RED FACTS; MCPB

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All pesticides sold or distributed in the United States must be registered by EPA, based on scientific studies showing that they can be used without posing unreasonable risks to people or the environment. Because of advances in scientific knowledge, the law requires that pesticides first registered before November 1, 1984, be reregistered to ensure that they meet today's more stringent standards.

In evaluating pesticides for reregistration, EPA obtains and reviews a complete set of studies from pesticide producers that describe the human health and environmental effects of each pesticide. To implement provisions of the Food Quality Protection Act (FQPA) of 1996, EPA considers the special sensitivity of infants and children to pesticides, as well as aggregate exposure of the public to pesticide residues from all sources, and the cumulative effects of pesticides and other compounds with common mechanisms of toxicity. The Agency develops any mitigation measures or regulatory controls needed to effectively reduce each pesticide's risks. EPA then reregisters pesticides that meet current human health and safety standards and can be used without posing unreasonable risks to human health and the environment.

When a pesticide is eligible for reregistration, EPA explains the basis for its decision in a Reregistration Eligibility Decision (RED) document. This fact sheet summarizes the information in the RED document for the pesticide MCPB (4-(2-methyl-4-chlorophenoxy)butyric acid) and salts, case number2365.

Uses

- MCPB is a phenoxy herbicide produced as a sodium salt and an acid.
- MCPB is registered for use on pea crops before flowering, for post-emergence control of broadleaf annual and perennial weeds including Canadian thistle, buttercup, mustard, purslane, ragweed, common lambsquarters, pigweed, smartweed, sowthistle, and morning glory.
- Application rates range from 0.5 to 1.5 lb ae/A applied once per year. The highest rate is used to treat Canada thistle at the bud stage.
- MCPB is a general use pesticide with no residential uses.
- There is one tolerance established for residues of MCPB *per se* in/on peas at 0.1 ppm (40 CFR §180.318).
- Approximately 12,000 pounds of MCPB is used annually.

Health Effects

- MCPB has low to moderate acute toxicity.
- MCPB is not a dermal sensitizer and nor is it irritating to the skin
- Kidney and liver effects are the most prevalent hazard concerns for MCPB.
- Developmental and reproductive toxicity studies do not indicate an enhanced sensitivity or susceptibility to young animals.
- Neurotoxicity effects were noted in studies conducted on MCPA (a structurally similar compound and metabolite of MCPB), and therefore a developmental neurotoxicity study is required for MCPB.

Ecological Effects

- MCPB is not volatile, not persistent, and not likely to bioconcentrate
- MCPB's acidic/anionic nature, physicochemical properties, and relatively low sorption to soil indicate that MCPB is prone to leach and runoff.
- MCPB is slightly to moderately toxic to freshwater fish on an acute basis, and slightly toxic to freshwater invertebrates on an acute basis.
- MCPB is classified as moderately toxic to birds based on data from an acute oral gavage study, and it is classified as practically non-toxic to birds on an acute dietary basis.
- MCPB is classified as slightly toxic to practically non-toxic to mammals on an acute oral basis. However, developmental effects and maternal toxicity were noted in a developmental study.
- MCPB is an herbicide, and therefore plant toxicity is expected.

Risks

- Acute and chronic dietary risks for food and drinking water are below the Agency's level of concern (i.e., less than 100 percent of the population adjusted dose (PAD)). The most highly exposed population subgroup was infants (<1 years old), at approximately 6% of the acute PAD (at the 95^{th} percentile of exposure) and approximately 10% of the chronic PAD.
- Dermal and inhalation risks to occupational handlers are below the Agency's level of concern with baseline clothing and chemical-resistant gloves.
- Risks to workers entering pea fields recently treated with MCPB to perform tasks such as scouting and irrigation are below EPA's level of concern with a 12-hour Restricted Entry Interval.
- No acute or chronic risks are predicted for freshwater fish, freshwater invertebrates, or marine/estuarine fish.
- There are potential acute risks to small birds that consume short grass. All other avian risk quotients are below the Agency's level of concern. No chronic avian risks are predicted for MCPB.

- No acute risks to mammals are predicted for MCPB. However, EPA's level of concern is exceeded for chronic risks to mammals of all weight classes that consume grasses, broadleaf forage, and small insects.
- EPA's level of concern is exceeded for terrestrial plants.

Risk Mitigation

The following risk mitigation measures are required for MCPB to address risks of concern.

- To address potential acute risks to small birds and terrestrial plants, and chronic risks to mammals, EPA is requiring medium or coarser droplet sizes to minimize the potential for spray drift.

Regulatory Conclusion

EPA has determined that all supported uses of DCNA are eligible for reregistration, provided that registrants implement risk mitigation measures described in the RED and make required changes to product labeling and provided that additional data identified in Chapter V of the RED confirm this decision.

For More Information

Electronic copies of the MCPB RED and all supporting documents are available in Docket #EPA-HQ-OPP-2005-0263 at http://www.regulations.gov .

For more information about EPA's pesticide reregistration program, the MCPB RED, or reregistration of individual products containing MCPB, please contact the Special Review and Reregistration Division (7508C), Office of Pesticide Programs, US EPA, Washington, DC 20460, telephone 703-308-8000.

For information about the health effects of pesticides, or for assistance in recognizing and managing pesticide poisoning symptoms, please contact the National Pesticide Information Center (NPIC). Call toll-free 1-800-858-7378, from 6:30 am to 4:30 am Pacific Time, or 9:30 am to 7:30 pm Eastern Standard Time, seven days a week. The NPIC internet address is http://npic.orst.edu.