Chickweed Bioherbicide

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TECHNOLOGY OVERVIEW
InnoTech Alberta has isolated a novel strain of the bacteria, Burkholderia andropogonis (CW00B006C) that can infect chickweed (Stellaria media) and related species. B. andropogonis infection of the chickweed plants causes disease symptoms such as chlorosis (lack of chlorophyll) and necrosis (cell death), resulting in suppression of weed growth and eventually death.

ADVANTAGES
Effective:
» Under field conditions, about 65% - 80% disease severity was consistently observed when an optimized concentration of B. andropogonis was applied to chickweed seedlings. A maximum dry weight reduction of 79.9% was obtained.

Easy delivery:
» Bacterial isolate can be combined with an organosilicone surfactant to deliver the bacteria directly into the xylem of the weed plant

As opposed to some other bioherbicides, the bacteria do not require a prolonged dew period or free moisture for infection and colonization.

Non-pathogenic to crops and native flora:
» Host specificity tests against 36 plant species in 30 genera and 8 families demonstrated that the use of B. andropogonis as a bioherbicide for control of chickweed would not cause major concerns to crops and native flora in Canada.

COMMERCIAL APPLICATIONS
Herbicide

STATUS
Issued patents in various jurisdictions, including US patent:
» US Patent 7,141,407
This technology is available for licensing.

WANT TO EXPLORE THIS OPPORTUNITY?
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