A-40

BIOLOGICAL CONTROL OF AVOCADO PESTS IN BIO-ORGANIC ORCHARDS IN ISRAEL

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A major approach to reducing the use of chemicals in agriculture is the application of biological control methods. The natural enemies used in biological control of insects are parasites, predators, and pathogenic microorganisms.

Three methods of utilizing these natural enemies:

1. Importation and colonization (successful biological control projects in Israel are described).
2. Augmentation of local natural enemies through inundated release, periodic colonization and genetic improvement.
3. Preservation and augmentation of local natural enemies through environmental manipulation.

The division of Bio-Organic Orchards in Israel has about 3,500 dunam of avocado. Control of mite and insect pests on avocado are achieved without recourse to synthetic biocides.

The list of insects and their natural enemies:

Pseudococcus Longispinus (Hom: Pseudococcidae)	*Anagyrus fusciventris* Girault *Cryptolaenus montrouzieri* Mulsant
Cryptoblabes Gnidiella (Lep: Phycitidae)	*Bacillus thuringiensis* Berliner
Boarmia Selenaria (Lep: Geometridae)	*Apanteles cerialis* Nixon
Compsilura concinnata Meigen	
Parabemisia Myricae (Aleyrodidae)	*Eretmocerus debachi* Rose and Rosen
Protopulvinaria Pyriformis (Coccidae)	*Metaphycus stanleyi* Compere *Metaphycus helvolus* Compere
Heliothrips Haemorrhoidalis (Thripidae)	*Thripobius semiluteus* Boucek
Chaetanaphothrips orchidii (Thripidae)	
Tetraleurodes Perseae (Tetranychidae)	*Neoseiulus californicus* McGregor