

BIOECOLOGICAL STUDIES ON ORIENTALIS YELLOW SCALE (*AONIDIELLA*
ORIENTALIS NEW.) AND ITS CONTROL BY INTEGRATED
METHODS IN FARS PROVINCE

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Summary

Investigation done in Fars province revealed that *A. orientalis* had been transferred from Jiroft to Baroos by infected seedlings in 1979 and spread rapidly over hundred hectares of citrus orchards.

The research carried out during 1986-1989 showed that this scale has five generations in a year and overwinters in form of nymph and adult. The highest population of the insect was recorded in the 4th. and 5th. generations

Reproduction of the insect occurred in three forms of vivipar, ovipar and ovovivipar but the vivipar form was found to be more common.

The chemical control of this pest was not advisable due to the presence of the beneficial enemies, but oil spraying with a 4% solution especially after fruit harvesting was recommended. Natural control was also achieved by *Chilochorus bipustulatus*, *Cybocephalus sp.* and *Encarsia aurantii*. Pruning of lower stalks and water management is also helpful for controlling this pest. (Table 1 and figures 1 and 2 in Farsi text).

References

- BEHDAD, E. 1984. Pest of Fruit Crops In Iran. Neshat Pub. Isfahan, pp. 707-709.
ESMAILI, M. 1983. Important Pests Of Fruit Crops In Iran. Sepehr, Pub., Tehran,
pp. 388-393.
HAYAT, M. 1970. New Species Of Encyrtidae (Hymenoptera - Chalcidodidea)

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Summary

Investigation done in Fars province revealed that *A. orientalis* had been transferred from Iran to Haroon by infested seedlings in 1979 and spread rapidly over hundred hectares of citrus orchards.

The research carried out during 1980-1982 showed that this scale has five generations in a year and overwinters in form of nymph and adult. The highest population of the insect was recorded in the 4th and 5th generations.

Reproduction of the insect occurred in three forms: of vivipar, ovipar and overwinter but the vivipar form was found to be more common.

The chemical control of this pest was not advisable due to the presence of the beneficial enemies but oil spraying with a 4% solution especially after fruit harvesting was recommended. Natural control was also achieved by *Cinichococcus pinivorus* (*Cinichococcus* sp. and *Encarsia wasmani*. Pruning of lower stalks and water management is also helpful for controlling this pest. (Table 1 and figures 1 and 2 in Farsi text).

References

BEHBAZI, H. 1984. Pest of Fruit Crops in Iran. Neshan Pub. Tehran, pp. 202-209.

ESMAILI, M. 1983. Important Pests of Fruit Crops in Iran. Sepan, Pub. Tehran, pp. 282-302.

HAYAT, M. 1978. New Species of Encyrtidae (Hymenoptera - Gasterodiplous)