# PHYTOPHAGUS MITE FAUNA OF IRAN

# (I)

### B. KHALIL-MANESH 1)

Plant Pests & Diseases Research Institute, Tehran, Evin

## Introduction:

In most parts of the world where commercial crops culture is practiced, the damage caused by mites to plants represents a major problem. The study of mites constitutes comparatively new field in all the countries of the world especially in Iran.

At the present, the damage caused by mites to agricultural crops in Iran presents some new aspects of problem to the ministry of Agriculture and to plant growers.

Even to the world Acarologists, mites comprise a difficult problem and to them the control of these small creatures is considered to be one of the complicated and important operations of crop production.

The unjustified usage of many chemicals especially chlorinated compounds in the past has resulted in killing beneficial insects and mites and in some instance the existing biological balance in a crop area has been distroyed, with the result that mites hitherto of minor importance rapidly have developed into primary importance.

The economical importance of mites as serious pests came to attention in Iran when many agricultural crops such as cotton, citrus, palms, vegetables and fruit trees were heavily infested and damaged, but due to the smallness of these creatures, their existance were unidentified.

On the other hand, due to the resistance attained in mites to chemicals used, the successful control measures were not easily accomplished.

To fulfill the needs of attaining some knowledge on mites and best means of control measures, the Acari lab, since its establishment, has been most successful, and so far, the biology, population fluctuations and methods of control of some of the harmful species of mites have been studied.

The present publication is prepared with an attempt to simply list the species of mites that occur in Iran, collected and identified within the past ten years from different regions on different crops.

<sup>1)</sup> B. Khalil-manesh, MSC. Tehran P.O.Box. 3178

Before intering into the presentation of mite fauna of Iran, a diagnostic classification of the *Acarina* may be followed:

| Phylum:    | Arthropoda           |
|------------|----------------------|
| Subphylum: | Chelicerata          |
| Class:     | Arachnida            |
| Order:     | ACARINA              |
| Family:    | (over 300 families). |

At this point the author wishes to thank Mr. F. Taghizadeh, head of the Department of Zoology and Deputy Director of Plant Pests and Diseases Research Institute, for his kind encouragement and advice during the course of this study.

The author is also indebted to Mr. M. Khosrowshahi for his valuable help in collecting and preparing the mites, and to other research workers at the Plant Pests and Diseases Research Institute for close cooperation in sending the mite samples from different regions of Iran.

Thanks are also due to Mr. D. Macfarlane of British Museum (Nat. Hist.) for his sincere help in identification and confirmation of some of the mite species.

#### References

BAKER, E.W. and WHARTON, G.W., 1952. An Introduction to Acarology.

- DOSSE, G., 1970. Über die im Iran vorkommenden Spinnmilben und Möglichkeiten ihrer Bekämpfung. (Report).
- EVANS, G.O., SHEALS and MACFARLANE, D., 1961. Terrestrial Acari of the Britisch Isles. Vol. I Britisch Museum, London.
- FARAHBAKHSH, Gh., 1961. A checklist of Economically important and other enemies of Plant and Agr. Productions in Iran. No. 1

HUGHES, A.M., 1961. The mites of stored food. Technical Bulletin, No. 9

KEIFER, H.H., 1952. The Eriophyid mites of California. Bulletin of the California Insect Survey. Vol. 2, No.1.

KHALIL-MANESH, B., 1965. Annual Report of the Research on mites. Plant Pests & Diseases Research Institute, Min. of Agric. (Iran).

KHALIL-MANESH, B., 1969. Biology & Ecology of *Brevipalpus obovatus* Donn. Second Plant Medicine Congress of Iran (Tea pests in Iran). pp: 161-176.

MURPHY, P.W., 1964. The Acari. Key to order, Families and certain Genera.

NAEGELE, J.A., 1963. Advance in Acarology. Vol. 1

NAEGELE, J.A., 1965. Advance in Acarology. Vol. 2

PRITCHARD, A. E. and BAKER, E.W., 1955. A revision of the Spider Mite of Family Tetranychidae, vol. 1 PRITCHARD, A.E. and BAKER, E.W., 1958. The false Spider Mites (Acarina: Tenuipalpidae).

SEPASGOSARIAN, H., 1970. The red false Spider Mites of Apple. Cenopalpus pulcher Can. & Fanz. Bulletin No. 115

College of Agr. of Teheran University. SEPASGOSARIAN, H., 1971. Mites and their economical importance in Iran. Bulletin No 2. College of Agr. of Teheran University.

TUTTLE, D.M. and BAKER, E.W., 1964. The Spider Mites of Arizona (Acarina: Tetranychidae).

TUTTLE, D.M. and BAKER, E.W., 1968. Spider Mites of Southwestern United States and a revision of the Family Tetranychidae.

WAINSTEIN, B.A., 1960. Tetranychid mites of Kazakhistan V. (In Russian).

ZAKHVATKIN, A.A., 1941. Fauna of U.S.S.R. Arachnidea, vol. VI, No. 1. Tyroglyphoidea (ACARI) (Translation in English).