



# The Very Hungry Caterpillars:

## Tips to Control These Prolific Pests

July 2016

Hungry caterpillars are making their annual appearance throughout the country right now! These larvae of moths and butterflies can wreak havoc on crops. Cutworms can be very destructive and are often the first to appear in the spring as they overwinter in soil, mulch or wood. From late spring through summer, the masses of larvae begin to hatch. Army worms, cabbage worms, bud worms, fruit worms, assorted loopers, tent worms and numerous other caterpillars begin to make their presence known.

By late summer, egg laying has peaked and caterpillars of one type or another can be found just about anywhere in the landscape. Fall crops of mums, cabbage, kale and pansies are particularly prone to damage by feeding larvae. Vegetable crops may also be susceptible from season's start to the end.



Salt marsh caterpillar on garden mum

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After eggs have been deposited on the plant, they can hatch in as little as a 4-5 days or the eggs can overwinter in place, as with the notorious gypsy moth, to hatch the next spring. Biological control in the form of the tiny *Trichogramma* wasp can be used to prevent eggs from hatching. These parasitic wasps attack freshly laid eggs (up to 4 days old), depositing their own eggs inside the pest egg. The beneficial wasps must be released prior to, or at the latest, just as the moths are flying and laying eggs. Starting releases prior to arrival of the moths will allow the parasitic wasp populations to build. *Trichogramma* wasps mature from egg to adult in 8-10 days. The adult wasps will reproduce on a diet of nectar, honeydew and pollen. They'll lay up to 10 eggs per day during their 7-14 day life cycle. *Trichogramma pretiosum* are supplied as parasitized moth pupae on cards (100,000 per card). One card treats up to one acre.

Once egg hatch occurs, the clock is ticking. Effective control of caterpillars is best achieved while the larvae are young and small. Killing them becomes progressively more difficult as the voracious eaters rapidly gain size. In addition, each day (or night) of feeding increases the cumulative damage to the plant. Plants can become unsalable in just a few days.

Several naturally derived insecticides are very effective against the hungry larvae. These include **Conserve**® and **Entrust**® (OMRI-listed), both of which have the active ingredient

spinosad (MOA 5); **PyGanic**® (MOA 3, OMRI-listed), and the bacterial products **DiPel**® (MOA 11, OMRI-listed) and **Grandevo**® (MOA UN, OMRI-listed). These products can be used on most edible and ornamental crops, in or out of doors. They're generally safe for blooms and foliage of ornamentals. Each of these products has a 4-hour REI, except **PyGanic**, which has a 12-hour REI.



Lacinato kale foliage reduced to vein structure by the cross-striped cabbage worm

Beyond the pesticides listed above, several broad-spectrum insecticides stand out as top picks for controlling caterpillars: these include **Decathlon**® (MOA 3), **TriStar**® (MOA 4A) and **Mainspring**® (MOA 28). **Mainspring** is the only product here that can be used in a spray or a drench application; it has the longest residual activity, is relatively safe for beneficial insects and has a 4-hour REI. **Mainspring** is not labeled for edible crops. **TriStar** has been shown to have some ovicidal activity, in addition to acting on the larvae. **TriStar** is labeled for the use at the transplant stage of several edible crops and has a 12-hour REI. **Decathlon** remains one of the few pyrethroids that is not labeled as a restricted-use pesticide in most states; it carries a 12-hour REI, and is not labeled for edible crops.

Historically, broad-spectrum pyrethroids (MOA 3) and organophosphates (MOA 1) have been widely used for caterpillar control. These products remain effective, but environmental concerns should normally steer our chemical choices to the options presented above. To ensure efficacy and safety, always read the label for specific uses and restrictions.

### Featured Products

Product	Description	Item No.
Conserve SC	1 qt	70-1365
Decathlon 20 WP	8 oz	70-14201
DiPel Pro DF	1 lb	70-1450
Entrust	1 qt	70-1538
Grandevo PTO	5 lbs	70-1760
Mainspring GNL	1 pt	70-2331
PyGanic 1.4 EC	1 qt	70-2682
<i>Trichogramma pretiosum</i> pupae card	1 card (100,000 pupae)	30TPH
TriStar 8.5 SL	1 qt	70-85221