



*Dasyneura rhodophaga*

Rose Midge

Rose Eating Fly

By Rich Baer, PNW District

# ROSE MIDGE

## A Little History



- Rose Midge First described in 1886 by a greenhouse grower in West Hoboken, NJ.
- Originally thought to be a tropical pest but then found in outside rose gardens across the Midwest.
- Midge is a native American insect that feeds on wild rose species
- First noted as serious garden pest around 1935.

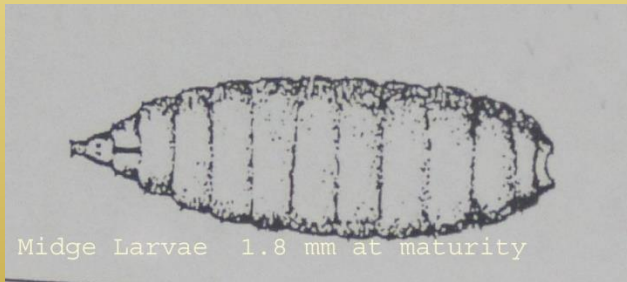


## Life History of the Rose Midge (*Dasyneura rhodophaga*)

Eggs are inserted into the growing tips of the rose. They are also said to be laid under the sepals of rose buds. The eggs typically hatch in 2 days.

# Midge Larvae

Feed by rasping rose tissues and  
mature in five to seven days.



Midge Larvae white to reddish colored up to 1.8 mm long



Mature larvae falling from tip to the ground to pupate



Cocoon made in soil

Pupae inside  
of cocoon

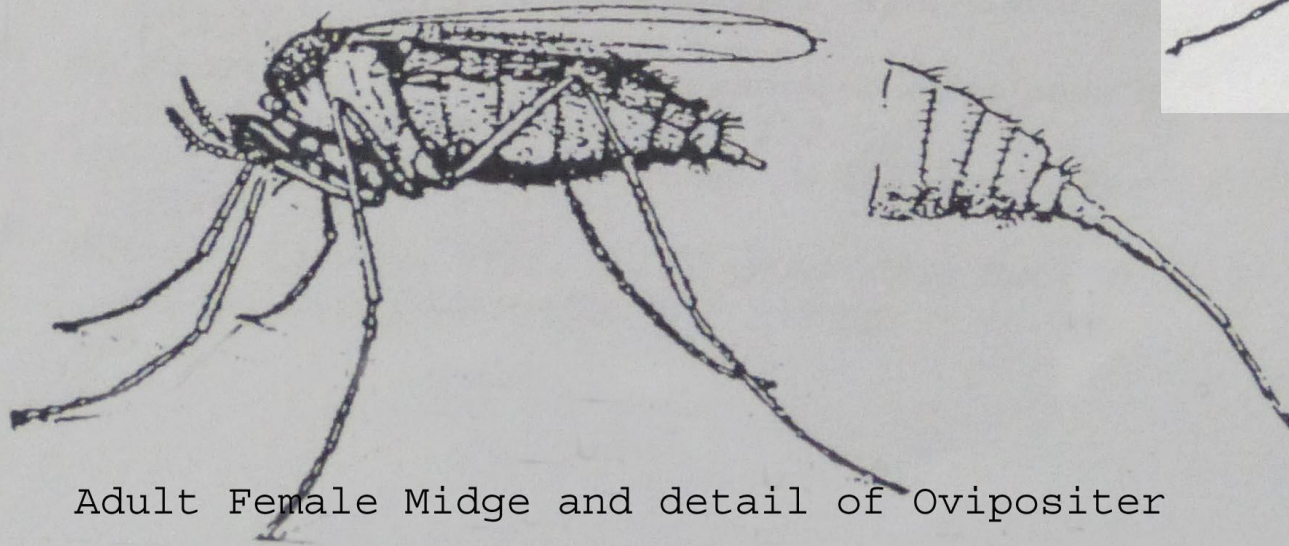
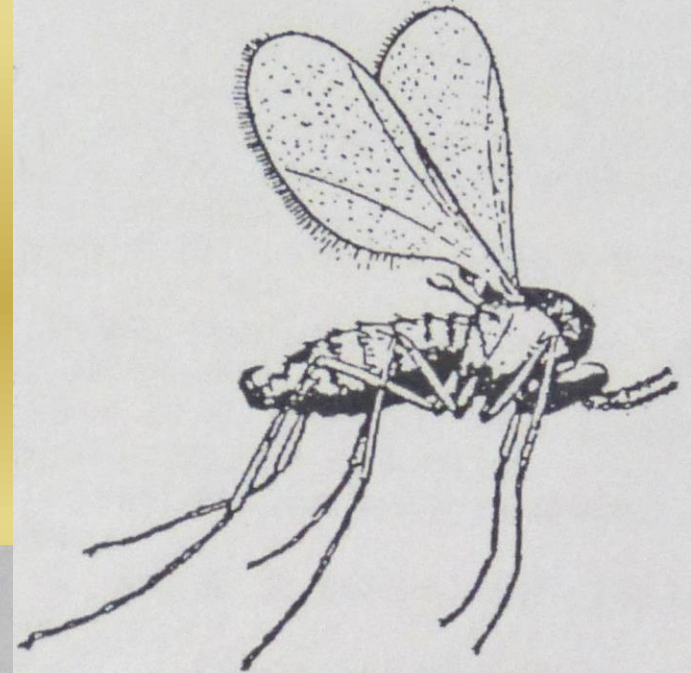
5-7 days





The adult midge had a life expectancy of 1-2 days. So hatch and get the eggs laid. Adults do not feed.

Adult Male Rose Midge



Adult Female Midge and detail of Ovipositor

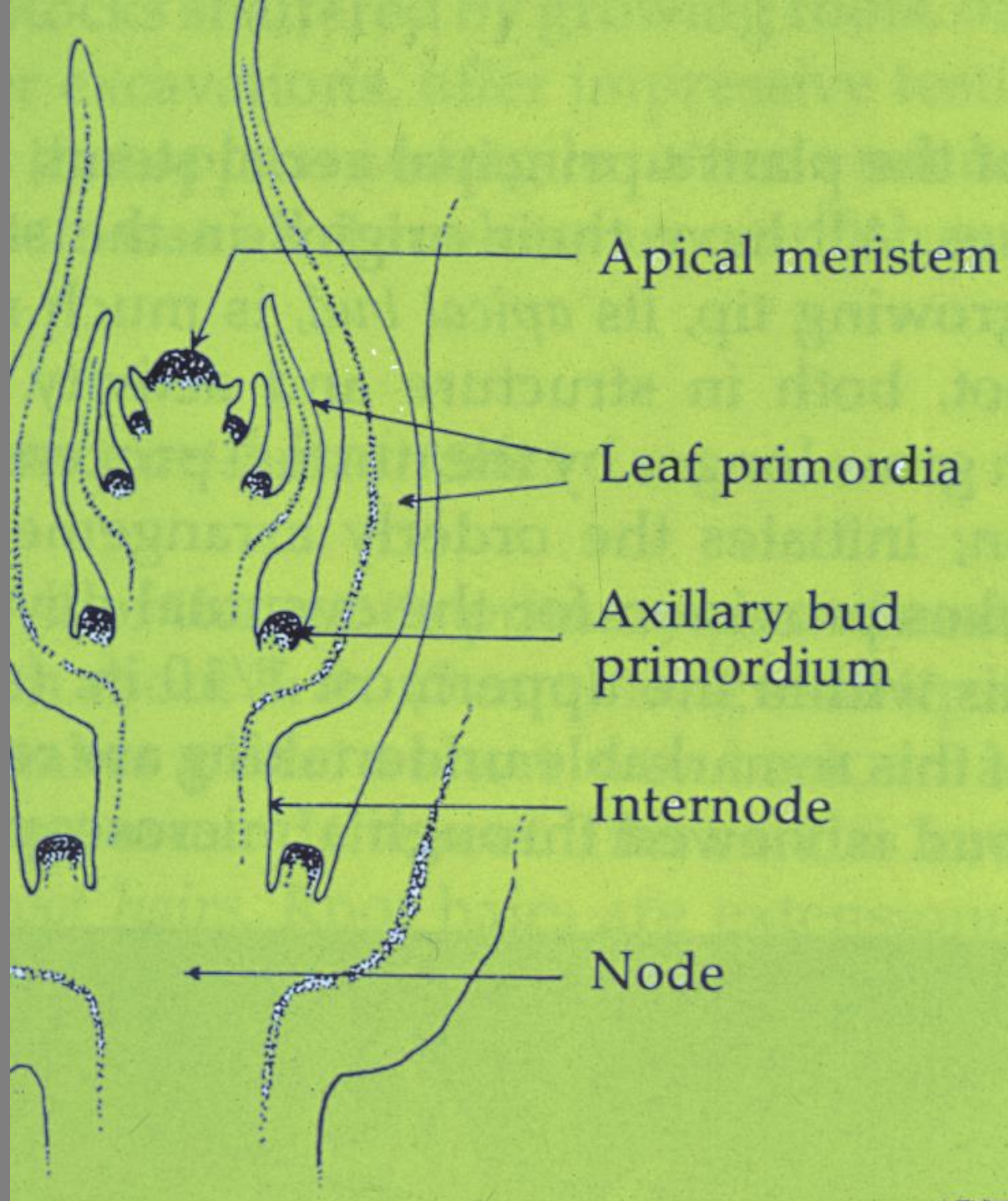


Adult Midges just over 1 mm in length, male on right



Plant growth tip, primordia  
and meristematic tissues  
are what the midge feeds  
on. Coleus

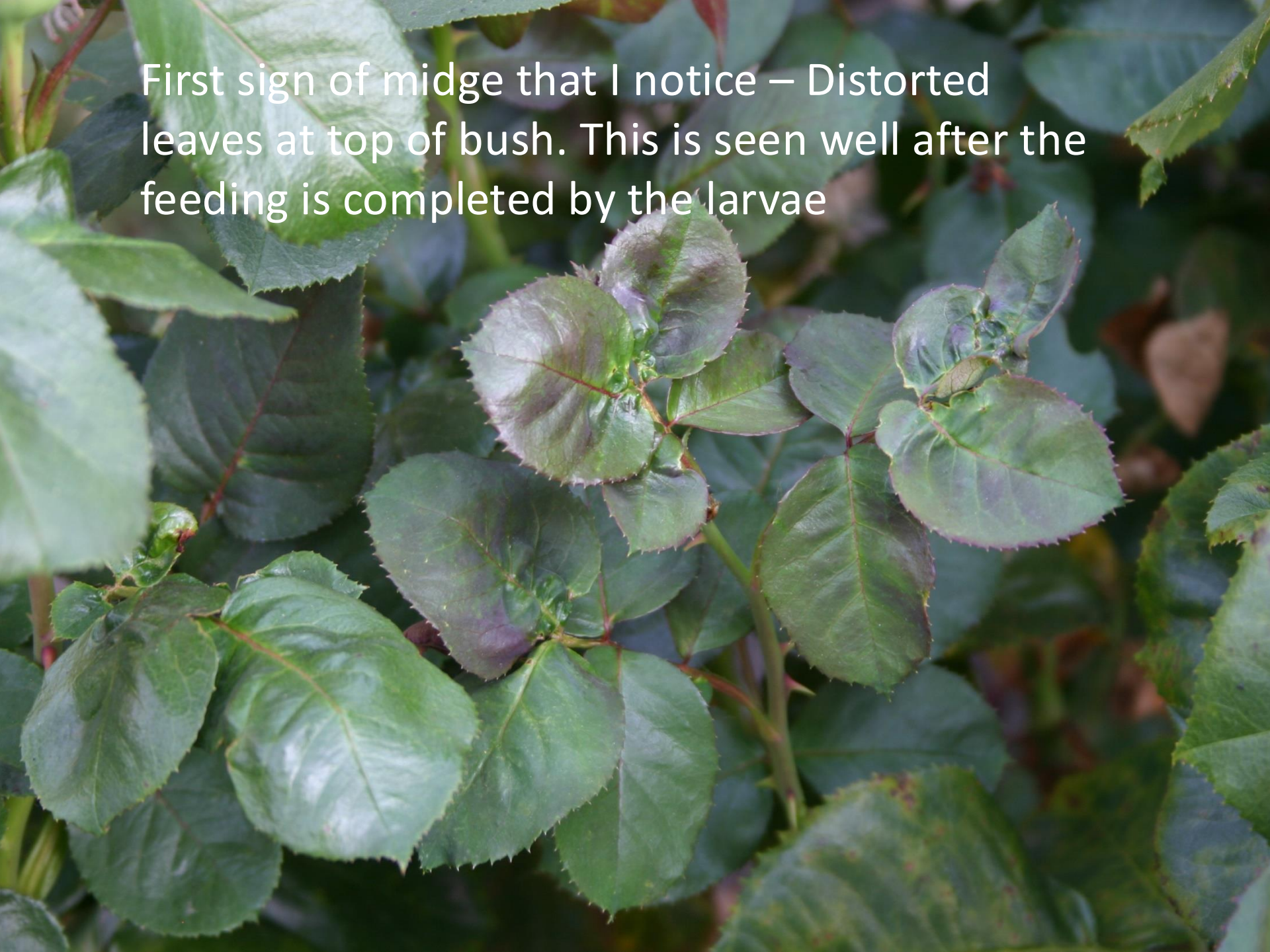




# Recognizing the signs and symptoms of rose midge in the rose garden



First sign of midge that I notice – Distorted leaves at top of bush. This is seen well after the feeding is completed by the larvae















If there are distorted leaves look for dead meristematic tissues.  
Dead tips with brown dry crispy parts























When the midge eats the growing tips of the plant, there is no more meristematic tissue to produce plant hormones. So the plant tissues below the tip respond to the killed tip as if the stem had been deadheaded, which for all intense and purposes it has been. In either case the auxin source has been removed from the tip of the stem.

The response by the plant is that the lateral buds below the killed tip begin to grow.

In less than a week from the time the final damage is done by the midge the rose begins a new growth cycle and forms new apical growths from the lateral buds along the stem.

These grow just in time so that there is new apical meristems for the next generation of midges to lay their eggs on. When these tips are eaten by the midge the rose again responds by sending out new lateral growth.

Eventually what you have is beautiful green rose bushes but with no flowers.





For an absolute positive diagnosis, collect normal looking growing tips of rose plants and dissect them. The following slides are from these tips.



# Rose Midge Larvae

















Bent bud caused by the feeding  
of Rose Midge Larvae



Funny Bud – Not caused by Rose Midge



Images from my garden last year.  
Not typical, from my experience,  
of rose midge damage, but there  
does not seem to be any other  
obvious explanation.





















## Another Diagnostic – The Midge Trap





## TREATMENT REGEMINS

In greenhouses tobacco dust was used,  $\frac{1}{4}$  to  $\frac{1}{2}$  inch under all of the rose plants. Nicotine is a good insecticide. It killed the larvae before they could enter the soil

Diazanone was found to be very effective against midge applied as a granular to the soil. Until it was banned.

Granular Dursban was as effective as Diazanone. Then it was banned as well.

Current research done at Oregon State found that the most effective control was by imidicloprid applied to the soil under the drip line. This kills the adults as they are emerging from the soil.

# Diazinon

## Soil & Turf Insect Control

This Product must not be used on Golf Courses and Sod Farms

**Faster Acting,  
PowerFlo® Granules**

**LESS DUST!**  
DENSER GRANULES  
STAY IN PLACE FOR LONGER COVERAGE

Ready-to-use granules  
for use only on:

### HOME LAWNS

to kill White Grubs, Mole Crickets,  
Chinch Bugs and Sod Webworms

### NUISANCE PESTS

#### OUTSIDE THE HOME

to kill Ants, Fleas, Brown Dog  
Ticks, and other listed pests

### HOME VEGETABLE GARDENS

to kill Cutworms, Wireworms,  
Root Maggots before planting

Active Ingredient  
Diazinon 50% 50%

Other Ingredients 50%

KEEP OUT OF REACH OF CHILDREN

CAUTION See additional safety  
statements on label and bag.

NET WT 10 lb / 4.53 kg

SATISFACTION GUARANTEED OR YOUR MONEY BACK

**ORTHO**

NET WT 10 lb / 4.53 kg

**Diazinon** Soil & Turf Insect Control

Diazinon

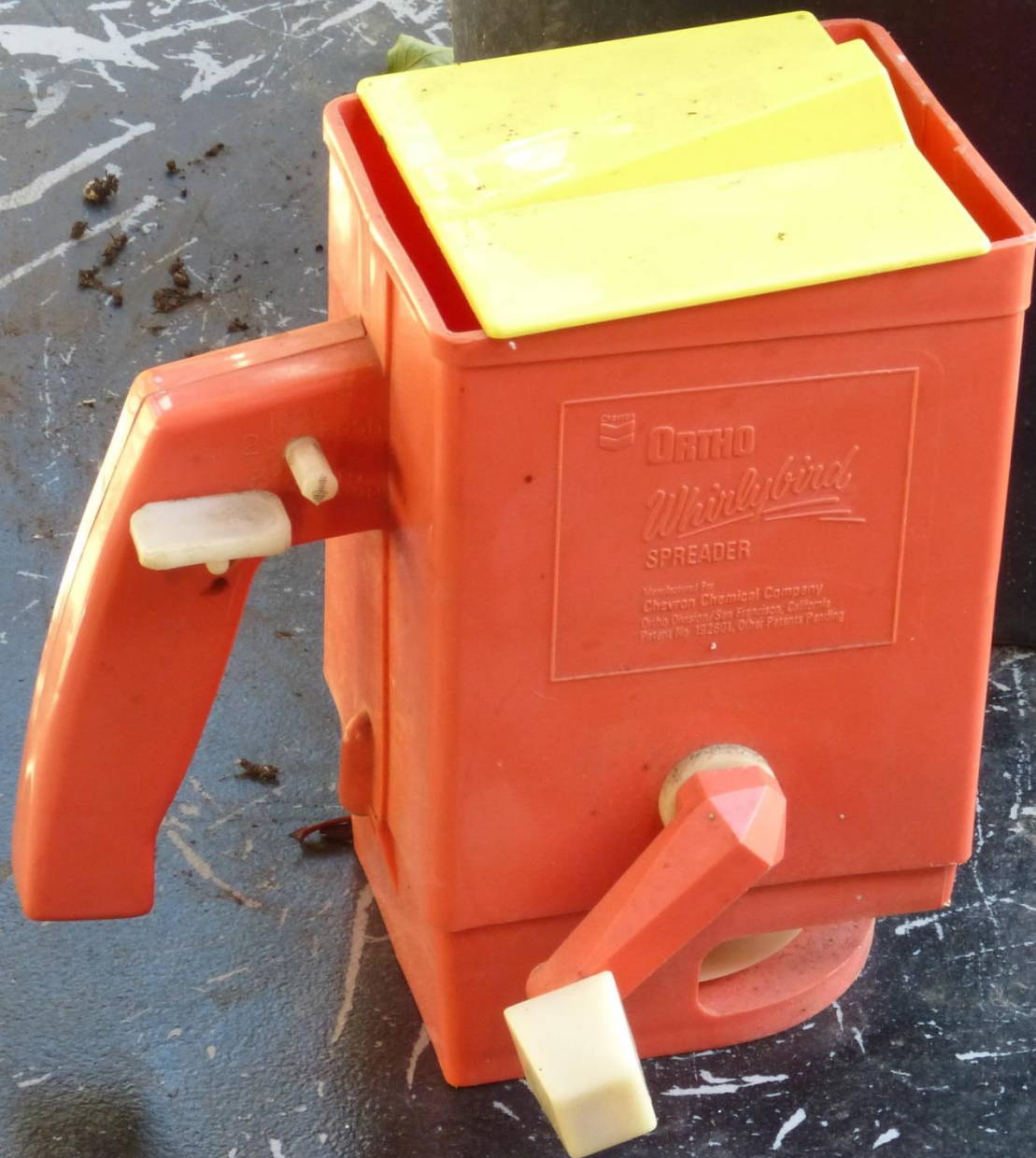


Imidacloprid  
cyfluthrin



- Name Change
- Since Bayer sold a large part of the company last year the name Bayer has been removed from their previous products.
- The current name for the same product is
- Bio Advanced Complete Insect Killer











## Other suggestions in the Literature

Spread plastic sheeting under the roses to prevent the larvae from entering the soil. Birds can then find and eat the larvae.

Deep mulch before the spring hatch to prevent the adults from emerging. Tried locally but showed no positive results.

Insecticide spray of bush to kill adults. Even when most of the adults were killed there was little reduction to the damage to the rose bushes by the feeding larvae.

Cutting of the dead tips and destroying them. Closing the barn door action.

In a conversation at the Fall National Rose Convention in San Diego John Mattia revealed that he was informed by Mark Windham that there was good control of Midge using the chemical Bifen IT. I could find no relevant research about this chemical and control of rose midge although it got good marks for controlling many other types of insects in the landscape.



