distance from emitter to perimeter of wetted area measured at the soil surface is 13 inches, then

$$A = 3.14 \times (13'' \times 13'')$$

$$A = 3.14 \times (169'')$$

$$A = 530.7 \text{ square inches}$$

2. The area in square feet wet in each acre = B

$$B = \frac{A \times \text{emitters/acre}}{144}$$

Example: If there are 300 emitters per acre, then  
 $B = \frac{530.7 \times 300}{144} = B = 1105.6 \text{ square feet wetted per acre}$

3. The total area (in square feet) wet by your system = C

$$C = B \times \text{acres covered by system}$$

**Example:** If the system covers 20 acres, then  
 $C = 1105.6 \text{ square feet per acre} \times 20 \text{ acres}$   
 $C = 22,112 \text{ square feet wetted by system}$

4. Amount of GoalTender to inject = S

Rate per treated acre of GoalTender = R

$$S = \frac{C \times R}{43,560} = \text{pints of GoalTender}$$

**Example:** If the desired application rate per treated acre is 1 quart of GoalTender, then

$$S = \frac{22,112 \times 1.0}{43,560} = S = 0.507 \text{ pints of GoalTender should be injected into system.}$$

**Note:** Select the proper rate based on weed spectrum and desired length of control (See **Rate Ranges** section below).

## Chemigation Systems Connected to Public Water Systems

If the chemigation system is connected to a public water supply, the following conditions must also be met:

- Public water systems means a system for the provision to the public of piped water for human

consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from a point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

## Mixing Directions

**Shake well before use.** Fill the spray tank at least one-third full of clean water. With the pump and agitator running, add the specified amount of herbicides to the spray tank. The order of addition to the spray tank should be (1) wettable powders, (2) flowables and (3) soluble liquids. Complete filling of the spray tank with water.

**Use of Surfactants:** For all applications of GoalTender where postemergence weed control is desired (**except garlic and onions**), add a minimum of 2 pints of 80% active nonionic surfactant (cleared for application to growing crops) per each 100 gallons of spray. The addition of 4 pints of nonionic surfactant is specified to enhance postemergence activity when hard water (greater than 600 ppm) is used. Maintain agitation until spraying is completed.

### Tank Mixing Precautions:

- Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.
- Do not exceed specified application rates. Do not tank mix this product with another pesticide that contains the same active ingredient as this product unless the label of either tank mix partner specifies the maximum dosages that may be used.

**Tank Mix Compatibility Testing:** A jar test is specified prior to tank mixing to ensure compatibility of this product and other pesticides. Use a clear glass quart jar with lid and mix the tank mix

ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, jels, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

**Sprayer Clean-up:** Thoroughly flush spray equipment (tank, pump, hoses and boom) with clean water before and after each use. Residues of GoalTender remaining in spray equipment may damage other crops. The addition of a non-ionic surfactant to equipment flushing waters at the rate of 1 quart per 100 gallons is specified to aid in removal of residues of GoalTender.

## Crop-Specific Use Directions

### Artichoke (Globe)

#### Post-Directed Spray Application

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 - 3	<b>Application Method:</b> Apply as a directed spray to the soil surface between the rows and at the base of artichoke plants in a minimum spray volume of 40 gallons per acre. <b>Timing to Crop:</b> Apply after completion of ditching operations. Separate applications of up to 2 pt/acre may be made 8 to 10 weeks apart or a single application of up to 3 pt/acre may be made. <b>Timing to Weeds:</b> Preemergence up to 8 leaf stage.
<b>Precautions:</b> <ul style="list-style-type: none"><li>• Do not apply over-the-top. Contact with direct spray or drift will cause injury to artichoke fronds or severe injury to buds or flowers.</li><li>• Application of GoalTender to artichoke plantings should be delayed a minimum of 60 days after cutting back or transplanting.</li></ul>		
<b>Restrictions:</b> <ul style="list-style-type: none"><li>• Do not apply more than 3 pints of GoalTender per acre per season as a result of a single application or multiple applications.</li><li>• <b>Preharvest Interval:</b> Do not apply within 5 days of harvest.</li></ul>		

#### Key Weeds Controlled

Preemergence		Postemergence	
cheeseweed (malva)	oxalis (bermuda buttercup) †	cheeseweed (malva)	oxalis (bermuda buttercup)
groundsel, common	shepherdspurse	groundsel, common	shepherdspurse
lambquarters, common	sowthistle, annual	mustard, common yellow	sowthistle, annual
mustard, common yellow		nettle, burning	

† Suppression

## Broccoli / Cabbage / Cauliflower

### Pre-Transplant (Preplant) Application for Preemergence Broadleaf Weed Control

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	0.5 - 1	<p><b>Pre-Transplant Application Only:</b> Apply broadcast to final seedbed prior to transplanting. Use lower rate in the rate range on coarse textured soils with less than 1% organic matter. Use the highest rate in the rate range on medium to fine textured soils or soils containing greater than 1% organic matter.</p> <p>Transplanting should be accomplished with minimal soil disturbance and soil left undisturbed during the time weed control is desired.</p>
<p><b>Precautions:</b></p> <ul style="list-style-type: none"> <li>• Pre-transplant applications may result in initial, but temporary, crop injury (leaf cupping or crinkling) and is enhanced if crop leaves come in direct contact with treated soil. Crop will rapidly outgrow this condition and develop normally. Severe crop injury may result if transplants are under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides or storage conditions. The use of transplants less than 5 weeks old or use of extremely succulent transplants grown in containers less than 1 inch square, may increase the severity of crop injury. Hardening off, increasing the age of transplants or increasing the size of the rooting containers will lessen the possibility and/or severity of potential crop injury.</li> <li>• GoalTender will assist in early season annual grass control, however, a herbicide program for preemergence or postemergence control of annual grasses is specified.  <b>Note:</b> Do not apply GoalTender if an acetanilide herbicide such as Dual Magnum herbicide, Lasso herbicide, or Ramrod herbicide has been applied to the field during the current growing season as severe crop injury may occur.</li> <li>• Do not apply GoalTender as a preemergence treatment to direct-seeded broccoli, cabbage or cauliflower.</li> <li>• Do not apply GoalTender post-transplant or over-the-top of broccoli, cabbage or cauliflower.</li> <li>• Applications to muck soils may result in partial weed control or suppression.</li> <li>• Furrow and drip irrigation immediately after transplanting and under high temperatures can result in increased crop injury. Sprinkler irrigation is specified during early establishment of transplants. If these conditions cannot be met, GoalTender herbicide should not be used.</li> </ul>		
<p><b>Crop-Specific Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Do not apply more than 1 pint of GoalTender per treated acre per season.</li> </ul>		

#### Key Weeds Controlled:

<b>Preemergence</b>			
carpetweed	pigweed, redroot	purslane, common	smartweed, Pennsylvania

## Cacao (Bearing And Nonbearing)

**(For Use Only in Hawaii)**

GoalTender may be applied as a pre-transplant treatment or to established or recently transplanted cacao.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	1 - 4	<p><b>Pre-transplant Application:</b> Up to 2 pints per broadcast acre may be applied as a pre-transplant application.</p> <p><b>Application to Established Plantings:</b> In established plantings, including recently transplanted cacao plants, apply as a directed spray to the orchard floor. Use higher rates in rate range and increase spray volume to control dense growth of existing weeds or for extended residual preemergence weed control.</p>
<p><b>Precautions:</b></p> <ul style="list-style-type: none"> <li>Do not apply preplant or preemergence to direct-seeded cacao.</li> <li>GoalTender should be applied to only healthy growing trees/transplants of suitable size to allow directed sprays. Avoid spray contact with foliage.</li> </ul>		
<p><b>Crop-Specific Restrictions:</b></p> <ul style="list-style-type: none"> <li>Do not apply more than 4 pints of GoalTender per acre as a single application or more than 12 pints per acre per year.</li> <li><b>Preharvest Interval:</b> Do not apply GoalTender within 1 day of harvest.</li> </ul>		

### Key Weeds Controlled

Preemergence		Postemergence	
ageratum buttonweed crotalaria	purslane, common spurge, garden	purslane, common	spurge, garden

## Citrus (Nonbearing)

Citrus, such as Calamondin, Chironja, Citrus Citron, Grapefruit, Kumquat, Lemon, Lime, Mandarin, Pummelo, Satsuma Mandarin, Sour Orange, Sweet Orange, Tangelo, Tangerine, Tangor

GoalTender may be applied only in non-bearing citrus orchards. Apply only as a directed spray to the orchard floor avoiding contact with citrus foliage.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	3	<p><b>Preemergence Weed Control:</b> Up to 3 pt/acre may be applied for residual preemergence weed control.</p> <p><b>Postemergence Weed Control:</b> The 3 pint/acre rate will control weeds up to 4 inches tall. Weeds greater than 4-leaf or 4 inches tall may be partially controlled. Use sufficient spray volume for complete and uniform coverage of weeds. Increase the spray volume with increased weed height and density to ensure complete coverage.</p>
Postemergence	1 - 3	



## Citrus (Nonbearing) (Cont.)

**Tank Mixing:** Refer to Mixing Directions section for Tank Mixing Precautions.

- **Preemergence Use:** For residual control of grass weeds, GoalTender may be tank mixed with grass herbicides labeled for use in citrus.
- **Postemergence Use:** For broader spectrum postemergence control of emerged grass and broadleaf weeds, GoalTender may be tank mixed with paraquat (Gramoxone herbicide) or glyphosate.

**Precautions:**

- Do not apply during periods of new citrus foliage growth. Applications should be made after foliage has fully expanded and hardened off. Avoid direct spray contact with citrus foliage.

**Crop-Specific Restrictions:**

- Apply GoalTender only to nonbearing citrus (trees that will not bear fruit for one year).
- Do not apply more than 3 pints (1.5 lbs ai) of GoalTender per acre per year as a result of a single or multiple applications.

### Key Weeds Controlled

(Arizona and California)		(Florida, Louisiana and Texas)	
Preemergence	Postemergence	Preemergence	Postemergence
burclover cheeseweed (malva) fiddleneck, coast filaree, broadleaf filaree, redstem filaree, whitestem groundsel, common henbit knotweed, prostrate lambsquarters, common lettuce, prickly pigweed, redroot purslane, common redmaids rocket, London shepherdspurse sowthistle, annual spurge, prostrate spurge, spotted	cheeseweed (malva) fiddleneck, coast filaree, broadleaf † filaree, redstem † filaree, whitestem † groundsel, common henbit minerslettuce nettle, burning pigweed, redroot redmaids shepherdspurse sowthistle, annual	cudweed, narrowleaf eveningprimrose, cutleaf †† groundcherry, cutleaf lambsquarters, common nightshade, American black nightshade, black pepperweed, Virginia pigweed, redroot poinsettia, wild pusley, florida sida, prickly (teaweed) smartweed, pennsylvania sowthistle, annual spurge, prostrate spurge, spotted	balsamapple cudweed, narrowleaf ††† eveningprimrose, cutleaf †† groundcherry, cutleaf groundcherry, Wright lambsquarters, common morningglory, annual nightshade, American black nightshade, black pepperweed, Virginia pigweed, redroot poinsettia, wild purslane, common pusley, florida sida, prickly (teaweed) smartweed, pennsylvania sowthistle, annual

† GoalTender at the 3 pt/acre will provide control of filaree and other weeds up to 4-inch stage. Applications to weeds beyond the 4-inch stage may result in partial control.

†† Highest rate and/or multiple applications may be required for acceptable control.

††† Maximum 0.5-inch diameter

## Clary Sage

Clary Sage (*Salvia sclarea*) Grown and Utilized in the Essence Industry  
(For Use Only in North Carolina)

Weed Control	Rate (pt/acre)	Specific Use Directions
Postemergence	0.25 – 0.5	GoalTender may be applied to established clary sage for control of henbit ( <i>Lamium amplexicaule</i> ) and other winter annual broadleaf weeds during the winter and spring season. Apply shortly after the first flush of henbit is in the 2- to 4-leaf stage of growth. Additional applications may be required to control subsequent weed flushes through the spring season. After treatment, henbit will stop growing and slowly die. Increase the spray volume if weed growth is dense.
<b>Precautions:</b> <ul style="list-style-type: none"><li>Clary sage may respond to the topical application of this product with some marginal leaf burn, but recovery is rapid.</li></ul>		
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"><li>Do not apply more than 3 pints per acre per year.</li></ul>		

## Coffee (Bearing And Nonbearing)

(For Use Only in Hawaii)

GoalTender may be applied to established coffee, recently transplanted coffee, or as a pre-transplant treatment. In established non-dormant coffee, apply as a directed spray avoiding contact with crop foliage. Newly established transplants should be healthy and well established and of sufficient size to allow use of directed sprays without contacting crop foliage.

GoalTender may be applied over-the-top of dormant coffee transplants. Transplants are considered to be dormant when active terminal growth has ceased and terminal buds have formed. Application over-the-top of coffee plants after buds start to swell (a sign that new growth has resumed) may result in crop injury.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	1 - 4	<b>Preemergence Weed Control:</b> <ul style="list-style-type: none"><li>Apply as a directed spray to the orchard floor beneath established coffee plants.</li><li>Up to 2 pints per acre may be applied as a pre-transplant application prior to transplanting coffee plants.</li></ul> <b>Postemergence Weed Control:</b> Increase the spray volume when weed growth is dense or trash is present; or use a higher rate within the rate range for extended residual preemergence weed control.
<b>Tank Mixing:</b> Refer to Mixing Directions section for Tank Mixing Precautions. Apply tank mixes only as a directed spray.		
<b>Precaution:</b> To prevent foliar injury, do not apply during periods of rapid new growth or allow spray or drift to contact actively growing foliage.		

## Coffee (Bearing And Nonbearing) (Cont.)

### Crop-Specific Restrictions:

- Do not apply preplant or preemergence to direct-seeded coffee.
- Do not apply more than 4 pints per broadcast acre of GoalTender in a single application or 12 pints per broadcast acre per year.
- **Preharvest Interval:** Do not apply GoalTender within one (1) day of harvest.

### Key Weeds Controlled:

Preemergence		Postemergence	
ageratum buttonweed crotalaria	purslane, common spurge, garden	purslane, common	spurge, garden

## Conifer Seedbeds, Transplants, Container Stock And Selected Field Grown Deciduous Trees

### General Use Precautions and Restrictions:

- Do not apply GoalTender in an enclosed greenhouse structure as injury to plant foliage may result.
- Do not store or transport treated container stock in an enclosed structure until completion of 4 irrigations (minimum 21 days) as injury to non-labeled plants may occur.
- Apply GoalTender only to healthy conifer stock. Do not apply GoalTender to conifers that are under stress from excessive fertilizer or soil salts, disease, nematodes, frost, drought, flooding, previously applied pesticides, soil insects, or winter injury, as severe injury may result.
- Do not graze or harvest livestock forage from treated areas.

**Key Weeds Controlled:** When GoalTender is applied preemergence or postemergence at specified dosages and weed stages.

barleygrass †  
bedstraw, catchweed  
bittercress, lesser  
bluegrass, annual †  
buckwheat, wild  
buckclover  
carpetweed

clover, red †  
clover, white †  
cocklebur, common  
crabgrass, large †  
fiddleneck, coast †  
filaree, broadleaf  
filaree, redstem

fireweed (from seed)  
flixweed  
foxtail, giant †  
goosegrass †  
groundcherry, cutleaf  
groundcherry, wright  
groundsel, common  
henbit  
jimsonweed  
knotweed, prostrate  
ladysthumb  
lambquarters, common  
lettuce, prickly  
mallow, little  
mayweed  
minerslettuce  
morningglory, ivyleaf †  
morningglory, tall †  
mustard, blue  
mustard, tumble  
mustard, wild  
nettle, burning  
nightshade, black  
nightshade, hairy  
oats, wild

orach, red  
pepperweed, yellowflower  
pigweed, prostrate  
pigweed, redroot  
pimpernel, scarlet  
purslane, common  
redmaids  
rocket, London  
sandspurry, red  
shepherdspurse †  
sida, prickly  
smartweed,  
    Pennsylvania  
sorrel, red (from seed)  
sowthistle, annual  
speedwell, birdseye  
spurge, prostrate ††  
spurge, spotted ††  
spurry, corn  
tansymustard  
thistle, bull ††  
thistle, Russian  
velvetleaf  
witchgrass  
woodsorrel, yellow ††

† Highest rate and/or multiple applications may be required for acceptable control.

†† Preemergence control only.

## Conifer Seedbeds

**Agricultural Use Requirements:** Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

GoalTender provides both postemergence and residual preemergence control of many broadleaf weeds and annual grass species.

Seeded conifers are tolerant to preemergence and postemergence applications of GoalTender. For weed control during the establishment of conifer seedlings, GoalTender can be applied after seeding of conifers, but prior to emergence. For weed control in emerged conifers, GoalTender may be applied over-the-top, but application should be delayed a minimum of 5 weeks after seedling emergence. If application is made during cool, cloudy weather, make certain that seedlings have hardened-off prior to spraying.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	0.5 - 2	<b>Application after planting, but prior to emergence of conifer seedlings:</b> Where grass weeds are present, apply 1 to 2 pints of GoalTender per acre. In known areas of high weed competition, apply 2 pints of GoalTender per acre. Broadcast to beds and irrigate with 1/2 to 3/4 inch of sprinkler irrigation before weed emergence. GoalTender is most effective on annual grasses when applied preemergence.
Postemergence	0.5 - 1	<b>Application after emergence of conifer seedlings:</b> Application should be made to seedling weeds less than 4 inches in height (seedling grasses not exceeding the 2-leaf stage). Depending on subsequent weed flushes, multiple applications may be necessary to achieve season-long weed control.
<b>Chemigation:</b> GoalTender may be applied at labeled rates through sprinkler irrigation systems. For center pivot irrigation systems, apply the specified dosage of GoalTender per acre metered at a continuous uniform rate during the entire irrigation period, otherwise meter GoalTender at a continuous uniform rate during the middle 1/3 of the irrigation period. When applying by sprinkler irrigation, follow directions given in the Chemigation Instructions section of this label.		
<b>Precautions:</b> <ul style="list-style-type: none"><li>• Occasionally spotting, crinkling, or flecking may appear on leaves of conifers. Leaves that receive direct spray or drift may be injured, but typically outgrow this condition rapidly and develop normally.</li></ul>		
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"><li>• Do not apply more than 4 pints of GoalTender per acre per year.</li></ul>		

### GoalTender may be applied to conifer seedbeds of the following species:

**Important:** When applied as directed, the conifer species listed on this label have shown tolerance to GoalTender. It is impossible, however, to evaluate this product on all varieties, biotypes and cultivars of listed species under all possible

growing conditions. Until familiar with results under local growing conditions, the user should exercise reasonable judgment and caution with this product. Limit application of this product to a few plants in a small area to determine plant tolerance and extent of injury if such occurs, prior to initiating large-scale applications.

## Conifer Seedbeds (Cont.)

<b>Douglas fir</b>	<i>Pseudotsuga menziesii</i>
<b>Fir</b>	Fraser ( <i>Abies fraseri</i> ) Grand ( <i>Abies grandis</i> ) Noble ( <i>Abies procera</i> )
<b>Hemlock</b>	Eastern hemlock ( <i>Tsuga canadensis</i> )
<b>Pine</b>	Austrian ( <i>Pinus nigra</i> ) Eastern White ( <i>Pinus strobus</i> ) Himalayan ( <i>Pinus wallichiana</i> ) Jack ( <i>Pinus banksiana</i> ) Loblolly ( <i>Pinus taeda</i> ) Lodgepole ( <i>Pinus contorta</i> ) Longleaf ( <i>Pinus palustris</i> ) Monterey ( <i>Pinus radiata</i> ) Mugo ( <i>Pinus mugo</i> ) Ponderosa ( <i>Pinus ponderosa</i> ) Scotch ( <i>Pinus sylvestris</i> ) Shortleaf ( <i>Pinus echinata</i> ) Slash ( <i>Pinus elliotii</i> ) Virginia ( <i>Pinus virginiana</i> )
<b>Spruce</b>	Blue ( <i>Picea pungens</i> ) Dwarf ( <i>Picea glauca Conica</i> ) Alberta ( <i>Picea abies</i> ) Norway ( <i>Picea sitchensis</i> )

## Conifer Transplants And Container Stock (Includes 2-0 Seedling And Christmas Tree Plantings)

**Agricultural Use Requirements:** Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Many container-grown conifers and conifer transplants are tolerant to preemergence and postemergence applications of GoalTender. Applied postemergence, GoalTender provides postemergence control of emerged weeds and preemergence residual control of many broadleaf weeds and grasses (see Key Weeds Controlled) at the beginning of this section.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 - 4	<b>Transplanted and Container Grown Conifers:</b> For best results, preemergence applications should be made immediately after transplanting seedlings or to weed-free container stock. Postemergence applications should be made to weeds less than 4 inches in height. Two applications may be necessary, in fall-transplanted conifer fields, for season-long weed control. The addition of a non-ionic surfactant (0.25% v/v) labeled for application to growing crops, enhances the activity of GoalTender on emerged weeds.
<b>Precautions:</b>		
<ul style="list-style-type: none"> <li>• Do not make over-the-top applications during periods of active conifer growth. Apply only before bud break or after new terminal growth has hardened off.</li> </ul>		
<b>Crop-Specific Restrictions:</b>		
<ul style="list-style-type: none"> <li>• Do not apply more than 4 pints of GoalTender per acre in a single application or more than 8 pints per acre per year.</li> </ul>		

## Conifer Transplants And Container Stock (Includes 2-0 Seedling And Christmas Tree Plantings) (Cont.)

In addition to those conifer species listed under the Conifer Seedbed section, the following conifer species have been shown to be tolerant to GoalTender:

<b>Arborvitae</b>	<i>Thuja occidentalis</i> <i>Thuja orientalis</i>
<b>Juniper</b>	<i>Juniperus chinensis</i> <i>Juniperus horizontalis</i> <i>Juniperus procumbens</i> <i>Juniperus sabina</i> <i>Juniperus scopulorum</i>
<b>Red cedar</b>	<i>Juniperus virginiana</i>
<b>Western Hemlock</b>	<i>Tsuga heterophylla</i>
<b>Yew</b>	<i>Taxus species</i>

### Selected Field-Grown Deciduous Trees

Listed field-grown deciduous trees are tolerant only to directed spray applications of GoalTender. GoalTender provides both preemergence and postemergence control of listed broadleaf weeds and grasses.

**Timing to Crop:** Apply GoalTender to established deciduous trees or after transplanting. For optimum weed control, applications should be made prior to weed germination. Apply only as a directed spray to soil beneath the trees.

<b>Weed Control</b>	<b>Rate (pt/acre)</b>	<b>Specific Use Directions</b>
Preemergence Early postemergence	1 - 3	GoalTender may be applied to established deciduous trees or after transplanting as a single or split application. Apply as a directed spray to the soil surface. Use of spray shields to reduce exposure of foliage and bark is specified. The addition of a non-ionic surfactant (0.25% v/v) labeled for application to growing crops, will enhance herbicidal activity on emerged weeds. <b>Spot Application:</b> Spot treatments at specified rates may be used to control localized weed infestations. See use directions for Spot Application in the Application Methods and Cultural Practices section.
<b>Tank Mixing:</b> For broader spectrum control, GoalTender may be tank mixed with other preemergence or postemergence herbicides registered for this use in deciduous trees. Refer to Mixing Directions section for Tank Mixing Precautions.		
<b>Precautions:</b>		
<ul style="list-style-type: none"> <li>For maximum crop safety, directed applications should be prior to budbreak in the spring or after trees have initiated dormancy in the fall. Avoid contact of spray or drift with foliage or stems with green bark. Application after bud swell may result in crop injury. If a non-dormant application is required due to weed competition, apply only after foliage has fully expanded and hardened off. Use only directed sprays and spray shields to prevent spray contact with stems with green bark or foliage.</li> <li>Do not apply GoalTender to trees that have been weakened or are under stress from excessive fertilizer or soil salts, disease, nematodes, frost, wind injury, drought, flooding, previously applied pesticides, insects, or winter injury as severe injury may result.</li> </ul>		

## Selected Field-Grown Deciduous Trees (Cont.)

### Crop-Specific Restrictions:

- Do not apply more than 3 pints of GoalTender per acre per year.
- Do not apply to bearing treefruit, nut and vine crops. For selected bearing treefruit, nut and vine crops, refer to Treefruit/Nut/Vine section of this label for use directions.
- Do not graze or feed livestock forage cut from areas treated with GoalTender.

### GoalTender may be applied to the following deciduous tree species:

Almond ††	<i>Prunus spp.</i>
Apple ††	<i>Malus X domestica</i>
Apricot ††	<i>Prunus spp.</i>
Ash, Green	<i>Fraxinus pennsylvanica</i>
Ash, White	<i>Fraxinus americana</i>
Birch, River	<i>Betula nigra</i>
Cherry ††	<i>Prunus spp.</i>
Chestnut ††	<i>Castanea spp.</i>
Crabapple ††	<i>Malus spp.</i>
Cottonwood	<i>Populus spp.</i>
Dogwood	<i>Cornus florida</i>
Eucalyptus	<i>Eucalyptus viminalis</i> <i>Eucalyptus pulverulenta</i> <i>Eucalyptus camaldulensis</i>
Filbert ††	<i>Corylus spp.</i>
Lilac	<i>Syringa vulgaris</i>
Locust, Black	<i>Robinia pseudoacacia</i>
Maple, Black †	<i>Acer nigrum</i>
Maple, Red †	<i>Acer rubrum</i>
Maple, Sugar †	<i>Acer saccharum</i>
Myrtle, Crepe	<i>Lagerstroemia indica</i>
Nectarine ††	<i>Prunus spp.</i>
Nut, Hickory ††	<i>Carya sp.</i>

Nut, Macadamia	<i>Macadamia ternifolia</i>
Oak, Chestnut	<i>Quercus prinus.</i>
Oak, Cherrybark	<i>Quercus pagoda</i>
Oak, Nutt All	<i>Quercus nuttallii</i>
Oak, Pin	<i>Quercus palustris</i>
Oak, Red	<i>Quercus. rubra</i>
Oak , Water	<i>Quercus nigra</i>
Oak, Willow	<i>Quercus phellos</i>
Olive, Russian	<i>Elaeagnus angustifolia</i>
Poplar	<i>Populus spp.</i>
Poplar, Tulip	<i>Liriodendron tulipifera</i>
Peach ††	<i>Prunus persica</i>
Pear ††	<i>Pyrus spp.</i>
Pecan ††	<i>Carya spp.</i>
Pistachio ††	<i>Pistacia vera</i>
Plum ††	<i>Prunus spp.</i>
Prune ††	<i>Prunus spp.</i>
Redbud	<i>Cercis canadensis</i>
Sweetgum	<i>Liquidambar styraciflua</i>
Sycamore	<i>Platanus occidentalis</i>
Walnut, Black ††	<i>Juglans nigra</i>

† Do not apply to maple trees used for production of maple sap or maple syrup.

†† Apply only to nonbearing trees. For bearing treefruit, nut and vine crops, refer to specific use directions in the Treefruit/Nut/Vine section of this label.

## Cotton

**Application Methods and Equipment:** GoalTender may be applied as a post-direct spray to cotton a minimum of 6 to 8 inches tall. Care must be exercised to avoid spray contact with the cotton leaves. Use rigid precision ground spray equipment and spray shields to prevent spray contact with cotton foliage. Use branch lifters or shields, as necessary, to avoid contact of directed sprays with cotton plant.

Accurate, placement of spray nozzles is essential for uniform coverage of weeds and to minimize injury to cotton plants. Use a minimum broadcast spray volume of 20 gallons per acre and operate the sprayer at the minimum spray pressure specified by the spray nozzle manufacturer. GoalTender may be applied as a post-direct spray with only 2 flat fan nozzles per row (1 nozzle on each side of the row). For optimum coverage, use 4 flat fan nozzles per row (2 nozzles on each side of the row). The 2 forward nozzles should point forward and downward while the rear nozzles

should point to the rear and downward. With either sprayer setup, nozzles should be carefully adjusted to cover the weed foliage with minimum contact to cotton plants. GoalTender may also be applied as a band application. **Do not use hollow cone nozzles.**

**Tank Mixing:** For control of additional broadleaf and grass weeds, GoalTender may be applied as a postemergence directed spray in tank mix combination with other herbicides registered for postemergence use in cotton (see Tank Mixing Precautions under Mixing Directions).

Weed Control	Rate (pt/acre)	Specific Use Directions
Postemergence	0.5 - 1	Apply as a post-directed spray. For optimum control, use the 1 pint per acre rate on actively growing weed seedlings with no more than 4 true leaves (not counting cotyledon leaves). Effective control of succulent weeds at the 2- to 3-leaf stage can usually be obtained at the 0.5 pint per acre rate. See Mixing Directions for surfactant recommendations. Where available, irrigation may be applied prior to application of GoalTender to encourage maximum weed emergence. Irrigation following application will improve preemergence activity of GoalTender against nightshade and groundcherry species.
<b>Precautions:</b>		
<ul style="list-style-type: none"> <li>Do not apply to cotton less than 6 inches tall or severe crop injury will result.</li> <li>Exercise care to avoid spray contact with cotton leaves. Leaves accidentally sprayed will exhibit necrotic (dead) spots and may be dropped from the plant. Crop injury may be enhanced if application is made when excessive soil moisture is present or rainfall occurs immediately after application, however, cotton will outgrow this condition and develop normally.</li> </ul>		
<b>Crop-Specific Restrictions:</b>		
<ul style="list-style-type: none"> <li><b>Western Cotton (AZ and CA):</b> Do not apply more than 1 pint (0.5 lb active) of GoalTender per acre in a single application, or more than a total of 2 pints (1.0 lb active) of GoalTender per broadcast acre per season as a result of multiple applications. Do not apply within 75 days of harvest.</li> <li><b>Southern Cotton (All other states):</b> Do not apply more than 1 pint (0.5 lb active) of GoalTender per acre of per season as a result of a single application or multiple applications. Do not apply within 90 days of harvest.</li> </ul>		

**Key Weeds Controlled:**

Postemergence			
cocklebur, common croton, tropic groundcherry, cutleaf groundcherry, Wright jimsonweed	lambsquarters, common morningglory, annual (up to 6 leaf) nightshade, American black	nightshade, black nightshade, hairy pigweed, redroot poinsettia, wild † purslane, common	sesbania, hemp sicklepod † † sida, prickly (teaweed) † smartweed, pennsylvania velvetleaf

† Multiple applications may be required for acceptable control.

†† Post-direct applications of GoalTender will control or suppress seedlings not exceeding the one true leaf stage.



## Cottonwood

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 - 3	GoalTender may be applied as a single or split application. Apply as a directed spray to soil at the base of cottonwood trees. Use the higher rate in the rate range for extended preemergence weed control or for postemergence control of weeds up to the 6 leaf stage. The addition of a non-ionic surfactant at 2 pints per 100 gallons of spray will enhance the postemergence activity of GoalTender on emerged weeds.
<b>Precautions:</b>		
<ul style="list-style-type: none"> <li>Apply GoalTender immediately after transplant only to dormant healthy cottonwood stock.</li> <li>In established stands, do not allow sprays of GoalTender to contact cottonwood foliage. In newly established cottonwood plantings, use spray shields, if necessary, to prevent exposure of green bark and foliage.</li> </ul>		
<b>Crop-Specific Restrictions:</b>		
Do not apply more than 3 pints per acre of GoalTender in a single application or more than 9 pints per acre per year.		

### Key Weeds Controlled:

groundsel, common knotweed, prostrate	lambsquarters, common mustard, hedge	shepherdspurse	smartweed, Pennsylvania
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## Eucalyptus

Apply GoalTender for preemergence and postemergence control of listed broadleaf weeds in established eucalyptus plantings.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 - 3	<b>Directed Spray:</b> GoalTender may be applied as a single or split application. Apply as a directed spray to soil at the base of eucalyptus trees. Use the higher rate in the rate range for extended preemergence weed control or for postemergence control of weeds up to the 6 leaf stage. The addition of a non-ionic surfactant at the rate of 2 pints per 100 gallons of spray, will enhance the postemergence activity of GoalTender on emerged weeds. <b>Over-the-Top Application:</b> In new plantings, apply GoalTender just before or immediately after transplanting eucalyptus seedlings that are in a dormant condition (i.e., leaves may be present, but terminal growth has hardened off and terminal buds have formed). In established plantings, GoalTender may be applied as an over-the-top spray when plants are in a dormant condition.

## Eucalyptus (Cont.)

### Precautions:

- At transplant, apply GoalTender only to healthy "dormant" healthy eucalyptus stock. In established plantings, use spray shields, if needed, to prevent exposure of foliage and bark of small and/or actively growing plants.
- To avoid phytotoxicity, make over-the-top applications only to eucalyptus trees in a dormant condition. Do not make over-the-top applications after bud break and resumption of active growth.

### Crop-Specific Restrictions:

- Do not apply more than 3 pints of GoalTender per acre in a single application or more than 9 pints per acre per year.

### Key Weeds Controlled:

Preemergence		Postemergence	
burclover	lambquarters, common	cheeseweed (malva)	pigweed, redroot
cheeseweed (malva)	lettuce, prickly	filaree, broadleaf †	redmaids
fiddleneck, coast	pigweed, redroot	filaree, redstem †	shepherdspurse
filaree, broadleaf	redmaids	filaree, whitestem †	sowthistle, annual
filaree, redstem	rocket, London	groundsel, common	
filaree, whitestem	shepherdspurse	henbit	
groundsel, common	sowthistle, annual	minerslettuce	
henbit	spurge, prostrate	nettle, burning	
knotweed, prostrate	spurge, spotted		

† At the 3-pint rate, GoalTender will provide control of filaree up to the 6-leaf stage.

## Use on Fallow Beds

### (Not for use prior to planting soybeans in California)

Used alone or in tank mix combination with glyphosate, GoalTender provides preemergence and/or postemergence control of winter annual broadleaf weeds on land to be planted to crops.

Prior to planting, treated fallow beds should be thoroughly tilled (incorporated) to a depth of at least 2.5 inches. GoalTender is no longer herbicidally effective once the active layer in the soil surface is disrupted by soil incorporation.

**Aerial Application:** GoalTender may be aerially applied for weed control in fallow beds. Follow requirements for Aerial Application in the Product Information section of this label.

### Minimum Treatment to Planting Intervals for listed crops:

	Minimum Treatment-to-Planting Interval	
	GoalTender (up to 0.5 pint/acre)	GoalTender (>0.5 to 1 pint/acre)
<b>Direct Seeded Crops</b>		
carrot	90 days	90 days
cotton	7 days	7 days
potato	60 days	60 days
sugar beet	60 days	90 days
other root/tuber crops	90 days	90 days

## Use on Fallow Beds (Cont.)

Direct Seeded Crops	Minimum Treatment-to-Planting Interval	
	GoalTender (up to 0.5 pint/acre)	GoalTender (>0.5 to 1 pint/acre)
onions	180 days	180 days
other bulb vegetables	180 days	180 days
cabbage	90 days	90 days
cauliflower	90 days	90 days
other brassica crops	120 day	120 days
lettuce	90 days	120 days
other leafy vegetables (except brassica crops)	120 days	120 days
pepper	90 days	120 days
tomato	60 days	120 days
other fruiting vegetables	120 days	120 days
cantaloupe	60 days	90 days
squash	90 days	120 days
watermelon	60 days	60 days
other cucurbits	90 days	120 days
dry beans	60 days	60 days
peanut	60 days	60 days
other legume vegetables	60 days	60 days
safflower	60 days	60 days
Soybeans (Except California)	7 days	7 days
cereal grains: Including barley, buckwheat, corn, proso millet, pearl millet, oats, popcorn, rice, rye, sorghum, triticale, wheat, and wild rice	10 months	10 months
cotton and soybean	(see specific labeling for fallow beds to be planted to cotton or soybeans)	

Transplanted Crops	Minimum Treatment-to-Planting Interval	
	GoalTender (up to 0.5 pint/acre)	GoalTender (>0.5 to 1 pint/acre)
celery	30 days	30 days
conifer	0 days	0 days
garlic	0 days	30 days
grape/kiwi	0 days	0 days
onion	0 days	30 days

## Use on Fallow Beds (Cont.)

Transplanted Crops	Minimum Treatment-to-Planting Interval	
	GoalTender (up to 0.5 pint/acre)	GoalTender (>0.5 to 1 pint/acre)
pepper	30 days	30 days
strawberries	30 days	30 days
tomato	30 days	30 days
treefruit/nut/citrus	0 days	0 days

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	0.5 - 1	<p>Use 20 or more gallons of spray volume per acre and increase spray volume for dense weed growth.</p> <p>Use the 0.5 pint per acre rate for up to 4 weeks of preemergence control and postemergence control of susceptible weeds up to 4-leaf stage. Use the 1 pint per acre rate for up to 8 weeks of preemergence control and postemergence control of susceptible weeds up to 6-leaf stage. Best preemergence control is achieved when irrigation or rainfall occurs within 3 or 4 weeks after application.</p> <p>A tank mix with glyphosate is specified if the treatment area contains dense weed populations, oversized weed seedlings, volunteer grains, annual grasses or under unfavorable environmental conditions.</p> <p><b>Outside of California:</b> For enhanced contact activity (burndown/suppression) tank mix 3.25 fl oz of GoalTender with the labeled rate of either glyphosate or paraquat (Gramoxone). Apply at the application rate and weed growth stages specified in the respective tank mix product label.</p>

### Precautions:

- **Failure to achieve thorough and complete incorporation, or to follow the specified treatment-planting interval, may result in stand reduction and/or vigor reduction of the planted crop.**
- Crop injury may be enhanced if newly seeded crops or transplants are under stress due to drought, flooding, excessive fertilizer or soil salts, low soil temperatures, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects or diseases.
- **Exercise extreme care to avoid herbicide contact with any desirable dormant or non-dormant crop, plant, tree or vegetation as severe injury may result.**

### Crop-Specific Restrictions:

- Do not apply more than 1 pint of GoalTender per acre per fallow season.

## Use on Fallow Beds (Cont.)

**Key Weeds Controlled:** GoalTender provides preemergence and postemergence control of the following weeds on fallow beds: †

buttercup, smallflower cheeseweed (malva) eveningprimrose, cutleaf †† fiddleneck, coast filaree, broadleaf	filaree, redstem geranium, Carolina groundcherry, cutleaf groundsel, common henbit ladysthumb	minerslettuce mustard species nettle, burning oxalis pigweed, redroot purslane, common	redmaids rocket, London shepherdspurse sida, prickly sowthistle, annual velvetleaf (wild cotton)
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† Thorough spray coverage is essential to maximize the postemergence activity of GoalTender. For postemergence control when applied by air, a tank mixture of GoalTender with either glyphosate or paraquat (Gramoxone) is specified.

†† Requires maximum rate and/or multiple applications for effective control.

### **Fallow bed use prior to transplanting peppers or strawberries grown in plastic culture**

GoalTender herbicide may be applied broadcast or banded as a fallow bed application to pre-formed beds prior to transplanting peppers or strawberries grown in plastic culture. The GoalTender use rate is up to 1 pint per broadcast acre. It is recommended that soil moisture be used to activate GoalTender soon after application. This can be done by sprinkler irrigation with approximately 1/2 inch of sprinkler irrigation and then applying the plastic any time during the 30-day treatment to planting interval. Or, if there is adequate existing soil moisture, apply plastic to the beds as soon as possible after application and allow the moisture which condenses and accumulates beneath the plastic to thoroughly wet the treated soil.

Mechanical incorporation of the fallow-bed treatment prior to laying plastic is not required. Not disturbing the soil may allow for extended weed control. Not incorporating increases the potential for crop injury, especially under wet conditions. Therefore, the treatment should be incorporated if the risk of crop injury is not acceptable. The minimum treatment to planting interval is 30 days.

## Garbanzo Beans

(For Use Only in Arizona and California)

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	0.5	Apply after planting but prior to weed or crop emergence as a single broadcast application using a spray volume of 20 or more gallons of water per acre.
<b>Precautions:</b>		
<ul style="list-style-type: none"> <li>• Garbanzo beans are tolerant to preemergence application of GoalTender, however, under certain conditions, severe but temporary crop injury may occur. A heavy splashing rain shortly after crop emergence or wet soil conditions during early growth stages can cause leaf cupping, crinkling, stunting or defoliation of the garbanzo seedlings. Injury, when it occurs, is usually limited to the first few leaves that develop after plants emerge from the soil. Delays in crop development and/or maturity may result, but Garbanzo beans do recover with little to no impact on yield.</li> </ul>		
<b>Crop-Specific Restrictions:</b>		
<ul style="list-style-type: none"> <li>• Do not apply more than 0.5 pint per acre of GoalTender in a single application.</li> <li>• Do not use bean vines for livestock feed or hay.</li> <li>• Maximum total application rate per year is 1.5 lbs ai/A</li> </ul>		

## Garbanzo Beans (Cont.)

### Key Weeds Controlled:

Preemergence			
groundsel, common	mallow, little	rocket, London	shepherdspurse

## Garlic

**Agricultural Use Requirements:** Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

For optimum preemergence weed control, the soil surface should be smooth and free of excessive trash (clippings, plant residues, etc.). Following application, cultural practices which result in redistribution or disturbance of the soil surface or move untreated soil into treated areas will reduce weed control.

Direct Seeded Garlic (Postemergence Application):		
Weed Control	Rate (per acre)	Specific Use Directions
Postemergence	1 - 2 fl oz	<b>Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:</b> Apply GoalTender at 1 to 2 fl oz per acre to direct seeded garlic that has at least 3 fully developed true leaves using ground equipment. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. Multiple treatments at 1 to 2 fl oz per acre may be applied up to a maximum of 1 pint (16 fl oz) per acre pre use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. Application to weeds at later than the 4 leaf growth stage may result in reduced weed control.
Postemergence	0.25 – 0.5 pt	<b>Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Texas, Utah and Washington:</b> Apply GoalTender at 0.25 to 0.5 pt per acre to seeded garlic that has at least 2 fully developed true leaves using ground equipment. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. Multiple treatments at 0.25 to 0.5 pt per acre may be applied up to a maximum of 1.25 pints per acre pre use season. For optimum postemergence weed control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. Application to weeds at later than the 4 leaf growth stage may result in reduced weed control.

## Garlic (Cont.)

Direct Seeded Garlic (Postemergence Application):		
Weed Control	Rate (per acre)	Specific Use Directions
Postemergence	0.25 pt	<b>All Other States:</b> Apply GoalTender at 0.25 pt per acre to direct seeded garlic that has at least 2 fully developed true leaves using ground equipment. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. Multiple treatments at 0.25 pt per acre may be applied up to a maximum of 1 pint per acre pre use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. Application to weeds at later than the 4 leaf growth stage may result in reduced weed control.

Direct Seeded Garlic (California Only)		
Weed Control	Rate (per/acre)	Specific Use Directions
Preemergence Postemergence	0.5 pt	<p><b>Application after planting but prior to garlic emergence:</b> Apply GoalTender after planting, but prior to crop emergence, for preemergence control of listed broadleaf and grass weeds using ground, air or sprinkler irrigation (chemigation).</p> <p><b>Aerial application:</b> Apply in a minimum spray volume of 10 gallons per acre. Follow Aerial Application instructions and precautions in the Product Information section of this label.</p> <p><b>Postemergence directed application:</b> Apply GoalTender as a directed spray to garlic that is at least 12 inches tall. Accurate, uniform placement of directed postemergence sprays is essential for effective weed control and to minimize injury to garlic plants. Use low-pressure sprays and a minimum spray volume of 20 gallons per acre. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing. Application to weeds at later than the 4 leaf growth stage may result in reduced weed control.</p> <p><b>Sprinkler irrigation (portable lateral or solid set) preemergence or postemergence:</b> Apply GoalTender at the specified broadcast application rate using sufficient irrigation to wet soil to a depth of 2 inches. Apply after planting but prior to garlic emergence or postemergence when garlic is at least 12 inches tall. Follow the application directions and precautions for "Sprinkler Chemigation" given in the Chemigation section of this label.</p>

## Garlic (Cont.)

### Direct Seeded Garlic (California Only)

#### Precautions:

- **Garlic Response to Preemergence Applications of GoalTender:** Following a preemergence application of GoalTender, a chlorotic band around some of the leaves may be observed after the first irrigation (or rainfall) following garlic emergence.
- **Garlic Response to Post-direct Applications of GoalTender:** Post-direct applications may cause chlorotic leaf banding, necrotic lesions, or stunting of the garlic plants. Symptoms will be more severe if applications are made during cool, wet, overcast, or foggy weather. Garlic will typically outgrow these conditions. A delay in crop development, maturity, reduced yields, or quality may result

### Transplanted Garlic: Postemergence Application Immediately after Planting

Weed Control	Rate (per/acre)	Specific Use Directions
Preemergence Postemergence	up to 1 pt	<b>All States except Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:</b> Transplanted garlic is most tolerant of a postemergence application immediately after transplanting. An application of up to 1 pint per acre may be made within two days after transplanting. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area. If less than 1 pint per acre is applied, a second application can be made two weeks or more after transplanting. Do not exceed the maximum use rate of 1 pint per acre of GoalTender per season as a result of multiple applications.
Preemergence Postemergence	1 - 2 fl oz	<b>Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:</b> Multiple treatments at 1 to 2 fl oz per acre may be applied up to a maximum of 1 pint (16 fl oz) per acre pre use season. Adjust nozzles for minimum spray contact with garlic plants, directing the spray to the soil at the base of garlic plants and adjacent bed top and furrow area.

#### Key Weeds Controlled:

canarygrass (annual) eveningprimrose, cutleaf groundsel, common mallow, little (malva)	nightshade, black pigweed, prostrate † pigweed, redroot †	puncturevine purslane, common † rocket, London sage, lanceleaf	shepherdspurse † sowthistle, annual
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† Key weeds controlled at specified rates in Northeastern States.

#### Garlic - Crop-Specific Precaution (Postemergence Application):

- Postemergence applications of GoalTender may cause chlorotic leaf banding, necrotic lesions, or stunting of the garlic plants. Symptoms may be more severe if garlic emerged under cool, wet, overcast, or foggy weather. These conditions are temporary and should not affect the vigor or development of garlic plants.



## Garlic (Cont.)

### Crop-Specific Restrictions (Applicable to All Methods of Application):

- In all states **except** Northeastern states, do not apply until **direct seeded** garlic plants have two fully developed true leaves. In the Northeastern states, do not apply until direct seeded garlic plants have three fully developed true leaves. Application made prior to the specified growth stage may result in serious crop injury.
- Do not apply more than a total of 1 pint per acre of GoalTender per use season as a result of multiple applications.
- Do not apply within 60 days of harvest.
- In direct seeded garlic (except in California), do not apply GoalTender as a preemergence treatment.
- Use only on dry bulb garlic.
- Do not apply to garlic grown for seed.
- For weed control in garlic, do not mix GoalTender with oils, surfactants, liquid fertilizers or pesticides except as specified on approved Dow AgroSciences Supplemental Labeling.
- Do not apply to garlic plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects, nematodes or diseases.

## Guava (Bearing and Non-Bearing)

(For Use Only in Hawaii)

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	2.5 - 4	<b>Preemergence or Postemergence:</b> In established guava plantings, apply preemergence or postemergence to weeds. Increase the spray volume to ensure adequate coverage in high densities of emerged weeds or heavy trash. Minimize contact with guava plants by directing the spray to the soil surface. Spray shields are suggested to minimize spray contact in young plantings. For broader spectrum postemergence control of grass and broadleaf weeds, GoalTender may be applied in tank mix combination with paraquat (Gramoxone) or glyphosate. Follow applicable use directions, precautions and limitations on the labels of the respective tank mix products.
Postemergence	1 - 4	

### Precautions:

- Prevent direct spray or drift from contacting green stems, fruit or foliage, as injury may result.
- Alone or in tank mix combination, GoalTender should be applied to only healthy growing trees.
- Application of GoalTender should be made only after new foliage growth has hardened off.

### Crop-Specific Restrictions:

- Do not apply more than 4 pints per acre of GoalTender in a single application or more than 8 pints per season.
- Do not apply GoalTender within 1 day of harvest.

## Guava (Bearing and Non-Bearing (Cont.))

### Key Weeds Controlled:

Preemergence		Postemergence	
ageratum buttonweed crotonaria	purslane, common spurge, garden	purslane, common	spurge, garden

## Horseradish

**Agricultural Use Requirements:** Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	1	Apply GoalTender after the horseradish roots have been planted but prior to emergence of new horseradish leaves. Emerged leaves that receive direct or indirect spray (drift) contact will be injured. If necessary, cultivate before application to destroy germinated weeds.
<p><b>Precautions:</b></p> <ul style="list-style-type: none"> <li>• Do not apply GoalTender to horseradish plantings that have been weakened or stressed due to unfavorable temperature conditions, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.</li> </ul>		
<p><b>Crop-Specific Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Do not apply more than 1 pint of GoalTender per acre per crop.</li> </ul>		

### Key Weeds Controlled:

lambquarters, common pigweed, redroot	purslane, common	shepherdspurge	smartweed, pennsylvania
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## Jojoba

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 - 3	Initial application may be made when jojoba plants have reached a height of 6 inches or more. Use sufficient spray volume to ensure thorough coverage of dense weed growth. Sprays should be directed to the base of jojoba plants to avoid possible phytotoxicity to foliage. Spray shields are suggested for use in young plantings. Use higher rate in rate range for extended residual preemergence weed control. Make follow-up applications as necessary to maintain weed control. For early postemergence control of susceptible seedling weeds (less than 8 inches tall) apply GoalTender at the rate of 2 pints per acre. GoalTender may be applied at the rate of 3 pints per acre for postemergence control of weeds up to 12 inches tall. For optimum residual control, apply during the fall or winter months. Control may be unsatisfactory for weeds greater than 12 inches tall.
<b>Precautions:</b>		
<ul style="list-style-type: none"> <li>• Avoid direct spray or drift contact with jojoba flowers or buds as severe injury may result.</li> <li>• Over-the-top applications may cause burning, crinkling or bronzing of jojoba foliage, particularly to the youngest leaves, flowers, or buds present at the time of application.</li> </ul>		
<b>Crop-Specific Restrictions:</b>		
<ul style="list-style-type: none"> <li>• Do not apply more than 3 pints per acre per year.</li> </ul>		

### Key Weeds Controlled:

Preemergence		Postemergence	
burclover	lettuce, prickly	fiddleneck, coast	nettle, burning
fiddleneck, coast	mallow, little (malva,	filaree, broadleaf ††	pigweed, redroot †
filaree, broadleaf	cheeseweed)	filaree, redstem ††	redmaids
filaree, redstem	pigweed, redroot	filaree, whitestem ††	shepherdspurse
filaree, whitestem	purslane, common	groundsel, common †	sowthistle, annual
groundsel, common	redmaids	henbit	
henbit	rocket, London	mallow, little (malva,	
knotweed, prostrate	shepherdspurse	cheeseweed)	
lambsquarters, common	sowthistle, annual	minerslettuce	

† Highest rate may be required for acceptable postemergence control.

†† GoalTender at the 3-pint rate will provide control of filaree not exceeding the 4-inch stage. Applications to filaree beyond the 4-inch stage may result in partial control.

## Mint (Spearmint and Peppermint)

### Mint (Spearmint and Peppermint) Grown on Mineral Soils

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 - 3	<p><b>Oregon and Washington (East of Cascades), California, Montana, Idaho, Nevada, South Dakota and Utah:</b> Apply from December through March when mint is dormant.</p> <p>When used postemergence (to weeds), add an 80% active ingredient nonionic surfactant at the rate of one quart per 100 gallons of spray volume and apply before weeds exceed a height of 4 inches.</p> <p>Late winter applications will provide maximum activity on summer weeds, but summer grass control may be inconsistent. For best results, fall-plowed fields should be harrowed to provide a smooth surface for application. In furrow-irrigated fields, corrugating must be done prior to application. Corrugating or harrowing will result in disturbance of treated soil or movement of untreated soil into treated areas, resulting in poor weed control.</p>
Preemergence	1 - 1.5	<p><b>Peppermint (Western Oregon Willamette Valley):</b> Apply GoalTender from November through February to dormant peppermint only. Treatments in January or February generally provide better residual preemergence control of annual broadleaf weeds. Full season weed control should not be expected from this treatment.</p>

#### Precautions:

- Application must be made prior to emergence of new spring growth or severe crop injury may result.
- **In the Willamette valley, do not apply GoalTender to mint that has been plowed.**
- Apply GoalTender only to healthy stands of spearmint and peppermint. Do not apply to spearmint or peppermint weakened by disease, drought, flooding, excessive fertilizer, soil salts, previously applied pesticides, nematodes, insects, or winter injury, as severe injury may result.

#### Crop-Specific Restrictions:

- Do not make more than one application of GoalTender per season.

#### Key Weeds Controlled:

bedstraw, catchweed † bluegrass, annual flixweed groundsel, common lambquarters, common	lettuce, prickly (china lettuce) mustard, blue (purple mustard) mustard, tumble (Jim hill mustard) nightshade, hairy	† oats, wild orach, red pepperweed, yellowflower pigweed, redroot	† ryegrass, Italian shepherdspurse sowthistle, annual tansymustard thistle, Russian
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† Control of annual grasses is best obtained when GoalTender is applied prior to emergence. Postemergence control of winter annual grasses is generally unsatisfactory if applications are made after the 1 to 2-leaf stage.

## Mint (Spearmint and Peppermint) (Cont.)

**Mint (Spearmint and Peppermint) Grown on Muck Soils: For Use Only on Mint Grown in Indiana, Michigan, Montana, North Dakota, South Dakota, and Wisconsin**

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 - 3	<p><b>Note:</b> Use directions in this section apply only to spearmint and peppermint grown on muck soils (organic matter content of 20% or greater).</p> <p>When used postemergence (to weeds), add an 80% active ingredient nonionic surfactant at the rate of one quart per 100 gallons of spray volume and apply before weeds exceed a height of 4 inches.</p>
<p><b>Precautions:</b></p> <ul style="list-style-type: none"> <li>• Application must be made prior to emergence of new spring growth or severe crop injury may result.</li> <li>• To avoid excessive crop injury, do not apply within 4 days of planting (sprigging) spearmint or peppermint.</li> <li>• Apply GoalTender only to healthy spearmint or peppermint. Do not apply to spearmint or peppermint that has been weakened by disease, nematodes, soil insects, or winter injury, as severe injury may result.</li> </ul>		
<p><b>Crop-Specific Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Do not make more than one application of GoalTender per season.</li> </ul>		

### Key Weeds Controlled

Knotweed, prostrate	pigweed, redroot	purslane, common
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## Non-Crop Use

**(Non-Food-Producing, Non-Cultivated Agricultural or Non-Agricultural Areas, such as Highway and Utility Rights-of-Way, Industrial Sites, Tank Farms, Storage Areas, Airports, Fencerows, and Farmsteads)**

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	2.5 - 4	<b>Preemergence:</b> Use higher rate in rate range for longer residual control.
Postemergence	1 - 4	<b>Postemergence:</b> Use the lower rate in the rate range for control of susceptible weeds in the early postemergence stage, less than 4 inches tall. Use the higher rate for weeds up to 12 inches tall. Application to weeds beyond the 4-inch stage may result in partial control.

## Non-Crop Use (Cont.)

**Tank Mixing:** Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.

- **Preemergence:** For broader-spectrum residual preemergence weed control, GoalTender may be applied in tank mix combination diuron (Karmex) or simazine.
- **Postemergence:** For additional postemergence control of susceptible grass and broadleaf weeds, GoalTender may be applied in tank mix combination with paraquat (Gramoxone) or glyphosate.

**Site-Specific Restrictions:**

- Do not feed or allow animals to graze on any areas treated with GoalTender.
- Do not apply more than 4 pints per acre in a single application.

### Key Weeds Controlled:

Preemergence		Postemergence	
burclover	lambsquarters,	cheeseweed (malva)	pigweed, redroot
cheeseweed (malva)	common lettuce, prickly	fiddleneck, coast	purslane, common
fiddleneck, coast	pigweed, redroot	filaree, broadleaf	redmaids
filaree, broadleaf	purslane, common	filaree, redstem	shepherdspurse
filaree, redstem	redmaids	groundsel, common	sowthistle, annual
groundsel, common	rocket, London	henbit	
henbit	shepherdspurse	minerslettuce	
knottweed, prostrate	sowthistle, annual	nettle, burning	

## Onions

**Agricultural Use Requirements:** Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

For optimum preemergence weed control, the soil surface should be smooth and free of excessive trash (clippings, plant residues, etc.). Following application, cultural practices which result in redistribution or disturbance of the soil surface or move untreated soil into treated areas will reduce weed control.

## Onions (Cont.)

<b>Direct Seeded Onions: Postemergence Application</b>		
<b>Weed Control</b>	<b>Rate (per acre)</b>	<b>Specific Use Directions</b>
Postemergence	1 - 2 fl oz	<b>Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:</b> Apply GoalTender at 1 to 2 fl oz per acre to direct seeded onions that have at least 3 fully developed true leaves using ground equipment. Multiple treatments at 1 to 2 fl oz per acre may be applied up to a maximum of 1 pint (16 fl oz) per acre pre use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing.
Postemergence	0.25 – 0.5 pt	<b>Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Texas, Utah and Washington:</b> Apply GoalTender at 0.25 to 0.5 pt per acre to direct seeded onions that have at least 2 fully developed true leaves using ground equipment. Multiple treatments at 0.25 to 0.5 pt per acre may be applied up to a maximum of 1.25 pints per acre pre use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing.
Postemergence	0.25 pt	<b>All other states:</b> Apply GoalTender at 0.25 pt per acre to direct seeded onions that have at least 2 fully developed true leaves, using ground equipment. Multiple treatments at 0.25 pt per acre may be applied up to a maximum of 1 pint per acre per use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4 leaf stage and actively growing.
Postemergence	(see above)	<b>Sprinkler Irrigation - all except northeastern states (center pivot, portable lateral or solid set):</b> Apply GoalTender at the specified broadcast application rate using sufficient irrigation to wet soil to a depth of 2 inches. Follow the application directions and precautions for "Sprinkler Chemigation" given in the Chemigation section of this label.

## Onions (Cont.)

Transplanted Onions: Application Immediately before Planting		
Weed Control	Rate (per/acre)	Specific Use Directions
Preemergence Postemergence	0.5 - 1 pt	<b>pre-transplant application (not for use in northeastern states or western states:</b> GoalTender may be applied as a broadcast or band application after completion of tillage operations, but before transplanting of onion plants. Transplanting should be accomplished with a minimum of soil disturbance. For optimum weed control, soil surfaces should be left undisturbed after transplanting for the period for which weed control is desired. However, timely cultivation after weed emergence will assist in weed control. If less than 1 pt per acre was applied as a pre-transplant application, postemergence applications may be made as instructed for seeded onions. Do not exceed the maximum use rate of 1 pt per acre per use season as a result of multiple applications.

Transplanted Onions: Application Immediately after Planting		
Application Timing for Target Weeds	Rate (per/acre)	Specific Use Directions
Preemergence	up to 1 pt	<b>All states except northeastern states:</b> transplanted onions are most tolerant of a postemergence application immediately after transplanting. An application of up to 1 pint per acre may be made within two days after transplanting. If less than 1 pint per acre is applied, a second application can be made two weeks or more after transplanting. Do not exceed the maximum use rate of 1 pint per acre of GoalTender per season as a result of multiple applications.
Preemergence	1 - 2 fl oz	<b>Northeastern states including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:</b> Multiple treatments at 1 to 3 fl oz per acre may be applied up to a maximum of 1 pint (16 fl oz) per acre pre use season.



## Onions (Cont.)

### Onions - Use Precautions (applicable to all areas and methods of application):

- GoalTender can cause necrotic lesions, twisting, pigtalling or stunting of the onion plants. Injury will be more severe if applications are made immediately following or during cool, wet weather and/or if applications are made prior to the specified onion growth stage of the onion plants as specified in Specific Use Directions.
- Do not apply to onion plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects, nematodes or diseases.

### Onions - Crop-Specific Restrictions (applicable to all areas and methods of application):

- In all states **except** Northeastern states, do not apply until **direct seeded** onion plants have at least two fully developed true leaves. In the Northeastern states, do not apply until direct seeded onion plants have at least three fully developed true leaves. Application made prior to the specified growth stage may result in serious crop injury.
- Do not apply more than a total of 1 pint per acre of GoalTender per use season as a result of multiple applications.
- Do not apply within 45 days of harvest.
- Do not apply GoalTender as a preemergence treatment to direct seeded onions.
- Use only on dry bulb onions.
- Do not apply to onions grown for seed, except as instructed in separate use directions.
- Tank mixtures of GoalTender herbicide with oils, surfactants, liquid fertilizers or other pesticides may be made but could result in enhanced crop response/injury and are the responsibility of the user.

### Key Weeds Controlled:

#### Postemergence

canarygrass (annual) eveningprimrose, cutleaf <sup>(a)</sup> groundsel, common	mallow, little (malva) nightshade, black pigweed, prostrate <sup>(b)</sup> pigweed, redroot <sup>(a, b)</sup>	puncturevine purslane, common <sup>(a, b)</sup> rocket, London sage, lanceleaf	shepherdspurse <sup>(b)</sup> sowthistle, annual
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<sup>a</sup> Weeds controlled when applied as a pre-transplant application. In addition, GoalTender at the rate of 0.5 to 1 pint per acre will provide control/suppression of carpetweed, Pennsylvania smartweed, galinsoga, common lambsquarters, and wild mustard. Applications of GoalTender to muck soils may result in partial control or suppression of the weeds listed.

<sup>b</sup> Specific weeds controlled at rates specified for use in northeastern states (see DOSAGE section).

## Onions Grown for Seed

**Agricultural Use Requirements:** Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

- Coveralls
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Weed Control	Rate (per/acre)	Specific Use Directions
Preemergence	1 fl oz	<p><b>Northeastern States including Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont:</b> Multiple treatments at 1 fl oz per acre may be applied up to a maximum of 1 pint (16 fl oz) per acre pre use season. Prior to initial treatment, seeded onions must have <i>at least four (4) true leaves</i>. Multiple treatments at the aforementioned rate may be applied.</p>
Preemergence	up to 0.25 pt	<p><b>All other States:</b> Apply GoalTender at up to 0.25 pt per acre to seeded onions that have <i>at least three (3) true leaves</i>. Multiple treatments at 0.25 pt per acre may be applied up to a maximum of 1 pint per acre pre use season. For optimum postemergence control, apply when susceptible weeds are in the 2 to 4-leaf stage and actively growing.</p> <p><b>Sprinkler Irrigation - Portable Lateral or Solid Set:</b> Apply GoalTender at the specified broadcast application rate using sufficient irrigation to wet soil to a depth of 2 inches. Follow the application directions and precautions for "Sprinkler Chemigation" given in the Chemigation section of this label.</p>
<p><b>Use Precautions:</b></p> <ul style="list-style-type: none"> <li>• <b>Notice:</b> Some varieties or inbred lines of onions may be more susceptible to GoalTender. Care should be taken to insure that the particular onion variety or line being grown is tolerant to GoalTender. It is suggested that all onion varieties or lines be tested in limited areas to ensure an adequate level of crop tolerance prior to an application for postemergence weed control.</li> <li>• GoalTender can cause necrotic lesions, twisting, pigtailing or stunting of the onion plants. Injury will be more severe if applications are made immediately following or during cool, wet weather and/or if applications are made prior to the specified onion growth stage of the onion plants as specified in Specific Use Directions.</li> <li>• Do not apply to onion plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, wind injury, hail, frost damage, injury from previously applied pesticides, or injury due to insects or diseases.</li> </ul>		
<p><b>Crop-Specific Restrictions:</b></p> <ul style="list-style-type: none"> <li>• In all states, do not apply GoalTender until the onions have reached the minimum leaf stage specified. Application prior to the specified stage of development may result in serious injury.</li> <li>• Do not apply more than a total of 1 pint per acre of GoalTender during one use season.</li> <li>• Do not apply within 60 days of harvest.</li> <li>• For seeded onions, do not apply GoalTender with oils, surfactants, liquid fertilizers or other pesticides except as specified in approved Dow AgroSciences Supplemental Labeling.</li> </ul>		

## Onions Grown for Seed (Cont.)

### Key Weeds Controlled:

Postemergence			
canarygrass (annual) eveningprimrose, cutleaf groundsel, common mallow, little (malva)	nightshade, black pigweed, prostrate † pigweed, redroot † puncturevine	purslane, common † rocket, London sage, lanceleaf	shepherdspurse sowthistle, annual

† Specific weeds controlled at rates specified for use in northeastern states (see DOSAGE section).

## Papaya

### (For Use Only in Hawaii)

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2	The initial application should occur no sooner than 4 months after transplanting or 6 months after direct seeding, and after the papaya has reached a minimum height of 4 feet. Applications may be repeated at approximate 4-month intervals. Apply preemergence or postemergence to weeds. Increase the spray volume to assure adequate coverage of dense growth of emerged weeds. GoalTender must be applied as a directed spray to the orchard floor beneath the papaya plants. Accurate, uniform placement of GoalTender is essential for effective weed control and to minimize crop injury. GoalTender must be applied using rigid precision ground sprayer equipment. Postemergence applications may be made up to the 4 leaf stage of weed growth.
<b>Precautions:</b>		
<ul style="list-style-type: none"> <li>• Do not allow the herbicide solution, spray, drift or mist to contact green bark, stems, fruit or foliage as injury may result.</li> <li>• Do not use GoalTender on papaya plantings that are weak, or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.</li> </ul>		
<b>Crop-Specific Restrictions:</b>		
<ul style="list-style-type: none"> <li>• Do not apply more than 2 pints of GoalTender per broadcast acre in a single directed spray or more than 6 pints per broadcast acre per year as a result of multiple applications.</li> <li>• Do not apply GoalTender within 1 day of harvest.</li> </ul>		

### Key Weeds Controlled:

amaranth, spiny	purslane, common	spurge, garden
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## Taro

### (For Use Only in Hawaii)

For use only to dryland taro grown in Hawaii. Dryland taro is defined as taro grown without irrigation, or by using irrigation practices that do not result in run-off, irrigation return flow, or other loss of irrigation water from the production area. If irrigation is used, the water applied shall not exceed the field capacity of the soil.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	1	<b>Preemergence to Taro and Weeds:</b> A single application of GoalTender at the rate of 2 pints per acre may be applied within 1 week after transplanting but prior to emergence of taro plants.
Postemergence	0.5	<b>Postemergence to Taro and Weeds:</b> GoalTender may be applied as a post-directed or band application at the rate of 1 pint per acre. Effective control of succulent weed seedlings in the 2-to 3-leaf stage can usually be obtained. Applications to weeds beyond the 3-leaf stage may result in partial control.
<b>Precautions:</b> <ul style="list-style-type: none"><li>• Accurate, uniform placement of GoalTender is essential for effective weed control and to minimize crop injury. Taro foliage receiving accidental spray or drift will be injured. GoalTender must be applied using rigid precision ground sprayer equipment.</li><li>• Occasionally, after the use of GoalTender, spotting, crinkling or flecking may appear on the leaves of the taro. Leaves that receive direct or indirect (drift) spray contact will be injured.</li><li>• Do not use GoalTender on taro plantings that are weak, or under stress due to temperature, disease, fertilizer, nematodes, insects, pesticides, drought or excessive moisture.</li></ul>		
<b>Crop-Specific Restrictions:</b> <ul style="list-style-type: none"><li>• Do not apply more than 1 pint of GoalTender per broadcast acre as a single preemergence application.</li><li>• Do not apply more than 0.5 pint of GoalTender per acre in a single post-direct spray or more than 1 pint per acre per season as a result of multiple post-directed applications.</li><li>• Do not apply more than 2 pints of GoalTender per acre per season as a result of preemergence and post-direct applications.</li><li>• Do not apply GoalTender within 6 months of harvest of taro (corms, leaves).</li></ul>		

### Key Weeds Controlled:

amaranth, spiny	purslane, common	spurge, garden
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## Treefruit / Nut / Vine Crops (Dormant Application)

Almond, Apple, Apricot, Avocado, Beechnut, Brazil Nut, Butternut, Cashew, Cherry, Chestnut, Chinquapin, Crab Apple, Date, Feijoa, Fig, Filbert, Grapes, Hickory Nut, Kiwi, Loquat, Macadamia Nut, Mayhaws, Nectarine, Olives, Peach, Pear, Pecan, Persimmon, Pistachio, Plum, Pomegranates, Prune, Quince, and Walnut

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence (broadcast application)  (banded application)	2.5 – 3  2.5 - 4	Apply GoalTender a minimum of 20 gallons of water per acre. Use higher spray volumes to ensure thorough coverage in high densities of emerged weeds or heavy trash. Sprays should be directed to the soil and the base of dormant trees or vines.  <b>In California</b> , GoalTender may be applied as an over-the-top or directed spray to dormant nonbearing grape plantings. The use of a low-pressure sprayer is suggested. Do not apply over-the-top to grape plantings that are under stress due to drought, flooding, excessive fertilizer or soil salts, storage conditions, wind injury, hail, injury from previously applied pesticides, or injury due to insects, nematodes, or diseases, as severe crop injury may result.
Postemergence (broadcast application)  (banded application)	1 – 3  1 - 4	Apply in a spray volume of 40 or more gallons per acre. For optimum control, apply when weeds are at seedling stage of growth.  The lower rate in the rate range (1 pint per acre) is specified for the control of susceptible seedling weeds in the early postemergence stage up to the 4-leaf stage. Higher rates (up to 3 pints per acre) may be used for weeds up to the 6-leaf stage. Applications to weeds beyond the 6-leaf stage may result in partial control.
<p><b>Tank Mixing:</b> Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply. See labels of tank mix partners to determine suitability and use rates for various crops.</p> <ul style="list-style-type: none"> <li>• <b>Postemergence:</b> For broader spectrum postemergence control of listed grass and broadleaf weeds, GoalTender may be applied in tank mix with paraquat (Gramoxone) or glyphosate. These herbicides may also be added to preemergence tank mixes for enhanced control of existing weeds.</li> <li>• <b>Preemergence:</b> For broad-spectrum preemergence control of susceptible grass and broadleaf weeds in listed treefruit, nut or vine plantings, GoalTender may be applied in tank mix with napropamide (Devrinol herbicide), diuron (Karmex herbicide), pronamide (Kerb® herbicide), simazine, norflurazon (Solicam herbicide) or oryzalin (Surflan herbicide).</li> </ul>		
<p><b>Chemigation (All States):</b> For dormant season application using sprinkler (low-volume (micro-sprinkler), drip (trickle), and flood (basin) irrigation systems, apply GoalTender at the specified rate per acre. Follow applicable directions in the Chemigation section of this label when making applications using irrigation systems.</p>		

## Treefruit / Nut / Vine Crops (Dormant Application) (Cont.)

### Precautions:

- GoalTender or any of the combinations specified on this label should be applied to only healthy growing trees or vines.
- Avoid direct plant contact. Direct spray toward the base of tree or vines unless specific use recommendations allow over-the-top application.

### Crop-Specific Restrictions:

- In all states, unless otherwise specified, do not apply GoalTender during the period between bud swell and completion of final harvest or when fruit/nuts are present. GoalTender may be applied upon completion of final harvest.
- **In Arizona and California, GoalTender may be applied during the period following completion of final harvest up to February 15 (February 1st in the Coachella Valley, California). Applications made after these calendar dates, but prior to bud swell, may result in significant crop injury and are the responsibility of the user.**
- For banded applications, up to 4 pints per acre of GoalTender per use season may be applied within the treated band. Do not apply more than a maximum of 3 pints per acre per use season on a broadcast basis.
- Do not apply to grapes or kiwi established less than 3 years unless vines are on a trellis wire a minimum of 3 feet above the soil surface.
- Do not apply to grapes or kiwi that are not staked or trellised unless vines are free standing.
- Maximum total application rate per year is 1.5 lbs ai/A

### Key Weeds Controlled (Arizona and California):

Preemergence		Postemergence	
burclover	lambsquarters,	cheeseweed (malva)	pigweed, redroot
cheeseweed (malva)	common	fiddleneck, coast	redmaids
fiddleneck, coast	lettuce, prickly	filaree, broadleaf †	shepherdspurse
filaree, broadleaf	pigweed, redroot	filaree, redstem †	sowthistle, annual
filaree, redstem	purslane, common	filaree, whitestem †	
filaree, whitestem	redmaids	groundsel, common	
groundsel, common	rocket, London	henbit	
henbit	shepherdspurse	minerslettuce	
knotweed, prostrate	sowthistle, annual	nettle, burning	

† GoalTender at the 3-pint rate will provide control of filaree not exceeding the 4-inch stage. Applications to filaree beyond the 4-inch stage may result in partial control.

## Treefruit / Nut / Vine Crops (Dormant Application) (Cont.)

**Key Weeds Controlled (All Other States Except Arizona and California):**

Preemergence		Postemergence	
camphorweed	pigweed, redroot	balsamapple	nightshade, black
cudweed, narrowleaf	poinsettia, wild	cocklebur, common	pepperweed, Virginia
eveningprimrose,	sida, prickly	cudweed, narrowleaf † †	pigweed, redroot
cutleaf †	smartweed,	eveningprimrose,	poinsettia, wild
groundcherry, cutleaf	Pennsylvania	cutleaf † † †	purslane, common
jimsonweed	sowthistle, annual	groundcherry, cutleaf	sesbania, hemp
lambsquarters,	spurge, prostrate	groundcherry, Wright	shepherdspurse
common	spurge, spotted	jimsonweed	sida, prickly (teaweed)
nightshade,	velvetleaf	lambsquarters, common	smartweed, Pennsylvania
American black		morningglory, annual	sowthistle, annual
nightshade, black		nightshade, American	velvetleaf
pepperweed, Virginia		black	

† Highest rate and/or multiple applications may be required for acceptable control.

† † Maximum 0.5-inch diameter

† † † Highest rate and/or multiple applications may be required for acceptable control.

## Grapes (Non-Dormant Application)

**(California Only)**

GoalTender may be applied as a directed spray or, for supplemental preemergence weed control, through low-volume sprinkler (micro-sprinkler) or drip irrigation systems for control or suppression of listed broadleaf weeds in non-dormant grapes (raisin and wine grapes only). GoalTender may also be applied to all grapes (raisin, table, and wine) as a dormant season application. Refer to Treefruit/Nut/Vine Crops (Dormant Application) section above for use directions for dormant season application to grapes.

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence	1	GoalTender may be applied preemergence or postemergence to weeds either as a directed spray in a minimum spray volume of 20 gallons per acre or through low-volume sprinkler (micro-sprinkler) or drip irrigation systems. Repeat applications may be required. Applications may be made from completion of bloom up to 14 days before to harvest.  When applied as a postemergence directed spray, add 1 quart 80% active nonionic surfactant cleared for application to growing crops per 100 gallons of spray. Sprays should be directed to the soil and the base of vines.
Postemergence	0.5 - 1	

## **Grapes (Non-Dormant Application) (Cont.)**

### **Tank Mixing:**

- When applied as a directed postemergence spray using ground equipment, GoalTender may be applied in tank mix with paraquat (Gramoxone) or glyphosate in a minimum spray volume of 10 gallons per acre. Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.

### **Chemigation:** Follow chemigation instructions in Product Information section.

- **Low Volume Sprinkler (Micro sprinkler) and Drip (Trickle) Irrigation:** Apply only through low-volume sprinkler or drip systems designed to uniformly distribute irrigation water beneath the canopy. Meter GoalTender at a continuous rate during the middle 1/3 of the irrigation period and discontinue application during the final 1/3 of the irrigation period to insure proper flushing of the irrigation system. Use of GoalTender through low-volume sprinklers or drip emitters helps to reduce the "ring effect" of weed escapes in areas around sprinklers or emitters where previously applied broadcast or directed treatments begin to break down.

### **Precautions:**

- **Crop Tolerance:** The use of GoalTender may result in varying degrees of injury to non-dormant grapes. Grape foliage will typically exhibit injury symptoms from direct or indirect (spray drift, soil contact) exposure. This injury may result in necrosis, reddening, cupping or crinkling of grape leaves. The grape plant will continue to grow normally. Grape leaves that are immature or expanding at the time of contact with GoalTender are the most susceptible to foliage injury. Grapes may exhibit some small blemishes (spots or flicks) on the fruit.
- GoalTender is phytotoxic to plant foliage. Avoid drift to all other crops and nontarget areas. Do not apply when weather conditions favor drift.

### **Crop-Specific Use Restrictions:**

- The total amount of GoalTender applied during one season (from completion of final harvest through dormancy to non-dormant use covered by this section) cannot exceed 3 pints per acre as a result of multiple applications in any given area (broadcast, banded, or within the wetted area of the low-volume sprinkler or drip irrigation system).
- Do not apply within 14 days of harvest.
- Do not initiate application of GoalTender in non-dormant grapes until the completion of the bloom period.
- Do not apply to grapes established less than 3 years unless vines are either on a trellis wire a minimum of 3 feet above the soil surface, or protected by grow tubes.
- GoalTender should be applied only by ground application equipment of through low-volume sprinkler (micro-sprinkler) or drip (trickle) irrigation systems.
- Apply GoalTender as a non-dormant application to wine grapes or raisin grapes only.



## Grapes (Non-Dormant Application) (Cont.)

### Key Weeds Controlled or Suppressed:

Preemergence		Postemergence	
burclover	mustard, black	cheeseweed (malva)	nettle, burning
cheeseweed, malva	nettle, burning	fiddleneck, coast	nightshade, black
fiddleneck, coast	nightshade, black	groundsel, common	pigweed, redroot
groundsel, common	pigweed, redroot	henbit	purslane, common
henbit	purslane, common	minerslettuce	redmaids
knotweed, prostrate	redmaids	morningglory species,	rocket, London
lambsquarters, common	rocket, London	annual	sowthistle, annual
minerslettuce	sowthistle, annual	mustard, black	

## Sucker Control in Non-Dormant Grapes

### (Washington and Oregon Only)

### (Grapes for Wine and Processing Only)

Application Timing for Sucker Control	Rate (pt/acre)	Specific Use Directions
Grape suckers less than 12 inches in length.	0.5 - 1	Apply GoalTender in a three-foot band directed towards to newly emerging suckers at the base of the grapevine. The highest rate and/or a second application may be required to achieve an acceptable level of control/suppression of grape suckers. Avoid spray contact on flowers, grape clusters, or fruit. Use mounted nozzles to deliver the spray solution. Thorough spray coverage of sucker growth is essential for optimal activity. Use a spray volume of 50 or more gallons per acre (broadcast basis).
<p><b>Tank Mixing:</b> For enhanced postemergence sucker activity, a tank mixture of GoalTender with either glufosinate (Rely Herbicide) or paraquat (Gramoxone) can be used. Apply at the specified rates and growth stages in a manner describe on the respective labels. Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.</p>		
<p><b>Precautions:</b></p> <ul style="list-style-type: none"> <li>The use of GoalTender may result in varying degrees of injury to non-dormant grapes. Grape foliage will typically exhibit injury symptoms from direct or indirect (spray drift or soil contact) exposure. This injury may result in necrosis, reddening, cupping or crinkling of grape leaves. The grape plant will continue to grow normally. Leaves that are immature or expanding at the time of contact with GoalTender are the most susceptible to injury. Grape fruit may exhibit some small blemishes (spots or flecks) on the fruit.</li> </ul>		
<p><b>Crop-Specific Restrictions:</b></p> <ul style="list-style-type: none"> <li>The total amount of GoalTender applied during one crop year (dormant and non-dormant) cannot exceed 3 pints per acre as a result of multiple applications in any give area (broadcast or banded).</li> <li>GoalTender should be applied only by ground application equipment.</li> <li>Apply GoalTender as a non-dormant application for sucker control only to wine or processed grapes.</li> <li>Do not apply GoalTender within 60 days of harvest.</li> </ul>		

## **Pistachios, Walnuts, Almonds (California and Arizona Only)**

**(Non-Dormant Application)**

<b>Weed Control</b>	<b>Rate (pt/acre)</b>	<b>Specific Use Directions</b>
Preemergence	2.5 - 3	<b>Preemergence:</b> For residual weed control of listed weeds.
Postemergence	0.5 - 1	<b>Postemergence (Suppression):</b> Apply to seedling weeds less than 4 inches in height. Repeat applications may be required.
	1 - 3	<b>Postemergence (Cleanup):</b> Contact (postemergence) control for cleanup sprays and preharvest applications. Apply to seedling weeds less than 4 inches in height. Applications to weed seedlings beyond the 4-inch stage may result in partial control.
<b>Tank Mixing:</b> For broader spectrum grass and broadleaf weed control in tree row middles, GoalTender may be tank mixed with either paraquat (Gramoxone) or glyphosate. Refer to Mixing Directions section for Tank Mixing Precautions. Follow applicable use directions, precautions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.		
<b>Chemigation:</b> Follow chemigation instructions in Product Information section. <b>Flood (Basin) Irrigation:</b> For flood (basin) irrigation systems, meter continuously into the water during the entire irrigation period. Best weed control results are obtained when a uniform distribution and flow of irrigation water is maintained over level land. Irrigation water treated with GoalTender must be contained on the treated area until the water is absorbed by the soil. <b>Low Volume Sprinkler (Micro sprinkler) and Drip (Trickle) Irrigation:</b> Apply only through low-volume sprinkler or drip systems designed to uniformly distribute irrigation water beneath the tree canopy. Applications should be made prior to weed emergence; otherwise postemergence activity may be inconsistent due to uneven coverage. Meter GoalTender at a continuous rate during the middle 1/3 of the irrigation period and discontinue application during the final 1/3 of the irrigation period to insure proper flushing of the irrigation system. Use of GoalTender through low-volume sprinklers or drip emitters helps to reduce the "ring effect" of weed escapes in areas around sprinklers or emitters where previously applied broadcast or directed treatments begin to break down.		
<b>Precautions:</b> <ul style="list-style-type: none"><li>• Direct spray toward the base of trees. Avoid direct contact with foliage or nuts.</li><li>• GoalTender should be applied only to healthy growing trees</li></ul>		
<b>Crop-Specific Use Restrictions:</b> <ul style="list-style-type: none"><li>• When applied as a non-dormant treatment, GoalTender can only be applied to pistachio plantings between May and 7 days prior to harvest.</li><li>• When applied as a non-dormant treatment, GoalTender can only be applied to almond plantings between April 1 and September 30 and to walnut plantings between May 1 and September 30.</li><li>• Do not apply GoalTender within 7 days of harvest of pistachios.</li><li>• Do not apply GoalTender within 30 days of harvest of almonds.</li><li>• Do not apply GoalTender within 7 days of harvest of walnuts.</li><li>• Do not apply more than 3 pints of GoalTender per acre during the non-dormant season.</li><li>• Maximum total application rate per year is 1.5 lbs ai/A</li></ul>		

## Pistachios, Walnuts, Almonds (California and Arizona Only) (Cont.)

### Key Weeds Suppressed and/or Controlled

cheeseweed (malva) fiddleneck, coast filaree, broadleaf filaree, redstem filaree, whitestem	groundsel, common henbit minerslettuce morninggloory species, annual	mustard, black nettle, burning pigweed, redroot purslane, common redmaids	rocket, London sowthistle, annual
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### Additional Weeds Controlled in Tank Mix with Glyphosate or Paraquat

barnyardgrass bluegrass, annual	chickweed, common horseweed (marestail)	rocket, London ryegrass, Italian
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## Windbreaks and Shelterbelts

(For Use Only in Minnesota, North Dakota, South Dakota and Wyoming)

Weed Control	Rate (pt/acre)	Specific Use Directions
Preemergence Postemergence	2 - 3	<p>Apply GoalTender may be applied as a broadcast, banded or post-directed spray. Preemergence control is most effective when spray is applied to clean, weed-free soil surfaces. Pre-transplant applications must be made after completion of soil preparation but prior to transplanting. Transplanting should be completed with minimal soil disturbance. For optimum weed control results, treated soil surfaces should be left undisturbed during the time period for which weed control is desired.</p> <p><b>Postemergence Weed Control:</b> For best results, apply before 4-leaf stage for broadleaf weeds or 2-leaf stage for grass weeds.</p> <p><b>Conifers:</b> GoalTender can be applied pre-transplant, post-directed or postemergence (over-the-top) to conifers. Postemergence or post-directed applications should be applied prior to budbreak or after new growth foliage has hardened off and new terminal buds have formed.</p> <p><b>Deciduous Hardwoods:</b> GoalTender has exhibited selectivity to many deciduous species when applied pre-transplant or as a post-directed spray prior to budbreak.</p>

## Windbreaks and Shelterbelts (Cont.)

### Precautions:

- **Important:** Some varieties or cultivars of conifers or deciduous species listed may be susceptible to GoalTender. Care should be taken to ensure that the particular variety to be sprayed with GoalTender is tolerant. For unfamiliar species, it is suggested that GoalTender be tested on a limited number of plants prior to large-scale application.
- Occasionally after the use of GoalTender, a spotting, crinkling or flecking may appear on the leaves of the deciduous species. Leaves that receive direct or indirect (drift) spray contact will be injured. Deciduous species typically rapidly outgrow these symptoms and develop normally.
- Application after budbreak may result in injury to deciduous species. If non-dormant application is required, apply only after foliage has fully expanded and hardened off. Avoid direct or indirect spray contact with the foliage by applying to the soil surface as a directed spray.
- Apply GoalTender only to healthy deciduous and/or conifer trees. Do not apply GoalTender to conifers or deciduous trees that have been weakened or under stress from excessive fertilizer or soil salts, disease, nematodes, frost, drought, flooding, previously applied pesticides, soil insects, or winter injury, as severe injury may result.

### Specific Use Restrictions for Shelterbelts:

- Do not apply more than 3 pints of GoalTender per acre in a single application or more than 9 pints per acre per year.

### Key Broadleaf Weeds Controlled:

buckwheat, wild burclover carpetweed dock, curly groundcherry, cutleaf groundcherry, Wright groundsel, common henbit jimsonweed knotweed, prostrate	kochia ladysthumb lambsquarters, common lettuce, prickly mallow, little mayweed mustard, blue mustard, tumble mustard, wild nettle, burning	nightshade, black nightshade, hairy oats, wild orach, red pepperweed, yellow flower pigweed, prostrate pigweed, redroot purslane, common rocket, London	shepherdspurse † smartweed, Pennsylvania sowthistle, annual tansymustard thistle, Russian (seedling) velvetleaf
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† The highest rate or multiple applications may be required for acceptable control.

### Key Grasses Controlled:

barnyardgrass bluegrass, annual	crabgrass, large foxtail, giant	goosegrass witchgrass
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## Windbreaks and Shelterbelts (Cont.)

GoalTender may be applied to numerous conifer and deciduous species, including the following:

### Conifer Species

Common Name	Scientific Name
<b>douglas-fir</b>	<i>Pseudotsuga menziesii</i>
<b>fir</b>	
grand	<i>Abies grandis</i>
fraser	<i>Abies fraseri</i>
noble	<i>Abies procera</i>
<b>hemlock</b>	
eastern hemlock	<i>Tsuga canadensis</i>
western hemlock	<i>Tsuga heterophylla</i>
<b>pine</b>	
Austrian	<i>Pinus nigra</i>
eastern white	<i>Pinus strobus</i>
jack	<i>Pinus banksiana</i>
Himalayan	<i>Pinus graffithii</i>
loblolly	<i>Pinus taeda</i>
lodgepole	<i>Pinus contorta</i>
longleaf	<i>Pinus palustris</i>
monterey	<i>Pinus radiata</i>
mugo	<i>Pinus mugo</i>
ponderosa	<i>Pinus ponderosa</i>
scotch	<i>Pinus sylvestris</i>
shortleaf	<i>Pinus echinata</i>
slash	<i>Pinus elliottii</i>
Virginia	<i>Pinus virginiana</i>
<b>spruce</b>	
blue	<i>Picea pungens</i>
dwarf Alberta	<i>Picea glauca conica</i>
Norway	<i>Picea abies</i>
Sitka	<i>Picea sitchensis</i>
<b>Arborvitae</b>	
	<i>Thuja occidentalis</i>
	<i>Thuja orientalis</i>
<b>juniper</b>	
	<i>Juniperus chinensis</i>
	<i>Juniperus horizontalis</i>
	<i>Juniperus procumbens</i>
	<i>Juniperus sabina</i>
	<i>Juniperus scopulorum</i>
<b>red cedar</b>	<i>Juniperus virginiana</i>
<b>yew</b>	<i>Taxus spp.</i>

### Deciduous Hardwood Species

Common Name	Scientific Name
ash	<i>Fraxinus spp.</i>
crabapple	<i>Malus spp.</i>
eucalyptus	<i>Eucalyptus spp.</i>
lilac	<i>Syringa vulgaris</i>
maple, black	<i>Acer nigrum</i>
oak, northern red	<i>Quercus rubra</i>
olive, Russian	<i>Elaeagnus angustifolia</i>
poplar (cottonwood)	<i>Populus spp.</i>
sweetgum	<i>Liquidambar styraciflua</i>
sycamore	<i>Platanus occidentalis</i>
walnut, black	<i>Juglans nigra</i>

## Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitations of Remedies.

## Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. To the extent permitted by law, Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

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## **Inherent Risks of Use**

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It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. All such risks shall be assumed by buyer.

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## **Limitation of Remedies**

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To the extent permitted by law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used

Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer and Inherent Risks of Use above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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Dow AgroSciences

# GoalTender®

## HERBICIDE

**Use Directions For:** artichokes (globe), broccoli/cabbage/cauliflower, cacao, citrus (nonbearing), coffee, conifer (seedbeds, transplants, container stock) and selected deciduous trees, cotton, cottonwood, eucalyptus, fallow bed, (cotton/soybeans) garbanzo beans, garlic, guava (Hawaii only), horseradish, jojoba, mint, onions, onions grown for seed, papaya (Hawaii only), taro, treefruit/nut/vine

Active Ingredient

oxyfluorfen: 2-chloro-1-(3-ethoxy-4-nitrophenoxy)-4-(trifluoromethyl)benzene .....	41%
Other Ingredients.....	59%
Total.....	100%

Contains 4 pounds active ingredient per gallon

**Shake Well Before Using**

**Keep Out of Reach of Children**

## CAUTION

For additional Precautionary Statements, First Aid, Storage and Disposal and other use information see inside this label.

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

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Dow AgroSciences LLC  
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Indianapolis, IN 46268**

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PEEL FILM HERE

51 1/4"

1 7/16"

14 15/16"

9 15/16"

15 1/16"

9 7/8"

Do Not Cut To Open  
Contents In Plastic

SHAKE WELL



BEFORE USE

4 7/8"



# GoalTender®

HERBICIDE

Use Directions For: artichokes (globe), broccoli/cabbage/cauliflower, cacao, citrus (nonbearing), coffee, conifer (seedbeds, transplants, container stock) and selected deciduous trees, cotton, cottonwood, eucalyptus, fallow bed, (cotton/soybeans) garbanzo beans, garlic, guava (Hawaii only), horseradish, jobba, mint, onions, onions grown for seed, papaya (Hawaii only), taro, treefruit/nut/vine

Active Ingredient  
oxyfluorfen: 2-chloro-1-(3-ethoxy-4-nitrophenoxy)4-(trifluoromethyl)benzene.....41%  
Other Ingredients.....59%  
Total.....100%

Contains 4 pounds active ingredient per gallon

Shake Well Before Using

Keep Out of Reach of Children

**CAUTION**

**Agricultural Use Requirements**  
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to inside of label booklet for Precautionary Statements and Directions for Use.  
**Notice:** Read the entire label. Use only according to label directions. **Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

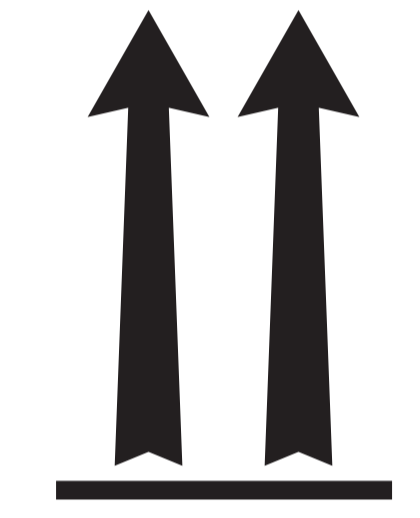
EPA Reg. No. 62719-447 (2M) (2N)  
EPA Est. 070989-MO-001; 34704-MS-1  
900-020772 / 00251181

®Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

Produced for  
**Dow AgroSciences LLC**  
9330 Zionsville Road  
Indianapolis, IN 46268

4 X 1 GAL

00251356



# GoalTender®

HERBICIDE

4 X 1 GAL

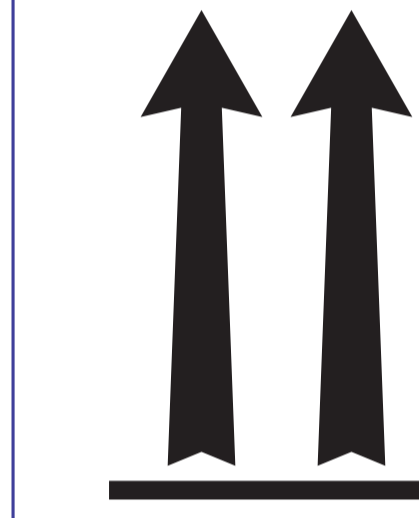


# GoalTender®

HERBICIDE

4 X 1 GAL

00251356



UN 4G/Z27.5/S/13  
USA/AA2110



# GoalTender®

HERBICIDE

4 X 1 GAL

13 5/16"

900-020772 / 00251181  
BOX MFG. DATE:

4 7/8"

23 1/16"  
CORR.





**STATE OF MAINE**  
**DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY**  
**BOARD OF PESTICIDES CONTROL**

28 STATE HOUSE STATION  
AUGUSTA, MAINE 04333

**PAUL R. LEPAGE**  
GOVERNOR

**WALTER E. WHITCOMB**  
COMMISSIONER

To: Board of Pesticides Control Members  
From: Mary Tomlinson, Pesticides Registrar/Water Quality Specialist  
Re: EPA Special Local Need (SLN) [FIFRA 24(c)] application to approve an increase in the number of applications of Gowan Malathion 8 Flowable, EPA Reg. No. 10163-21, to control spotted wing drosophila on cane berries  
Date: February 7, 2017

\*\*\*\*\*

Please find enclosed the above-referenced SLN application and label for your consideration. The Board approved a request in May 2013 for the use of Gowan Malathion 8 Flowable for use on blueberries, to control spotted wing drosophila (SWD). This request, previously approved in 2013, extends the use to cane berries and increases the application to a maximum of four times a year.

This request is supported by University of Maine Blueberry Extension specialists David Handley and David Yarborough. Malathion has demonstrated effective control against SWD on cane berries at a rate of two pints per acre four times per year. The currently labeled rate of two pints per acre, with a maximum of three applications per year, is much less effective in achieving control. Due to its short reentry and post-harvest intervals, Malathion is a pesticide of choice. Use of this product in rotation with other pesticides with different modes of action will aid in resistance prevention. Available data indicate that residues are expected to be below the established tolerance.

Your package includes the additional following documents for your review:

- State product container label and SDS
- Letter of request from Melissa Reisland of Gowan Company
- Letter of support from David Handley, Vegetable and Small Fruit Specialist, Maine Cooperative Extension

Please review these materials and contact me at (207) 287-7544 if you have any questions.

**HENRY JENNINGS, DIRECTOR**  
90 BLOSSOM LANE, DEERING BUILDING



PHONE: (207) 287-2731  
WWW.THINKFIRSTSPRAYLAST.ORG



United States Environmental Protection Agency  
Office of Pesticide Programs, Registration Division (7505C)  
Washington, DC 20460

**Application for/Notification of State Registration  
of a Pesticide To Meet a Special Local Need**  
*(Pursuant to section 24(c) of the Federal Insecticide,  
Fungicide, and Rodenticide Act, as Amended)*

**For State Use Only**  
Registration No. Assigned  
**ME-170001**  
Date Registration Issued

1. Name and Address of Applicant for Registration

2. Product is (Check one)  
 EPA-Registered  
 New (not EPA-registered)  
 Attach EPA Form 8570-4, Confidential Statement of Formula for new products.  
 EPA Registration Number  
 EPA Company Number  
 3. Active Ingredient(s) in Product

4. Product Name

5. If this is a food/feed use, a tolerance or other residue clearance is required. Cite appropriate regulations in 40 CFR Part 180, 185, and/or 186.

6. Type of Registration (Give details in Item 13 or on a separate page, properly identified and attached to this form):  
 a. To permit use of a new product.  
 b. To amend EPA registrations for one or more of the following purposes:  
 (1) To permit use on additional crops or animals.  
 (2) To permit use at additional sites.  
 (3) To permit use against additional pests.  
 (4) To permit use of additional application techniques or equipment.  
 (5) To permit use at different application rates.  
 (6) Other (specify below)

7. Nature of Special Local Need (check one)  
 There is no pesticide product registered by EPA for such use.  
 There is no EPA-registered pesticide product which, under the conditions of use within the State, would be as safe and/or as efficacious for such use within the terms and conditions of EPA registration.  
 An appropriate EPA-registered pesticide product is not available.

10. Has FIFRA section 24(c) registration for this use of the product ever, by another State, been (check appropriate box(es), if known):  
 Sought  Issued  Denied  Revoked  
 If any of the above are checked, list States in item 13 below.  
 No FIFRA section 24(c) Action

8. If this registration is an amendment to an EPA-registered product, is it for a "new use" as defined in 40 CFR 152.3?  
 Yes (discuss in item 13 below)  No

9. Has an EPA Registration or Experimental Use Permit for this chemical ever been (check applicable box(es), if known):  
 Sought  Issued  Denied  Cancelled  Suspended  
 Registration  Experimental Use Permit  No Previous Permit Action

11. Endangered Species Act: (Give details in item 13 or on a separate page, properly identified and attached to this form)  
 Identify the counties where this pesticide will be used. If Statewide, indicate "all." Provide a list of Federally protected endangered/threatened species which occur in the areas of proposed use.

**Certification**  
 I certify that the statements I have made on this form and all attachments thereto are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

12. Indicate use status of Special Local Need, i.e., planned dates of use:  
 From: \_\_\_\_\_ To: \_\_\_\_\_

Signature of Applicant or Authorized Representative  
*Melissa Risdahl*  
 Title  
 Telephone Number  
 Date

13. Comments (attach additional sheet, if needed)

**Determination by State Agency**  
 This registration is for a Special Local Need and is being issued in accordance with section 24(c) of FIFRA, as amended. To the best of our knowledge, the information above is correct, except as noted in "Comments" below or in attachments.

Name, Title, and Address of State Agency Official  
 Mary Tomlinson  
 Maine Board of Pesticides Control  
 28 State House Station  
 August, ME 04333  
 Title  
 Pesticides Registrar/Water Quality Specialist  
 Telephone Number  
 207-287-7544  
 Date  
 February 17, 2017

Comments (by State Agency Only)

Received by EPA



The Go To Company

P.O. Box 5569 ▲ Yuma, AZ 85366-5569 ▲ Phone (928) 783-8844 ▲ FAX (928) 343-9255

FIFRA §24(c) REGISTRATION  
EPA SLN No.: ME-XXXXXX

SPECIAL LOCAL NEED REGISTRATION

FOR DISTRIBUTION AND USE ONLY WITHIN THE STATE OF MAINE  
FOR CONTROL OF SPOTTED WING DROSOPHILA IN CANEBERRIES

# GOWAN MALATHION 8 FLOWABLE

AGRICULTURE INSECTICIDE  
EPA Reg. No. 10163-21

This label expires and must not be distributed or used in accordance with this SLN registration after December 31, 2021.

ACTIVE INGREDIENT:	<b>% By Wt.</b>
Malathion (O,O-dimethyl phosphorodithioate of diethyl mercaptosuccinate): .....	79.5%
INERT INGREDIENTS .....	20.5%
	TOTAL 100.0%

Contains Petroleum Distillates  
Contains 8 lbs. Malathion per gallon

## KEEP OUT OF REACH OF CHILDREN CAUTION

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- Follow all applicable directions, restrictions, Worker Protection Standard (WPS) requirements, and precautions on the EPA registered label for Gowan Malathion 8 Flowable (EPA Reg. No. 10163-21).
- This labeling must be in the possession of the user at the time of pesticide application.

### DIRECTIONS FOR USE

CROP	REI	RATE (PTS/ACRE)	PEST	RESTRICTIONS
BLACKBERRIES (1), BOYSENBERRIES (1), DEWBERRIES (1), LOGANBERRIES (1), RASPBERRIES (1)	12 hours	Up to 2	Spotted Wing Drosophila	The maximum application rate is 2.0 pints of product per acre; the maximum number of applications per year is 4; and the minimum retreatment interval is 7 days.  Do not exceed a total maximum use rate of malathion from all sources of 8 lbs. ai per acre per year.  Do not apply within 1 (one) day of harvest.

**IMPORTANT:** This product is sold subject to the Conditions of Sale and Warranty and Liability Limitations set forth on the container label.

**24(c) REGISTRANT:** Gowan Company  
P.O. Box 5569  
Yuma, AZ 85366-5569

December 1, 2016

Maine Department of Agriculture, Conservation, and Forestry  
Maine Board of Pesticide Control  
Attention: Mary E. Tomlinson, Pesticide Registrar / Water Quality Specialist  
28 State House Station  
Augusta, ME 04333-0028

**RE: Gowan Malathion 8 Flowable, EPA Reg. No. 10163-21  
Application for 24(c) SLN: Spotted Wing Drosophila in Caneberries**

Dear Ms. Tomlinson,

Gowan Company hereby authorizes support for the application of the Section 24(c) Special Local Need for Gowan Malathion 8 Flowable, EPA Reg. No. 10163-21 on caneberries. The local conditions with the spotted wing drosophila (SWD) have been previously submitted and still continue to exist. We know that no new products have become available since the original request was submitted in regards to blueberries. Therefore, we authorize the use of all information currently on file in consideration of this action. Gowan Company commits to supplying the necessary product if this registration is approved.

We are concerned about the performance of Gowan Malathion 8 Flowable against spotted wing drosophila at the currently labeled rates. Consequently, we are supporting the application of the Section 24(c) label request on caneberries with an additional application per year. With the additional application, efficacy tests have shown that the growers have achieved necessary control of the pest.

In support of this application, we have enclosed the following:

- Application for Special Local Need (EPA Form 8570-25)
- Proposed Malathion 8 Flowable 24(c) label
- Current Malathion 8 Flowable Container label
- Current Malathion 8 Flowable Safety Data Sheet
- Letter of Support from Dr. David Yarborough, University of Maine

Please contact me if you have any questions regarding this submission.

Respectfully,



Melissa Riesland  
Registration Specialist  
(928) 819-1594  
mriesland@gowanco.com



*Putting Knowledge to Work with the People of Maine*

November 29, 2016  
Mary E. Tomlinson  
Pesticide Registrar/Water Quality Specialist  
Maine Board of Pesticides Control  
28 State House Station  
Augusta, ME 04333

**Highmoor Farm**  
P.O. Box 179  
Monmouth, ME 04259-0179  
Tel. (207) 933-2100  
Fax (207) 933-4647  
dhandley@umext.maine.edu

Dear Mary:

I am writing in support of a 24(c) label for the use of a higher rate of Malathion 8F on cane berries in Maine to control spotted wing drosophila. From our monitoring and survey work from 2012-2015, it has become clear that this insect is a significant threat to cane berry fruit in Maine, causing premature fruit decay and significant crop losses throughout southern, coastal and mid-state regions. Numerous growers have been forced to abandon crops after just a few pickings, or altogether, due to high rates of larvae infesting the fruit. Most growers are able to continue harvest only by managing SWD through regular insecticide applications. Malathion, spinosad, and synthetic pyrethroids are the most commonly used insecticides. It is vital that growers be able to alternate between chemical families to prevent the development of resistance. Malathion presently offers fair to good control and a short pre-harvest interval at a reasonable price. However, we believe that the higher rate will significantly improve control levels, improve residual activity, and further reduce the risk of resistance development. This will make the product a highly effective part of an overall pest management plan for this new pest.

I request that the Board of Pesticides control approve a State of Maine 24(c) label for control of the spotted wing drosophila in blueberries and cane fruit in Maine for 2017.

Sincerely,

David T. Handley, Ph. D.  
Vegetable & Small Fruit Specialist  
Cooperating Professor of Horticulture

[www.umext.maine.edu](http://www.umext.maine.edu)

The University of Maine and the U.S. Department of Agriculture cooperating.  
Cooperative Extension provides equal opportunities in programs and employment.

*A Member of the University of Maine System*

# GOWAN<sup>®</sup> MALATHION 8 FLOWABLE

## AGRICULTURAL INSECTICIDE

<b>ACTIVE INGREDIENT:</b>	<b>% By Wt.</b>
Malathion (O,O-dimethyl phosphorodithioate of diethyl mercaptosuccinate) .....	79.5%
<b>OTHER INGREDIENTS:</b> .....	20.5%
	<b>TOTAL 100.0%</b>

Contains Petroleum Distillates  
Contains 8 lbs. Malathion per gallon

### KEEP OUT OF REACH OF CHILDREN

## CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

<b>FIRST AID</b> <b>Organophosphate Insecticide</b>	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Do not give any liquid to the person.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>HOT LINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact <b>1-888-478-0798</b> for emergency medical treatment information.	
<b>NOTE TO PHYSICIAN</b>	
Malathion upon use may cause cholinesterase inhibition. Atropine is antidotal. May pose an aspiration pneumonia hazard. Contains petroleum distillates.	

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Harmful if swallowed. Avoid breathing of spray mist. Avoid contact with skin.

**NET CONTENTS: 2.5 Gallons**

EPA Reg. No. 10163-21  
EPA Est. No. 67545-AZ-001  
Item No. XXXXX  
M8FI-XX-RXXXX

Produced For:  
Gowan Company  
P.O. Box 5569  
Yuma, AZ 85366-5569

**Gowan<sup>®</sup>**  
*The Go To Company*

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber, nitrile, or viton. If you want more options, follow the instructions for category F on an EPA chemical resistance category selection chart.

### Mixers, Loaders, Applicators, Flaggers, and other Handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

## USER SAFETY RECOMMENDATIONS

### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENGINEERING CONTROLS

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides [40 CFR 170.240(d)(6)]. Pilots must wear the PPE required on this labeling for applicators.

## ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic organisms, including fish and invertebrates. This product may contaminate water through drift of spray in wind. This product has a high potential for runoff after application. Use care when applying in or to an area which is adjacent to any body of water, and do not apply when weather conditions favor drift from target area. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

## DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI). The REI for each crop is listed in the directions for use associated with each crop.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical-resistant gloves, made out of any waterproof material
- Shoes plus socks

## NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, or nurseries.

Do not enter or allow others to enter until sprays have dried.

## PRECAUTIONS AND RESTRICTIONS

In order that pesticide residues on food and forage crops will not exceed tolerances established by the Federal Food and Drug Administration, use only the specified rates and intervals, and do not apply closer to harvest than prescribed.

Unless otherwise specified, apply at the first sign of infestation and repeat as needed observing the use limitations listed for each specified crop in the application tables. Consult your State Agriculture Experiment Station or the State Agricultural Extension Service for additional information as the timing of applications needed will vary with local conditions.

Applications may be made by aircraft or by ground equipment according to the DIRECTIONS FOR DILUTION below. The amount of water needed to treat an acre varies, therefore the following directions are given to cover a broad range of applications.

### Buffer Zones for Aerial Application:

When making a Non-ULV application with aerial application equipment, a minimum buffer zone of 25 feet must be maintained along any water body.

Do not use in greenhouses.

## PHYTOTOXICITY ADVISORY STATEMENT

As is common with most emulsifiable concentrate formulations adverse effects, such as spotting or discoloration of the fruit or foliage can occur. Some conditions known to contribute to phytotoxicity include, but are not limited to : high temperatures, poor spray drying conditions, excessive spray runoff, certain spray mixtures, stage of crop development or tank mixes with other pesticides.

### SPRAY DRIFT REQUIREMENTS

Observe the following requirements when spraying in the vicinity of aquatic areas such as, but not limited to lakes; reservoirs; rivers; permanent streams; marshes or natural ponds; estuaries and commercial fish ponds.

**Droplet Size:** Use the largest droplet size consistent with acceptable efficiency. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air steam as much as possible, and by avoiding excessive spray boom pressure.

For groundboom and aerial applications, use only medium or coarser spray nozzles according to ASAE (S572) definition for standard nozzles, or a volume mean diameter (VMD) of 300 microns or greater for spinning atomizer nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

**Wind Direction and Speed:** Make aerial or ground applications when the wind velocity favors on target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph. Avoid applications when wind gusts approach 15 mph. For all non-aerial applications, wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

**Temperature Inversion:** Do not make aerial or ground applications into areas of temperature inversions. Inversions are characterized by stable air and increasing temperatures with increasing distance above the ground. Mist or fog may indicate the presence of an inversion in humid areas. Where permissible by local regulations, the applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

**Additional Requirements for Ground Applications:** Spray should be released at the lowest height consistent with pest control and flight safety. Applications more than 10 feet above the crop canopy should be avoided. For groundboom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy. For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

**Additional Requirements for Aerial Applications:** For aerial applications, the spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of wing span or 90% rotor diameter. Aerial applicators must consider flight speed and nozzle orientation in determining droplet size. When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

### DIRECTIONS FOR DILUTION

Rates are given in terms of pints of Malathion 8 Flowable per acre.

#### Dilute Application

Field and Row Crops: Use specified rate in 20 to 60 gallons of water per acre.

Trees and Vines: Use specified rate in 100 to 800 gallons of water per acre.

### MIXING DIRECTIONS

Pour specified amount of product into spray tank nearly filled with water. Add balance of water to fill tank. Keep agitator running during filling and spraying operations. If mixture does not mix readily, but tends to separate as an oily layer, do not use as injury to plants may result.

Do not combine with wettable powders unless previous use of the mixture has proven physically compatible and safe to plants. Always thoroughly emulsify this product with at least half of total water before adding wettable powders.

### PREHARVEST INTERVAL

Minimum days between last application and harvest are given in ( ) after each crop name.

### TREES AND VINES

Under heavy pest pressure, use higher rates.

CROP	REI (HRS)	RATE (PTS/ACRE)	PESTS	COMMENTS
APRICOTS (7)	12	1.5	Aphid, Codling moth, European Lecanium scale, Orange tortrix, Soft brown scale, Terrapin scale	The maximum application rate is 1.5 pints of product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
AVOCADOS (7)	48	4.7	Green house thrips, Latania scale, Omnivorous looper, Soft brown scale, Orange tortrix	The maximum application rate is 4.7 pints of product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 30 days.
BLACKBERRIES (1), BOYSENBERRIES (1), DEWBERRIES (1), LOGANBERRIES (1), RASPBERRIES (1)	12	2	Japanese beetle, Leafhoppers, Mites, Thrips	The maximum application rate is 2.0 pints of product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.
		2	Aphid, Rose scale	
BLUEBERRIES (1)	12	1.25	Aphids, Blueberry maggot, Blueberry tip borer, Cherry fruitworm, Cranberry fruitworm, Japanese beetle, Plum curculio, Leafrollers, Sharp-nosed leafhopper, White Tussock moth	The maximum application rate is 1.25 pints of product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 5 days.





CROP	REI (HRS)	RATE (PTS/ ACRE)	PESTS	COMMENTS
<b>CHERRIES</b> (3)	12	1.75	Black cherry aphid, Bud moth, Cherry fruit fly, Fruittree leafroller, Lesser peach twig borer, Forbes and San Jose scale	For Lesser peach twig borer, apply to trunk and scaffold limbs at 21 day intervals beginning with emergence (Do not exceed 4 applications per year). May cause injury on certain varieties of sweet cherries The maximum application rate is 1.75 pints of product per acre; the maximum number of applications per year is 4; and the minimum retreatment interval is 3 days.
<b>CITRUS</b> [GRAPEFRUIT, LEMONS, LIMES, ORANGES, TANGELOS, TANGERINES [Mandarin or Mandarin Oranges, Tangors, and other hybrids of tangerines with other citrus] (7)	72	CA: 7.5 All Other States: 4.5	Aphids, Black scale (single and off-brooded), California red scale, Citricola scale, Orange worm, Purple scale, Soft scale, Thrips, Yellow scale	Do not apply when trees are in bloom. <b>FOR CALIFORNIA:</b> The maximum application rate is 7.5 pints of product per acre; the maximum number of applications per year is 1. <b>ALL OTHER STATES:</b> The maximum application rate is 4.5 pints of product per acre; the maximum number of applications per year is 1.
		CA: 1 - 7.5 All Other States: 1 - 4.5	Mediterranean fruit fly	
<b>KUMQUATS</b> (7)	48	4.5	Aphids, Black scale (single and off-brooded), California red scale, Citricola scale, Orange worm, Purple scale, Soft scale, Thrips, Yellow scale	Do not apply when trees are in bloom. The maximum application rate is 4.5 pints product per acre; the maximum number of applications per year is 1.
<b>CURRANTS</b> (1)	12	1.25	Japanese beetle, Mites	The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 3; the minimum retreatment interval is 7 days.
<b>GOOSEBERRIES</b> (3)	12	2	Currant aphid, Imported currantworm	The maximum application rate is 2.0 pints product per acre; the maximum number of applications per year is 3; the minimum retreatment interval is 7 days.
<b>FIGS</b> (5)	12	1.5	Dried fruit beetles, Vinegar flies	Apply with 1 - 2 gallons sulfured molasses per acre. The maximum application rate is 1.5 pints product per acre; the maximum number of applications per year is 2; the minimum retreatment interval is 5 days.
<b>GRAPES</b> (3)	72 girdling and tying 24 other activities	1.88	Drosophila, European fruit lecanium, Grape leafhopper, Japanese beetle, Leafhopper, Mealybug, Spider mites, Terrapin scale	Injury may occur to grape berries when applications are made after bloom. The maximum application rate is 1.88 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 14 days.
<b>GUAVA</b> (2) <i>(Not registered for use in California)</i>	12	.75 - 1.25	Fruit flies	Apply with 1 pound partially hydrolyzed yeast protein or enzymatic yeast hydrolyzate. The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 13; and the minimum retreatment interval is 3 days.
<b>MANGO</b> (1) <i>(Not registered for use in California)</i>	12	0.9375	Fruit flies	The maximum application rate is 0.9375 pints product per acre; the maximum number of applications per year is 10; and the minimum retreatment interval is 7 days.
<b>PASSION FRUIT</b> (3) <i>(Not registered for use in California)</i>	12	1	Fruit flies	The maximum application rate is 1.0 pints product per acre; the maximum number of applications per year is 8; and the minimum retreatment interval is 7 days.
<b>MACADAMIA NUTS</b> (1)	12	0.94	Green Stink bug	The maximum application rate is 0.94 pints product per acre; the maximum number of applications per year is 6; and the minimum retreatment interval is 7 days.
<b>NECTARINES</b> (7)	24	3	Black cherry aphid, Black peach aphid, Green peach aphid, Japanese beetle, Rusty plum aphid	May be mixed with spray oil for dormant and delayed dormant applications. Follow spray oil manufacturer's directions. The maximum application rate is 3.0 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.
<b>PEACHES</b> (7)	24	1.25	Cottony peach scale, Lesser peach tree borer, Plum curculio, Oriental fruit moth, San Jose scale, Terrapin scale	The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 11 days.
<b>PECANS</b> (7)	24	2.5	Aphid, Mites, Pecan bud moth, Pecan leaf casebearer, Pecan nut casebearer, Pecan phylloxera	The maximum application rate is 2.5 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
<b>WALNUTS</b> (7)	24	1.5 - 2.5	Aphid, Mites, Walnut husk fly	The maximum application rate is 2.5 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.



**FIELD AND ROW CROPS**

Under heavy pest pressure, use higher rates.

CROP	REI (HRS)	RATE (PTS/ ACRE)	PESTS	COMMENTS
<b>ALFALFA, BIRDSFOOT TREFOIL, CLOVER, LESPEDEZA, VETCH (0)</b>	12	1 - 1.25	Alfalfa weevil larvae, Aphids, Armyworms, Clover leaf weevil, Grasshoppers, Lygus bugs, Pea aphid, Potato leafhoppers, Spider mites, Spittlebug, Vetch bruchid	Use higher rate for Armyworm control. Apply to alfalfa in bloom only in the evening or early morning when bees are not working in the fields or are not hanging on the outside of hives. The maximum application rate is 1.25 pints product per acre; the maximum number of applications is 2 per cutting; and the minimum retreatment interval is 14 days.
<b>LEAFY VEGETABLES (EXCEPT BRASSICA VEGETABLES) CROP GROUPING: AMARANTH (LEAFY AMARANTH, CHINESE SPINACH, TAMPALA) (7), ARRUGULA (ROQUETTE) (7), CELTUCE (7), CHERVIL (7), CHRYSANTHEMUM-Edible-leafed, Garland (7), CORN SALAD (7), DOCK (SORREL) (7), FLORENCE FENNEL (7), ORACH (7), PURSLANE-Garden and Winter (7) (Not registered for use in California)</b>	24	1 - 1.25	Aphids	The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
<b>DANDELIONS (7)</b>	24	1.25	Aphids	The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
<b>PARSLEY (7)</b>	24	1.5	Aphids	The maximum application rate is 1.5 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
<b>SWISS CHARD (14) (Not registered for use in California)</b>	12	1.0	Aphids	The maximum application rate is 1.0 pint product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
<b>CELERY (7)</b>	24	1.0 - 1.5	Aphids, Spider mite	The maximum application rate is 1.5 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
<b>LETTUCE, FIELD HEAD (14)</b>	24	1.88	Aphids, Alfalfa loopers, Leafhoppers, Mites	The maximum application rate is 1.88 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 6 days.
<b>LETTUCE, FIELD LEAF (14)</b>	24	1.88	Aphids, Alfalfa loopers, Leafhoppers, Mites	The maximum application rate is 2.0 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 5 days.
<b>ENDIVE, FIELD (7)</b>	24	1.25	Aphids, Alfalfa loopers, Leafhoppers, Mites	The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
<b>SPINACH (7)</b>	12	1.0	Aphids	The maximum application rate is 1.0 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
<b>BEETS, TABLE (7)</b>	12	1.25	Aphids, Beet armyworm, Blister beetles, Flea beetles	Do not use on Sugar Beets. The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.
<b>COLE CROPS (Brassica (cole) Leafy Vegetable crop group: BROCCOLI (2), BROCCOLI RAAB (RAPINI) (2), BRUSSELS SPROUTS (2), CAULIFLOWER (2), CAVALO BROCCOLO (2), CHINESE BROCCOLI (2), CHINESE MUSTARD CABBAGE (7), MIZUNA (7), MUSTARD SPINACH (7), RAPE GREENS (7)</b>	48	1.25	Aphids, Cabbage loopers, Flea beetles, Imported cabbage worms	The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
<b>CABBAGE (7)</b>	48	1.25	Aphids, Cabbage loopers, Flea beetles, Imported cabbage worms	The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 6; and the minimum retreatment interval is 7 days.
<b>CHINESE CABBAGE (BOK CHOY, NAPA) (7)</b>	48	1.25	Aphids, Cabbage loopers, Flea beetles, Imported cabbage worms	The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.

CROP	REI (HRS)	RATE (PTS/ ACRE)	PESTS	COMMENTS
COLLARDS (7)	12	1	Aphids, Cabbage loopers, Flea beetles, Imported cabbage worms	The maximum application rate is 1.0 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.
KALE (7), MUSTARD GREENS (7)	12	1	Aphids, Cabbage loopers, Flea beetles, Imported cabbage worms	The maximum application rate is 1.0 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 5 days.
KOHLRABI (7)	24	1.25	Aphids, Cabbage loopers, Flea beetles, Imported cabbage worms	The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
CORN-Field (7)	72 hours for detasseling 12 hours for all other activities	0.61	Aphids, Corn rootworm adults, Sap beetles, Thrips, Young grasshoppers	<b>CAUTION:</b> Injury may occur in whorl and silk stages. The maximum application rate is 0.61 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
COTTON (7)	48	2.5	Aphids, Brown cotton leafworm, Cotton leaf perforator, Leafhoppers, Spider mites, Whitefly, Boll weevils, Cotton fleahoppers, Fall armyworms, Grasshoppers, Garden webworms and Lygus	Do not graze or feed forage to livestock. The maximum application rate is 2.5 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.
CUCUMBERS (1)	24	1.75	Aphids, Cucumber beetles, Cutworms, Darkling ground beetles, Leafhoppers, Pickleworm, Spider mites, Squash vine borer, Thrips	Do not apply unless plants are dry. For vine borer apply to stems and vines at base of plant. The maximum application rate is 1.75 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
SQUASH, Summer (1)	24	1.75	Aphids, Cucumber beetles, Cutworms, Darkling ground beetles, Leafhoppers, Pickleworm, Spider mites, Squash vine borer, Thrips	The maximum application rate is 1.75 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.
SQUASH, Winter (1)	12	1	Aphids, Cucumber beetles, Cutworms, Darkling ground beetles, Leafhoppers, Pickleworm, Spider mites, Squash vine borer, Thrips	The maximum application rate is 1.0 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.
EGGPLANT (3)	12	1.56	Aphids, Spider mites, Lace bugs	The maximum application rate is 1.56 pints product per acre; the maximum number of applications per year is 4; and the minimum retreatment interval is 5 days.
FLAX (52)	12	0.5	Grasshoppers	The maximum application rate is 0.5 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.
GARLIC (3)	24	1 - 1.56	Aphids, Thrips	The maximum application rate is 1.56 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.
LEEKs (3), SHALLOTS (3)	24	1 - 1.56	Aphids, Thrips	The maximum application rate is 1.56 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
GRASSES (Forage, Hay) (0)	12	1 - 1.25	Aphids, Grasshoppers, Leafhoppers	The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 1.
HOPS (10) (Not registered for use in California)	12	0.63	Aphids	The maximum application rate is 0.63 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.
HORSERADISH (7), PARSNIPS (7), SALSIFY (7)	24	1.25	Aphids, Diamondback moths, Flea beetles, Leafhoppers	The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.
RADISHES (7)	12	1	Aphids, Diamondback moths, Flea beetles, Leafhoppers	The maximum application rate is 1.0 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.
MUSHROOMS (1) (Not registered for use in California)	12	1.7	Phorid flies, Sciarid flies	Apply in 130 gal of water per acre, or 1 tablespoon per 3 gal of water per 1000 square foot bed. Make thorough application as soon as possible after picking. The maximum application rate is 1.7 pints product per acre; the maximum number of applications per year is 4; and the minimum retreatment interval is 3 days.



CROP	REI (HRS)	RATE (PTS/ACRE)	PESTS	COMMENTS
OKRA (1) <i>(Not registered for use in California)</i>	12	1.2	Aphids, Japanese beetles	The maximum application rate is 1.2 pints product per acre; the maximum number of applications per year is 5; and the minimum retreatment interval is 7 days.
ONIONS- BULB AND GREEN (3)	12	1 - 1.56	Thrips	The maximum application rate is 1.56 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
		1.5	Onion maggots	
PEAS, DRIED (3)	12	1	Aphids, Pea weevils	Do not graze or feed forage to livestock. Dried peas can be treated by ground and foliar applications only. The maximum application rate is 1.0 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
PEAS, GREEN (3)	12	1	Aphids, Pea weevils	Do not graze or feed forage to livestock. Green peas can be treated by ground, foliar and aerial applications. The maximum application rate is 1.0 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
PEPPERMINT (7), SPEARMINT (7)	12	0.94	Adult flea beetles, Leafhoppers	The maximum application rate is 0.94 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.
PEPPERS (Field) (3)	12	1.5	Aphids, Pepper maggots	The maximum application rate is 1.5 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 5 days.
POTATOES (0)	12	1	False chinch bugs, Leafhoppers, Mealybugs	The maximum application rate is 1.5 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
		1.5	Aphids, Blister beetles	
RICE-DOMESTIC, GRAIN OR WILD (7)	12	1.25	Rice leaf miners, Rice stink bugs	Do not apply Propanil within 15 days of Malathion treatment. Broadcast use only over intermittently flooded areas. Application may not be made around bodies of water where fish or shellfish are grown and/or harvested commercially. The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
RUTABAGAS (7)	12	1	Aphids	The maximum application rate is 1.0 pints product per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.
SMALL GRAINS (BARLEY) (7)	12	1 - 1.25	Armyworms, English grain aphids, Grasshoppers, Greenbugs	The maximum application rate is 1.25 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
SMALL GRAINS (OATS, RYE, WHEAT [Spring and Summer]) (7)	12	1	Armyworms, English grain Aphids, Grasshoppers, Greenbugs	The maximum application rate is 1.0 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
SORGHUM-Grain (7)	12	1.0	Greenbugs	Do not graze or feed forage to livestock. The maximum application rate is 1.0 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
STRAWBERRIES (3)	12	1.5 - 2	Aphids, Field crickets, Lygus bugs, Potato leafhoppers, Spider mites, Spittlebugs, Strawberry leafrollers, Strawberry root weevils, Thrips, Whiteflies	The maximum application rate is 2.0 pints product per acre; the maximum number of applications per year is 4; and the minimum retreatment interval is 7 days.
SWEET CORN (Field) (5)	72 detassling 12 other activities	1	Japanese beetles	<b>CAUTION:</b> Injury may occur in whorl and silk stages. The maximum application rate is 1.0 pints product per acre; the maximum number of applications per year is 5; and the minimum retreatment interval is 5 days.
SWEET POTATOES (3)	12	1 - 1.5	Leafhoppers	The maximum application rate is 1.5 pints product per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.
		1.5	Morning Glory leafminers	
TOMATOES (Field) (1)	12	1.5	Aphids, Spider mites, Drosophila flies	Apply a full coverage application to fruit and foliage. The maximum application rate is 1.5 pints product per acre; the maximum number of applications per year is 4; and the minimum retreatment interval is 5 days.



CROP	REI (HRS)	RATE (PTS/ ACRE)	PESTS	COMMENTS
WATERCRESS (7)	12	1	Aphids	The maximum application rate is 1.0 pints product per acre; the maximum number of applications per year is 5; and the minimum retreatment interval is 3 days.

#### OUTDOOR ORNAMENTALS

Note: Before treating a large number of ornamental plants with Gowan Malathion 8 Flowable alone or as a tank mixture with any other material, make a test application on a few plants and observe for 7-10 days prior to treating large areas to reduce the possibility of plant injury.

CROP	REI (HRS)	RATE	PESTS	COMMENTS
FLOWERS, SHADE TREES and SHRUBS	12	1 pint in 100 gal of water as a dilute spray	Aphids, Euonymus scales, European pine shoot moths, Four-lined leaf bugs, Japanese beetle adults, Lace scales, Mealybugs, Millipedes, Oyster shell scales, Potato leafhoppers, Rose leafhoppers, Scurfy scales, Spider mites, Springtails, Sowbugs, Tarnished plant bugs, Thrips, Whiteflies	<b>CAUTION:</b> Avoid use on certain ferns including Boston, Maidenhair and Pteris, as well as some species of Crassula and Canaetri Juniper. For Oyster shell, Fletch, Juniper, Oak kermes and Pine needle scales apply when scale crawlers have settled on foliage. The maximum number of applications per year is 2; and the minimum retreatment interval is 10 days.
		1.25 pints in 100 gal of water as a dilute spray	Azalea scales, Bagworms, Birch leafminers, Boxwood leafminers, Fletch scales, Florida-red scales, Juniper scales, Magnolia scales, Oak kermes, Pine leaf scales, Tent caterpillars	
		1.6 pints in 100 gal of water	Black scale crawlers, Monterey pine scales	
		2 pints in 100 gal of water	Pine needle scales, Wax scales	

#### SLASH PINE, PINE SEED ORCHARDS, AND CHRISTMAS TREE PLANTATIONS

CROP	REI (HRS)	RATE	PESTS	COMMENTS
SLASH PINE, and PINE SEED ORCHARDS	12	For ground application, mix 0.4 gal of Malathion 8 Flowable in 100 gallons of water.	Slash pine flower thrips, European pine sawfly	Apply 3/4 gallons of the mixture per tree on the smallest flowering trees. Mist blowers or airstab sprays may be used. The maximum application rate is 3.2 pints product per acre; the maximum number of applications per year/growing season is 2; and the minimum retreatment interval is 7 days.
		For air application, mix 0.4 gal of Malathion 8 Flowable in at least 10 gallons of water.		Apply a minimum of 10 gallons of mixture per acre. Make two applications, the first when female flowers are in twig bud stage, the second one week prior to maximum flower receptivity to pollen. The maximum application rate is 3.2 pints product per acre; the maximum number of applications per year/growing season is 2; and the minimum retreatment interval is 7 days.
CHRISTMAS TREE PLANTATIONS	12	For ground application, mix 0.4 gal of Malathion 8 Flowable in 100 gallons of water.	Slash pine flower thrips, European pine sawfly	Apply 3/4 gallons of the mixture per tree on the smallest flowering trees. Mist blowers or airstab sprays may be used. The maximum application rate is 3.2 pints product per acre; the maximum number of applications per year is 2.
		For air application, mix 0.4 gal of Malathion 8 Flowable in at least 10 gallons of water.		Apply a minimum of 10 gallons of mixture per acre. Make two applications, the first when female flowers are in twig bud stage, the second one week prior to maximum flower receptivity to pollen. The maximum application rate is 3.2 pints product per acre; the maximum number of applications per year is 2.

#### MOSQUITO CONTROL

##### AROUND THE OUTSIDE OF BUILDINGS

Around lower outside foundations of homes, yards - spot treatment only, out-door garbage cans, and garbage dumps: Apply 0.2439 gallons of Malathion 8 Flowable undiluted per 1000 sq. ft. on painted surfaces. Apply 0.2439 gallons of Malathion 8 Flowable undiluted per 1000 sq. ft. on unpainted surfaces.

##### CULL FRUIT AND VEGETABLE DUMP

Around cull fruit and vegetable dumps: Apply 6.857 pounds of Malathion 8 Flowable undiluted per 1000 sq. ft. on painted surfaces. Apply 2 gallons of Malathion 8 Flowable undiluted per 1000 sq. ft. on unpainted surfaces.

#### APPLICATION THROUGH IRRIGATION SYSTEMS - CHEMIGATION

Apply this product only through sprinkler, including center pivot, lateral move, end tow side (wheel) roll, traveler, big gun, solid set, or hand move, or drip (including surface and subsurface) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Mix in clean supply tank the specified amount of this product for acreage to be covered, and needed quantity of water.

This product should not be tank-mixed with other pesticides, surfactants or fertilizers unless prior use has shown the combination noninjurious under your conditions of use. Follow precautionary statements and directions for all tank-mix products.

On all crops, use sufficient gallonage of water to obtain thorough and uniform coverage, but not cause runoff or excessive leaching. This will vary depending on equipment, pest problem and stage of crop growth. Application of more or less than optimal quantity of water may result in decreased chemical performance, crop injury or illegal pesticide residues.

Meter this product into the irrigation water uniformly during the period of operation. Do not overlap application. Follow specified label rates, application timing, and other directions and precautions for crop being treated. Continuous mild agitation of pesticide mixture may be needed to assure a uniform application, particularly if the supply tank requires a number of hours to empty.

Do not apply when wind speed favors drift beyond the area intended for treatment.

#### CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Note: Gowan Company does not encourage connecting chemigation systems to public water supplies. The following information is provided for users who have diligently considered all other application and water supply options before electing to make such a connection.

Public water systems means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

#### SPRINKLER CHEMIGATION (FOLIAR SPRAY USES)

The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

#### DRIP (INCLUDING SURFACE AND SUBSURFACE) CHEMIGATION

The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

## STORAGE AND DISPOSAL

**DO NOT CONTAMINATE** water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** Gowan Malathion 8 Flowable should be stored in the original unopened container in a secure, dry place. Do not contaminate with other pesticides or fertilizers. The product should never be heated above 55°C (131°F), and should not be stored for long periods of time at a temperature in excess of 25°C (77°F).

**PESTICIDE DISPOSAL:** To avoid wastes, use all materials in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. After cleaning, if recycling is not available, puncture and dispose of in a sanitary landfill.

FOR 24-HOUR EMERGENCY ASSISTANCE (SPILL, LEAK OR FIRE), CALL CHEMTREC® (800) 424-9300.

For other product information, contact Gowan Company or see Material Safety Data Sheet



#### **NOTICE OF CONDITIONS OF SALE AND WARRANTY AND LIABILITY LIMITATIONS**

**Important:** Read the entire Directions for Use and Notice of Conditions of Sale and Warranty and Liability Limitations before using this product. If terms are not acceptable return the unopened container for a full refund.

Our directions for use of this product are based on tests believed to be reliable. However, it is impossible to eliminate all risk associated with the use of this product. Crop injury, inadequate performance, or other unintended consequences may result due to soil or weather conditions, off target movement, presence of other materials, method of use or application, and other factors, all of which are beyond the control of Gowan Company. All such risks shall be assumed by the Buyer and User.

Gowan Company warrants that this product conforms to the specifications on the label when used in strict conformance with Direction for Use, subject to the above stated risk limitations. GOWAN COMPANY MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE FULLEST EXTENT PERMITTED BY LAW, GOWAN COMPANY'S EXCLUSIVE LIABILITY FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT WHETHER IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, OR ANY OTHER LEGAL THEORY IS STRICTLY LIMITED TO THE PURCHASE PRICE PAID OR REPLACEMENT OF PRODUCT, AT GOWAN COMPANY'S SOLE DISCRETION.

Chemtrek® is a registered trademark of American Chemistry Council, Inc.



## 1 Identification

### · Product identifier

· Trade name: **GOWAN MALATHION 8 FLOWABLE**

**EPA Registration No.: 10163-21**

· CAS Number: Active Ingredient: Malathion (79.5%), CAS:121-75-5

· Relevant identified uses of the substance or mixture and uses advised against

· Sector of Use Agriculture

· Application of the substance / the mixture Agricultural insecticide

### · Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

Gowan Company

P.O. Box 5569

Yuma, Arizona 85366-5569

(928) 783-8844

· Information department: [sds@gowanco.com](mailto:sds@gowanco.com)

· Emergency telephone number:

Chemtrec® Emergency Telephone 24 - Hours: (Spills, leak or fire) Inside U.S. & Canada: (800) 424-9300

Outside the U.S. & Canada: +011 (703) 527-3887

For medical emergency (Prosar® ): (888) 478-0798

## 2 Hazard(s) identification

### · Classification of the substance or mixture



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

### · Label elements

· GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms



GHS07

· Signal word: Warning

· Hazard-determining components of labeling:

malathion (ISO)

· Hazard statements

Harmful if swallowed.

· Precautionary statements

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· Hazard description: Harmful if swallowed. Avoid breathing of spray mist. Avoid contact with skin.

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**Trade name: GOWAN MALATHION 8 FLOWABLE**  
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· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



**HAZARD INDEX:**

4 Severe Hazard  
 3 Serious Hazard  
 2 Moderate Hazard  
 1 Slight Hazard  
 0 Minimal Hazard

· **HMIS-ratings (scale 0 - 4)**



**HAZARD INDEX:**

4 Severe Hazard  
 3 Serious Hazard  
 2 Moderate Hazard  
 1 Slight Hazard  
 0 Minimal Hazard

· **Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable in US.
- **vPvB:** Not applicable in US.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

121-75-5	malathion (ISO) 	79.5%
71-36-3	butan-1-ol 	3.1%

### 4 First-aid measures

· **Description of first aid measures**

· **General information:**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

You may also contact 1-888-478-0798 for emergency medical treatment information.

· **After inhalation:**

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-

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- mouth if possible.
  - Call poison control center or doctor for further treatment advice.
- **After skin contact:**
  - Take off contaminated clothing.
  - Rinse skin immediately with plenty of water for 15-20 minutes.
  - Call a poison control center or doctor for treatment advice.
- **After eye contact:**
  - Hold eye open and rinse slowly and gently with water for 15-20 minutes.
  - Remove contact lenses, if present, after first 5 minutes, then continue rinsing eyes.
  - Call a poison control center or doctor for treatment advice.
- **After swallowing:**
  - Immediately call a poison control center or doctor.
  - Do not induce vomiting unless told to do so by the poison control center or doctor.
  - Do not give any liquid to the person.
  - Do not give anything by mouth to an unconscious person.
- **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed** Unknown
  - **Indication of any immediate medical attention and special treatment needed**  
 Malathion upon use may cause cholinesterase inhibition. Atropine is antidotal. May pose an aspiration pneumonia hazard. Contains petroleum distillates.

## \* 5 Fire-fighting measures

- **Extinguishing media**
  - **Suitable extinguishing agents:**  
 CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
  - Carbon monoxide (CO)
  - Carbon dioxide (CO<sub>2</sub>)
  - Sulphur dioxide (SO<sub>2</sub>)
  - Phosphorus trioxide
  - Methyl mercaptan
  - Hydrogen sulfide
  - Dimethyl sulfide
- **Advice for firefighters**
  - Containers in fire may burst or explode from excessive heat. Stay well back from fire area. Vapors may travel along floor to ignition source and flash back.
  - **Protective equipment:** Wear self-contained respiratory protective device.

## \* 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  - Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.

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**Trade name: GOWAN MALATHION 8 FLOWABLE**  
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See Section 13 for disposal information.

(Contd. of page 3)

## 7 Handling and storage

### · Handling:

#### · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

Harmful if swallowed. Avoid breathing of spray mist. Avoid contact with skin.

· **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.

### · Conditions for safe storage, including any incompatibilities

#### · Storage:

##### · Requirements to be met by storerooms and receptacles:

Store in a cool, dry, well-ventilated area.

The product should never be heated above 55°C (131°F), and should not be stored for long periods of time at a temperature in excess of 25°C (77°F).

· **Information about storage in one common storage facility:** Store away from foodstuffs.

· **Further information about storage conditions:** None.

· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

### · Control parameters

#### · Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** Harmful if swallowed. Avoid breathing of spray mist. Avoid contact with skin.

### · Exposure controls

#### · Personal protective equipment:

##### · General protective and hygienic measures:

• Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

• Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

• Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

##### · Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

##### · Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

##### · Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

##### · Body protection:

Handlers must wear:

- Long-sleeved shirt and long pants

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- Chemical-resistant gloves
- Shoes plus socks

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

##### · Appearance:

- Form: Liquid
- Color: Light amber
- Odor: Mercaptan
- Odour threshold: Not determined.

· pH-value: Not determined.

#### · Change in condition

- Melting point/Melting range: Undetermined.
- Boiling point/Boiling range: > 149 °C (> 300 °F)

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

#### · Ignition temperature:

- Decomposition temperature: Not determined.

· Auto igniting: Product is not self-igniting.

· Danger of explosion: Product does not present an explosion hazard.

#### · Explosion limits:

- Lower: Not determined.
- Upper: Not determined.

· Vapor pressure: Not determined.

· Density at 20 °C (68 °F): 1.21 g/cm<sup>3</sup> (10.097 lbs/gal)

- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate: Not determined.

#### · Solubility in / Miscibility with

- Water: Dispersible.

· Partition coefficient (n-octanol/water): Not determined.

#### · Viscosity:

- Dynamic: Not determined.
- Kinematic: Not determined.

· Other information: No further relevant information available.

## 10 Stability and reactivity

### · Reactivity

- Chemical stability: Stable under normal conditions

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**Trade name: GOWAN MALATHION 8 FLOWABLE**  
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- **Thermal decomposition / conditions to be avoided:**  
 No decomposition if used according to specifications.  
 Excessive heat
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Excessive heat.
- **Incompatible materials:** Strong oxidizers
- **Hazardous decomposition products:**  
 Carbon monoxide (CO)  
 Carbon dioxide  
 Sulfur dioxide  
 Phosphorus trioxide  
 Methyl mercaptan  
 Hydrogen sulfide  
 Dimethyl sulfide  
 No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

Oral	LD50	5400 mg/kg (rat) Male
Dermal	LD50	>2000 mg/kg (rat)
Inhalative	LC50/4 h	>5.2 mg/l (rat)

- **Primary irritant effect:**
  - **on the skin:** Slightly irritating
  - **on the eye:** Slight irritation
- **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
 Harmful  
 Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

121-75-5	malathion (ISO)	3
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- **NTP (National Toxicology Program)**

None of the ingredients are listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients are listed.

## 12 Ecological information

- **Toxicity**

This pesticide is toxic to aquatic organisms, including fish and invertebrates. This product may contaminate water through drift of spray in wind. This product has a high potential for runoff after application. Use care when applying in or to an area which is adjacent to any body of water, and do not apply when weather conditions favor drift from target area. Poorly draining soils and soils with shallow water tables are more prone to produce

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- runoff that contains this product.
- **Aquatic toxicity:** No further relevant information available.
  - **Persistence and degradability** No further relevant information available.
  - **Behavior in environmental systems:**
    - **Bioaccumulative potential** No further relevant information available.
    - **Mobility in soil** No further relevant information available.
  - **Ecotoxicological effects:**
    - **Remark:** Very toxic for fish
  - **Additional ecological information:**
    - **General notes:**  
Do not apply to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.
  - **Other adverse effects** No further relevant information available.

## \* 13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:**  
To avoid wastes, use all materials in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste facility or pesticide disposal program (often such programs are run by state or local governments or by industry).
- **Uncleaned packagings:**
  - **Recommendation:**  
Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. After cleaning, if recycling is not available, puncture and dispose of in a sanitary landfill.

## \* 14 Transport information

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                           | <p>Void<br/>UN3082</p>   |
| <ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul> | <p>3082 Environmentally hazardous substances, liquid, n.o.s. (malathion (ISO))<br/>           ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (malathion (ISO)), MARINE POLLUTANT<br/>           ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (malathion (ISO))</p> |

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US

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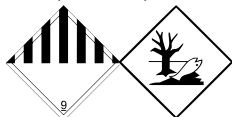
Reviewed on 07/01/2015

**Trade name: GOWAN MALATHION 8 FLOWABLE**  
**EPA Registration No.: 10163-21**

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· **Transport hazard class(es)**

· **ADR, IMDG, IATA**



· **Class** 9 Miscellaneous dangerous substances and articles  
 · **Label** 9

· **Packing group**

· **ADR, IMDG, IATA** III

· **Environmental hazards:** Product contains environmentally hazardous substances: malathion (ISO)

· **Marine pollutant:** Yes  
 Symbol (fish and tree)

· **Special marking (ADR):** Symbol (fish and tree)

· **Special marking (IATA):** Symbol (fish and tree)

· **Special precautions for user**

Warning: Miscellaneous dangerous substances and articles

· **Danger code (Kemler):** 90

· **EMS Number:** F-A,S-F

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable

· **Transport/Additional information:**

· **Quantity limitations** On passenger aircraft/rail: No limit  
 On cargo aircraft only: No limit

· **ADR**

· **Excepted quantities (EQ)** Code: E1  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 1000 ml

· **IMDG**

· **Limited quantities (LQ)** 5L  
 Code: E1  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":**

US DOT:  
 For packages <30 Ga.: NOT REGULATED  
 For packages ≥ 30 Ga.: UN3082, Environmentally hazardous substances, liquid, n.o.s. (malathion (ISO)), 9, III

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

EPA /FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.

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· **SARA Title III**

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

All ingredients are listed.

· **TSCA (Toxic Substances Control Act):**

None of the ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

· **TLV (Threshold Limit Value established by ACGIH)**

121-75-5 malathion (ISO)

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients are listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

Not applicable

· **Signal word:**

(US EPA) CAUTION

· **Hazard-determining components of labeling:**

malathion (ISO)

· **Hazard statements**

Harmful if swallowed.

· **Precautionary statements**

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

Dispose of contents/container in accordance with local/regional/national/international regulations.

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· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing SDS:** Supply Chain

· **Contact:** sds@gowanco.com

· **Date of preparation / last revision** 07/01/2015 / 4

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

· **\* Data compared to the previous version altered.**



STATE OF MAINE  
DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY  
BOARD OF PESTICIDES CONTROL  
28 STATE HOUSE STATION  
AUGUSTA, MAINE 04333

PAUL R. LEPAGE  
GOVERNOR

WALTER E. WHITCOMB  
COMMISSIONER

To: Board Members  
From: Staff  
Re: Rulemaking Timeline and Topics  
Date: February 6, 2017

At the December 16, 2017 meeting the Board discussed the possibility of initiating rulemaking to Chapter 29 around browntail moth control and asked staff to determine possible hearing dates. Major-substantive rulemaking needs to be submitted to the Legislature by the second Friday of January, 2018 for consideration in that legislative session.

Discuss	Submit to SOS	Public Hearing	Public Comment Period Ends	Review	Adopt
Mar 31	April 11	May 12	May 26	June 23	Aug-Dec
Mar 31, May 12	May 23	Jun 23	July 7	Aug 4	Sept-Dec
Mar 31, May 12, Jun 23	Jul 4	Aug 4	Aug 18	Sept	Oct-Dec
Mar 31, May 12, Jun 23, Aug 4	August	September	Oct	Nov	Dec

Since rulemaking is expensive and time-consuming the Board generally tries to consolidate rulemaking initiatives. Below is a list of potential amendments that have been identified by the Board or staff.

Chapter	
10 Section 2(P)(2)b	Incorporate policy regarding application of pesticides to unoccupied hotel rooms and apartments. Currently the rule specifies “occupied apartments” but is silent on “unoccupied apartments.” May want to consider the 7 day exception (section 2(P)(2)(d)ii) because indoors 7 days may not be enough
10 Section 2(P)(2)(d)ii	Incorporate Policy Concerning Denying Access to the Public for Seven Days to Areas “Open to Use by the Public”

HENRY JENNINGS, DIRECTOR  
90 BLOSSOM LANE, DEERING BUILDING



PHONE: (207) 287-2731  
WWW.THINKFIRSTSPRAYLAST.ORG

26 Section 1(E)	Incorporate Interim Interpretative Policy on the Applicability of CMR 01-026 Chapter 26 (Clarify the definition of “occupied buildings” to mean fully enclosed indoor spaces inside building and that open air structures are not buildings for the purpose of the rule)
27 Section 2(B)(4)ii	Change wording “a list of pesticide applications conducted on school grounds” to include “ to school buildings” to clarify that all pesticide applications must be included in log
27 Section 2(B)(5)	Change wording from “made in school buildings and on school grounds” to “made <u>to</u> school buildings and on school grounds” to clarify that it includes the exterior of buildings
27 Section 3(A)	Add insect repellents to the list of exemptions
27 Section 3(C)	Change wording “When the Maine Center for Disease Control has identified arbovirus positive animals (including mosquitoes and ticks) in the area, powered applications for mosquito control are exempt...” to clarify that all applications are exempt not just mosquito control applications.
28 Section 3(B)(2)(d)v	Clarify that the telephone number on the sign must be a working number
29 Section 5	Restrictions on Pesticide Applications to Control Browntail Moths Near Marine Waters
29 Section 6	Incorporate Interim Policy to Delegate Authority to the Staff to Approve Requests for Variance from CMR 01-026 Chapter 29 for Control of Plants that Pose a Dermal Toxicity Hazard
29 Section 6	Incorporate Interim Policy to Delegate Authority to the Staff to Approve Requests for Variance from CMR 01-026 Chapter 29 for Control of Invasive Plants
31 Section 1	Do unlicensed applicators have to be employees of the same company as the Master or Operator? Question has arisen around employees of temp agencies and volunteers. Clarify
31 Section 2(A)(II) Section 3(B)(VII)c	Change Forest Pest Control to Forest Pest Management Change Disinfectant and Biocide Treatments to <ul style="list-style-type: none"> <li>• 1 Disinfectant and Biocide Treatments</li> <li>• 2 Swimming Pool &amp; Spa</li> <li>• 3 Mod Remediation &amp; Water Damage Restoration</li> </ul> To align with exams
36	Certification and Licensing Provisions/Monitors and Spotters for Forest Insect Aerial Spray Program. Requirements were repealed in statute. Repeal entire chapter
41	Refuge in a bag.
50 Section 1(C)	Definition of “spray period” was repealed in Title 22 so Spray Period Records should not be required. Also if Chapter 36 is repealed there will be no monitors
50	During discussion of removing the requirements for monitors and spotters, the Legislature suggested that the spray application maps should be provided to the BPC after application.



PAUL R. LEPAGE  
GOVERNOR

STATE OF MAINE  
DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY  
BOARD OF PESTICIDES CONTROL  
28 STATE HOUSE STATION  
AUGUSTA, MAINE 04333-0028

WALTER E. WHITCOMB  
COMMISSIONER

HENRY S. JENNINGS  
DIRECTOR

## MEMORANDUM

Date: April 24, 2015  
To: Board Members  
From: Gary Fish  
Subject: Policy regarding application of pesticides to unoccupied hotel rooms and apartments

### Background

At the December 5, 2014 meeting the Board had a discussion regarding pesticide applications to hotel rooms and unoccupied apartments. State statutes define pesticide applications made to property open to use by the public as “custom applications” which may only be conducted by a licensed commercial applicator.

Section 2 (P) (2) of Chapter 10 defines “property open to use by public” and when those areas are NOT considered open to the public. One of those exemptions includes, “where the public has not been permitted upon the property at any time within seven days of when the property received a pesticide application.”

The Board recognized that indoor pesticide applications inherently pose greater risks to building occupants than outdoor applications because the confined space of a residential building inhibits both the dissipation and breakdown of airborne and surface pesticide residues. Due to these concerns, the Board came to a consensus that the term “property” means the entire building when it involves residential apartments and lodging places<sup>1</sup>.

### Board Policy

Based on the considerations described above, the Board adopted the following policy on April 24, 2015:

The Board determined that because indoor applications pose greater risks to building occupants, lodging places and apartment buildings should not be included as exemptions to areas open to the public. Therefore all pesticide applications to lodging places or apartment buildings must be made under the direct supervision of a licensed commercial applicator unless the public is excluded from the entire building for the full seven days.

<sup>1</sup>Lodging Places - LODGING PLACES means every building or structure, or any part thereof, used, maintained, advertised or held out to the public as a place where sleeping accommodations are furnished to the public for business purposes. The term includes, but not by way of limitation, hotels, motels, guest homes and cottages. A Lodging License is required for any person or entity which rents out four or more rooms or cottages. CMR 10-144 Chapter 206



PAUL R. LEPAGE  
GOVERNOR

STATE OF MAINE  
DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY  
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DIRECTOR

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**MAINE BOARD OF PESTICIDES CONTROL**

**POLICY CONCERNING DENYING ACCESS TO THE PUBLIC  
FOR SEVEN DAYS TO AREAS "OPEN TO USE BY THE PUBLIC"**

**ADOPTED July 10, 2015**

**Background**

At the December, 2014, and the April and June, 2015 meetings, the Board had discussions regarding pesticide applications to private lands which are held open for public use. State statutes define pesticide applications made to property open to use by the public as "custom applications" which may only be conducted by a licensed commercial applicator.

Section 2 (P) (2) of Chapter 10 defines "property open to use by the public." Property is deemed to be open to use by the public where its owner, lessee or other lawful occupant operates, maintains or holds the property open or allows access for routine use by members of the public. The rule also defines when those areas are NOT considered open to the public.

One of those exemptions includes areas, "where the public has not been permitted upon the property at any time within seven days of when the property received a pesticide application."

The Board discussed what the term "property" means in the context of this exemption and whether or not to interpret it in a way that allows land trusts and other land owners to control invasive plants or other vegetation and then close off only the area that was treated instead of the entire property.

**Board Policy**

The Board determined that because pesticide applications to recreational areas, trails and parks pose minimal risks, the exemption from consideration as a "property open to use by the public" is appropriate when the public is excluded from treated areas for seven days. Therefore pesticide applications under those circumstances will not require supervision by a licensed commercial applicator.

responsible for establishing policies relating to the operating practices of others applying pesticides within the company or agency. Such practices may include equipment maintenance and calibration, employee training, safety and hygiene, pesticide and container disposal, accident mitigation and ensuring that applications are conducted in compliance with all state and federal laws and regulations.

- K. "Commercial applicator/Operator" means a commercial applicator who:
1. applies or directs the application of a pesticide according to the instructions of the master when a master is required according to Chapter 31, Section 1 (Company /Agency Licensing Requirements); or
  2. applies or directs the application of a pesticide and performs the function of the master applicator when a separate master is not required according to Chapter 31, Section 1(Company/Agency Licensing Requirements).
- L. "Compact urban line" means that delineation made by the Maine Department of Transportation which denotes a section of the highway where structures are nearer than 200 feet apart for a distance of one-quarter of a mile.
- M. "Compatibility" means that property of a pesticide that permits its use with other chemicals without undesirable results being caused by the combination.
- N. "Competent" means properly qualified to perform functions associated with pesticide application, the degree of capability required being directly related to the nature of the activity and the associated responsibility.
- O. "Common exposure route" means a likely way (oral, dermal, respiratory) by which a pesticide may reach and/or enter an organism.
- P. "Custom application" means an application of a pesticide:
1. Under contract or for which compensation is received;
    - a. For the purposes of this definition, "under contract" includes: verbal or written agreements to provide services which include the use of any pesticide; i.e., private or commercial rental agreements, pest control service agreements, landscape maintenance agreements, etc.
    - b. For purposes of this definition, compensation is deemed to have been received for a pesticide application where any form of remuneration has been or will be exchanged, including payment of cash, rent, or other financial consideration, or by the exchange of goods and/or services. This also includes any agreements where crops grown on rented land will be sold to the landowner or are otherwise grown for the benefit of the land owner.

2. To a property open to use by the public;
  - a. For purposes of this definition, property is deemed to be open to use by the public where its owner, lessee or other lawful occupant operates, maintains or holds the property open or allows access for routine use by members of the public. Persons are considered to be members of the public even though they may pay a fee or other compensation in order to make use of the property or may visit the property for a commercial purpose.
  - b. Property open to use by the public includes but is not limited to: shopping centers, office and store space routinely open to the public (i.e. rest rooms, self-service areas and display aisles), common areas of apartment buildings, occupied apartments, public pools and water parks, schools and other institutional buildings, public roads, organized recreational facilities, golf courses, campgrounds, parks, parking lots, ornamental and turf areas around condominiums, apartment buildings, stores malls and retail areas of greenhouses and nurseries if the public is allowed access before the pesticide restricted-entry or re-entry interval elapses.
  - c. Examples of property not open to use by the public include without limitation: farms, forest lands, and private residential or commercial property which is not routinely operated or maintained for use by the public or otherwise held open to public use.
  - d. Notwithstanding this definition, property shall not be deemed to be open for use by the public in the following cases:
    - i. where the property is devoted primarily to agricultural, forest, ornamental tree or plant production, but this exception shall not apply to campgrounds, leased inholdings or roads within such property which are open for use by the public;
    - ii. where the public has not been permitted upon the property at any time within seven days of when the property received a pesticide application;
    - iii. forestry rights of way where the property has been closed during the time of spraying or during the label restricted entry interval or re-entry period, whichever is greater.
3. In a food establishment licensed under M.R.S. 22, Chapter 551, or an eating establishment licensed under M.R.S. 22, Chapter 562, except that “custom application” does not include a pesticide application at a licensed food or eating establishment when:
  - a. The establishment is ancillary to the production of an agricultural commodity;
  - b. The owner or an employee of that establishment is certified as a private applicator under section 1471-C, subsection 2; and



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## **MAINE BOARD OF PESTICIDES CONTROL INTERIM INTERPRETATIVE POLICY ON THE APPLICABILITY OF CMR 01-026 CHAPTER 26**

**ADOPTED AUGUST 27, 2009**

### **BACKGROUND**

The Board first adopted Chapter 26 of its rules in 2006 and later amended it in 2008. At the time of adoption, the Board intended to regulate the use of pesticides inside occupied buildings because the air tight environment poses unique exposure risks to building occupants. However, when the Board crafted the definition of an “occupied building”, it used the term “structures”, which is a more general term than building. Consequently, Chapter 26 as currently written could be interpreted to regulate the roofed areas of retail stores that are otherwise open to the outdoors. Such areas have ample ventilation and do not pose the same exposure risks as an air tight building space would.

### **POLICY**

The Board determined that its intent in promulgating Chapter 26 was to regulate the use of pesticides in enclosed buildings in which reduced airflow affects dissipation of airborne pesticides. Consequently, the Board adopted an interim interpretation of the term “occupied buildings” to mean fully enclosed indoor spaces inside buildings.



**01 DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY**

**026 BOARD OF PESTICIDES CONTROL**

**Chapter 26: STANDARDS FOR INDOOR PESTICIDE APPLICATIONS AND NOTIFICATION FOR ALL OCCUPIED BUILDINGS EXCEPT K - 12 SCHOOLS**

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**SUMMARY:** These regulations establish procedures and standards for applicators applying pesticides inside occupied private and public buildings other than K - 12 schools that are covered by Chapter 27. This chapter also sets forth the requirements for notification about pending pesticide applications to residents of rented space, employees of agencies, businesses and institutions, and parents or guardians of children in licensed child care facilities and nursery schools.

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**Section 1. Definitions**

- A. **Applicator.** For the purposes of this regulation, Applicator means a commercial applicator or other persons who apply pesticides to occupied buildings.
- B. **Client.** For the purposes of this regulation, Client is the person who either owns or manages the Occupied Building and who contracts with a commercial applicator to monitor and/or control pests.
- C. **Crack and Crevice Treatment.** For the purposes of this regulation, Crack and Crevice Treatment means using an injector tip and placing the tip inside an opening to apply small amounts of pesticides into cracks and crevices in which pests hide or through which they may enter a building. Such openings commonly occur at expansion joints, between elements of construction, and between equipment and floors. These openings may lead to voids such as hollow walls, equipment legs and bases, conduits, motor housings, and junction or switch boxes. This does not include spraying a band covering the baseboards or mopboards or spraying above the baseboards or mopboards.
- D. **Integrated Pest Management.** For the purposes of this regulation, Integrated Pest Management (IPM) is a process that utilizes regular monitoring to determine if and when a treatment is needed. It employs physical, mechanical, cultural, chemical, biological and educational programs to keep pest populations low enough to prevent intolerable damage or annoyance. Pesticides should be only one of many options considered for solving a pest problem, and when required, target-specific, low impact pesticides and application techniques should be employed. Furthermore, pesticide applications are not made according to a pre-determined schedule but are only made when and where monitoring, or a previous history of pest incidence has indicated that the pest will cause unacceptable economic, medical or aesthetic damage. The IPM program must as a result be environmentally, socially, and economically compatible to meet current public expectations.
- E. **Occupied Building.** For the purposes of this regulation, Occupied Building means any public, private, commercial or institutional structure used or occupied by persons on a regular, long-term basis as a residence or for occupations. These include but are not

limited to rented residential buildings, condominiums, licensed childcare facilities and nursery schools, and governmental, commercial and institutional buildings.

## **Section 2. Exemptions**

- A. The following pesticide uses are exempt from the requirements of this Chapter:
1. application of ready-to-use general use pesticides by hand or with non-powered equipment to control or repel stinging or biting insects when there is an urgent need to mitigate or eliminate a pest that threatens the health or safety of any person;
  2. application of general use antimicrobial products by hand or with non-powered equipment to interior or exterior surfaces and furnishings during the course of routine cleaning procedures;
  3. application of paints, stains or wood preservatives that are classified as general use pesticides;
  4. application of pesticides by a resident to his or her own residential unit;
  5. commercial application of pesticides where the resident has contracted for application to his or her own personal residential unit; and
  6. indoor applications of pesticides injected into closed systems for control of nuisance microbial organisms.
- B. The use of baits, gels, pastes, dusts and granular materials placed in areas not readily accessible to residents, employees or children is exempt from the requirements of Sections 3(A), 3(B) and 3(C) of this Chapter.
- C. The use of crack and crevice treatments placed in areas not readily accessible to residents, employees or children and done in a manner that minimizes exposure to vapors and/or aerosolized materials is exempt from the requirements in Sections 3(A), 3(B) and 3(C) of this Chapter.

## **Section 3. Notification**

### **A. Notice to Residents**

1. At least 24 hours and no more than seven days in advance of a pesticide application not exempted by Section 2, the applicator must provide or cause to be provided a Board approved written notice (see Appendix A) to the resident or residents of an apartment unit, condominium unit or other rented residential unit to be treated, where the residents of that unit did not request the impending pesticide application. The notice may be mailed or provided directly to the residents and shall explain that pesticides may be used in their residential unit and that they have the right to ask for and receive more specific information described

**01 DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY**

**026 BOARD OF PESTICIDES CONTROL**

**Chapter 27: STANDARDS FOR PESTICIDE APPLICATIONS AND PUBLIC NOTIFICATION IN SCHOOLS**

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**SUMMARY:** This rule establishes procedures and standards for applying pesticides in school buildings and on school grounds. This rule also sets forth the requirements for notifying school staff, students, visitors, parents and guardians about pending pesticide applications.

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**Section 1. Definitions**

- A. **Integrated Pest Management.** For the purposes of this rule, Integrated Pest Management (IPM) means the selection, integration and implementation of pest damage prevention and control based on predicted socioeconomic and ecological consequences, including:
- (1) understanding the system in which the pest exists,
  - (2) establishing dynamic economic or aesthetic injury thresholds and determining whether the organism or organism complex warrants control,
  - (3) monitoring pests and natural enemies,
  - (4) when needed, selecting the appropriate system of cultural, mechanical, genetic, including resistant cultivars, biological or chemical prevention techniques or controls for desired suppression, and
  - (5) systematically evaluating the pest management approaches utilized.
- B. **School.** For the purposes of this rule, School means any public, private or tribally funded:
- (1) elementary school,
  - (2) secondary school,
  - (3) kindergarten or
  - (4) nursery school that is part of an elementary or secondary school.
- C. **School Building.** For the purposes of this rule, School Building means any structure used or occupied by students or staff of any school.

- D. **School Grounds.** For the purposes of this rule, School Grounds means:
- (1) land associated with a school building including playgrounds, athletic fields and agricultural fields used by students or staff of a school, and
  - (2) any other outdoor area used by students or staff including property owned by a municipality or a private entity that is regularly utilized for school activities by students and staff. School grounds do not include land utilized primarily for non-school activities, such as golf courses and museums.
- E. **Integrated Pest Management Coordinator.** An employee of the school system or school who is knowledgeable about integrated pest management and is designated by each school to implement the school pest management policy.
- F. **School Session.** For the purposes of this rule, school is considered to be in session during the school year including weekends. School is not considered to be in session during any vacation of at least one week.

## Section 2. Requirements for All Schools

- A. All public and private schools in the State of Maine shall adopt and implement a written policy for the application of Integrated Pest Management techniques in school buildings and on school grounds.
- B. Each school shall appoint an IPM Coordinator who shall act as the lead person in implementing the school's Integrated Pest Management policy. The IPM Coordinator shall be responsible for coordinating pest monitoring and pesticide applications, and making sure all notice requirements as set forth in this rule are met. In addition, the IPM Coordinator shall:
- (1) complete Board-approved IPM Coordinator overview training within one month of his/her first appointment as an IPM Coordinator and obtain Board documentation thereof;
  - (2) complete Board-approved IPM Coordinator comprehensive training within one year of his/her first appointment as an IPM Coordinator and obtain Board documentation thereof;
  - (3) obtain at least one hour of Board-approved continuing education annually;
  - (4) maintain and make available to parents, guardians and staff upon request:
    - a. the school's IPM Policy,
    - b. a copy of this rule (CMR 01-026 Chapter 27),
    - c. a "Pest Management Activity Log," which must be kept current. Pest management information must be kept for a minimum of two years from date of entry, and must include:

- i. the specific name of the pest and the IPM steps taken, as described under Section 5C of this rule; and
  - ii. a list of pesticide applications conducted on school grounds, including the date, time, location, trade name of the product applied, EPA Registration number, company name (if applicable) and the name and license number of the applicator. If the product has no EPA Registration number, then a copy of the label must be included.
- (5) authorize any pesticide application not exempted under Sections 3A(2), 3A(3), 3B, 3C, or 3D made in school buildings or on school grounds and so indicate by completing and signing an entry on the Pest Management Activity Log prior to, or on the date on which the minimum notification requirements must be implemented; and
- (6) ensure that any applicable notification provisions required under this rule are implemented as specified.
- C. By September 1, every school shall inform the Board of the identity and the contact information for the IPM Coordinator. This requirement can be fulfilled through a Board approved reporting system.

### **Section 3. Exemptions**

- A. The following pesticide uses are exempt from the requirements of Sections 4 and 5 of this rule:
  - (1) application of ready-to-use general use pesticides by hand or with non-powered equipment to control or repel stinging or biting insects when there is an urgent need to mitigate or eliminate a pest that threatens the health or safety of a student, staff member or visitor,
  - (2) application of general use antimicrobial products by hand or with non-powered equipment to interior or exterior surfaces and furnishings during the course of routine cleaning procedures, and
  - (3) application of paints, stains or wood preservatives that are classified as general use pesticides.
- B. The following pesticide uses are exempt from the requirements of Section 4 of this rule:
  - (1) pesticides injected into cracks, crevices or wall voids,
  - (2) bait blocks, gels, pastes, granular and pelletized materials placed in areas inaccessible to students,
  - (3) indoor application of a pesticide with no re-entry or restricted entry interval specified on its label but entry to the treated area is restricted for at least 24 hours.

- C. When the Maine Center for Disease Control has identified arbovirus positive animals (including mosquitoes and ticks) in the area, powered applications for mosquito control are exempt from Section 4B(1) and 5C. Applicators should post the treated area as soon as practical, in a manner consistent with Section 4B(2).
- D. School education facilities utilized for agricultural or horticultural education, and not normally used by the general school population, such as, but not limited to, greenhouses, nursery plots or agricultural fields, are exempt from the application limitations contained in Section 5E and notification provisions contained in Section 4B(1) provided that parents, staff and students are informed about the potential for pesticide applications in such areas. The posting requirements contained in Section 4B(2) must be complied with. In addition, students entering treated areas must be trained as agricultural workers, as defined by the federal Worker Protection Standard.

#### **Section 4. Notification**

- A. A notice shall be included in the school's policy manual or handbook describing the school's IPM program including that a school integrated pest management policy exists and where it may be reviewed, that pesticides may periodically be applied in school buildings and on school grounds and that applications will be noticed in accordance with Section 4B hereof. This notice shall describe how to contact the IPM Coordinator and shall also state that the school's IPM Policy, a copy of the *Standards for Pesticide Applications and Public Notification in Schools* rule (CMR 01-026 Chapter 27), and the Pest Management Activity Log, are available for review.
- B. When school is in session, schools shall provide notice of pesticide applications in accordance with Sections 4B(1) and 4B(2). When school is not in session, notice shall be accomplished by posting of signs as described in Section 4B(2) of this rule.
  - (1) The school shall provide notification of each application not exempted by Section 3 performed inside a school building or on school grounds to all school staff and parents or guardians of students. Notices given shall state, at a minimum: (a) the trade name and EPA Registration number of the pesticide to be applied; (b) the approximate date and time of the application; (c) the location of the application; (d) the reasons for the application; and (e) the name and phone number of the person to whom further inquiry regarding the application may be made. These notices must be sent at least five days prior to the planned application.
  - (2) In addition to the notice provisions above, whenever pesticide applications not exempted by Section 3 are performed in a school building or on school grounds, a sign shall be posted at each point of access to the treated area and in a common area of the school at least two working days prior to the application and for at least forty-eight hours following the application. Posting of the notification signs as required by this rule satisfies the posting requirements of Chapter 28 of the Board's rules (CMR 01-026 Chapter 28).

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**Section 3. Public Notice and Posting Requirements for Certain Pesticide Applications****A. Sidewalks and Trails**

Public notice must be provided consistent with Board policy for the outdoor commercial application of pesticides within category 6B to sidewalks and trails.

**B. Posting****1. Categories Requiring Posting**

- a. 3A (outdoor ornamentals)
- b. 3B (turf)
- c. 6B (industrial/commercial/municipal vegetation management), except applications to sidewalks, trails, railroad sidings, and power substations
- d. 7A (general pest control)
- e. 7E (biting fly & other arthropod vectors)

**2. Posting Requirements**

Areas treated under the categories listed in Section 3B(1) shall be posted in a manner and at locations designed to reasonably assure that persons entering such area will see the notice. Such notice shall be posted before application activities commence and shall remain in place at least two days following the completion of the application. The sign shall be sufficient if it meets the following minimum specifications:

- a. The sign must be at least five (5) inches wide and four (4) inches high;
- b. The sign must be made of rigid, weather resistant material that will last at least forty-eight (48) hours when placed outdoors;
- c. The sign must be light colored (white, beige, yellow or pink) with dark, bold letters (black, blue or green);
- d. The sign must bear:
  - i. the word CAUTION in 72 point type;
  - ii. the words PESTICIDE APPLICATION in 30 point type or larger;
  - iii. the Board designated symbol;

- iv. any reentry precautions from the pesticide labeling;
- v. the name of the company making the pesticide application and its telephone number;
- vi. the date and time of the application; and
- vii. a date and/or time to remove the sign.

**C. Exemption from this section**

- 1. The placement of marked bait stations in outdoor settings shall be exempt from this section.
  - 2. Any person providing notice in accordance with Chapter 51 - Notice of Aerial Pesticide Applications, Section III. - Ornamental Plant Applications, shall be exempt from this section.
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STATUTORY AUTHORITY: 22 M.R.S.A. §1471-M(2)D

EFFECTIVE DATE:

September 22, 1998

AMENDED:

April 27, 1999

June 26, 2000

March 4, 2007 – Section 1(B)(e), filing 2007-68

December 26, 2011 – filing 2011-473

CORRECTIONS:

February, 2014 – agency names, formatting

AMENDED:

May 24, 2015 – filing 2015-076 (Final adoption, major substantive)





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**MAINE BOARD OF PESTICIDES CONTROL INTERIM POLICY TO  
DELEGATE AUTHORITY TO THE STAFF TO APPROVE REQUESTS FOR  
VARIANCE FROM CMR 01-026 CHAPTER 29 FOR CONTROL OF PLANTS  
THAT POSE A DERMAL TOXICITY HAZARD**

Adopted November 18, 2011

**BACKGROUND**

In September 1995, the Board delegated the authority to approve repeated requests for variance from the sensitive area identification requirements of CMR 01-026 Chapter 22. Since that time, the Board delegated similar authority for certain variance requests for broadcast pesticide applications within the 25-foot untreated buffer zone required by CMR 01-026 Chapter 29.

In Chapter 29, applications to control arthropod vectors of human disease and stinging insects are exempted, but applications to control vegetation that causes public health issues are not.

Recently, a variance request was submitted for control of poison ivy. There was urgency to the request, since it involved an infestation that blocked the landowner's only access to the waterfront. However, due to the timing, the request had to wait five weeks to be considered at the next Board meeting. The Board granted the variance and asked the staff to develop a policy to allow the staff to approve similar requests in the future with an emphasis on Best Management Practices (BMPs). For BMP information, applicants can be directed to the Board's *GotPests?* website, where there are seven fact sheets that provide excellent management information.

The staff recommends the following interim policy:

**POLICY**

The Board delegates the authority to approve requests for variance from CMR 01-026 Chapter 29, Section 6, for the control of plants that pose a dermal toxicity hazard. Those plants may include, but are not limited to:

- Wild Parsnip (*Pastinaca sativa*)
- Giant Hogweed (*Heracleum mantegazzianum*)
- Poison Ivy (*Toxicodendron radicans*)
- Poison Oak (*Toxicodendron toxicarium*)
- Poison Sumac (*Toxicodendron vernix*)
- Poison Hemlock (*Conium maculatum*)

The variance must include agreement to use low-pressure, handheld application equipment, and the spray must be directed away from the water with no drift or direct discharge to the water body or wetland.



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## MAINE BOARD OF PESTICIDES CONTROL INTERIM POLICY TO DELEGATE AUTHORITY TO THE STAFF TO APPROVE REQUESTS FOR VARIANCE FROM CMR 01-026 CHAPTER 29 FOR CONTROL OF INVASIVE PLANTS

Adopted December 13, 2013

### BACKGROUND

In September 1995, the Board delegated the authority to approve repeated requests for variance from the sensitive area identification requirements of CMR 01-026 Chapter 22. Since that time, the Board delegated similar authority for certain variance requests for broadcast pesticide applications within the 25-foot untreated buffer zone required by CMR 01-026 Chapter 29.

On November 18, 2011, an interim policy was approved by the Board to permit staff to approve Chapter 29 requests for variances to control vegetation that pose a dermal toxicity hazard. However, no policy exempts applications to control invasive vegetation.

Several requests for variances to control invasive vegetation within twenty-five feet of surface water have recently been received and granted by the Board. Invasive plants are a common problem near surface water, involve an increasing variety of species, are difficult to eradicate, and easily re-establish. Because management is complex and requires a multi-year approach the Board directed the staff to develop a policy that allows the staff to approve multi-year variance requests provided that the request:

- includes specific pesticide use strategies designed to minimize contamination of surface water
- incorporates a long term control plan that includes re-vegetation of the site and consideration of appropriate best management practices (BMPs) specific to the target invasive species.

For BMP information and fact sheets, applicants can be directed to the Board's *GotPests?* website, <http://www.maine.gov/dacf/php/gotpests/index.html>.

### POLICY

The Board delegates the authority to the staff to approve requests for variance from CMR 01-026 Chapter 29, Section 6, for the control of invasive plants. "Invasive plants" may include, but are not limited to: plants listed by the Invasive Plants Atlas of New England website, [http://www.eddmaps.org/ipane/ipanespecies/current\\_inv.htm](http://www.eddmaps.org/ipane/ipanespecies/current_inv.htm).

The request for a variance must include a detailed description of the area, photographs showing the area and relation to water, an agreement to use low-pressure, handheld application equipment, and the spray must be directed away from the water with no drift or direct discharge to the water body or wetland. The variance must also include a multi-year control strategy, a plan for re-vegetation of the site, and demonstrate knowledge of efficacy and appropriate practices. The variance may be granted for up to a three year period, conditional upon compliance with all variance requirements.

**01 DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY**

**026 BOARD OF PESTICIDES CONTROL**

**Chapter 29: STANDARDS FOR WATER QUALITY PROTECTION**

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**SUMMARY:** These regulations establish standards for protecting surface water. This chapter establishes a fifty-foot setback from surface water for mixing and loading of pesticides, sets forth requirements for securing containers on sprayers and cleaning up spills occurring within the setback zone, establishes restrictions on pesticide applications to control browntail moths near marine waters and requires an untreated 25-foot buffer zone for outdoor terrestrial broadcast pesticide applications near waters of the State.

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**Section 1. Protecting Waters of the State during Pesticide Mixing and Loading Operations**

- A. No person shall mix or load any pesticides or fill a sprayer or mix tank within fifty (50) feet from the high water mark of any surface waters of the State as defined in 38 M.R.S.A. §361-A(7).
- B. No person shall use a pump that pumps pesticide concentrate or formulation or any hose that has been in contact with pesticide solution to draw liquid from any surface waters.
- C. All pesticide pumping systems that come in contact with any surface waters shall be equipped with an anti-siphoning device.

**Section 2. Securing Pesticide Product Containers and Mix Tanks on Sprayers, Nurse Vehicles and Other Support Vehicles during Transportation**

No person shall transport any pesticide unless it is secured so as to prevent release of pesticides onto the vehicle or from the vehicle. All tanks, liquid containers, cartons and bags must be securely held so they may not shift and become punctured or spilled.

**Section 3. Cleaning up Pesticide Spills within Setback Zone in Section 1**

Any person who spills a pesticide within fifty (50) feet from the high water mark of any surface water shall take immediate steps to recover the pesticide by the most efficient means available and remove all contaminated soil to prevent water contamination.

**Section 4. Exemptions**

The following persons are exempt from Section 1(A) regarding mixing and loading within fifty (50) feet of the high water mark of any surface water:

- A. Applicators with a variance approved by staff for an impervious mixing/loading pad with containment features. Applications for a variance must be submitted to the Board on or before December 31, 1999;
- B. Applicators using chemigation equipment specified on labels to draw water from their tail-water ponds;
- C. Commercial applicators using small individually packaged concentrates to mix no more than five (5) gallons for use in non powered equipment; and
- D. Commercial applicators making aquatic applications from boats and barges.

### **Section 5. Restrictions on Pesticide Applications to Control Browntail Moths Near Marine Waters**

Pesticide applications for control of browntail moths within 250 feet of the mean high tide mark adjacent to coastal waters and extending upriver or upstream to the first bridge are subject to the requirements of this section:

#### **A. Exemptions**

The prohibitions and restrictions in Section 5 do not apply to biological pesticides, to the injection of pesticides directly into the soil or shade and ornamental trees or to the application of pesticides by licensed commercial pesticide applicators using non-powered equipment.

#### **B. Prohibitions and Restrictions**

- I. A person may not apply a pesticide to control browntail moths on shade or ornamental trees within 50 feet of the mean high water mark.
- II. A person may not apply a pesticide to control browntail moths on shade or ornamental trees in coastal areas located between 50 and 250 feet from the mean high water mark except in accordance with this subsection.
  - a. Only products with active ingredients specifically approved by the Board for this purpose may be applied.
  - b. Applications may be performed only with a hydraulic hand-held spray gun or air-assisted sprayers.
  - c. Applications may be performed only in a manner in which the applicator directs the spray away from marine waters.
  - d. Applications may not be made when the wind is blowing toward marine waters.
  - e. Applications may be performed only when the wind is equal to or greater than 2 miles per hour and blowing away from marine waters.

**Section 6. Buffer Requirement**

- A. No person shall make an outdoor terrestrial broadcast application of pesticides, except for applications made to control arthropod vectors of human disease or stinging insects, within twenty-five (25) feet from the mean high water mark of:
- I. Any lake or pond, except ponds that are confined and retained completely upon the property of one person and do not drain into or have a surficial connection with any other waters of the State;
  - II. Rivers
  - III. Any stream depicted as a solid or broken blue line on the most recent edition of the U.S. Geological 7.5-minute series topographic map or, if not available, a 15-minute series topographic map;
  - IV. Estuarine and marine waters as defined under 38 M.R.S.A. §361-A (5); or
  - V. Wetlands, except man-made wetlands that are designed and managed for agricultural purposes, which are:
    - a. connected to great ponds at any time of the year; or
    - b. characterized by visible surface water; or
    - c. dominated by emergent or aquatic plants.
- B. An applicator may vary from the standards imposed under Chapter 29, Section 6 (A) by obtaining a permit to do so from the Board. Permit applications shall be made on such forms as the Board provides and shall include at least the following information:
- I. The name, address and telephone number of the applicant;
  - II. The area(s) where pesticides will be applied;
  - III. The type(s) of pesticides to be applied;
  - IV. The purpose for which the pesticide application(s) will be made;
  - V. The approximate application date(s);
  - VI. The type(s) of application equipment to be employed; and
  - VII. The particular reasons why the applicant seeks a variance from the requirements of this section, including a detailed description of the techniques to be employed to assure that a reasonably equivalent degree of protection of the water body will be obtained.
- C. Within 30 days after a complete application is submitted, the Board or its staff shall issue a permit if it finds that the applicant will:

- I. Achieve a substantially equivalent degree of protection as adherence to the requirements of this section would provide; or
- II. Demonstrate an appropriate balance of risk and benefit; and
- III. Will conduct the application in a manner which protects surface waters as defined in Chapter 29, section 6 (A).

The Board may place conditions on any such permit, and the applicant shall comply with such conditions. Except as required by the permit, the applicant shall undertake the application in accordance with all of the procedures described in his variance request and all other applicable legal standards. Permits issued by the Board under this section shall not be transferable or assignable except with further written approval of the Board and shall be valid only for the period specified in the permit.

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STATUTORY AUTHORITY: 7 M.R.S.A. §§ 601-625 and 22 M.R.S.A. §§ 1471-A-X.

EFFECTIVE DATE:

April 14, 1999

AMENDED:

February 3, 2008 – filing 2008-35 (except that the major substantive language of Section 6, which was undergoing legislative review)

May 1, 2008 - filing 2008-154, including Section 6's final adoption

CORRECTIONS:

February, 2014 – agency names, formatting

**01 DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY**

**026 BOARD OF PESTICIDES CONTROL**

**Chapter 31: CERTIFICATION AND LICENSING PROVISIONS/COMMERCIAL APPLICATORS**

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**SUMMARY:** These regulations describe the requirements for certification and licensing of commercial applicators.

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**1. Individual Certification and Company/Agency Licensing Requirements**

- A. Any commercial applicator must be either:
  - I. licensed as a commercial applicator/master; or
  - II. licensed as a commercial applicator/operator; or
  - III. supervised on-site by either a licensed commercial applicator/master or a commercial applicator/operator who is physically present on the property of the client the entire time it takes to complete an application conducted by an unlicensed applicator. This supervision must include visual and voice contact. Visual contact must be continuous except when topography obstructs visual observation for less than five minutes. Video contact does not constitute visual observation. The voice contact requirement may be satisfied by real time radio or telephone contact. In lawn care and other situations where both the licensed and unlicensed applicator are operating off the same application equipment, the licensed applicator may move to an adjoining property on the same side of the street and start another application so long as he or she is able to maintain continuous visual and voice contact with the unlicensed applicator.
- B. All commercial applicator licenses shall be affiliated with a company/agency and shall terminate when the employee leaves the employment of that company or agency.
- C. Individuals certified as commercial applicators are eligible to license with one or more companies/agencies upon submission of the application and fee as described in Section 6 of this regulation. The individual's certification remains in force for the duration of the certification period as described in Section 5 of this regulation.
- D. Each branch office of any company, agency, organization or self-employed individual ("employing entity") required to have personnel licensed commercially under state pesticide law shall have in its employment at least one master applicator. This Master must be licensed in all categories which the branch office of the company or agency performs applications and any Operators must also be licensed in the categories in which they perform or supervise pesticide applications. This master applicator must actively supervise persons applying pesticides within such employing entity and have the ability

to be on site to assist such persons within six (6) hours driving time. Whenever an out-of-state employing entity is conducting a major application project they must have a master applicator within the state.

**E. Exemptions**

- I. Employing entities only performing post harvest treatments to agricultural commodities are exempt from master licensing requirements.
- II. Persons applying pesticides to household pets and other non agricultural domestic animals are exempt from commercial applicator licensing.
- III. Swimming pool and spa operators that are certified by the National Swimming Pool Foundation, National Spa and Pool Institute or other organization approved by the Board are exempt from commercial applicator licensing. However, these persons must still comply with all provisions of C.M.R. 10-144, Chapter 202 – Rules Relating to Public Swimming Pools and Spas Administered by the Maine Bureau of Health.
- IV. Certified or licensed Wastewater or Drinking Water Operators applying registered disinfectants to waste or drinking water as part of their employment.
- V. Adults applying repellents to children with the consent of parents/guardians.
- VI. Persons installing antimicrobial metal hardware.

**2. Categories of Commercial Applicators**

- A. All commercial applicators shall be categorized according to the type of work performed as outlined below:
  - I. **Agricultural Animal and Plant Pest Control**
    - a. **Agricultural Animal** - This subcategory includes commercial applicators using or supervising the use of pesticides on animals and to places on or in which animals are confined. Doctors of Veterinary Medicine engaged in the business of applying pesticides for hire as pesticide applicators are included in this subcategory; however, those persons applying pesticides as drugs or medication during the course of their normal practice are not included.
    - b. **Agricultural Plant** - This subcategory includes commercial applicators using or supervising the use of pesticides in the production of crops including blueberries, orchard fruit, potatoes, vegetables, forage, grain and industrial or non-food crops.



**Option I - Limited Commercial Blueberry** - This option includes commercial applicators using or supervising the use of pesticides in the production of blueberries only.

**Option II - Chemigation** - This option includes commercial applicators using or supervising the use of pesticides applied through irrigation equipment in the production of crops.

**Option III - Agricultural Fumigation** - This option includes commercial applicators using or supervising the use of fumigant pesticides in the production of crops.

**Option IV - Post Harvest Treatment** - This option includes commercial applicators using or supervising the use of pesticides in the post harvest treatment of food crops.

## II. **Forest Pest Control**

This category includes commercial applicators using or supervising the use of pesticides in forests, forest nurseries, Christmas trees, and forest seed producing areas.

## III. **Ornamental and Turf Pest Control**

- a. **Outdoor Ornamentals** - This subcategory includes commercial applicators using or supervising the use of pesticides to control pests in the maintenance and production of outdoor ornamental trees, shrubs and flowers.
- b. **Turf** - This subcategory includes commercial applicators using or supervising the use of pesticides to control pests in the maintenance and production of turf, such as at turf farms, golf courses, parks, cemeteries, athletic fields and lawns.
- c. **Indoor Ornamentals** - This subcategory includes commercial applicators using or supervising the use of pesticides to control pests in the maintenance and production of live plants in shopping malls, businesses, residences and institutions.

## IV. **Seed Treatment**

This category includes commercial applicators using or supervising the use of pesticides on seeds.

## V. **Aquatic Pest Control**

- a. **General Aquatic** - This subcategory includes commercial applicators using or supervising the use of pesticides applied directly to surface water, including but not limited to outdoor application to public drinking

water supplies, golf course ponds, rivers, streams and wetlands. Excluding applicators engaged in public health related activities included in categories VII(e) and VIII below.

- b. **Sewer Root Control** - This subcategory includes commercial applicators using or supervising the use of pesticides applied to sewers to control root growth in sewer pipes.

## VI. **Vegetation Management**

- a. **Rights-of-Way Vegetation Management** - This subcategory includes commercial applicators using or supervising the use of pesticides in the management of vegetation on utility, roadside and railroad rights-of-way.
- b. **General Vegetation Management** - This subcategory includes commercial applicators using or supervising the use of pesticides in the management of vegetation (including invasive plants) on sites not included in category VI a including, but not limited to, municipal and other publicly owned properties, industrial or commercial plants and buildings, lumber yards, airports, tank farms, storage areas, parking lots, sidewalks, and trails.

## VII. **Industrial, Institutional, Structural and Health Related Pest Control**

- a. **General** - This subcategory includes commercial applicators using or supervising the use of pesticides in, on or around human dwellings, office buildings, institutions such as schools and hospitals, stores, restaurants, industrial establishments (other than in Category 6) including factories, warehouses, food processing plants, food or feed transportation facilities and other structures, vehicles, railroad cars, ships, aircraft and adjacent areas; and for the protection of stored, processed or manufactured products. This subcategory also includes commercial applicators using or supervising the use of pesticides to control rodents on refuse areas and to control other pests, including but not limited to birds and mammals.
- b. **Fumigation** - This subcategory includes commercial applicators using or supervising the use of fumigants or fumigation techniques in any type of structure or transportation device.
- c. **Disinfectant and Biocide Treatments** - This subcategory includes commercial applicators using or supervising the use of pesticides to treat water in manufacturing, swimming pools, spas, industrial cooling towers, public drinking water treatment plants, sewers and air conditioning systems.
- d. **Wood Preserving** - This subcategory includes commercial applicators using or supervising the use of restricted use pesticides to treat lumber, poles, railroad ties and other types of wooden structures including

- I. General use and (restricted or limited use) pesticide dealers shall notify the Board of their intent to distribute plant-incorporated protectants on all initial license and license renewal application forms provided by the Board.
- II. General use and (restricted or limited use) pesticide dealers shall maintain sales records showing the list of the names and addresses of all purchasers of plants, plant parts or seeds containing plant-incorporated protectants. These records must be made available to representatives of the Board for inspection at reasonable times, upon request, and must be maintained for two calendar years from the date of sale.
- III. Any general use and (restricted or limited use) pesticide dealer who discontinues the sale of plant-incorporated protectants shall notify the Board in writing and shall provide the Board, upon request, with all records required by Section 5(C)II of this chapter.

**D. Grower Requirements**

- I. All users of plant-incorporated protectants shall maintain the records listed below for a period of two years from the date of planting. Such records shall be kept current by recording all the required information on the same day the crop is planted. These records shall be maintained at the primary place of business and shall be available for inspection by representatives of the Board at reasonable times, upon request.
  - a. Site and planting information, including town and field location, a map showing crop location and refuge configuration in relation to adjacent crops within 500 feet that may be susceptible to cross-pollination;
  - b. Total acres planted with the plant-incorporated protectant and seeding rate;
  - c. Total acres planted as refuge and seeding rate;
  - d. Detailed application information on any pesticide applied to the refuge as described in Section 1(A) of Chapter 50, "Record Keeping and Reporting Requirements"; and
  - e. Planting information for each distinct site including:
    - i. date and time of planting; and
    - ii. brand name of the plant-incorporated protectant used.
- II. There are no annual reporting requirements for growers.

**E. Product-Specific Requirements**

- I. Requirements for plant-incorporated protectant corn containing *Bacillus thuringiensis* (Bt) protein and the genetic material necessary for its production.
  - a. Prior to planting plant-incorporated protectant corn containing any *Bacillus thuringiensis* (Bt) protein and the genetic material necessary for

its production, the grower must have completed a Board-approved training course and possess a valid product-specific training certificate.

- b. Product-specific training certificates shall be issued following each Board-approved session. The certificates will remain valid until December 31 of the third year after issuance.
  - c. Non-Bt-corn growers whose crops are or will be located within 500 feet of a prospective Bt-corn planting site can request that the Bt-corn grower protect the non-Bt-corn crop from pollen drift.
    - i. the request must be made prior to planting of the Bt-corn crop;
    - ii. the request must identify the non-Bt-corn crop to be protected; and
    - iii. the growers may agree on any method for protection but, if an agreement cannot be reached,
      - 1. the Bt-corn grower must plant any refuge required by the Bt-corn grower agreement, grower guide or product label in a configuration that provides maximum protection from pollen drift onto the adjacent non-Bt-corn crop; or
      - 2. if no refuge is required, the Bt-corn grower shall maintain at least a 300-foot Bt-corn-free buffer to non-Bt-corn crops.
  - d. Bt-corn growers are encouraged to follow all best management practices developed by the Board or the Department of Agriculture, Conservation and Forestry.
- II. Dealers distributing Bt-sweet corn shall only sell the seed in quantities large enough to plant one acre or more.

**F. Confidentiality**

Any person providing information to the Board in connection with the record-keeping and reporting requirements of Section 5 of this chapter may designate that information as confidential in accordance with 7 M.R.S.A. §20.

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- III. Any pesticide dealer who discontinues the sales of restricted/limited use pesticides shall notify the Board in writing and shall provide the Board, upon request, with all required records including a final sales report up to the date of discontinuance.

C. **Spray Period Records for Major Forest Insect Aerial Spray Programs**

- I. Each monitor employed on a major public or private forest insect aerial spray application program shall prepare written spray period records describing each spray period.
- II. The spray period records shall include the following information: Date and time of the spray period; Area actually sprayed; Pesticide used; Weather conditions before, during and immediately after spraying; Spray behavior, including visible drift to nontarget areas; and Notation of any reason why a spray period was terminated prior to completion of area. The records shall also include a map showing any nontarget areas that were sprayed.
- III. The spray period records shall be made available for inspection by representatives of the Board as soon as practicable following the close of each spray period and, in any event, before the next spray period and before the end of the day. The spray records shall be maintained on file and available for inspection by representatives of the Board for a period of at least two years.

**Section 2. Reports**

- A. **Annual Summary Reports by Commercial Applicators.** Annual summary reports must be submitted for each calendar year by January 31 of the following year. In the event a required report is not received by the due date, the person's license may be temporarily suspended until the proper report is received or until a decision is tendered at a formal hearing as described in 22 M.R.S.A. §1471-D(7). The report filed with the Board by or on behalf of commercial applicators shall contain the following information for each site or crop treated: quantity of each pesticide used, EPA registration number and total area treated (where applicable) for each pesticide.
- B. **Annual Pesticide Sales Reports.** Pesticide dealers licensed to sell limited and restricted use pesticides must provide the Board with a calendar year-end report of total sales of all limited, restricted and general use pesticides before their pesticide dealer license can be renewed. The Board will furnish report forms.
- C. **Spray Incident Reports**
  - I. Commercial agricultural producers, commercial applicators, spray contracting firms and licensed pesticide dealers shall be responsible for telephoning a spray incident report to the Board as soon as practicable after emergency health care has been obtained for injured parties and efforts have been initiated to contain any spills.

- II. A reportable spray incident is any significant misapplication or accidental discharge of a pesticide. Such incidents shall include: fires involving pesticides; vehicle and aircraft accidents resulting in a spill or human contamination; failure to turn off spray booms or other spray equipment resulting in application to sensitive areas (such as water bodies, accidentally applying pesticides to the wrong site or places of human habitation) when such application is a violation of label instructions or other law; overfilling of spray equipment resulting in risk of contamination of water; and any other equipment breakage or malfunction or pesticide handling activity which causes a pesticide release which may result in a threat to human health or the environment.
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STATUTORY AUTHORITY: Title 22 M.R.S.A., Chapter 258-A §1471-G, M and R

EFFECTIVE DATE:

July 6, 1979 - as "Reporting Requirements," filing 79-338

AMENDED:

August 12, 1985 - filing 85-275

REPEALED AND REPLACED:

April 5, 1995 - as "Record Keeping and Reporting Requirements," filing 95-149

AMENDED:

October 2, 1996

EFFECTIVE DATE (ELECTRONIC CONVERSION):

March 1, 1997

AMENDED:

November 11, 2001 - filing 2001-483

March 5, 2003 - filing 2003-61

January 4, 2005 – filing 2004-606 affecting Section 1.A.I.

December 23, 2012 – filing 2012-348 affecting Section 1.B.II.

CORRECTIONS:

February, 2014 – agency names, formatting

## Proposed Administrative Consent Agreement Background Summary

**Subject:** Alfred Fugazzi  
Stone Wall Farms  
78 Hoover Lane  
Lincoln, Maine 04457

**Date of Incident:** 4/23/2016

**Background Narrative:** Fugazzi applied approximately one ounce of Lannate SP insecticide, a restricted use pesticide, to bread pieces from four slices of bread, and then put the bread out in three locations near his crop land in Lincoln in an effort to control crows damaging his planted vegetable seeds. A joint investigation by the Lincoln police department and an inspector from the Board of Pesticides Control confirmed the application was made on April 23, 2016. The application killed at least seven crows. Two pet dogs being walked by their owner also died when they ate some of the bread. Fugazzi was fully cooperative with the investigation and acknowledged his misuse of the pesticide. At its August 2016 meeting the Board heard the facts of this case along with input from Fugazzi and the dog owner. The Board approved a motion for the staff to negotiate a consent agreement.

### Summary of Violation(s):

22 M.R.S. § 1471-D (8)(C) It is unlawful to use or supervise the use of pesticides applied in a careless, negligent or faulty manner or in a manner which is potentially harmful to the public health, safety or welfare or the environment.

- Applying Lannate SP to bread and then placing the laced bread in an open field as bait to kill crows.

7 U.S.C. § 136j (a)(2)(G), 7 M.R.S. § 606 (2)(B) and 22 M.R.S. § 1471-D (8)(F). Use of a pesticide in a manner inconsistent with its label.

- Applying Lannate SP to bread and then placing the laced bread in an open field as bait to kill crows is not an approved label use.
- Lannate SP label's maximum application rate per acre for any crop or site is one pound per acre. The use of one ounce of Lannate SP to treat 4 slices of bread, which was then placed out in three piles, far exceeded the Lannate SP maximum application label rate.
- LANNATE® SP is a dry powder in a water soluble bag to be dissolved in water for application by mechanical ground, overhead sprinkler or aerial application equipment only. Hand-held equipment is prohibited for application to crops.
- Do not handle, open, rip, tear, cut or perforate the inner water soluble bag.
- Wear protective eyewear and respirator.

**Rationale for Settlement:** The staff considered:

- The importance of deterring the same person or others from future violations
- The cause and circumstances of the violation, including:
  - The foreseeability of the violation
  - The standard of care exercised by the violator
- The pesticide was applied in a careless, negligent or faulty manner or in a manner which was potentially harmful to the public health, safety or welfare or the environment.

**Attachments:** Proposed Consent Agreement



**STATE OF MAINE  
DEPARTMENT OF AGRICULTURE, CONSERVATION, AND FORESTRY  
BOARD OF PESTICIDES CONTROL**

In the Matter of: )  
Alfred Fugazzi ) ADMINISTRATIVE CONSENT AGREEMENT  
Stone Wall Farms ) AND  
78 Hoover Lane ) FINDINGS OF FACT  
Lincoln, Maine 04457 )

This Agreement by and between Stone Wall Farms (hereinafter called "Fugazzi") and the State of Maine Board of Pesticides Control (hereinafter called the "Board") is entered into pursuant to 22 M.R.S. §1471-M (2)(D) and in accordance with the Enforcement Protocol amended by the Board on June 3, 1998.

The parties to this Agreement agree as follows:

1. That Fugazzi is a commercial vegetable and fruit grower in Lincoln.
2. That Fugazzi is a licensed private pesticide applicator holding license number PPA 10648 issued by the Board pursuant to 22 M.R.S. § 1471-D(2).
3. That on April 26, 2016, the Board received a call from Lincoln police officer John Walsh. Walsh reported that on April 23, 2016, his department received a call from Ronald Thornton reporting two dogs were thought to have been poisoned and died.
4. That the Lincoln police department responded to the complaint described in paragraph three the same day it was received. Walsh and Lincoln animal control officer Nicole Murchison initially met with dog owner Hawley (Tim) Thornton ("T. Thornton") at his residence at 356 Enfield Road in Lincoln. Thornton showed Walsh his dead English setter (Jasper).
5. That during the meeting described in paragraph four, Thornton explained the setter died in the fields behind their house when Thornton's wife Ann ("A. Thornton") had walked the setter and their other dog a dachshund (Moxie) earlier in the day. A. Thornton was in the process of taking the dachshund to the emergency vet because it too had ingested something while in the field and was suffering with seizures.
6. That T. Thornton took Walsh to the field where the setter died. T. Thornton directed Walsh to a tall grass area where T. Thornton said he found the setter convulsing and foaming at the mouth. Walsh's written report records that the grass was flattened and there was a large amount of foam on it.
7. That while still at the site, Walsh noted that the field was below agricultural fields belonging to Alfred Fugazzi (Stone Wall Farms).
8. That Walsh called Fugazzi and left him a voice message and Walsh and T. Thornton returned to the Thornton's residence.
9. That upon returning to the Thornton residence Walsh met with A. Thornton who stated that the dachshund had died enroute to the emergency vet. The dachshund died with identical symptoms the setter displayed before it died, convulsing and foaming at the mouth. Walsh saw the dead dachshund.

10. That A. Thornton informed Walsh that she saw the dogs “get in to something” on the back side of Fugazzi’s crops.
11. That Walsh asked A. Thornton if she could show him where the incident occurred. Walsh and A. Thornton drove to the main entrance of Fugazzi’s fields. Walsh’s written report notes that there was a rope across the entrance and signs on either side of the entrance that read “sprayed fields, keep out”.
12. That Walsh’s written report states that he and A. Thornton walked along the path she and the dogs traveled on their outing and that she entered from the back side of the fields and was walking back towards the Bedford Farm Road. The report further stated that she entered from the south side of the field from a woods trail where there were no signs indicating pesticide use or to stay out and was walking north along the edge of the field and was going to exit on an unposted trail leading to the Bedford Farm Road.
13. That Walsh’s report indicates A. Thornton told Walsh that along the edge of the tilled soil, almost directly between two tilled plots, she had seen the dogs eating something.
14. That Walsh checked this area and found a small spot that had what appeared to be bread crumbs on the ground and that in the dirt next to the bread crumbs were footprints belonging to a species of dog. Walsh collected the bread crumbs in a plastic bag and later took them to the Lincoln police department.
15. That while still at the site, Walsh’s coworker called to inform him Fugazzi had been calling the police department to speak with Walsh.
16. That Walsh called Fugazzi and informed him that two dogs had died suddenly after being in his field and it appeared they may have eaten a piece of bread. Fugazzi told Walsh he would meet him in the field shortly.
17. That Fugazzi arrived at the field soon after the call described in paragraph sixteen. Fugazzi admitted that he broke up some slices of bread and then used Lannate SP, a restricted use pesticide, to treat the bread crumbs before placing the laced bread crumbs out in three separate locations earlier that morning to control crows. Fugazzi acknowledged he knew this was an improper use of Lannate SP. Fugazzi said the crows had destroyed some vegetable seeds he had planted, requiring replanting.
18. That Walsh asked Fugazzi to show him the three locations where Fugazzi put the bread crumb piles. At the first location Walsh noted there were seven dead crows in the immediate area and what appeared to be other dead crows in the distance. The bread at the second location appeared to be untouched. The third location is where the dogs had eaten some of the laced bread.
19. That on April 26, 2016, a Board inspector first met with Walsh, interviewed him about the incident, collected a copy of Walsh’s written report, and collected the bread crumb sample that Walsh had taken as described in paragraph fourteen.
20. That in addition to the points discussed in Walsh’s written report described in paragraphs twelve through eighteen, Walsh told the Board inspector A. Thornton had walked the dogs off leash on April 23, 2016, in the fields leased by Fugazzi. The Board inspector asked Walsh how he determined the back path A. Thornton used to access Fugazzi’s field was not posted with a “sprayed keep out sign” on April 23, 2016. The inspector learned that in Walsh’s written report on this point, Walsh was recording what A. Thornton told him, not what Walsh observed himself.
21. That on April 26, 2016, the Board Inspector and Walsh then met with Fugazzi. The inspector completed an inspection with Fugazzi and documented the label for Lannate SP and how it was mixed. The inspector

asked Fugazzi to complete a written statement about the incident but Fugazzi was too upset to do so at that time.

22. That from the inspection described in paragraph twenty-one, it was determined that Fugazzi applied one ounce of Lannate SP to breadcrumbs from four slices of bread about noon on April 23, 2016.
23. That during the inspection described in paragraph twenty-one the Board inspector also took digital photos documenting field signs, field and farm sign.
24. That after meeting with Fugazzi as described in paragraph twenty-one, the Board inspector then met with A. Thornton later that day. She completed a written statement.
25. That A. Thornton's written statement described in paragraph twenty-four stated that on April 23, at approximately 3:30 PM, she was walking both dogs on the Bedford Farm Road. She used the back entrance to the field. The dogs were loose and about seventy-five feet ahead of her. She kept the dogs out of the new planting. She saw both dogs eat something on the field's edge.
26. That A. Thornton's written statement went on to say that within thirty seconds of ingesting something, her dachshund, while chasing after the setter, began stumbling and fell. The dachshund began coughing and foaming at the mouth and shaking and twitching. The dog died on the way to the vets within forty-five minutes of ingestion.
27. That A. Thornton's written statement further described her phoning her husband who came to Fugazzi's fields and located the setter using the setter's remote collar. The setter was in tall grass struggling to breathe, foaming at the mouth, and trembling. The dog's legs were drawn up and tense to his body. Her husband carried him towards home, but the setter died within thirty minutes of ingestion.
28. That A. Thornton's written statement concludes by stating that when the Thorntons and the Lincoln police officer and animal control officer returned to the field where the incident occurred, they found bread crumbs in the area she saw the dogs ingest something and these bread crumbs were collected by the Lincoln police officer. A. Thornton wrote that there were no signs posted to discourage entry to the field at the back entrance where she and the dogs entered.
29. That on April 27, 2016, the Board inspector sent A. Thornton a copy of an aerial photo from Google Earth requesting that she draw the approximate route she and the dogs took on April 23, 2016, to enter Fugazzi's farm land. The inspector received the marked photo back from Thornton on April 30, 2016.
30. That on April 29, 2016, the Board inspector returned to Stone Wall Farm and conducted another inspection with Fugazzi and asked Fugazzi to mark on a clean copy of an aerial photo from Google Earth where he placed the three piles of laced breadcrumbs bait, the location of the planted seeds, and the location of signage. Fugazzi agreed and marked all these areas on the aerial photo.
31. That during the inspection described in paragraph thirty, the inspector asked Fugazzi for a written statement about the baiting incident and offered two ways to accomplish this. Fugazzi could dictate the statement to the inspector who would write it down or Fugazzi could write it himself. Fugazzi chose to dictate his statement to the inspector. Fugazzi's statement read in part, that approximately one ounce of Lannate SP was mixed with crumbs from four slices of bread, and distributed to three locations on Saturday, April 23. The inspector then read the statement back to Fugazzi, and he agreed it documented the incident then signed and dated the statement form.

32. That a pesticide may not be applied in a manner inconsistent with its labeling as outlined in 7 U.S.C. § 136j (a)(2)(G), 7 M.R.S. § 606 (2)(B) and 22 M.R.S. § 1471-D(8)(F).
33. That applying Lannate SP to breadcrumbs and then placing the laced breadcrumbs in an open field as bait to kill crows is not an approved label use.
34. That the circumstances described in paragraphs one through thirty-three constitute a violation of 7 U.S.C. § 136j (a)(2)(G), 7 M.R.S. § 606 (2)(B) and 22 M.R.S. § 1471-D(8)(F).
35. That the Lannate SP label's maximum application rate per acre for any crop or site is one pound per acre.
36. That the use of one ounce of Lannate SP to treat 4 slices of bread, which were then place out in three piles, far exceeded the Lannate SP maximum application label rate as described in paragraphs seventeen, eighteen, twenty-two and thirty.
37. That the circumstances described in paragraphs seventeen, eighteen, twenty-one, twenty-two, thirty, thirty-one, thirty- two, thirty-five, and thirty-six constitute a violation of 7 U.S.C. § 136j (a)(2)(G), 7 M.R.S. § 606 (2)(B) and 22 M.R.S. § 1471-D(8)(F).
38. That the Lannate SP Label states "Do not handle, open, rip, tear, cut, or perforate the inner soluble bags".
39. That Fugazzi opened the Lannate SP inner water soluble bag to remove one ounce of the insecticide to treat breadcrumbs as described in paragraph twenty-two and thirty-one.
40. That the circumstances described in paragraphs twenty-two, thirty-one, thirty-two, thirty-eight, and thirty-nine constitute a violation of 7 U.S.C. § 136j (a)(2)(G), 7 M.R.S. § 606 (2)(B) and 22 M.R.S. § 1471-D(8)(F).
41. That the Lannate SP label requires chemical resistant boots, chemical resistant gloves, protective eyewear, and a respirator when mixing, and a chemical resistant apron, chemical resistant gloves, and protective eyewear when it is being applied.
42. That during the inspection described in paragraph twenty-one the Board inspector documented that Fugazzi did not have the required personal protective equipment described in paragraph forty-one when he mixed and applied the Lannate SP as described in paragraphs seventeen, twenty-one, and twenty-two.
43. That the circumstances described in paragraphs thirty-two, forty-one and forty-two constitutes the use of a pesticide inconsistent with its product labeling, a violation of 7 U.S.C. § 136j (a)(2)(G), 7 M.R.S. § 606 (2)(B) and 22 M.R.S. § 1471D(8)(F).
44. That, pursuant to M.R.S. § 1471D(8)(C), it is unlawful to use or supervise the use of pesticides applied in a careless, negligent or faulty manner or in a manner which is potentially harmful to the public health, safety or welfare or the environment.
45. That open baiting for crows, using Lannate SP laced breadcrumbs as described in paragraphs seventeen, eighteen, twenty-two, thirty, and thirty-one, and forty-four constitute a violation of M.R.S. § 1471D(8)(C).
46. That the Board has regulatory authority over the activities described herein.
47. That Fugazzi expressly waives:

- a. Notice of or opportunity for hearing;
- b. Any and all further procedural steps before the Board; and
- c. The making of any further findings of fact before the Board.

48. That this Agreement shall not become effective unless and until the Board accepts it.

49. That in consideration for the release by the Board of the causes of action which the Board has against Fugazzi resulting from the violations referred to in paragraphs thirty-four, thirty-seven, forty, forty-three, and forty-five Fugazzi agrees to pay to the State of Maine the sum of \$1,500 at the same time he signs and submits this Consent Agreement to the Board. (Please make checks payable to Treasurer, State of Maine).

IN WITNESS WHEREOF, the parties have executed this Agreement of five pages.

STONE WALL FARMS

By: \_\_\_\_\_ Date: \_\_\_\_\_

Type or Print Name: \_\_\_\_\_

BOARD OF PESTICIDES CONTROL

By: \_\_\_\_\_ Date: \_\_\_\_\_

Henry Jennings, Director

APPROVED:

By: \_\_\_\_\_ Date: \_\_\_\_\_

Mark Randlett, Assistant Attorney General



**PAUL R. LEPAGE**  
GOVERNOR

**STATE OF MAINE**  
**DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY**  
**BOARD OF PESTICIDES CONTROL**  
28 STATE HOUSE STATION  
AUGUSTA, MAINE 04333

**WALTER E. WHITCOMB**  
COMMISSIONER

**MAINE BOARD OF PESTICIDES CONTROL POLICY—DEFINITION OF  
BIOLOGICAL PESTICIDE AS IT RELATES TO CHAPTER 29 SECTION 5**

Adopted January 11, 2017

**BACKGROUND**

The Board discussed questions that arose during the spring of 2016 relative to interpretation of the term “biological pesticide” as used in Section 5 of Chapter 29, which regulates pesticide applications for control of browntail moth adjacent to marine waters. The staff pointed out that when this rule was originally written, it contemplated that “biological pesticide” would primarily include strains of *Bacillus thuringiensis* and similar microbial pesticides. With the recent increase in browntail moth populations, questions have arisen about other active ingredients which are derived from organisms. Staff indicated that the term “biological pesticide” is now commonly perceived to include pesticide active ingredients consisting of single cell organisms or products derived from organisms. At the January 11, 2017 meeting, the Board reviewed various options and adopted the following interpretation of the term “biological pesticide.”

**POLICY**

For the purposes of Chapter 29, Section 5, the term “biological pesticide” includes:

- pesticides that contain micro-organisms as the active ingredient, or
- pesticides that contain biological derivatives of micro-organisms as the active ingredient, and are approved by the Board.

**HENRY JENNINGS, DIRECTOR**  
90 BLOSSOM LANE, DEERING BUILDING



PHONE: (207) 287-2731  
WWW.THINKFIRSTSPRAYLAST.ORG



**STATE OF MAINE**  
**DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY**  
**BOARD OF PESTICIDES CONTROL**  
 28 STATE HOUSE STATION  
 AUGUSTA, MAINE 04333

**PAUL R. LEPAGE**  
 GOVERNOR

**WALTER E. WHITCOMB**  
 COMMISSIONER

**MAINE BOARD OF PESTICIDES CONTROL POLICY ON ALLOWABLE  
 PESTICIDES FOR THE CONTROL OF BROWNTAIL MOTH WITHIN 250  
 FEET OF MARINE WATERS**

Adopted January 11, 2017

**BACKGROUND**

On January 25, 2008, the Board adopted Section 5 of Chapter 29 which regulates the use of insecticides used to control browntail moth within 250 feet of marine waters. Section 5 limits insecticide active ingredients to those approved by the Board. Since that time, a number of newer chemistries have been registered for use and far more data is available on the efficacy of many products. On November 4, 2016 and December 16, 2016 the Board discussed the browntail moth populations and the available products. On January 11, 2017, the Board approved the following active ingredients for control of browntail moth in coastal areas located between 50 and 250 feet from the mean high water mark in accordance with CMR 01-026 Chapter 29: Standards for Water Quality Protection.

Acetamiprid  
 Bifenthrin  
 Clothianidin  
 Deltamethrin  
 Diflubenzuron  
 Dinotefuran  
 Fluvalinate  
 Imidacloprid  
 Spinosad

**HENRY JENNINGS, DIRECTOR**  
 90 BLOSSOM LANE, DEERING BUILDING



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**PAUL R. LEPAGE**  
 GOVERNOR

**WALTER E. WHITCOMB**  
 COMMISSIONER

January 11, 2017

Jeffrey M. Taylor  
 Vegetation Control Service, Inc.  
 2342 Main Street  
 Athol, MA 01331

**RE: Variance Permit for CMR 01-026, Chapter 29**

Dear Mr. Taylor:

On December 13, 2013, the Board authorized the staff to issue multi-year permits for broadcast pesticide applications within 25 feet of water for control of invasive plants provided the applicator has demonstrated knowledge of best management practices for control of the plant, has a multi-year plan for controlling the invasive plants, and has a re-vegetation plan for the site.

By way of this letter, your request for a variance from the 25-foot setback requirement contained in Chapter 29, Section 6 is hereby granted for the treatment of various invasive plants on the Maine Audubon East Point Sanctuary property in Biddeford Pool, Maine. We understand that this is an expansion from the variance permit received in 2015 for 3.5 acres to the entire property. This variance is valid until December 31, 2018. Please bear in mind that your permit is based upon your company adhering to the precautions listed in Section X of your variance application; also, the Board does require that you notify them if there is a change in products to be used.

We will alert the Board at its February 17, 2017 meeting that the variance permit has been issued. If you have any questions concerning this matter, please feel free to contact me at 287-2731.

Sincerely,

Henry Jennings  
 Director  
 Maine Board of Pesticides Control

**HENRY JENNINGS, DIRECTOR**  
 90 BLOSSOM LANE, DEERING BUILDING



PHONE: (207) 287-2731  
 WWW.THINKFIRSTSPRAYLAST.ORG





# 128th MAINE LEGISLATURE

## FIRST REGULAR SESSION-2017

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Legislative Document

No. 174

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H.P. 130

House of Representatives, January 24, 2017

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### An Act To Limit the Use of Pesticides on School Grounds

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Reference to the Committee on Agriculture, Conservation and Forestry suggested and ordered printed.

A handwritten signature in cursive script that reads "R B. Hunt".

ROBERT B. HUNT  
Clerk

Presented by Representative DAUGHTRY of Brunswick.  
Cosponsored by Representatives: DEVIN of Newcastle, HICKMAN of Winthrop,  
McCREIGHT of Harpswell, O'NEIL of Saco, RYKERSON of Kittery, TEPLER of Topsham,  
Senators: CARSON of Cumberland, MILLETT of Cumberland.

1 **Be it enacted by the People of the State of Maine as follows:**

2 **Sec. 1. 20-A MRSA §6307** is enacted to read:

3 **§6307. Use of pesticides in school buildings and on school grounds**

4 **1. Definitions.** As used in this section, unless the context otherwise indicates, the  
5 following terms have the following meanings.

6 A. "Lawn care pesticide" means a pesticide registered by the United States  
7 Environmental Protection Agency and labeled pursuant to the Federal Insecticide,  
8 Fungicide, and Rodenticide Act, 7 United States Code, Section 136 et seq. for use on  
9 lawn, garden and ornamental sites or areas.

10 B. "Pesticide" has the same meaning as in 7 United States Code, Section 136(u).

11 C. "School" means a public elementary school, secondary school or kindergarten, or  
12 a nursery school that is part of a public elementary or secondary school, or a private  
13 elementary school, secondary school or kindergarten, or a nursery school that is part  
14 of a private elementary school or secondary school, approved under section 2901.

15 D. "School grounds" means land associated with a school building, including  
16 playgrounds, lawns, agricultural and recreational fields, walkways, fence lines and  
17 any other outdoor area used by students or staff, including property owned by a  
18 municipality or private entity that is regularly used for school activities. "School  
19 grounds" does not include athletic fields.

20 **2. Pesticide applications in school buildings.** The application of pesticides in  
21 school buildings must comply with Title 7, chapter 103, subchapter 2-A, Title 22, chapter  
22 258-A and rules adopted by the Department of Agriculture, Conservation and Forestry,  
23 Board of Pesticides Control under those chapters.

24 **3. Allowed uses of pesticides on school grounds.** Pesticides, including lawn care  
25 pesticides, may be used on school grounds only:

26 A. To control, repel or eliminate stinging or biting insects when there is an urgent  
27 threat to the health or safety of a student or staff member;

28 B. In response to the presence of animals or insects, including mosquitoes and ticks,  
29 identified as a public health nuisance by the Department of Health and Human  
30 Services, Maine Center for Disease Control and Prevention or a local public health  
31 officer; or

32 C. On an agricultural field in accordance with the manufacturer's instructions for use  
33 of the pesticides for appropriate pest management.

34 Pesticides may be used on school athletic fields when determined necessary by the school  
35 for the health and safety of the field and students. A school shall consider all options for  
36 reducing pesticide use on athletic fields, including reduced application amounts and the  
37 development of plans that phase out pesticide use or use alternatives to pesticides.

38 **4. Adoption of rules minimizing or avoiding pesticide use on school grounds.**  
39 The commissioner shall adopt rules to implement landscaping design that minimizes or

1 avoids the necessity of the use of pesticides on school grounds for new construction of  
2 school facilities. Rules adopted pursuant to this subsection are routine technical rules as  
3 defined in Title 5, chapter 375, subchapter 2-A.

4 **Sec. 2. Rulemaking.** The Commissioner of Education shall adopt rules required  
5 pursuant to the Maine Revised Statutes, Title 20-A, section 6307, subsection 4 no later  
6 than January 1, 2018.

7 **SUMMARY**

8 This bill restricts the use of pesticides on school grounds. It allows their use only in  
9 situations that pose a health threat to a student or staff member, in response to the  
10 presence of animals or insects identified as a public health nuisance or on agricultural  
11 fields in accordance with the manufacturer's instructions. It permits their use on athletic  
12 fields when determined necessary by the school for the health and safety of the field and  
13 students. It requires the Commissioner of Education to adopt rules to implement  
14 landscaping design that minimizes or avoids the necessity of the use of pesticides on  
15 school grounds for new construction of school facilities.



# 128th MAINE LEGISLATURE

## FIRST REGULAR SESSION-2017

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Legislative Document

No. 418

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H.P. 298

House of Representatives, February 7, 2017

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**An Act To Educate the Public on the Proper Use of Pesticides and  
To Promote Integrated Pest Management Using Existing Resources**

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Reference to the Committee on Agriculture, Conservation and Forestry suggested and ordered printed.

A handwritten signature in cursive script that reads "Robert B. Hunt".

ROBERT B. HUNT  
Clerk

Presented by Representative BLACK of Wilton.  
Cosponsored by Senator SAVIELLO of Franklin and  
Representatives: HICKMAN of Winthrop, KINNEY of Knox, LYFORD of Eddington,  
MAREAN of Hollis, SKOLFIELD of Weld, THERIAULT of China, TIMBERLAKE of  
Turner, Senator: DAVIS of Piscataquis.



## Chamberlain, Anne

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**From:** Pesticides  
**Sent:** Wednesday, January 11, 2017 1:59 PM  
**To:** Jennings, Henry; Chamberlain, Anne  
**Subject:** FW: sales-data followup to members of the pesticide-control board, prior to January 11 meeting

**From:** jody spear [<mailto:lacewing41@gmail.com>]

**Sent:** Wednesday, January 11, 2017 12:24 PM

**To:** Pesticides; Paul; Sarah Lakeman; Ryan Parker; [tquaday@mofga.org](mailto:tquaday@mofga.org); Ben Tettlebaum; Avery Yale Kamila; Cathy Ramsdell; JoAnn Myers

**Subject:** sales-data followup to members of the pesticide-control board, prior to January 11 meeting

Dear board members,

More than a year has passed since letters were sent to you from MOFGA, NRCM, Friends of Casco Bay, Conservation Law Foundation, Paul Schlein, and myself asking, among other things, that homeowner pesticide sales data be tracked in order to show that the state is fulfilling its mandate to reduce pesticide use. The board did not respond to those letters, so it's time to renew the request and to underscore some of the main issues about misuse of chemicals applied cosmetically to lawns and golf courses. Memos from MOFGA and NRCM of January 5 and 6, 2017, respectively, are on the agenda for today's meeting, and I have my own concerns.

The agriculture department's staff have been involved in sediment and stormwater testing, results of which reveal some of the pesticides that are migrating into waterways. Not surprisingly, they include weed-and-feed herbicidal formulations -- used excessively on urban lawns -- and fungicides, often applied preemptively. The very fact that these and many other pesticides are getting into water sources is a compelling reason to track them, but there are other reasons -- namely, (1) the damage done to bird and bee populations by insecticides as well as weed and fungal killers and (2) rampant weed resistance, fungal resistance, and insect resistance to the chemicals applied.

As the target pests become resistant, more and more toxic chemicals are substituted, and thus those listed on annual summary reports are moving targets. To single out, as Ted Quaday (MOFGA) and Sarah Lakeman (NRCM) have done, only six herbicides and three insecticides from a recent report -- and omitting fungicides altogether -- strikes me as inadequate. Now more than ever, we need a complete accounting of pesticides sold and used. If the board is unwilling to dedicate resources to the task, replicating systems used elsewhere, it may be that others will find a way to do it for individual municipalities, just as ordinance processes are being undertaken by activists city by city throughout the state.

Sincerely,

Jody Spear, Harborside

P.S. For the record, the MOFGA short list includes the following:

herbicides 2,4-D, MCPP, and dicamba (only one of many three-way weed-and-feed combinations), prodiamine, dithiopyr, glyphosate; insecticides imidacloprid (only one of several neonicotinoids), bifenthrin and permethrin (only two of several pyrethroids).

Also for the record, pesticides detected by Friends of Casco Bay sampling (2001-2009) include the following:

herbicides 2,4-D, MCPP, dicamba, clopyralid, MCPA, diazinon; insecticide sumithrin; fungicides chlorothalonil and propiconazole.

P.P.S. I find it troubling that the board is ramping up efforts to spray for an expected browntail moth infestation next spring, imperiling many beneficial insects and aquatic life, rather than emphasizing individual protective responses such as covering skin surfaces. Surely the few who experience dermal and respiratory discomfort from BTM should not dictate a policy that will cause far more harm to far more people and wildlife.

JAN 19 2017 9g

Caler Farms and Logging  
Wendell H. Caler  
62 Caler Rd  
Centerville Me 04623  
207-598-6618

Board of Pesticides Control  
28 State House Station  
Augusta, Me 04333-0028

Attn: Henry Jennings

January 11, 2017

Mr. Jennings,

This is in regards to the January meeting at the Agricultural Trade Show in Augusta, Me for Article number 4 Statute of Limitations proposed by Darin Hammond.

My concern with this issue is the board taking enforcement action against older or out dated violations. I do favor some kind of statute of limitation when it comes to enforcement issues. In a phone conversation with you, you indicated that this was not the intent of the board. It would leave some question that if one is required to keep pesticide records for 2 years (or for any other length of time) that an investigation would go past that time frame.

I do support the situations that you gave me over the phone of environmental issues that could go back as far back as the 1950's as far a getting the problem cleaned up. Enforcing violations stemming from the past would be almost impossible. It is my feelings that some kind of guidelines need to be put into play as to how far back investigations can take place.

Thank you for allowing me to submit testimony on this issue and for speaking with me on the phone.

Sincerely,



Wendell H. Caler