

The produce of sunflower-grain varies considerably according to the state of the soil, climate, method of cultivation, and the purity of the seed used. At Weraroa this season an experimental plot of $\frac{1}{10}$ acre was sown on 9th November, 1918, with the Large Russian black-seeded variety, and the crop was harvested on 23rd April, 1919. Australian seed was sown at the rate of 7 lb. per acre, in 30 in. rows, and the plants spaced 18 in. apart in the rows. The crop was a mixture of good and bad. Some plants came into flower in twelve weeks, whilst the latest ones to bloom arrived at the flowering-stage in sixteen weeks. Some were 10 ft. high, others under 5 ft. It is only by the selection of single plants that one may look for a crop flowering evenly and ripening evenly. Uniformity as regards height is also important, and may be arrived at by selection.

Some plants in this test plot gave from ten to twenty small flowers instead of one large head, which is a disadvantage, owing to the time it takes handling so many small heads when knocking the seed out. Topping the plants to encourage them to send out several flowers is sometimes advised, but my own experience indicates that this is a mistake in more ways than one. Besides making the harvesting more expensive, it delays the harvest; consequently the plants are longer growing, and the crop is more exhausting to the soil than it would otherwise be.

The heaviest plant weighed in the Weraroa crop referred to gave a total weight of 9 lb. 7 oz., made up of root, 1 lb. 5 oz.; stem, 4 lb. 2 oz.; head 4 lb.; 1,500 seeds from this head weighed 12 oz.

There is a considerable difference in the percentage of husk and kernel in individual sunflower-plants. I have found it vary from 61.4 per cent. husk to 53.8 per cent. husk. To increase the percentage of kernel, from which the oil is extracted, should be the first aim of the plant-breeder. The bushel weight of dry seed from selected plants has ranged from 25 lb. to 32.5 lb. for the variety under test at Weraroa this season.

As regards the disposal of the stems of a sunflower crop, a sample from Rhodesia analysed by the Imperial Institute, London, contained 10.3 per cent. of moisture and 10.7 per cent. of ash, the latter containing 49 per cent. of potash, 2.3 per cent. of soda, and 1.5 per cent. of phosphoric acid. According to the Institute, the best use to which the stems can be put is to chop them up finely and spread them as manure, since they contain about 5 per cent. of potash, or else to burn them and use the ash as a potassic fertilizer or for the extraction of potash, as is done in Russia.

Opossums.—At the last meeting of the Board of Agriculture a report from the Crown Lands Ranger, Dunedin, on a proposal of the Otago Farmers' Union that opossums might be liberated in some of the forests of the great alpine range was carefully considered. It was finally agreed that this might prove a considerable source of revenue to the country (as black skins were said to be worth £1 each) if the black or brown ones were introduced, and if every care was taken to prevent their introduction into districts where they might become a menace to the fruitgrowing industry.