A contribution to study of hoppers (Hom. Auchenorrhyncha) of potato fields in Isfahan and Daran

J. KHAJEHALI, H. SEYEDOLESLAMI and K. KAMALI

College of Agriculture, Shahrekord University; College of Agriculture, Isfahan University of Technology and College of Agriculture, Tarbiat Modarres University

SUMMARY

This survey was carried out during Potato growing season of 1996-97 in Isfahan and Daran districts. Overall 25 species of families: Cicadellidae with 5 subfamilies. 12 tribes, 17 genera and 20 species, Cercopidae with 1 species, Delphacidae with 1 subfamily, 2 genera and 2 species, Dictyopharidae with 1 species and Cixiidae with 1 species, were collected and identified. All species mean density of adults per 100 - sweeping net were estimated to determine relative abundance and importance of these species during Potato growing season. Ability of species in transmission of plant disease agents are discussed. The most abundant and destructive species was *Empoasca decipiens* and *Austroagallia sinuata*, *Circulifer opacipennis*, *Circulifer tenellus*, *Macrosteles laevis* and *Euscelis incisus* were reported to be important in Potato disease stransmission in the world.

A photo of each species are presented. For most species characters of male genitalia were drawn. A key to species for leafhoppers of potato fields in Isfahan and Daran is provided.

Key words: Plant hoppers, Taxonomy, Patato plant, Isfahan

## References

- AHMED, M. 1987. Host associations and losses to growth and yield to some vegetable plants caused by typhlocybine leafhoppers (Cicadellidae) in Pakistan. Proc. 2nd Int. Workshop on Leafhoppers and Planthoppers of Economic Importance, Provo, Utah, USA 28th July- 1st Aug. 1986. Eds. Wilson, M. R and Nault, L. R., CIE, London, pp. 243-250.
- BALALI, G. H., D. DANESH and F. FILSOUF 1986. Purple Top Wilt of Potato in Iran. Proc. VIII. Plant prot. cong. Iran. Univ. Tech. Isfahan, P. 124.
- DANESH, D., A. R. SEPAHI and H. SEYEDOLESLAMI 1990. Final report for seed

  Potato production project. Annual Reports of Plant pests and Diseases

  Research Laboratory, Isfahan, Iran.
- DLABOLA, J. 1981. Ergebnisse der Tschoslowakisch Iranischen entomologischen expeditionen nach dem Iran (1970 und 1973). Acta Ent. Mus. Nat. Pragae 40: 127-311.
- EMELYANOV, A. F. 1967. Suborder Cicadinea (Auchenorrhyncha). In: Keys to the insects of the European U.S.S.R. I, ed. Bei-Bienko, G. Y. Israel program for Scientific Translation, Jerusalem, pp. 421-551.
- INTERNATIONAL POTATO CENTER 1984. Integrated pest management. CIP.

  Lima Peru. 263 pp.
- LODOS, N. 1993. Entomology. Vol. II. general, applied, faunistic. Translated by M. Modarres Awal. Barsada pub. 521 pp. (in Farsi)
- NIELSON, M. W. 1968. The leafhopper vectors of phytopathogenic viruses (Homoptera, Cicadellidae). Taxonomy, biology and virus transmission. U.S.D.A. Tech. Bull. No. 1382. 386 pp.
- NIELSON, M. W. 1985. Leafhopper systematics. In: The Leafhoppers and Planthoppers, eds. Nault, L. R. and Rodriguez, J. G., Wiley & Sons, New York, pp. 11-39.

- OSMELAK, J.A. 1987. Predicting vector occurrence and disease incidence in tomato crops: A control strategy. Proc. 2nd. Int. Workshop on Leafhoppers and Planthoppers of Economic Importance, Provo, Utah, USA. 28th July- 1st Aug. 1986. Eds. Wilson, M.R. and Nault, L.R., CIE, London, pp. 161-174.
- RICH, A.E. 1991. Potato Diseases. Translated by B. Jafarpoor. Ferdowsi Univ. of mashhad pub. 283 pp. (in Farsi)
- SEYEDOLESLAMI, H., D. DANESH, H. ESLAMI and A. R. SEPAHI 1986.

  Association of *Empoasca decipiens* Paoli (Cicadellidae: Hom.) With leaf necrosis of cosima Potato. Journal of Entomological Society of Iran. 9 (1&2): 1-13. (in Farsi with English summary)
- WILSON, M. R. and M. F. CLARIDGE 1991. Handbook for the Identification of Leafhoppers and Planthoppers of Rice. C.A.B. International. 142 pp.
- WILSON, S. W. and L. B. O'BRIEN, 1987. S survey of Planthopper pests of economically important plants (Homoptera: Fulgoroidea). Proc. 2nd. Int. Workshop on Leafhoppers and Planthoppers of Economic Importance, Provo, Utah, USA. 28th July- 1st Aug. 1986. Eds. Wilson, M. R. and Nault, L. R., CIE, London, pp. 343-360.
- Address of the authors: Eng. J. KHAJEHALI. College of Agriculture, Shahrekord
  University, Shahrekord, Iran. Dr. H. SEYEDOLESLAMI. Department of
  Plant Protection, College of Agriculture University of Technology, Isfahan,
  Iran. Dr. K. KAMALI. Department of Entomology, College of Agriculture,
  Tarbiat Modarres university, Tehran, Iran.