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SURVEY ON SUGAR-BEET FIELDS' HARMFUL NEMATODES IN THE WEST OF IRAN FROM 1975 TO 1978 (1)

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SUMMARY

In order to identify sugar-beet fields' harmful nematodes of Bisotun, Islamabad-e-gharb, Hamadan and Lorestan sugar factories in the western parts of Iran, the soil of these fields were sampled from different localities of Kermanshahan, Hamadan, Lorestan, Ilam and Kordestan provinces. These samplings were carried out in the years 1975-1978. 11918 hectares were observed and totally 512 soil samples from 1278 hectares of cultivated land were gathered (see table 1 in Farsi text).

To specify the species of **Heterodera,** the cysts of 422 samples were extracted by Fenwick's Method and tops were provided from the cysts. After microscopic investigations of the cone tops, several species of **Heterodera** were specified in mentioned provinces. The species are: **H. trifolii = H. t., H. galeopsidis = H.g., H. avenae group = H.a., H. latipons = H.l., H. iri = H.i.** and **H. rosii = H.r..**

The host plants of **H.t.** are clover, lucern, legumes etc.. Clover and some weeds are the hosts of **H. g..** These two species have also been

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seen on sugar-beet. **H.a.** and **H.l.** attack the grass family **(Gramineae).** The host plants of the two species **H.i. and H.r.** are weeds. Dominant species is **H.i.** which has frequently been seen more than the others.

237 samples from the total (512) were washed by special sieves and the nematodes were collected by Baermann-Funnel's method. These nematodes were fixed by the No. 1 fixative warm solution. As the result of microscopic investigations, fifteen genera were identified which are as follows:

1- **Ditylenchus** = Di., 2- **Pratylenchus** = Pr., 3- **Helicotylenchus** = He., 4- **Tylenchorhynchus** = Tr., 5- **Paratylenchus** = Pa., 6- **Criconemoides** = Cr., 7- **Xiphinema** = Xi., 8- **Aphelenchus** = Ap., 9- **Zygotylenchus** = Zy., 10- **Tylenchus** = Ty., 11- **Psilenchus** = Ps., 12- **Boleodorus** = Bo., 13- **Neotylenchus** = Ne., 14- **Nothotylenchus** = No., **15- Rotylenchus** = Ro..

Amons these genera, **Ditylenchus** and **Pratylenchus** are economically more important on sugar-beet. In the first genus, **Di. dipsaci** causes rot and reduction of sugar-beet yield (up to %50) in addition to direct damage.

There are four species in the second genus which cause lesion on sugarbeet root. The names of the areas where cyst-forming nematodes were seen, have been mentioned in Farsi text (See table 2 in Farsi text).

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