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Pesticide Update

EPA's Office of Chemical Safety and Pollution Prevention

EPA Opens Public Comment Period on Proposal to Register Novel Pesticide Technology for Potato Crops

EPA is proposing to register pesticide products containing the new active ingredient ledprona for three years, a timeframe that is consistent with EPA's approach to other novel pesticide products.

Ledprona is a new type of pesticide that relies on a natural mechanism--called RNA interference (RNAi)--used by plants and insects to protect against disease. The proposed new biopesticide involves a sprayable double-stranded ribonucleic acid (dsRNA) product that targets the Colorado potato beetle (CPB), a major pest of potato crops grown in the United States, including in the potato-growing states of Colorado, Idaho, Maine, Michigan, Minnesota, North Dakota, Oregon, Washington, and Wisconsin. The CPB feeds heavily on potato plant foliage. If left uncontrolled, CPB will eat and destroy the leaves of the plant. If this occurs around the time of flowering, the plant may not produce potatoes. The CPB is also known to develop resistance to insecticides rapidly. This sprayable dsRNA product kills the pest by "silencing" the CPB gene needed to produce the *PSMB5* protein, whose role is essential to keeping the CPB alive, without resulting in a genetically modified organism. If approved by EPA, this RNAi-based pesticide would be the first sprayable dsRNA pesticide in the world allowed to be used commercially and sprayed on plants.

EPA supports advancements in novel pesticide technology, which can offer alternatives to chemical-based pesticides that may pose higher potential risks or have

reduced effectiveness because of resistance issues. Registered and recommended conventional active ingredients for foliar use against immature and adult CPB currently include the neonicotinoids (e.g., thiamethoxam), the spinosyns, abamectin, novaluron (an insect growth regulator), the diamides (e.g., cyantraniliprole), and some pre-mixes of these (e.g., abamectin and cyantraniliprole).

Consistent with its obligation to ensure that the product does not pose unreasonable adverse effects on the environment, including that residues of that product are safe for consumption, EPA has conducted a robust evaluation of this novel biotechnology product. EPA's assessment also includes an Endangered Species Act (ESA) evaluation. In considering the risk for this technology, EPA has also been engaged with international partners and experts in the field via its leadership of the Organisation for Economic Co-operation and Development (OECD) [Working Party on Pesticides Ad Hoc Expert Group on RNAi-based Pesticides](#).

In May 2023, EPA approved an experimental use permit (EUP) under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) for testing in 10 states (Idaho, Maine, Michigan, Minnesota, New York, North Dakota, Oregon, Virginia, Wisconsin, Washington). The EUP required the permittee to immediately notify EPA of any findings from the experimental uses that have a bearing on safety. No such findings have been reported to EPA thus far. Data generated from the EUP testing on product efficacy and application methods may be used in a future application for this product to amend its directions for use.

In addition to the proposal to limit the duration of this registration to three years in order to receive and assess any data from the EUP testing, EPA is proposing to require the same personal protective equipment as required under the EUP, including long-sleeved shirt, long pants, socks, shoes, protective eyewear, and a particulate filtering respirator.

To read more about the proposed registration of ledprona and to comment, see docket EPA-HQ-OPP-2021-0271 at <https://www.regulations.gov/docket/EPA-HQ-OPP-2021-0271>. The public comment period will be open for 15 days, closing on Friday, October 13th, 2023.

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