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Novel system for distributing predatory insects on field for biological control

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Technology

A new system for carrying a plurality of containers closable to house a mixture of insects and carrier material that allows dropping batches of predatory insects sequentially, in a plurality of distinct locations onto the field. The independent containers are collectively carried over the field with a vehicle. The carrier material is biodegradable.

Applications

Controlled release of predatory insects have benefits in agriculture. It can help cure a field from an invasion of prey insects, such as using *Perillus bioculatus* to control populations of *Leptinotarsa decemlineata* (the Colorado potato beetle), or releasing insects can be beneficial for pollinating purposes. However, such use of insects is not widespread at least partially due to insufficiencies of a commercially viable large-scale distribution method. This new system shall alleviate this obstacle.

Competitive advantages

. Uniform release while moving on the field, either at a source point in accordance with a predetermined pattern which can depend on the type and quantity of insects, and the intended use of the insects, or at intermittent rate.
. The viability of all predatory insects to be released is maintained.
. The containers are removably held onto the conveyor to facilitate handling of the insects /carrier mixture.

State of development

At experimental scale, a prototype consisting of four containers mounted on the conveyor, and carried by a tractor over a partially infected field has successfully distributed about 150 predatory insects. At operational scale, 40 containers shall be mounted to release about 6,000 insects.

Business opportunity

Université Laval is seeking an industrial partner for licensing this Technology.

Intellectual Property

Method and system for distributing mixture of insects and carrier materials on field
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