

Corn Table 6: Foliar insecticides registered on field corn in Michigan and Ohio, with preharvest intervals and precautions.

- Insecticides are grouped by active ingredient(s), which are listed alphabetically, allowing for easy comparison of products with the same chemistry.
- Letters under a pest name indicate which rate to use from the previous column. If a letter is not listed, that pest is not on the label.
- Acronyms: CRW - corn rootworm; ECB - European corn borer; WBC - western bean cutworm

Active ingredient Trade Names	Labelled rate(s) per acre (unless specified)	aphids	CRW adults	cutworm	ECB	fall armyworm	flea beetle	grasshoppers	Japanese beetle	spider mite	stink bugs	true armyworm	WBC	Pre-harvest interval (PHI) in days	Precautions and Remarks
Bacillus thuringiensis (Bt) subspecies <i>aizawai</i> Agree WG Xentari Insecticide	(a) 1.0 - 2.0 lbs (a) 0.5 - 2.0 lbs				a	a						a	*	0	<ul style="list-style-type: none"> • Selective biological insecticide to control caterpillars. Larvae must eat treated foliage to be controlled so good coverage is important. Must be targeted on small (1st - 2nd stage) larvae • All listed here can be used on organic crops, except Dipel ES <p>* Western bean cutworm is on the Dipel ES label</p> <p>Corn earworm (not in this table) is on many Bt labels too</p>
subspecies <i>kurstaki</i> BioBit HP Dipel 10G Dipel ES Javelin WG	(a) 0.5 - 2.0 lbs (a) 10 lbs in whorl (a) 1.5 - 4.0 pints (a) 0.25 - 1.5 lbs														
bifenthrin Bifenthrin 2EC Bifenture EC Brigade 2EC Discipline 2EC Fanfare EC, 2EC, & ES Sniper & Sniper Helios Tundra EC	(a) 2.1 - 6.4 oz (b) 5.1 - 6.4 oz	a	a	a	a	a	a	a	a	b	a	a	a	30	<ul style="list-style-type: none"> • Max 0.3 lb per acre active ingredient for all applications • Do not apply as a ULV (ultralow volume) application • Do not apply if heavy rainfall is imminent • Check label for Bee Warning
Bifender FC	(a) 2.4 - 7.4 oz (b) 5.9 - 7.4 oz														
bifenthrin + biofungicide Ethos XB	(a) 2.8 - 8.5 oz (b) 6.8 - 8.5 oz	a	a	a	a	a	a	a	a	b	a	a	a	30	<ul style="list-style-type: none"> • Contains a biological fungicide strain (<i>Bacillus amyloliquefaciens</i>); otherwise, similar to bifenthrin
bifenthrin+cypermethrin (zeta) Hero	(a) 2.6 - 6.1 oz (b) 4.0 - 10.3 oz (c) 10.3 oz	b	b	a	b	b	a	b	b	c	b	b	a	30 grain 30 graze 60 forage	<ul style="list-style-type: none"> • Max 41.2 (Hero), 44.8 (Hero EW), or 18.7 (Steed) oz per acre per season for all uses; see label for max use rates for all bifenthrin products combined • Do not apply as a ULV (ultralow volume) application • Do not apply if heavy rainfall is imminent • Spider mite is not listed on the Steed label • Check label for Bee Warning
Hero EW	(a) 2.8 - 6.7 oz (b) 4.5 - 11.2 oz (c) 11.2 oz														
Steed	(a) 2.5 - 3.5 oz (b) 3.5 - 4.7 oz														

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carbaryl Carbaryl 4L Sevin 4F Sevin XLR Plus	(a) 1 - 2 qts (b) 1.5 - 2 qts (c) 2 qts	a	c	b	a	a		a			a	c	14 silage 14 graze 48 grain	<ul style="list-style-type: none"> Max 8 quarts per acre and 4 applications per year REI = 24 hours. Exception: REI of 21 days for workers detasseling seed corn Check label for Bee Warning 	
chlorantraniliprole Coragen Prevathon	(a) 3.5 - 5.0 oz (a) 14 - 20 oz			a	a						a	a	14 grain 1 seed	<ul style="list-style-type: none"> Do not make more than 2 sequential applications 	
chlorantraniliprole + lambda-cyhalothrin Besiege	(a) 5 - 10 oz (b) 6 - 10 oz	b	a	b	b	b	b	b		b	b	a	21	<ul style="list-style-type: none"> Max 31 oz per acre per year Minimum 7 days between applications Use higher rates for heavier infestations Check labels for specifics on max application rates of products containing gamma & lambda cyhalothrin 	
cyfluthrin or beta cyfluthrin Baythroid XL Tombstone Tombstone Helios	(a) 0.8 - 1.6 oz (b) 1.6 - 2.8 oz (c) 2.8 oz	b	a	b	c	a	c	b		b	b	b	21 grain 21 fodder 0 forage	<ul style="list-style-type: none"> Max 2.8 oz per acre allowed per 7-day interval Max 11.2 oz per acre and 4 applications per year Check label for Bee Warning 	
cyhalothrin (gamma) Declare Proaxis	(a) 1.0 - 1.5 oz (b) 1.5 oz (a) 1.92 - 3.2 oz (b) 2.56 - 3.84 oz	b	b	a	b	b	b	b		b	b	a	21 grain 21 silage	<ul style="list-style-type: none"> Max 0.38 (Declare) or 0.96 (Proaxis) pints per acre. Bee Warning: Highly toxic to bees. Do not apply to pollinating corn or drift to flowering weeds if bees are visiting field. Check labels for specifics on max application rates of products containing gamma & lambda-cyhalothrin 	
cyhalothrin (lambda) Kendo LambdaStar Lambda-Cy Lambda-T Lambda Cyhalothrin 1EC Paradigm VC Silencer Grizzly Too Lamcap II Province II Warrior II	(a) 1.92 - 3.20 oz (b) 2.56 - 3.84 oz (a) 0.96 - 1.60 oz (b) 1.28 - 1.92 oz	b	a	b	b	b	b	b		b	b	a	21	<ul style="list-style-type: none"> Max 0.12 lbs of active ingredient per acre per year from at-plant + foliar applications For armyworm, only small caterpillars (1st & 2nd instars) are controlled Check labels for specifics on max application rates of products containing gamma & lambda cyhalothrin Check label for Bee Warning 	

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cypermethrin (alpha) Fastac CS Fastac EC	(a) 1.3 - 2.8 oz (b) 1.8 - 3.8 oz (c) 2.7 - 3.8 oz (d) 3.2 - 3.8 oz	c	c	a	c	d	c	c	c	c	d	b	30 grain 60 forage	<ul style="list-style-type: none"> Max 11.4 oz per acre, including both soil and foliar applications. Do not use other products containing cypermethrin or zeta-cypermethrin during the same year as this product Check label for Bee Warning 	
cypermethrin (zeta) Mustang	(a) 1.4 - 3.0 oz (b) 1.9 - 4.3 oz (c) 2.9 - 4.3 oz (d) 3.4 - 4.3 oz	c	c	a	c	d	c	c	c	c	d	b	7	<ul style="list-style-type: none"> Max 17.2 (Mustang) or 16 oz (Maxx) per acre Check label for Bee Warning 	
	Mustang Maxx														
deltamethrin Delta Gold	(a) 1.0 - 1.5 oz (b) 1.5 - 1.9 oz	b	b	a	b	b	a	a	b	b	b		12 silage 12 graze 21 grain	<ul style="list-style-type: none"> Max 8.1 oz per acre and 5 applications per year Make applications at least 21 days apart 	
dimethoate Dimate 4E Dimethoate 4EC & 400	(a) 1 pint	a	a					a					14 silage 28 grain	<ul style="list-style-type: none"> Max 1 pint per year REI = 48 hours. Exception: REI of 4 days for detasseling Check label for Bee Warning 	
esfenvalerate Asana XL S-Fenvalostar Zyrate	(a) 2.9 - 5.8 oz (b) 5.8 - 9.6 oz (c) 7.8 - 9.6 oz	b	b	b	c		b	b	b	b	a		21 grain 1 seed	<ul style="list-style-type: none"> Check label for Bee Warning 	
etoxazole Zeal or Zeal WSP	(a) 1 - 3 oz								a				21	<ul style="list-style-type: none"> Max 6 oz per acre and 2 applications per year. Make applications at least 14 days apart For resistance management, alternate with a different miticide 	
	Zeal SC	(a) 2 - 6 oz													
flupyradifurone Sivanto 200SL Sivanto HL Sivanto Prime	(a) 7.0 - 10.5 oz (a) 3.5 - 7.0 oz (a) 7.0 - 14.0 oz	a											7 forage 21 grain	<ul style="list-style-type: none"> Systemic insecticide, effective on sucking pests Also controls whiteflies 	
hexythiazox Onager	(a) 10-24 oz								a				30	<ul style="list-style-type: none"> Limit of 1 application per year 	
indoxacarb Steward	(a) 6.0 - 11.3 oz				a	a						a	14 grain 1 forage 1 silage	<ul style="list-style-type: none"> Label also lists suppression of stink bugs and Japanese beetle 	

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malathion Malathion 5 and 5EC Fyfanon ULV Ag	(a) 1.5 pints (a) 4-8 oz	a	a					a						7	<ul style="list-style-type: none"> Max 2 applications per year REI = 12 hours. Exception: REI of 3 days for detasseling ULV formulation be applied by air or ground using specialized equipment; aphids are not listed on the Fyfanon ULV label • Check label for Bee Warning
methomyl Annihilate LV Lannate LV Nudrin LV Annihilate SP Corrida 90WSP Lannate SP Nudrin SP	(a) $\frac{3}{4}$ - 1 $\frac{1}{2}$ pints (a) $\frac{1}{4}$ - $\frac{1}{2}$ pints	a	a	a	a	a				a		21 grain 3 forage 21 stover			
methoxyfenozide Intrepid 2F	(a) 4 - 16 oz			a						a	a	21			• Max 64 oz per acre per season
permethrin Perm-Up 25DF Pounce 25WP Arctic 3.2EC Permastar Ag Perm-Up 3.2EC	(a) 6.4 - 9.6 oz (b) 3.2 - 6.4 oz (a) 4 - 6 oz (b) 2 - 4 oz	a	a	a	a	a				a	b	30 grain 0 forage			
permethrin (granular) Pounce 1.5G	(a) 6.7 - 10 lbs			a	a	a				a		30 grain 0 forage			• Broadcast by air or with ground equipment, directing granules into the whorl
pyrethrins Evergreen EC 60-6 PyGanic EC 1.4 II PyGanic Specialty	(a) 2.0 - 12.6 oz (a) 16 - 64 oz (a) 4.5 - 15.6 oz	a	a	a	a	a	a	a	a	a	a	0 when sprays dry			<ul style="list-style-type: none"> Plant-derived insecticides that knock down insects quickly but have very short residual control. Coverage is critical Max 10 applications per season, min. 3-day spray interval PyGanic is OMRI listed for use on organic crops; Evergreen does not have OMRI certification because it contains PBO Highly toxic to bees exposed to direct treatment; do not apply on or drift onto blooming crops or weeds
spinetoram Radiant SC	(a) 3 - 6 oz				a	a				a	a	28 grain 3 forage 1 seed			<ul style="list-style-type: none"> Max 36 oz per acre per season For resistance management, no more than 2 consecutive application of spinetoram or spinosad

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spinosad	Blackhawk				a	a						a	b	28 grain 1 seed	<ul style="list-style-type: none"> Important to time sprays with egg hatch PHI for forage is 7 days (Blackhawk) or 3 days (Tracer)
	Tracer														
spiromesifen	Oberon 2SC								a					5 silage 30 grain	<ul style="list-style-type: none"> Max 17 oz per acre and 2 applications per year Make applications at least 14 days apart Active against all mite stages, including eggs Complete coverage is important. Adjuvants may be used to improve coverage
sulfoxaflor	Transform WG	(a) 0.75 - 1.5 oz	a											14 grain 7 grazing 7 forage	<ul style="list-style-type: none"> Translaminar product, moves in leaf to target sucking pests "Do not apply product 3 days before bloom, or until after seed set"