

irrigation at various points in the country, and collated our material in a special Table (See p. 386.).

We shall prepare an account of expenditures for beet cultivation, according to which a nutritive unit of beet amounts to 6.8 mils. It is cheaper than that of maize grains, which comes to 7.7 mils.

### Oil Crop Experiments.

by Dr. L. Pinner and Agr. A. Malzeff.

#### I. Seed Flax.

1) During the years 1921 — 26 linseed varieties were tested at the Exp. Station Ben Shemen by the Division of Plant Breeding and Variety Testing, in order to examine the possibility of grown linseed on farms. The results showed that of all varieties only the large-seeded are satisfactory in Palestine. This result corresponds with Vavilov's theory according to which the large-seeded flax varieties originated on the Southern coast of the Mediterranean.

2) The grain yields of those varieties ranged from 912 to 2800 kilos per hectare and averaged equally with the yields of wheat during the same period. (See table 1, page 392-3).

3) The growing period of the large-seeded varieties ranged from 108 to 163 days according to time of sowing and weather conditions. The ripening time always falls between that of barley and wheat. (See table 2, page 396).

4) The 1000-grain-weight of the large-seeded varieties was between 9.3 and 12 grams, i. e. about the double of other seed flax varieties and nearly three times the weight of the seeds of European fibre flax. (See table 5, page 399).

5) The crude fat content of the large-seeded varieties is about 40% on the average i. e. considerably higher than in European and in American seed and fibre flax varieties. The large-seeded flax, grown in Palestine ranges equally with the bold linseed from India the price of which is about 11% higher than that of La Plata Linseed.

6) The experiments point to the fact that seed flax would

be a safe staple crop in Palestine if proper care were given to the preparation of the field. While the large-seeded flax may compete favourably with wheat, if used only as an oil crop, owing to the price, generally 50% higher, of the bold linseed as compared with wheat. An additional income may be secured by making use of the fibre which can be worked up for ropes and coarse linen goods.

### Field Mice Control in Palestine.

by Dr. F. S. Bodenheimer and H. Z. Klein.

Field mice, the cause of much damage to Palestinian agriculture, seem to be found in only two species: the *Microtus philestinus* Tho. in the south, and the *Microtus syriacus* Brandt. in the north. Their mode of life does not appear to differ in any salient point from that of similar species in Europe. It would seem that southern Palestine forms a geographical limit for the *Microtus*, as no field mice are to be found in the Sinai Peninsula or Egypt.

In Palestine field mice prevail in two regions in particular: 1) the Plain of Philistia, (between Ekron and Ben Shemen) and 2) the vicinity of Nahalal in the Plain of Esdraelon. Their presence in restricted areas is evidently due to peculiar ecological conditions, but hitherto we have been unable to discover its causes.

As a general thing only winter crops are attacked. Vetch is most severely attacked, while cereals suffer only slightly less. Among the irrigated crops alfalfa is more violently attacked than clover. The mice multiply twice during the year: 1) October-November to January, and 2) April-May, after the rains, in harvest time. Their number is noticeably diminished by the heavy winter rains. The damage they do is quite serious; sometimes it comes to 25-50% of the grain returns.

We began our experiments in field mice control at Ben Shemen in 1923-1924. Various means were tried. The only really good results were obtained with Hora implements. Carbon bisulfide gave less favourable results. In 1928 we instituted a special experiment at the Gevat Experiment Station on a larger scale.