











BENEFICIAL INSECTS FOR FRUIT AND VEGETABLE GROWERS



























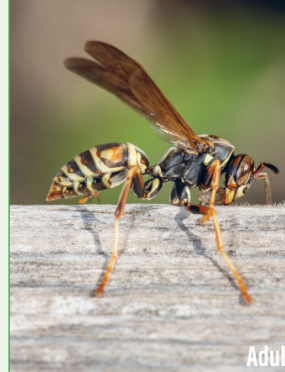




Enhancing habitat that adjoins fields with native flowering plants will attract beneficial insects that provide two critical ecosystem services: pest insect population control and pollination. The following chart and photos provide information on common beneficial insects and their predator/prey relationships.  Visits Flowers

BENEFICIAL INSECT	PREY OR HOSTS OF NOTE / COMMENTS	aphids	beetle larvae	caterpillars	earthworms	earwigs	eggs of pest insects	flies	grasshoppers	leafhoppers	lygus bugs	mealybugs	mites	psyllid	sawflies	slugs	snails	soft scale	thrips	whiteflies
Green Lacewings (family Chrysopidae) 	Eggs laid on long stalks attached to plants	X	X	X			X			X	X	X	X	X				X	X	X
Brown Lacewings (family Hemerobiidae)	Eggs laid singly on buds, leaves, or sheltered location	X	X	X			X						X							
Ladybird Beetles (Ladybugs)	Both adults and larvae are predators on soft-bodied insects	X					X					X	X					X		X
Syrphid Flies (Flower/Hover Flies) 	Subfamily Syrphinae only; adults consume flower nectar and pollen	X																		
Long-legged Flies, <i>Condylostylus</i>	Mites, thrips	X	X						X				X							X
Tachinid Flies 	Parasitic, females lay eggs on or in host		X	X		X			X						X					
Soldier Beetles, <i>Chauliognathus</i> 	Larvae search for prey in leaf litter, on plants, and in the soil	X	X	X			X									X	X		X	
Ground Beetles, <i>Harpalus</i> , <i>Poecilus</i>	Eggs laid in soil, both adults and larvae are nocturnal predators	X	X		X			X	X							X	X			
Plant Bugs, <i>Plagiognathus</i> 	Eggs laid in new growth of shrubs, nymphs and adults predatory	X											X							
Assassin Bugs, <i>Zelus</i>	Both adults and nymphs are predatory	X		X				X	X				X							
Damsel Bugs, <i>Nabis</i>	Colorado potato beetle larvae	X	X	X				X	X				X							X
Spined Soldier Bug, <i>Podisus</i>	European corn borer, fall armyworm, beet armyworm, cabbage looper, corn earworm, Colorado potato beetle, Mexican bean beetle		X	X																
Braconid Wasps	European corn borer, armyworms, hornworms, corn rootworm	X		X																
Potter and Mason Wasps 	Most nest in cavities aboveground and hunt a variety of caterpillars		X	X																
Yellowjackets, <i>Vespula</i> , <i>Dolichovespula</i> 	Pear psylla, fall webworm		X	X				X	X					X						
Paper Wasps, <i>Polistes</i> 	Cabbage looper, hornworms, fall armyworm		X	X																
Scoliid and Thynnid Wasps 	White grubs (scarab beetle larvae)		X																	
Jumping, Wolf, Orbweaver Spiders	Cucumber beetles, flea beetles	X	X	X			X		X	X										

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Green Lacewings Family Chrysopidae	Brown Lacewings Family Hemerobiidae	Ladybird Beetles (Ladybugs)	Syrphid Flies (Flower Flies)	Long-legged Flies <i>Condylostylus</i>	Tachinid Flies
 <p>Egg Adult</p>  <p>Larva</p>	 <p>Larva</p>	 <p>Adult</p>  <p>Larva</p>	 <p>Adult</p>  <p>Larva Larva</p>	 <p>Adult</p>	 <p>Adult</p>  <p>Adult</p>
Soldier Beetles <i>Chauliognathus</i>	Ground Beetles <i>Harpalus, Poecilus</i>	Plant Bugs, <i>Plagiognathus</i>	Assassin Bugs, <i>Zelus</i>	Damsel Bugs, <i>Nabis</i>	Spined Soldier Bug, <i>Podisus</i>
 <p>Adult</p>  <p>Larva</p>	 <p><i>Harpalus</i></p>  <p><i>Poecilus</i></p>		 <p>Eggs</p>  <p>Adult</p>	 <p>Adult</p>	 
Braconid Wasps	Potter and Mason Wasps Subfamily Eumeninae	Yellowjackets <i>Vespula, Dolichovespula</i>	Paper Wasps, <i>Polistes</i>	Thynnid and Scoliid Wasps	Jumping, Wolf, and Orbweaver Spiders
 <p>Adult</p>  <p>Parasitized 'Mummy' Aphids</p>	 <p>Adult</p>  <p>Adult</p>	 <p>Adult</p>  <p>Adult</p>	 <p>Adult</p>	 <p>Thynnid Wasp</p>  <p>Scoliid Wasp</p>	 <p>Jumping Spider</p>  <p>Wolf Spider</p>