

## Biological Control Agents for Weeds



Adult female *Rhopalomyia*



Shoot tip gall produced by *Rhopalomyia*



Overwintered seedling gall produced by *Rhopalomyia*

### The scentless chamomile gall midge

*Rhopalomyia tripleurospermi*

### Life cycle

Adult *Rhopalomyia tripleurospermi* are tiny, delicate flies, or midges, that live for only a few hours. *Rhopalomyia* are native to eastern Europe and feed only on scentless chamomile. The females lay eggs in the growing points, leaf axils, or flower buds of scentless chamomile plants. The larvae hatch and feed in the plant tissue, causing the tissue to swell into a gall near the feeding site. The gall, a mass of short, crowded, leaf-like growths, has a “mossy” appearance. The galls interrupt and stunt the normal growth of the plant, thereby reducing its flowering. Within a few weeks, adults emerge from the galls. Three generations can be produced during the growing season in Alberta.

### Release method

Release sites should be selected in advance. Choose areas with vigorous populations of scentless chamomile that include seedling or young rosette-stage plants. To allow the insect population to establish, select a site that can be left unsprayed and uncultivated. Creek banks and slough margins are suitable release areas. Each release will consist of nine galled plants. As soon as the plants are received, they should be transplanted into the release site, 1 metre apart in a  $3 \times 3$  grid. Mark the release point with a sign or stake so that you can locate it later for monitoring. If soil conditions are dry immediately after transplanting, the plants should be watered periodically to keep them in good condition until the adult midges emerge.

*Rhopalomyia* is now widespread on scentless chamomile in some parts of Alberta and Saskatchewan, so before ordering the insect check plants in your area to see if galls are present. There is no benefit to releasing the gall midge in an area where it is already abundant.

## Monitoring

Within four to six weeks after the release, galls should be visible on plants around the transplants. They may appear on various parts of the plant, for example, the shoot tips, the leaf axils, the central growing point of seedlings or rosettes, or the flowers. The pictures in this information sheet will help you recognize the galls. The following spring you may notice very small, cushion-like overwintered galls on young scentless chamomile seedlings. The midges spread quite rapidly, so search a wide area around your release site when monitoring.



Flower and bud galls produced by *Rhopalomyia*

## Results

*Rhopalomyia tripleurospermi* has established successfully at many sites in Alberta and Saskatchewan, and spreads quickly, sometimes up to 5 km per year. At many sites galls are abundant and the scentless chamomile plants are visibly stunted.

Successful releases will result in establishing a population of the biological control agent that will spread and increase in density over the next several years, causing gradual increased stress on the weed population. Biological control agents do not kill plants outright or immediately.

## How to obtain it

*Rhopalomyia tripleurospermi* can be ordered from McClay Ecoscience in Sherwood Park, Alberta, for release in early or mid summer. Orders should be placed as early in the season as possible to ensure availability.

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