



R.E.D. FACTS

Indole-3-Butyric Acid

Pesticide Reregistration

All pesticides sold or used 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 which were first registered years ago 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, describing the human health and environmental effects of each pesticide. The Agency imposes any regulatory controls that are needed to effectively manage each pesticide's risks. EPA then reregisters pesticides that can be used without posing undue hazards to human health or the environment.

When a pesticide is eligible for reregistration, EPA announces this and explains why in a Reregistration Eligibility Document, or RED. This fact sheet summarizes the information in the RED for indole-3-butyric acid (IBA).

Use Profile

IBA is a plant growth regulator, used to promote and accelerate root formation of plant clippings and to reduce transplant shock of nonfood ornamental nursery stock. IBA is also used on fruit and vegetable crops, field crops and ornamental turf to promote growth development of flowers and fruit and to increase crop yields. IBA has been classified as a biochemical pesticide because it is similar in structure and function to the naturally-occurring plant growth hormone indole-3-acetic acid.

Regulatory History

Pesticide products containing IBA were first registered in 1960 for use on ornamental plant cuttings and transplants to promote root growth and to reduce transplanting shock. In June 1988, EPA issued a Data Call-In Notice for products containing IBA. Registrants responded by requesting a low volume minor use data waiver for all applicable guidelines. EPA was later asked to classify IBA as a biochemical pesticide. Following review, EPA designated IBA as a biochemical pesticide.

In 1990, new IBA products were registered for use on fruit and vegetable crops, field crops and ornamental turf, to promote growth and development of flowers and fruit and to increase crop yields. Thirty-one

pesticide products containing IBA with or without other active ingredients currently are registered.

Human Health Assessment

Toxicity

All generic toxicology data requirements have been waived for IBA. The registered uses result in very low exposure to workers and negligible residues on crops. Products are formulated with very low percentages of IBA (0.0004 to 4.5%) and are applied at ultra-low rates (7 mg IBA/acre). Formulated products generally are of low toxicity. Additionally, IBA is metabolized to 3-indole acetic acid which is a common metabolite in tryptophan (an amino acid) metabolism in humans.

Occupational Exposure

People may be exposed to IBA during mixing, loading and application activities. However, IBA is of low toxicity and is applied at extremely low rates, so exposure data have not been required.

EPA has no significant exposure concerns other than protecting the eyes of mixers, loaders and applicators. Thus, IBA products in Toxicity Category II for primary eye irritation must bear appropriate label precautions, including a requirement that applicators wear protective eyewear (goggles, face shield, or safety glasses).

Human Risk Assessment

The Agency believes the potential risks to humans from occupational and dietary exposure to IBA are negligible.

Environmental Assessment

Ecological Effects and Environmental Fate

Due to IBA's ultra-low application rates, its behavior as a plant growth hormone, and its similarity in structure and function to other naturally occurring chemicals, EPA believes that IBA poses a negligible risk to the environment. However, to confirm its assumption that the toxicity of IBA to avian and aquatic species is low, EPA is requiring four ecotoxicity studies.

Environmental Risk Assessment

EPA concludes for the reasons stated above that the current uses of IBA pose a negligible risk to the environment.

Additional Data Required

EPA is issuing a data call-in notice with the RED requiring four ecotoxicity studies. These studies are due within eight months after registrants receive the RED. Additionally, chemistry and acute toxicity data on formulated products are required within this same period.

Product Labeling Changes Required

The labels of the IBA products must comply with EPA's current pesticide labeling requirements.

In addition, the labels of IBA products in Toxicity Category II for primary eye irritation must include the following eye protection/protective eyewear statement:

"Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear goggles, face shield or safety glasses. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse."

The accompanying statement of practical treatment should read:

"If in eyes: hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. If swallowed: drink promptly a large quantity of milk, egg white and gelatin solution, or if these are not available, large quantities of water. Avoid alcohol."

Regulatory Conclusion

- The registered uses of IBA are not likely to cause unreasonable adverse effects in people or the environment, and are eligible for reregistration.
- Acute ecotoxicity studies are required to confirm EPA's assumption that only negligible risks are posed to avian and aquatic animal species.
- Products that contain IBA as their only active ingredient will be reregistered once product-specific data and amended labeling are received and accepted by EPA.
- Products that contain additional active pesticide ingredients will be reregistered once EPA completes eligibility decisions on the other active ingredients, and once product specific data and amended labeling are received and accepted by EPA.

For More Information

EPA is requesting public comments on the Reregistration Eligibility Document (RED) for IBA during a 60-day time period, as announced in a Notice of Availability published in the Federal Register. To obtain a copy of the RED or to submit written comments, please contact the Public Response and Program Resources Branch, Field Operations Division (7506C), Office of Pesticide Programs (OPP), US EPA, Washington, DC 20460, telephone 703-305-5805.

In the future, the IBA RED will be available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, telephone 703-487-4650.

For more information about IBA or about EPA's pesticide reregistration program, please contact the Special Review and Reregistration Division (7508W), OPP, US EPA, Washington, DC 20460, telephone 703-308-8000. For information about reregistration of individual IBA products, please contact the Registration Division (7505C), OPP, US EPA, Washington, DC 20460, telephone 703-305-5447.

For information about the health effects of pesticides, or for assistance in recognizing and managing pesticide poisoning symptoms, please contact the National Pesticides Telecommunications Network (NPTN). Call toll-free 1-800-858-7378, 24 hours a day, seven days a week, or Fax your inquiry to 806-743-3094.