

# Indole-3-Butyric Acid (046701) Fact Sheet

## Summary

Indole-3-butyric acid enhances the growth and development of food crops and ornamentals when applied to soil, cuttings, or leaves. Because it is similar in structure to naturally occurring substances and is used in tiny amounts, this plant growth regulator poses no known risks to humans or the environment.

## I. Description of the Active Ingredient

Indole-3-butyric acid is a substance that is closely related in structure and function to a natural growth regulator found in plants. Indole-3-butyric acid is used on many crops and ornamentals to promote growth and development of roots, flowers and fruits, and to increase crop yields. Growers find it more effective and efficient than its natural counterpart because plants cannot break it down as quickly. No harm to humans or the environment is expected to result from use of indole-3-butyric acid.

## II. Use Sites, Target Pests, and Application Methods

- **Use Sites:** Many food and feed crops; ornamental turf and nursery plants
- **Uses:** Growth enhancer to increase both yield and quality.
- **Application Methods:** Applied to soil or plants as spray. Also used as a dip for cuttings.

## III. Assessing Risks to Human Health

With the exception of certain workers, no harm is expected from use of indole-3-butyric acid. The active ingredient is not toxic to humans or other mammals. Furthermore, indole-3-butyric acid is effective at very low concentrations--often several orders of magnitude below 1%. It is applied at very low rates compared with most other pesticides. In animals, indole-3-butyric acid is rapidly broken down to a closely related, harmless chemical that occurs naturally in living organisms.

Eye irritation to certain workers is EPA's only health concern for products containing indole-3-butyric acid. For products that may cause eye irritation, workers (such as mixers and applicators) are required to use protective eyewear, such as goggles, face shield, or safety glasses.

## IV. Assessing Risks to the Environment

No risks to the environment are expected from use of this active ingredient because 1) it does not harm animals or plants in the tiny amounts used, 2) it acts as a plant growth enhancer, 3) it does not persist in the environment, 4) it is closely related to naturally occurring substances.

## V. Regulatory Information

Products containing indole-3-butyric acid were initially registered (licensed for sale and distribution) in 1960 for use on ornamental plant cuttings and transplants. As part of EPA's ongoing review to ensure that pesticide products meet current standards, the chemical was reviewed and found eligible for reregistration in 1992. As of May 2000, there were more than 40 products containing indole-3-butyric acid as an active ingredient.

## **VI. Registrant Information**

Many companies have registered pesticide products that contain indole-3-butyric acid.

## **VII. Additional Contact Information**

[Ombudsman, Biopesticides and Pollution Prevention Division](#) (7511P)

Office of Pesticide Programs

Environmental Protection Agency

1200 Pennsylvania Avenue, NW

Washington, D.C. 20460