Importance of Regional interrelationship of bioecology ofapple orchards in biocontrol and in development of its IPM in plateau of Iran.

Dr. M. Shojai

Department of Entomology. Science and Research Branch of Islamic Azad University - Tehran.

Iranian Research Organization for Science and Technology - IRAN

In a ten year project, during 1990-1999, an integrated pest management program (IPM) was experienced on apple orchards in Mashhad and Uroomieh, which included both applid as classic and natural biological control. In this programme the following important pests, are targets:

- Cydia pomonella (L)(Lep. Tortricidae, Olethreutinae)
- (Synonyms: Carpocapsa = Laspeyresia)
- Leucoptera scitella (Zell) (Lep. Lyonetiidae)
- Eriosoma lanigerum (Hausm.) (Hom. Aphididae)
- Aphis pomi DeG. (Hom. Aphididae)
- Panonychus ulmi (Koch) (Aca. Tetranychidae)
- Podosphaera leucotricha

In this IPM programme for controling Cydia pomonella two different approches were used:

1- Direct classic of biocontrol method, a sustained inundative release of Trichogramma and supplementary biotic agents, were used to reduce the population density of codling moth, in its different developement stage such as: egg, larva, adult, at different yearly generations, and lowered the level of economic damage to the range of 0.8% to 12.07% .

2- Indirect methods including: Pheromone - traps, repellents and destroying o'verwintering full grown larvae by installing belt-traps on tree trunks.

could take the best advantage of the situation, despite the unavoidable limitations in such soils and water availability. In conclusion, the method of deep hole placement of fertilizers with different nutrient mixtures is one of the most practical and useful ways of achieving an optimum fertilization method in the apple orchards of the region.