Novel Molluscicide

Tech ID: 25920 / UC Case 2016-025-2

IMAGES

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BRIEF DESCRIPTION

UCR will be accepting commercialization plans for this case no. 2016-025 until 08/11/2023.

Background:

Slugs and snails are among the most problematic invasive agricultural and horticultural pests. They cause crop loss, reduce crop yield and quality, cause product shipment rejection, and transmit plant and human pathogens. The most commonly used chemical molluscicides are toxic to pets and other organisms. These chemical pesticides are also harmful to the environment, are not cost effective, and with variable effficacy that is highly influenced by environmental conditions such as moisture.

Brief Description:

UCR researchers have developed a novel potential biopesticide that targets slugs and snails using the recently discovered US strain of the nematode species *Phasmarhabditis hermaphrodita*. The European strain

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OTHER INFORMATION

KEYWORDS

biopesticide, pest management options, nematodes, insecticide, biological pest control, gastropods, slugs, snails, mollusks, invasive pests, nemaslug

CATEGORIZED AS

- **Agriculture & Animal Science**
  - Animal Science
  - Chemicals
- **Environment**
  - Other
- **Materials & Chemicals**
  - Pesticides and Insecticides

RELATED CASES

2016-025-2

of this nematode (Nemaslug ®) is being used to successfully manage slugs and snails in Europe. Recent surveys show that consumers in the US are willing to pay more for a more effective and environmentally safe pest management alternative for these invasive gastropods. *Phasmarhabditis hermaphrodita* (singly or in combination with *P. californica* or *P. papillosa*) can be used effectively to manage slug and snail infestations, notably European brown garden snail (*Cornu aspersum*), Giant African land snail (*Lissachatina fulica),* gray field slug *(Deroceras reticulatum) and* greenhouse slug (*Lehmannia valentiana*).

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	10,772,333	09/15/2020	2016-025

ADVANTAGES

- Nontoxic and safer to humans, animals and the environment – specific to mollusks
- High mortality against certain species of slugs & snails

APPLICATIONS

- Specialty crops (horticultural, agricultural, other high-value crops)
- Urban landscape
- Home gardens

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