

***Agrobacterium radiobacter* Strain K84 (114201)**

Fact Sheet

Summary

The bacterium *Agrobacterium radiobacter* strain K84 occurs naturally in many types of soil and near plant roots. As a pesticide active ingredient, it is used in nurseries and greenhouses for controlling the closely related bacterium *Agrobacterium tumefaciens*, which causes crown gall disease in plants. No adverse effects are expected to humans, other non-target organisms, or the environment when pesticidal products containing *Agrobacterium radiobacter* strain K84 are applied.

I. Description of the Active Ingredient

Agrobacterium radiobacter strain K84 is found worldwide in many kinds of soil and near plant roots. It controls the bacterium *Agrobacterium tumefaciens*, which causes crown gall infection in certain plants, by competing directly with *A. tumefaciens* for food and space. *A. radiobacter* strain K84 is the overwhelming winner in this competition because it releases a protein that inhibits the growth of *A. tumefaciens*. Many kinds of bacteria produce such growth-inhibiting proteins, which typically act only against close relatives. [See also information on *A. radiobacter* strain K1026, which was created by modifying *A. radiobacter* strain K84.]

II. Use Sites, Target Pests, and Application Methods

- **Use Sites:** For use on certain plants in greenhouses and nurseries. The active ingredient can be used on certain ornamental plants, as well as certain fruit and nut plants. EPA requires that pesticide products with this active ingredient be applied at least one year before the plants bear edible fruit or nuts, to ensure that the fruits and nuts used as food do not contain pesticide residues.
- **Target pest:** *Agrobacterium tumefaciens*, the bacterium that causes crown gall disease.
- **Application Methods:** Applied by dipping or spraying, as appropriate, to germinating seeds, seedlings, cuttings, and roots and stems.

III. Assessing Risks to Human Health

When laboratory animals were exposed to *A. radiobacter* strain K84 by feeding or by skin application, no toxic effects were observed. Based on these and other data, the approved pesticidal uses of this bacterium are not expected to cause harmful effects in humans.

IV. Assessing Risks to the Environment

Because *Agrobacterium radiobacter* strain K84 is used only in nurseries and greenhouses, there should be minimal to no exposure to non-target organisms or to the environment. EPA is not aware of any cases where this bacterium or related bacteria have been associated with harmful effects on birds, fish, insects or other non-target species, despite more than 20 years of pesticidal use.

V. Regulatory Information

A. radiobacter strain K84 was initially registered (licensed for sale) as an active ingredient in 1979. As part of a program to ensure that active ingredients registered before 1984 meet current standards, EPA reviewed information on *A. radiobacter* strain K84 and approved it for reregistration in 1995. As of January 2000, two pesticide end products contained *A. radiobacter* strain K84 as the active ingredient.

VI. Producer Information

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VII. Additional Contact Information

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