

What is IPM?

TAKING ACTION! It's never good news to see that you have an insect problem brewing on your marsh. However, there is a lot you can do to manage it successfully. Just remember: Your aim is to prevent the insect pests from getting out of control while keeping the helpful insects healthy. When treating pests, you have to be choosy.

Integrated Pest Management – IPM, for short – is a combination of strategies to control pests. In fact, sweep netting is one part of IPM. It helps you figure out if you have a problem, and identify what insects are threatening your bog's success.

When pests reach action thresholds, another part of IPM kicks in. You develop a plan based on the pros and cons of different choices. Many of the choices avoid using pesticides. This is a smart approach. It avoids some pesticide problems. (See box to the right).

WHY PESTICIDES ARE NOT NECESSARILY AN EFFECTIVE CHOICE:

1. You might **create bigger problems** for the future. Insects can become resistant to a particular chemical. Resistance means that chemical won't work as well in the future to control the pests, and may even stop working altogether.
2. Using pesticides can actually lead to the **reappearance** of the very insect you are trying to get rid of! Some pesticides destroy the natural enemies of your target pest – not just the pest. As the pests begin to bounce back after the treatment, there might not be other insects that help to keep them under control.
3. **New pests** can get a stronghold while the target pest and natural pest enemies are wiped out.

KNOW THE LINGO – CRANBERRY GROWERS' LANGUAGE

A **pest** is any organism – but usually an insect – that people decide is unwanted, for any reason. In cranberry growing, a pest will injure or threaten the cranberry plant's ability to stay healthy and produce cranberries. However, what cranberry growers think of as pests might not be harmful to other types of plants or crops. In those situations, the insects would not be called pests.

A **pesticide** is (usually) a chemical used to kill or injure pests such as the insects that can damage cranberry plants and threaten its ability to produce cranberries.

A **strategy** is a plan or set of steps for reaching a goal. In IPM, growers think through their strategies before taking action.

Sweep netting is one part of an IPM. It helps growers know what pests, if any, are likely to cause problems on the marsh.

MANAGING PESTS: SOME EFFECTIVE CHOICES

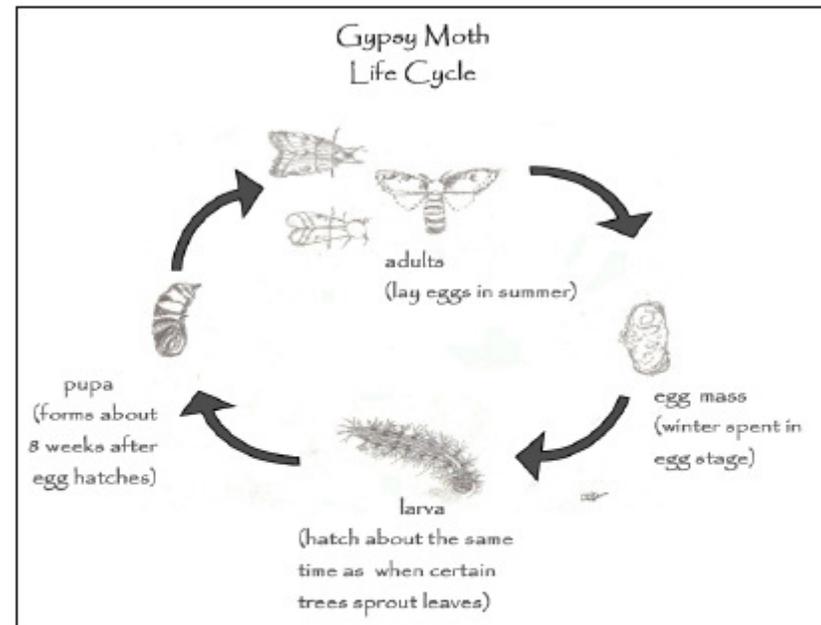


There are many reasons to flood the marsh, including wet harvest and insect pest management.

Biological controls: Sometimes you can use non-pest organisms to help control pests. For example: A bacterium (germ) called B.t. (short for *Bacillus thuringiensis*) blocks the lifecycle of the gypsy moth caterpillar. B.t. naturally lives in soils, but can also be added to the marsh. B.t. is safe for other organisms in the cranberry ecosystem, including honey bees, birds, and fish.

Late water spring flooding: Remove the winter flood in March. Around mid-April, re-flood your marsh for one month. This approach works to control false army worms, cranberry blossom worms, and gypsy moths. **Caution:** It is recommended that you limit late floods. Use them no more than every third year. **Example:** If you flood this year, skip the next two.

Detrashing floods: Cleaning your marsh yearly can help with insect management. **How it works:** Immediately after harvest, a flood will make the leaves, twigs, and fallen berries float. All the trash can be skimmed off the water. **Why it works:** Plant litter contributes to insect habitats. The less trash on you marsh, the less likely insects will make a home near or on you vines.



The biological control B.t. infects some larvae, and the larvae die. It's important to treat with Bt not only when you see young larvae, but also when you find the egg-laying adults.