



WHAT IS BIOCONTROL

Biocontrol is the suppression of pest populations using living organisms. The release program started as a collaboration between Agriculture & Agri-Food Canada and several Agricultural Fieldmen in 2001. The AISC took over in 2016 and continues to use host-specific insects for invasive plant control in Alberta.



RUSSIAN KNAPWEED

Russian knapweed (*Rhaponticum repens*) is classified as a prohibited noxious weed in Alberta. This perennial plant flowers in summer to fall with purple to pink flowers. It reproduces through creeping roots and up to 1,200 seeds per plant. This plant can cause chewing disease in horses.

GALL WASP

The AISC uses *Aulacidea acroptilonica* gall wasps as biocontrol agents for Russian knapweed. Adult wasps lay eggs inside the stems of the plant, where emerging larvae will feed. This causes a tumor-like growth called a gall, which can limit plant growth, and flower/seed production. The wasps are small (up to 3mm) and can't harm humans. Larvae overwinter in galls, and emerge as adults in the early spring, ready to lay eggs as soon as Russian knapweed rosettes are up.

HOW TO PREPARE

Here's how you can prepare for your biocontrol release:

- **Get your orders in!**
 - Orders are 'first come, first serve'; please contact AISC as soon as possible.
- **Locate ideal site for release:**
 - Russian knapweed patch (size at least 20m x 20m).
 - Full sun, avoid tree canopy.
 - Separate from herbicide treatments (at least 10m).
 - Avoid rivers, floodplains, windy areas and pastures with cattle as they destroy the galls during grazing.





MOVING GALL WASPS

Once you have an established population of gall wasps on your property, you can move them to nearby infestations of Russian knapweed. Adult wasps can fly and spread to nearby infestations by themselves. Please note, not all biocontrol releases will result in established populations.

Here are some tips to help you start collecting and releasing your gall wasps:



When can you move the wasps?

Moving and collecting wasps is most efficient when populations of wasps are high and a site is well established (usually 3-5 years after a release). Collect adults before wasps emerge from the galls in early May. An established site will exhibit galls on the skeletons of Russian knapweed.

How do you move the wasps?

- **Gather equipment.**
 - GPS, garden clippers, tray or vented container.
- **Monitor the site for gall wasp activity.**
 - Russian knapweed skeletons with galls on the stems.

- Emergence holes on galls.
- **Collect galls.**
 - Any weather works for collection (and release)!
 - Collect galls on Russian knapweed skeletons by clipping the stem at least 3 inches from the gall.
 - Put stems in a tray or vented container.
 - Keep galls in the fridge until release (they can last several weeks).
- **Release the wasps!**
 - Russian knapweed rosettes should be ~3-6 inches tall.
 - Scatter galls around the plants base in a location protected from rodents.
 - Take care to release away from rivers, floodplains, grazing pastures and out of the wind.

That's all! The wasps will emerge and get to work on your Russian knapweed infestation and you should see changes within 3-5 years!

Contact us:

587-999-0954
info@abinvasives.ca