

Cole Crops XXIII (Heading Brassicas)

Thrips

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Onion thrips (*Thrips tabaci*)

Identification (and life cycle/seasonal history)

Onion thrips is the most common foliage infesting thrips of vegetable crops. Separation from other common thrips species requires microscopic examination of hairs on the thorax and antennal features.

Onion thrips survive winter in the region within plant debris. Likely some feeding occurs throughout winter during warm periods.

Eggs are laid by inserting into leaves. After hatch there are two feeding stages (Instar I and II nymphs). Two non-feeding stages follow, which are non-feeding and usually occur in the soil. Numerous generations are produced annually, which overlap so that all stages are present throughout the growing season.

Plant Response to Damage

Thrips puncture the plant surface and remove sap from the underlying cells. This produces silvery scars, often marked with tiny dark spots that are the thrips excrement. Injuries are rarely observed and thrips commonly infested cole crops without being observed. However some cabbage varieties have a hypersensitive response to injury and develop conspicuous warty swellings at thrips feeding sites.

Management Approaches

Natural Controls

Rainfall/irrigation that washes off thrips and seals stages in soil can be very important in reducing thrips numbers. Minute pirate bugs and predatory thrips are the primary biological controls.

Cultural Control

Cabbage varieties differ greatly in response to thrips injury. Some varieties will readily develop warty, edema-like swellings on leaves; other varieties show little response to thrips injury. Use of varieties that are tolerant of thrips feeding and do not show damage is the best way to manage thrips injury.

Chemical Control

Thrips are difficult to control. Coverage of plants can be a problem, particularly once thrips have infiltrated under leaves of the head. Pesticide resistant strains are important in other crops (see Onions).

Product List for Thrips on Cabbage, Cauliflower, Broccoli and Brussels sprouts:

Insecticide	Product (Fl oz. or oz. product)	Preharvest Interval, remarks
Foliar Treatments Allowable for Certified Organic Production		
Entrust	1-2 oz/A	1 day PHI, 4 hour reentry. Naturalyte insecticide (spinosyns); formulation allowed for Certified Organic production
Foliar Applications		
SpinTor, Success	3-6 fl. oz./A	1 day PHI, 4 hour reentry. Naturalyte insecticide (spinosyns).
Capture 2E	2.1-6.4 fl. oz./A	7 day PHI, 24 hour reentry. Pyrethroid insecticide (bifenthrin)
Mustang/Fury	2.4-4.3 fl. oz./A	1 day PHI, 12 hour reentry. Pyrethroid insecticide (zeta-cypermethrin)
Warrior	2.56-3.84 fl. oz./A	1 day PHI, 24 hour reentry. Pyrethroid insecticide (lambda-cyhalothrin)
<i>endosulfan (Phaser, Thiodan, Thionex, etc.)</i>	as labeled	7 day PHI for cabbage and broccoli; 14 day PHI for cauliflower and Brussels sprouts. 24 hour reentry. Chlorinated hydrocarbon insecticide (endosulfan)
^R Restricted use pesticide ¹ Labeled for chemigation ² Generic active ingredient, several formulations		

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Categories: Cole crops, heading brassicas, insects, thrips

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