2004 BELTWIDE COTTON CONFERENCES, SAN ANTONIO, TX – JANUARY 5-9

OBERON: A NEW COMPOUND FOR WHITEFLY AND MITE CONTROL

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Abstract

Oberon® 2 SC (Code name: BSN 2060) is a new insecticide – acaricide that is being developed by Bayer CropScience for foliar application in annual crops against all important whitefly and mite species. Oberon belongs to a new chemical class named Ketoenols and it is a contact insecticide - acaricide that is active against all mite development stages. However, mite juvenile stages are often more susceptible than adults. Oberon is also highly effective against whitefly nymphs, plus it has a significant effect on the otherwise difficult to control pupal stage.

Introduction

Oberon® 2 SC is a novel compound being developed by Bayer CropScience that it is highly efficacious against mites and whiteflies. Both of these markets have a clear, continuing need to discover, develop and introduce novel and efficacious products to combat resistance due to the prolific reproduction cycles of these pests. Currently the U.S. is dependent on only five miticides for 70% of mite treatments. In the 1990's, whitefly (*Bemisia*) had a devastating impact on both the agricultural industry (field and vegetable crop production) and the ornamental industry. Crop losses were in excess of $200 million annually. The major states impacted were California, Arizona, Texas and Florida. The introduction of innovative new products in conjunction with geographic specific, Integrated Pest Management (IPM) programs has allowed agriculture to be maintained in these key agricultural states but resistance is developing.

Discussion

Oberon will introduce a new chemical class (ketoenols) and a new mode of action (inhibition of lipid biosynthesis) into a pest management system that is placing heavy selection pressure of a few insecticides on mites and whiteflies. Cross resistance to existing whitefly or spidermite agents of other chemical classes has not been detected even within whitefly populations known to be cross-resistant to multiple insecticides. Because of this, Oberon is expected to become an important tool for managing whitefly resistance to insecticides. Furthermore, Oberon is considered an IPM friendly compound because of its selective activity against mites and whiteflies, its safety to pollinators and other beneficial arthropods, and its unique mode of action compared to other products on the market for mite and whitefly control. Registration is being requested on cotton, field corn, strawberries, cucurbit vegetables and melons, fruiting vegetables and leafy vegetables (non-brassica and brassica). Oberon has been tested in many programs as a stand-alone product. It provides a reliable high level of performance equal to or better than the efficacy and residual control provided by current standards.

Summary

Oberon 2 SC is a novel mite and whitefly product that is IPM friendly and provides a highly efficacious and new mode of action into a system where resistance to current control methods is of concern to growers. The introduction of Oberon will bring many desirable benefits, including:

- A much needed resistance management tool for both mite and whitefly control.
- An excellent fit in integrated pest management strategies.
- Compatibility with genetically modified crops.
- Ease of use to growers.
- A very favorable environmental safety profile.
- A very favorable human safety profile.