

***Pseudomonas chlororaphis* strain 63-28 (006478) Fact Sheet**

Summary

Pseudomonas chlororaphis strain 63-28 is a naturally occurring bacterium that can be used in controlling various fungi that attack crop roots. The bacterium has shown no toxicity or pathogenicity to humans, wildlife, or the environment. Its use is limited to vegetables and ornamental crops in containers in greenhouses.

I. Description of the Active Ingredient

- **Active Ingredient Name:** *Pseudomonas chlororaphis* strain 63-28
- **OPP Chemical Code:** 006478

Pseudomonas chlororaphis strain 63-28 was isolated from healthy canola plants in western Canada in 1984. It controls several kinds of harmful fungi (*Pythium* spp., *Rhizoctonia solani*, *Fusarium oxysporum*) that grow on or near crop roots and cause stem and root rot. Several ways in which this bacterium may exert its fungicidal effect are as follows:

1. *Pseudomonas chlororaphis* strain 63-28 produces plant growth factors, such as cytokinin, which could help the plant to limit fungal damage.
2. The bacterium also produces antibiotics, which would act directly on the fungi.
3. The bacterium seems to contain a special protein that binds iron that the fungi might need for growth and reproduction.

Thus *Pseudomonas chlororaphis* strain 63-28 seems to outcompete the fungi for space and other resources.

II. Use Sites, Target Pests, and Application Methods

- **Use Sites:** Ornamentals and vegetables grown in greenhouses.
- **Target pests:** Certain fungi that attack plant roots and cause wilt diseases, as well as stem and root rots.
- **Application Methods:** The pesticide product is applied by drenching the soil of contained plants.

III. Assessing Risks to Human Health

Because no harmful effects were seen in toxicity and pathogenicity studies, no adverse effects to humans are expected from use of pesticide products containing this bacterium.

IV. Assessing Risks to the Environment

No risks to the environment are expected, particularly since pesticide products containing this bacterium are approved for use only in greenhouses. The bacterium occurs naturally. No harmful effects have been reported in the literature, and no harmful effects have been found in laboratory tests.

V. Regulatory Information

The product AtEze™, the first pesticide product containing this active ingredient, was registered in September 2001 for a period of 18 months. During that period, the registrant is required to submit additional data, which will allow EPA to decide whether to grant the product a full registration.

VI. Registrant Information

EcoSoil Systems, Inc.
10740 Thornmint Rd.
San Diego, CA 92127

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