

## SUMMARY.

### Results of Experiments with Alfalfa Varieties as Compared with those of Egyptian Clover, and Experiments with Green Maize

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1) An Alfalfa variety trial was undertaken by the Experiment Station at Gevath (near Nahalal). Preliminary results covering two years' growth are presented (see tables I, II, III p. 5—6 in the Hebrew Text).

The following varieties were tried during two seasons: Hairy Peruvian, Smooth Peruvian and Chilean Alfalfa from California, Provence and Poitou Lucerne of France.

Hairy Peruvian and de Provence gave the best results, the former excelled during the first year of growth, while the Provence Lucerne outyielded the Hairy Peruvian during the second season, both of them being nearly equal on the whole average; the total yield of two years reached nearly 14 tons per dunam. Seven cuttings were obtained during the first season and eight cuttings during the second season. The average yield per cutting of all varieties fluctuated from 644 to 821 kgs per dunam (1000 sq. m.) in the first season and from 966 to 1100 kgs in the second season.

Damascus Alfalfa as well as commercial samples of Hungarian, Italian, Argentinian and Turkestan Alfalfa proved inferior to the Californian and French varieties; the Turkestan varieties were almost destroyed by rust (*Uromyces*).

The quantity of water applied per dunam was 850 m<sup>3</sup> during the first season and 1200 m<sup>3</sup> during the second season.

Fall sowing is not advisable on account of the danger of Agrotis attacks.

2) Berseem (Egyptian Clover) under irrigation gave 8 cuttings from October till the end of May. The yield per cutting reached 765 to 2226 kgs per dunam, and averaged 1403 kgs. The total yield of green mass for 8 cuttings was 11<sup>1</sup>/<sub>4</sub> tons per dunam (see Table IV p. 9).

Berseem and Alfalfa are liable to supplement one another for the supply of green fodder throughout the year. Both are well adapted to the soil of the Emek, where irrigation is available.

3) Irrigated Green Maize. Two American Ensilage varieties "Orange County Prolific" and "Eureka Ensilage Corn" proved superior to the local variety; they are ten days later than the local Maize and gave 20% and 18% more than it, when cut at the proper time, but produced also by 12—10,7% more when cut at the same time as the local variety (see Table V p. 10).

### Notes on the Fertilization of Vetch Hay

by S. Zemach.

Demonstration Fields 1928/29.

The demonstration fields were laid out for the purpose of elucidating two problems:

1) The quality and influence of nitrogenous fertilizers like Chilean Nitrate of Soda, Sulfate of Ammonia, Nitrochalk.

2) The most economical application of fertilizers.

Five kgs of Sulfate of Ammonia given in two applications to the field at Merhavia, brought about an increase in the yield of up to 151%, and a profit of 389 mils per dunam. An application of 15 kgs of Chilean Nitrate of Soda increased the yield by 97% and gave a profit of 79 mils per dunam.

The soils of Merhavia are apparently very poor and readily respond to heavy applications of nitrogenous fertilizers, as the