By Sheri Bethard, Certified Master Gardener, Orange County

There are basically two types of beneficial insects - parasites and predators. Parasites or parasitoids lay their eggs on or in the pests' insect's eggs or in the bodies of the pests. Their larvae hatch and eat the pests. Predators do the work more directly by eating the pests with powerful chewing mouthparts. Beetles and true bugs are examples of predators. Flies and small wasps are examples of parasitoids. Large wasps are predators.

It is important we use methods of destroying the bad insects but leave the good insects in tack. This is hard, but using much safer products than synthetic toxic chemical poisons can control them. Aphids, red spider mites, and other small pests can be controlled with garlic/pepper tea and liquid seaweed while the tougher insects such as beetles and bugs can be controlled with citrus oil, horticultural oil, or even something as simple as allpurpose flour. "Killing" organic sprays should be used as a last resort. Spray or dust only when a serious infestation exists because most pesticides, organic or chemical, will hurt or kill more beneficial insects than the targeted pests.

Using beneficial insects is the best control. You can purchase these online from reputable dealers. Beneficial's need lots of energy to be active and search for prey. Adults rely on pollen and nectar as food sources. So to keep beneficials around be sure to have a wide variety of flowering plants from spring thru fall.

Some plants that will attract beneficial insects are:

Alyssum Caraway Coreopsis Coriander Cosmos

Goldenrod

Lantana Liatris Roses Sunflowers Tansy Yarrow

## Beneficial Insects

Beneficial Insect	Preferred Habitat	Benefit
Assassin bug	Flowering plants of ornamentals and food crops	Controls aphids, Colorado potato beetles, small flying insects, caterpillars, leafhoppers, Mexican bean beetles
Bee	Beehives and flowers	Pollinates flowers, produces honey
Damsel bug	Vegetation of all kinds	Controls aphids, caterpillars, thrips, plant bugs, leafhoppers, treehoppers
Damselfly	Ponds, pools, water features	Controls mosquitos, gnats, other flying insects
Doodlebug	Sandy soil	Controls ants, other small crawling insects
Dragonfly	Ponds, pools, water features	Controls mosquitos, gnats, other flying insects
Giant Wheel bug	Shrubs, trees	Controls moths, squash bugs, cucumber beetles, caterpillars
Ground beetle	Drainage ditches, rock gardens, ornamental and vegetable gardens, greenhouses	Controls, aphids, flea beetles, cabbageworms, slugs, cutworms, leafhoppers
Hover fly	Herbs and flowers	Controls caterpillars, thrips corn earworms, aphids, mealybugs, scale, leafhoppers'
Ichneumom wasp	Woodlots, flowers	Controls caterpillars, beetles, moths, borers
Lacewing	Fencerows, woodlots, night- lights	Controls aphids, scale, thrips, mites, mealybugs, whiteflies, moths, loopers, beetles, leafminers
Lady beetle (lady bug)	Hedgerows, leaf litter, gardens, wildflowers, other protected places	Controls aphids, scale, thrips, mites, mealybugs, whiteflies, moths, loopers, beetles, leafminers
Longlegged fly	Ornamental and vegetable gardens	Controls many small, soft- bodied insects
Minute pirate bug	Pollen and nectar plants	Controls caterpillars, thrips, mites, aphids
Mud dauber	Flowering plants, food crops,	Controls spiders, crickets,

	barns & garages	cicadas, flies, leafhoppers
Beneficial Insect	Preferred Habitat	Benefit
Praying mantis	Wood areas, grass strips,	Controls aphids, beetles,
	fencerows, vines	leafhoppers, caterpillars, flies,
		wasps
Soil Nematodes	Soil - purchase high quality	Controls grubs, cranefly,
	nematodes from farm supply or	Japanese beetle, flea larvae
	online	
Spider	Beehives, wood scraps,	Controls many insect pests
	fencerows, gardens	
Spined soldier bug	Vegetable gardens	Controls borers,moths,
		caterpillars, beetles
Tachinid fly	Herbs & flowers	Controls cutworms, stink bugs,
		beetles, corn borers, squash
		bugs, caterpillars, cabbage
		worms, sawflies, grasshoppers
Trichogramma Wasp	Eggs arrive on a card you hang	Controls, caterpillars
	in foliage	

Information from Texas Bug Book and How to Bug a Gardener by John Friel with Green Profit magazine