

| Cabbage |

Two-Way Protection from Black Rot and Caterpillar Pests

Leap[®] ES Bacterial Disease Management Biological Insecticide Emulsifiable Suspension is the newest reliable tool to manage black rot in cabbage. Timely applications of *Leap* will deliver protection for bacterial diseases, as well as lepidopteran (caterpillar and worm) pests that can increase pathogen points of entry.

Leap provides two-way protection and guards against significant damage to crop foliage and plant health that can reduce crop quality and yield.

- ▶ Triggers plant defenses to minimize effects from bacterial diseases
- ▶ Proven and effective caterpillar and worm control
- ▶ Reliable mode of action for bacterial disease management; reduces the need for copper-based products
- ▶ Offers an alternative resistance management option for bacterial diseases



Black rot disease on cabbage caused by *Xanthomonas* spp.

Leap is a Good Resistance Management Tool

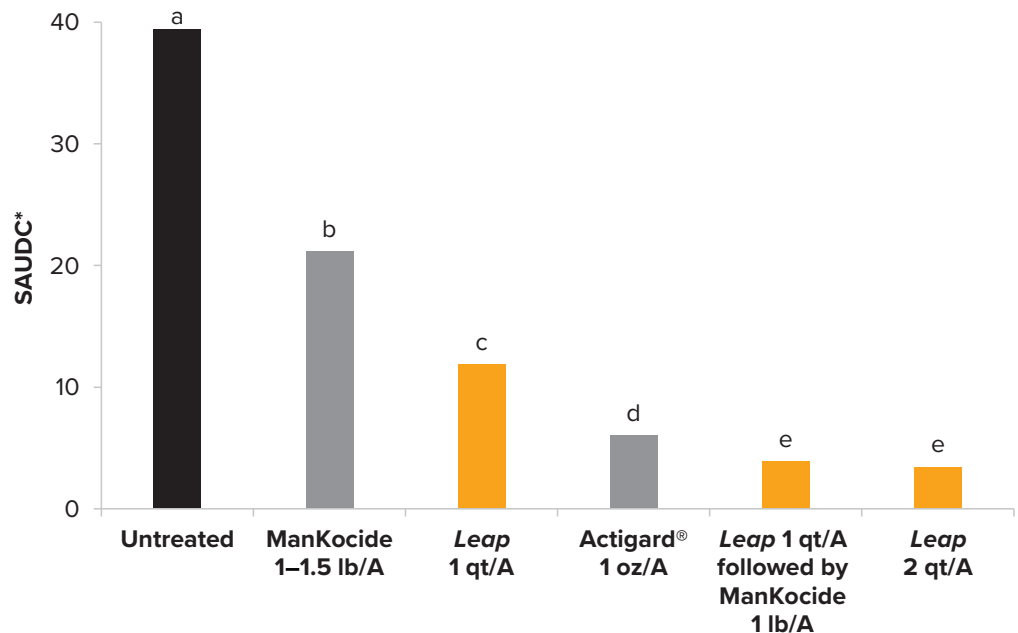
Leap does not have cross-resistance with known fungicides/bactericides, making it an ideal rotation or tank mix partner with other materials.

Leap Can Reduce the Severity of Black Rot on Cabbage

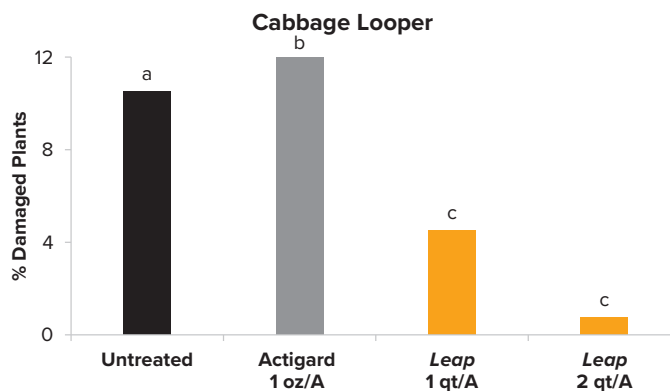
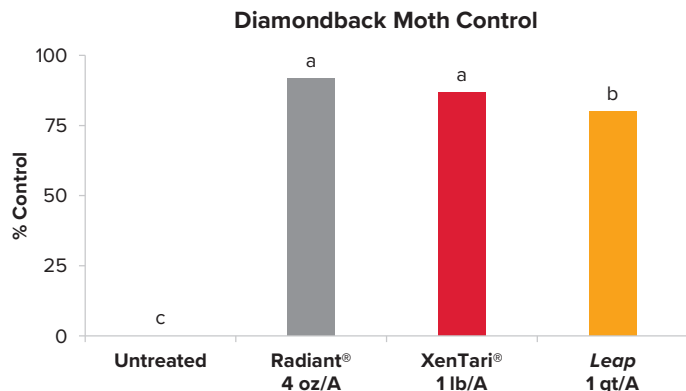
Leap applied weekly can deliver optimum reduction of black rot severity. In addition, *Leap* can be part of a rotational program with ManKocide[®] or a tank mixture partner to enhance performance.

*SAUDC = Standardized Area Under the Disease Progress Curve

Source: GLC Consulting, Tallahassee, GA



Leap vs. Industry Standards for Lepidoptera Control



In addition to its proven disease management, *Leap* can be an effective tool to manage diamondback moth.

The trial consisted of a program of four applications with a one week interval between treatments. The untreated control had 45% defoliation rating at the time of evaluation (49 days after planting).

Means followed by the same letters are not significantly different ($P \leq 0.10$).

Source: Hugh Smith, IFAS, Wimauma, FL

Leap can also deliver control of other Lepidoptera pests, such as cabbage looper, with the same application on cabbage.

The trial consisted of a program of four applications with spray intervals of one week. Ratings six days after the first application.

Means followed by the same letters are not significantly different ($P \leq 0.10$).

Source: GLC Consulting, Tallahassee, GA

How To Use

Rate	0.5–2 qt/A; under heavy pest or disease pressure use higher label rates
Timing	Apply before the disease appears <ul style="list-style-type: none"> • Treat when larvae are young and before economic thresholds have been exceeded
Method	Ground application
Spray Volume	Apply in sufficient water to provide thorough leaf coverage
Adjuvant	Refer to the label before deciding to add an adjuvant
PHI / REI	0 days / 12 hours

Other Important Information

- ▶ Larvae must be actively feeding on treated, exposed plant parts
- ▶ Repeat applications at an interval sufficient to maintain control, usually 5 to 14 days



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