TABLE 2

LIST OF BIOLOGICAL CONTROL AGENTS FOR USE IN GREENHOUSE PRODUCTION SYSTEMS AGAINST THE MAJOR INSECT AND MITE PESTS

PEST	BIOLOGICAL CONTROL AGENTS	TYPE	COMMENTS
Aphids	*Hippodamia convergens*	Predator	Repeated releases are usually needed. Requires high aphid numbers to be effective.
	Chrysoperla rufilabris	Predator	A single larvae may consume up to 300 aphids.
	Chrysopa carnea	Predator	May also feed on thrips, whiteflies, and mealybugs.
	Aphidoletes aphidomyza	Predator	May enter a diapause stage under short daylengths.
	Adalia bipunctata	Predator	Both larvae and adult feed on many different aphid species.
	Aphidius colemani	Parasitoid	Attacks both green peach and melon aphid.
	Aphidius ervi	Parasitoid	Attacks both foxglove and potato aphid.
	Aphidius matricariae	Parasitoid	Attacks the green peach aphid.
	Aphelinus abdominalis	Parasitoid	Attacks many different aphid species and adults will host-feed.
Fungus Gnats	*Stratiolaelaps scimitus*	Predator	Feeds on eggs, larvae, and pupae. Survives up to seven weeks without a food source.
	Steinernema feltiae	Beneficial Nematode	Must be used early in the production cycle. Can be applied through chemigation systems.
	Dalotia coriaria	Predator	Feeds on both eggs and larvae. Adults will disperse throughout the greenhouse.
Leafminers	*Diglyphus isaea*	Parasitoid	Female lays eggs near larva, and will also host-feed. Requires high populations to be effective.
Mealybugs	*Cryptolaemus montrouzieri*	Predator	Less effective against the longtailed mealybug.
	Leptomastix dactylopii	Parasitoid	Only attacks third to early-fourth instar larvae of the citrus mealybug.
	Anagyrus pseudococci	Parasitoid	Attacks second instar and adult life stages of several mealybug species.
Spider Mites	*Phytoseiulus persimilis*	Predator	Primarily attacks twospotted spider mite. Requires certain temperatures and relative humidity.
	Amblyseius fallacis	Predator	Tolerates low temperatures and feeds on pollen in the absence of prey.
	Amblyseius californicus	Predator	Tolerates high temperatures and low relative humidity. Feeds on pollen in the absence of prey.
	Amblyseius andersonii	Predator	Feeds on a wide-range of spider mites, and other prey as a food source.
	Galendromus occidentalis	Predator	Tolerates high temperatures and low relative humidity.
	Feltiella acarisuga	Predator	Adults do not feed. Females deposit eggs near areas infested with spider mites.
	Stethorus punctillum	Predator	Feeds on all life stages of spider mites. Adults will disperse to locate spider mite infestations.
Shoreflies	*Dalotia coriaria*	Predator	Adults and larvae are predaceous. Adults are very mobile and will disperse within a greenhouse.
Thrips	*Neoseiulus cucumeris*	Predator	Only attacks first instar nymph. Releases should be made early in the production cycle.
	Amblyseius swirskii	Predator	Attacks both first and second instar nymphs.
	Stratiolaelaps scimitus	Predator	May attack pupae located in the growing medium.
	Steinernema feltiae	Beneficial Nematode	May be effective on pupae in the growing medium.
	Orius insidiosus	Predator	Feeds on both nymphs and adults.
	Dalotia coriaria	Predator	May feed on pupae in the growing medium.
Whiteflies	*Encaria formosa*	Parasitoid	Primarily used against the greenhouse whitefly. Host-feeding by adult may kill whitefly larvae.
	Eretmocerus mundus	Parasitoid	Primarily used against the sweet potato whitefly.
	Amblyseius swirskii	Predator	Feeds on both eggs and larvae. Will also feed on pollen as an alternative food source.
	Delphastus catalinae	Predator	Feeds on both eggs and larvae. Useful for dealing with high whitefly populations.

Author:			
Raymond Cloyd			
essor and Extension Entomologist			
Kansas State University			
Department of Entomology			
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