

5.29 CHRISTIAN SCHLATTER

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CLARIVA™ SEED TREATMENT NEMATICIDE, A BREAKTHROUGH FOR SUGAR BEET PRODUCTION

ABSTRACT

Heterodera schachtii, the sugar beet nematode, is a persistent soil-borne pest which can cause serious stand and reduce root yields by up to 60% and build up over time to render fields unusable for sugar beet and some other crops. Lower levels of infection, which may present little or no visible symptoms can cause up to 10% root loss and begin a build-up in the soil which will cause problems in later years. The recent increased incidence of the problem is thought to be caused by the concentration of the beet growing area, a trend to closer rotations and increases in soil temperature. So far there is now no permitted active ingredient controlling for beet cyst nematodes.

Clariva™ contains the biological active ingredient *Pasteuria nishizawae*, a natural obligate bacterial parasite of nematodes. The product delivers long lasting activity via a unique mode of action causing immediate infection upon contact and resulting in reduced reproduction and death of the sugar beet cyst nematodes.

In addition, Clariva™ offers sugar beet growers the following key benefits:

- Clariva™ is a great fit to enhance the performance of sugar beet cyst tolerant varieties aiming to increase sugar yield
- Clariva™ may provide long-lasting activity, has an excellent safety and environmental profile, and is combined best in class insecticide and fungicide seed treatment package
- It works under a range of environmental conditions and is independent of soil pH, temperature and moisture conditions
- Through reduced nematode attacks to the root system, Clariva™ may provide an indirect yield effect by reducing interactions of fungal pathogens such as *Pythium* and *Rhizoctonia*.
- Clariva™ adds a key component to supplement current beet cyst nematode management practices such as crop rotation and the use of nematode tolerant varieties