

**Always read
the product
label!**



INSECT MANAGEMENT SNAPSHOT 2008

Adapted from Anne L. Averill's sections in the UMass Cranberry Chart Book

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PHI = preharvest interval
REI = reentry interval
♦ = Restricted use

PRACTICE / PRODUCT	RATE/A	NOTES
NEW! Actara♦	2-4 oz	Do not exceed 12 oz per season; low rate works well; beware bee toxicity.
NEW! Assail 30G: 1.9-6.9 oz; 70 WP: 0.8 to 3 oz		Timing and coverage are critical, as target insects must ingest the material.
NEW! Avaunt	6 oz	For black-headed fireworm and spring-only cranberry weevils; Hold water 1 day.
<i>Bt (Bacillus thuringiensis)</i> (examples: Dipel ES, Biobit, and XenTari)		Rate depends on the product; works only on caterpillars; allow time for control, as product must be consumed by larvae (so thorough coverage essential); best against early stage larvae, but combination with other insect control products may control larger caterpillars.
Confirm 2F (growth regulator)	16 oz	Affects caterpillars only; growth regulator; allow time for control, as product must be consumed by larvae (so thorough coverage essential).
Intrepid 2F♦ (growth regulator)	10-16 oz	Intrepid much like Confirm, but with improved activity and longer residual.
Diazinon 50W♦	4-6 lb	<i>For all diazinon formulations:</i> Highly toxic to birds & aquatic organisms; hold water for at least 3 days; 7-day PHI; 5 day REI; no more than 3 apps per season.
Diazinon AG500♦	4-6 pt	
Diazinon AG600♦ & 5W	51-76.5 oz	
Floods fall flood late-water flood (pp 45-47) 10-hour flood		Sept. 27 th -Oct. 7 th for 3 to 4 weeks (for cranberry fruitworm control). April 21 st -26 th , hold for 30 days (for cranberry fruitworm control). Late May for false armyworm and blossomworm; June 5 th - 17 th for some other cutworms, spanworms, small 1 st -gen blackheaded fireworm, and armyworms.
Imidan 70W	1.33-4 lbs	Different formulation from what is used in Maine's wild blueberry industry.
Lorsban 4E♦ Nufos 4E♦	3 pt	<i>Extremely toxic to fish;</i> Hold water at least 5 days; use only 2 times per season; rates of 2 pt (chemigation) give control; 60-day PHI and 24-hr REI;
Lorsban 75 WG♦	2 lbs	
Hatchet♦ Chlorpyrifos 4E AG♦	3 pt	Weevil & <i>Spag</i> Lorsban resistance problems in Massachusetts;
Nexter	3.5-7.0 oz	Miticide (for southern red mite); 2 apps/season; High success using low rates;
Orthene 97 Acephate 97UP	1 lb	Only one application per season; 90-day PHI; DO NOT apply from 10 days prior to bloom until completion of pollination due to bee toxicity; 24-hr REI.
Acephate 75 WSP Orthene 75S	1.33 lb	
Pyronyl or pyrenone	up to 12 oz	For spanworm control.
Sevin XLR Plus & 4F, Carbaryl 4L	1½ -2 qt	Avoid application within 10 days of bloom onset; 7-day PHI; no more than five applications per season; 7-day application interval.
Sevin 80 WSP & Sevin 80S	1.88-2.5 lb	
NEW! Delegate WG	3-6 oz	More active (and with greater residual) than SpinTor; Up to 6 apps / year.
SpinTor 2SC (Spinosad)	4-10 oz	Do not exceed 29 oz/season.
Entrust (Spinosad)	1.25-3 oz	Organic approved; Do not exceed 9 oz/season.

For Delegate, SpinTor, and Entrust, efficacy is improved with shorter rinse times.

armyworms

√ *Bt* √ Delegate WG √ SpinTor 2SC √ Entrust √ 10-hour flood anytime from about June 5th – 17th

blackheaded fireworm & other fireworms

√ Assail 30G / 70 WP	√ Diazinon 50W♦, AG500♦	√ Lorsban♦ 4E & 75 WG	√ Delegate WG
√ Avaunt	√ & AG600♦	√ Nufos 4E♦	√ SpinTor 2SC
√ Confirm 2F	√ Imidan 70W	√ Hatchet♦	√ Entrust
√ Intrepid 2F♦	√ Orthene 97 or 75S	√ Sevin XLR Plus or 4F	√ 10-hour flood
	√ Acephate 75 WSP or 97UP	√ Sevin 80 WSP or 80S	
	√ Chlorpyrifos 4E AG♦	√ Carbaryl 4L	

cranberry fruitworm

√ Assail 30G / 70 WP	√ Imidan 70W	√ Hatchet♦	√ Sevin 4F
√ Intrepid 2F♦	√ Lorsban 4E♦ & 75 WG♦	√ Carbaryl 4L	√ fall flood
√ Diazinon 50W♦, AG500♦ & AG600♦	√ Nufos 4E♦	√ Sevin 80 WSP or 80S	√ late water flood (pp 45-47)
	√ Chlorpyrifos 4E AG♦	√ Sevin XLR Plus	

cranberry weevil

- √ Lorsban 4E♦ or 75 WG♦
- √ Nufos 4E♦
- √ Chlorpyrifos 4E AG♦
- √ Hatchet♦
- √ Avaunt (Registered for *spring* populations only—no summer applications)
- √ Actara♦

cutworms & humped green fruitworm

False armyworm and blossomworm are the cutworm members most often found on Maine cranberry beds.

- √ *Bt*
- √ Confirm 2F
- √ Intrepid 2F♦
- √ Diazinon 50 W♦
- √ Diazinon AG500♦
- √ Diazinon AG600♦
- √ Lorsban 4E♦
- √ Lorsban 75 WG♦
- √ Nufos 4E♦
- √ Chlorpyrifos 4E AG♦
- √ Hatchet♦
- √ Orthene 97
- √ Acephate 75 WSP or 97UP
- √ Sevin XLR Plus
- √ Sevin 4F
- √ Carbaryl 4L
- √ Sevin 80 WSP or 80S
- √ Delegate WG
- √ SpinTor 2SC
- √ Entrust
- √ 10-hour flood

gypsy moth caterpillars

- √ *Bt*
- √ Confirm 2F
- √ Intrepid 2F♦
- √ Orthene 97 or 75S
- √ Acephate 75 WSP or 97UP
- √ Sevin XLR Plus
- √ Sevin 4F
- √ Carbaryl 4L
- √ Sevin 80 WSP or 80S
- √ Delegate WG

spanworms (inchworms)

- √ *Bt*
- √ Confirm 2F
- √ Intrepid 2F♦
- √ Lorsban 4E♦
- √ Lorsban 75 WG♦
- √ Nufos 4E♦
- √ Chlorpyrifos 4E AG♦
- √ Hatchet♦
- √ Orthene 97 or 75S
- √ Acephate 75 WSP or 97UP
- √ Pyronyl or pyrenone
- √ Delegate WG
- √ SpinTor 2SC
- √ Entrust
- √ 10-hour flood

Sparganothis fruitworm

This pest is often controlled by virtue of control practices targeting other insect pests.

- √ Confirm 2F
- √ Intrepid 2F♦
- √ Lorsban 4E♦
- √ Lorsban 75 WG♦
- √ Nufos 4 E♦
- √ Chlorpyrifos 4E AG♦
- √ Hatchet♦
- √ Orthene 97 or 75S
- √ Acephate 75 WSP or 97UP
- √ Delegate WG
- √ SpinTor 2SC
- √ Entrust

cranberry tipworm

- √ Diazinon AG500♦
- √ Diazinon AG600♦
- √ Diazinon 50W♦ (4 lbs per acre – maximum of 3 applications per season regardless of target pest)

Assail's active ingredient performed superbly against tipworm in a 2005 Univ. of Wisconsin trial (virtually 100% tipworm kill rate), but only fireworm and cranberry fruitworm are listed on the label. Fireworm and tipworm begin at the same point in the season, however (mid to late May).

cranberry girdler

This soil-dwelling larva generally goes unnoticed unless a large area of damage is discovered, and none have been noticed in Maine cranberries since at least 1996.

- √ Fall flood Sept. 27th-Oct. 7th and hold for six days, starting no later than Oct 2nd (Best if weather is cool & cloudy in order to help minimize potential damage to the vines)
- √ Sanding (minimum of 1") suppresses populations by reducing habitat favorability, but eventually populations will likely rebound.
- √ Nematodes (parasitic worms) (also will control black vine & strawberry root weevil – but rarely a problem in Maine)