WHO NEEDS A COMMERCIAL LICENSE?

- ANYONE WHO APPLIES ANY PESTICIDE…
  - FOR ANY TYPE OF COMPENSATION
  - IN AREAS OPEN TO THE PUBLIC
  - AS A GOVERNMENT EMPLOYEE, INCLUDING SCHOOL EMPLOYEES
  - ALSO INCLUDES APPLICATION OF RESTRICTED USE PESTICIDES FOR OTHER THAN AGRICULTURAL PURPOSES (E.G., TERMITE CONTROL)
YOU MUST BECOME CERTIFIED TO BE ELIGIBLE FOR A LICENSE (COA)

CERTIFICATION = PASSING EXAMS

• CORE EXAM
• CATEGORY EXAM—IN THIS CASE 7C3

MUST SCORE AT LEAST 80%

THIS WILL CERTIFY YOU TO APPLY FOR A COMMERCIAL OPERATOR APPLICATOR LICENSE
EVERY SCHOOL SYSTEM WISHING TO USE POWERED APPLICATION EQUIPMENT MUST HAVE AT LEAST ONE COMMERCIAL MASTER APPLICATOR (CMA)

CERTIFICATION = PASSING EXAMS

- CORE EXAM
- CATEGORY EXAM—IN THIS CASE 7C3
- WRITTEN REGULATIONS EXAM
- VERBAL EXAM WITH A BPC STAFF MEMBER

MUST SCORE AT LEAST 80%

THIS WILL CERTIFY YOU TO APPLY FOR A COMMERCIAL MASTER APPLICATOR LICENSE
HOW DO YOU COMPLY?

- COMMERCIAL APPLICATOR EXAMS ARE NORMALLY OFFERED IN AUGUSTA
- THE BPC WILL WORK WITH SCHOOL EMPLOYEES TO OFFER EXAMS AT ADDITIONAL LOCATIONS WHEN NEEDED
  - SEND IN A PAPER APPLICATION
  - PESTICIDES@MAINE.GOV
  - EXAMS WILL BE SCHEDULED IN AN AREA NEAR YOU
WHAT TYPES OF USES ARE EXEMPT FROM REQUIRING A LICENSE?

• ROUTINE “HAND” CLEANING BY CUSTODIAL STAFF

• APPLICATION OF PAINTS, STAINS OR WOOD PRESERVATIVES
Training for Category 7C3

1. Microorganisms

2. Antimicrobial Pesticides

3. Mold Remediation

This manual can be purchased through the University of Maine Cooperative Extension Office.
Microorganisms

➢ Small
➢ High impact
➢ Found everywhere
Microorganisms - Benefits

➢ Synthesize – Nutrients
➢ Digest – Carbohydrates
➢ Control – Harmful Microorganisms
➢ Manufacture – Antibiotics
➢ Waste Water -Treatment
Microorganisms - Benefits

➢ Fermentation – Beer
➢ Fix – Nitrogen
➢ Decomposition – Dead Organic material
➢ Production – Biofuels
Microorganisms - Detrimental

- Infections – Illness
- Plants – Crop destruction
- Animals - Toxins
- Disease - Cancer
- Spoilage - Food
- Metal - Corrosion
- Environment – Fish Kills
Pesticide Risks

❖ Direct Contact
  ❖ Breathing
  ❖ Skin
  ❖ Eating

❖ Residues
  ❖ Food

❖ Water Contamination
  ❖ Ground Water
  ❖ Surface Water
READ THE LABEL BEFORE...

- BUYING THE PESTICIDE
- STORING THE PESTICIDE
- MIXING AND APPLYING THE PESTICIDE
- DISPOSING OF UNUSED PESTICIDE AND EMPTY CONTAINERS
Disinfectants and Sanitizers are Pesticides

✓ Chemicals (including 'green' and 'natural' products)

✓ Regulated by Federal and State Agencies to protect human health
Antimicrobial Products

• ORGANIC ≠ SAFE

• NATURAL ≠ SAFE

ALL PESTICIDES HAVE RISKS!!!

Synthetic ≠ Highly Toxic

No endorsement intended or implied
Microorganisms

• Single Cell

• Multiple Cells

• No cell
Bacteria

- Unicellular (single celled)
- Occur Everywhere
Bacteria Characteristics

- Endospore
- Motility
- Encapsulation
- Biofilms

Disinfectants may not kill endospores
Infection and Disease

Some microbes cause serious illness

Example: Campylobacteriosis is an infectious disease caused by Campylobacter bacteria which can cause diarrhea and sickens about 1.5 million people in the US annually.
Fungi

- Single or multi-cellular
- 1.5 million species
- Disease – Plant and humans
Fungi

Molds
Clean Up

Individuals who clean up after rodent infestations are likely to be infected by Leptospira interrogans.
Viruses

✓ Not even a cell
✓ No internal metabolism
✓ Cannot move on their own
✓ Cannot reproduce on their own
✓ Infectious packets DNA RNA
✓ Size
Microbial Pest Management

✓ Prevention

✓ Scrubbing

✓ Filtration

✓ pH Adjustment

EFFECTIVE MICROBIAL PEST CONTROL REQUIRES MULTIPLE STRATEGIES
Microbial Pest Management

✓ Wet / Dry Heat
✓ Boiling
✓ Radiation
✓ Ultrasonic
Microbial Pest Management

✓ Ozone

✓ Chemical Control
Microbial Pest Management

✓ Chlorine

Chlorine is a strong oxidizer and cannot be applied to some materials.
PESTICIDE REGISTRATION

▪ TO BE LEGAL FOR USE IN MAINE, ALL PESTICIDES MUST BE REGISTERED BY BOTH:

  • EPA*
  
  • BPC

*Some “reduced risk” pesticides have been deregulated by the EPA
Board of Pesticides Control

Pesticide Certification Exam Information

- We are now contacting and scheduling exam applicants who have not yet been scheduled due to the ongoing COVID-19 emergency.
- Applicants may register for an exam via paper application only.
- To schedule a private and agricultural basic exam, please call the BPC office at 207-227-2731.
- Please continue to monitor our website regarding exam applications.
- If you have any questions, please contact Board staff at pesticides@maine.gov.

Disinfectants and COVID-19

- Maine Registered Disinfectants for Use Against COVID-19 - 07/24/2020 (Excel 59 KB)
  Products on this list include Maine registered disinfectants that meet EPA's criteria for use against SARS-CoV-2, the novel coronavirus that causes the disease COVID-19. The list will be updated often. If you have any questions about products please contact our office at pesticides@maine.gov.
- EPA associated pesticides for Coronavirus COVID-19 mitigation (Source: EPA)
  This site provides information on EPA's criteria for determining which pesticides are listed for use against SARS-CoV-2.
- Information on using disinfectants to control the COVID-19 Virus (Source: NFESC)
  Find general guidance on using disinfectants effectively. Also find steps to consider to reduce your risk when using disinfectants.

Respiratory Protection: Keeping Yourself Safe and Meeting Local Requirements (Source: NFESC)
- This infographic contains a helpful decision matrix for determining the need for a respirator during pandemic applications. It also provides suggestions on which types of respirators will provide equivalent or better protection when a labeled respirator is unavailable.
- EPA Releases Temporary Guidance on Respiratory Protection for Agricultural Pesticide Handlers During COVID-19 (Source: EPA)
  This temporary guidance outlines approaches to address the unavailability of required respiratory protection and respiratory fit testing that should first be exhausted before considering any alternative options.

The next Board of Pesticides Control Meeting is Scheduled to be Held on July 24, 2020.
Board of Pesticides Control

Pesticide Registration

The sale and use of pesticide products in Maine must comply with both state and federal law. All pesticide products, including IFRA 25(b) minimum risk pesticides, distributed or offered for sale in Maine must be registered annually with the Maine Board of Pesticides Control pursuant to the Maine Pesticides Control Act of 1973. Pesticide products not in compliance with this law are subject to immediate Stop Sale Use Removal Order.

Search for Maine Registered Products

New Product Registration

- Pesticide product registration and renewals are only accepted through the Maine BPC Online Portal.
- To create a login follow these instructions.
- Follow these instructions for navigating the online portal to add and renew products and add new companies.
- Renewals open November 18 of each calendar year.

Submission Guidelines for Labels and Supporting Documents (revised 3-27-2017) [PDF]

FIFRA Section 18 Emergency Exemptions

- U.S. EPA FIFRA Section 18 Emergency Exemption information [PDF] or [Web]
- Maine currently has no Section 18 registrations.

FIFRA Section 24(c) Special Local Needs Exemptions

- Board policy for 24(c) applications: Special Local Needs [PDF] or [RTF]
- 24(c) registrations currently in effect
- U.S. EPA 24c guidance

FIFRA Section 25(b) Minimum Risk Pesticides

- Universal Statement of Formula [RTF]
- U.S. EPA Minimum Risk Pesticide Information
- U.S. EPA Minimum Risk Pesticide Registration [Web] or [PDF]
- U.S. EPA Registration (PRR) Notice 2000-5: Minimum Risk Pesticides Exempted Under FIFRA Section 25(b) [PDF]
- U.S. EPA: Active Ingredients Eligible for FIFRA 25(b) Pesticide Products
- U.S. EPA: Inactive Ingredients Eligible for FIFRA 25(b) Pesticide Products

Contact Information

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SEARCH MAINE STATE PESTICIDE PRODUCTS

Search for pesticide products currently registered in Maine using one of the following methods.

- **EPA Registration Number:**
  - Search by the multi-part EPA registration number. You can copy/paste the complete EPA Registration Number into any of the boxes above.

- **State Product Name:**
  - Search by the full or partial name of a product registered in a state.

- **State Company Name:**
  - Search by the full or partial name of a company registering products in a state.

- **Active Ingredient:**
  - Search by the PC code, Chemical Abstract Services Number (CAS) or the full or partial chemical name.

[Search]
Antimicrobial Pesticides

- cides, cidal - germicides, virucides
- stats, static – fungistats, bacteriostats
- sanitizers
- disinfectants
- sterilants
Antimicrobial Pesticides

▪ cides, cidal - germicides, virucides

No endorsement intended or implied
Antimicrobial Pesticides

- stats, static – fungistats, bacteriostats

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Antimicrobial Pesticides

- sanitizers

No endorsement intended or implied
Antimicrobial Pesticides

- disinfectants

No endorsement intended or implied
Antimicrobial Pesticides

- sterilants

No endorsement intended or implied
Antimicrobial Pesticides

FORMULATIONS

▪ Concentrated Liquids
▪ Soluble Solids
▪ Suspensions and Emulsions
▪ Aerosols
▪ Gases
Antimicrobial Pesticides

FORMULATIONS

- Concentrated Liquids

These products need to be diluted
Antimicrobial Pesticides

FORMULATIONS

- Soluble Solids

These products need to be mixed

No endorsement intended or implied
Antimicrobial Pesticides

FORMULATIONS

- Suspensions and Emulsions
Antimicrobial Pesticides

FORMULATIONS

▪ Aerosols
Antimicrobial Pesticides

FORMULATIONS

- Gases
  - Often used for sterilization of heat–sensitive items
  - Use gaseous antimicrobials in unoccupied, enclosed spaces
Antimicrobial Pesticides

ANTIMICROBIAL EFFECTIVENESS

- Types of microorganisms
  - Vary in their susceptibility

- Number of microorganisms
  - Larger number may require longer exposure

- Age and condition of organisms
  - Older usually are more resistant
Antimicrobial Pesticides

ANTIMICROBIAL EFFECTIVENESS

- **Nature of surface**
  - **Porous** — textiles, drywall, ceiling tiles, insulation. Porous materials hold moisture longer and have crevices for mold to grow.
  - **Semi-porous** — concrete, cement-based grout, unfinished wood.
  - **Nonporous** — tile, plastic, glass, sheet metal, finished wood. Antimicrobials are most effective on nonporous surfaces because they retain little moisture.
Antimicrobial Pesticides

ANTIMICROBIAL EFFECTIVENESS

- Concentration
  - Follow the label

- Contact Time
  - Follow the label, varies with organism,
    make sure the surface remains wet for
    the required amount of time

- Hardness of water
  - Calcium, magnesium, iron, will interfere
    with killing power
Antimicrobial Pesticides

ANTIMICROBIAL EFFECTIVENESS

- Acidity/alkalinity - pH
  - Work at an optimum pH
- Cleanliness and type of surface
  - Presence of organic matter interferes with the effectiveness
- Porous surfaces may be prohibited on product label
Antimicrobial Pesticides

ANTIMICROBIAL EFFECTIVENESS

- Temperature
  - Effectiveness increases with increasing temperatures

- Simply using a biocide to kill mold is not adequate because fragments of mold, living or dead, can cause allergic reactions
Antimicrobial Pesticides

ANTIMICROBIAL RESISTANCE

Microorganisms can become resistant to pesticides.
Cryptosporidium is a microscopic parasite that causes the diarrheal disease cryptosporidiosis. Both the parasite and the disease are commonly known as “Crypto.” There are many species of Cryptosporidium that infect animals, some of which also infect humans.

Cryptosporidium is resistant to most disinfectants.
Mold Remediation

DETECTING MOLD

➢ Hidden mold

➢ Find the water

➢ Some mold looks like dust
Mold Remediation

DETECTING MOLD

➢ Direct association between mold and moisture

➢ A definitive way to tell if there is mold – send sample to a laboratory
Mold Remediation

DETECTING MOLD

➢ Moisture meters can be useful in finding potential areas of hidden mold growth

➢ Hygrometers

➢ Thermal Imagers
Mold Remediation

REMEDIATION PLAN

➢ The homeowner or tenant needs to know the “entire” plan

➢ Containment – level is based on size

➢ Personal Protective Equipment – read the label

➢ Eliminating Dampness – KEY

➢ Cleanup
Mold Remediation

REMEDIATION PLAN

➢ Containment

Level of containment is based on the size of the area being cleaned.

Area’s greater than 10 ft² may need added airflow.

Most potential for harmful mold exposure is during the remediation.

Mold infested items that cannot be cleaned need demolition and removal.
Mold Remediation

REMEDIATION PLAN

➢ PPE
Mold Remediation

REMEDIATION PLAN

➢ Eliminating Dampness
Mold Remediation

REMEDICATION PLAN

➢ Condensation – major contributor

➢ Optimum Humidity is 30 to 50 %

➢ Problems if relative humidity is above 90%

➢ Moisture problems need to be addressed with 48 hours

➢ A HVAC system can monitor the moisture in the air with a humidistat
Mold Remediation
REMEDIATION PLAN

➢ Safe Cleanup and Removal

➢ Double bag Containment materials

➢ Successful mold remediation if there is NO mold smell
MICROBIAL PEST CONTROL REVIEW

➢ Dwell time or contact time - critical

➢ Mix Ratios – Read the Label

➢ Mixing – When most accidents occur

➢ Reentry Periods – The pesticide used may require the area sprayed to be closed off. Read the Label

➢ Inhalation Hazard – Respiratory Risk
MICROBIAL PEST CONTROL REVIEW

➢ Acute dermal toxicity – highly corrosive – wear the PPE listed on the label

➢ Disinfectants – very few provide long-term sanitation

➢ “Buyer Beware” – research pesticidal products

➢ Products need to be registered in Maine and with the EPA
There are differences between regular cleaning, sanitation and disinfecting.

Follow the equipment manufacturer's instructions for all powered applications.

Licensure required.

All chemicals can be harmful.
QUESTIONS

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