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International Organisation for Biological and Integrated Control of Noxious Animals and Plants
Organisation Internationale de Lutte Biologique et Intégrée contre les Animaux et les Plantes Nuisibles

IOBC/WPRS Working Group

Integrated Control in Citrus Fruit Crops

Lisbon (Portugal)

26-27 September 2005

chemical control as well as application of relatively selective insecticides (mineral oil and others) led to increase of biodiversity and efficiency of beneficial organisms in citrus agrocenosis.

Citrus Fruit of Lankaran (Azerbaijan) in danger

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Lankaran (Talish) region is situated in the southeast part of Azerbaijan on the shore of the Caspian Sea. Lankaran lowlands and Lankaran –Talish Mountain system form Lankaran region. Lankaran is one of the peculiar corners of our republic. It is one of important agricultural regions of the Republic which was the second subtropical base of former Soviet Union. We can find relics of different origins here in the forests. Invaluable sorts of trees prevail in the forests most of which are not seen in other places: lignum vitae, chestnut leafed oak, silk acacia, hirkan poplar, persimmon etc. Talish Mountains with its ancient flora and fauna and relics of ancient origin is the classic place in the Caucasus. *Pseudaulacaspis pentagona* Targ. Torzetti (Hemiptera, Diaspididae), a dangerous pest of forest, citrus fruits and ornamental species, has widely spread in Lankaran in recent 6-7 years. The polyphagy, high prolificacy and ecological plasticity of this pest allowed it to widespread and survive easily under local conditions. It settles on the trunks, branches, lives seldom on fruits, causing drying up of the branches of the tree and full destruction of the plants. Close contact with plants, small size, protective coloration and waxen covering (corselet) helps this scale insect to spread easily.

According to our initial investigation *P. pentagona* is widely spread in Lankaran region and seriously harms citrus plants. About 20-25 % of the plants of Lankaran area are already affected by this pest. It spread in Lerik, Lankaran, Masalli and Astara and advances to other regions of Azerbaijan characterized by temperate climate in recent years. At present this quarantine species is the most serious and dangerous pest of many fruit crops, forest and shrubby species.

According to literature, the pest spread through plant stuff from eastern Asia to many countries with subtropical climate. Due to its aggressiveness it was soon classified as the most dangerous pest of all species. Once it spread widely in Europe too. Its settling to new regions was first accompanied with quick growth of number and high level of harmfulness but later these pestholes in Europe were eliminated gradually with the help of effective parasitoid. However, *P. pentagona* has never been a serious problem in the Soviet Union. It was detected on the coasts of Abkhazia and Ajara in the thirties. First it harmed cherries, peach, lilac and later circle of the fodder plants extended. It was considered that natural habitat of *P. pentagona* was confined to Sukhumi and its suburbs. However, in 1986 a giant pesthole on mulberry was detected in the suburbs of Batumi.

In recent years, *P. pentagona* heavily spread in Lankaran and remain a serious problem for Azerbaijan. Absence of specialized parasitoids helps mass reproduction of this pest. Advance of the pest to zones with temperate climate causes great danger for the flora. It is necessary to carry out integrated measures, i.e., land measures, chemical, biological and other control methods. *Encarsia berlesei* should be imported from abroad (Georgia or Turkey) and introduce in Azerbaijan as an effective biological control agent. According to our knowledge, *Rhyzobius lophanthae* (Blaisdell) (Coleoptera, Coccinellidae) is also an interesting predator.