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Sunflowers as a cover crop for market gardens.

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Fig. 1.—Showing the dense mass of lush green material at the time of ploughing-in

SUNFLOWERS AS A COVER CROP FOR MARKET GARDENS

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THE quantity of organic manure available to vegetable growers seems to decrease each year and it has therefore been necessary to seek other means of maintaining both soil fertility and the supply of humus which are essential for growing quality vegetables. This is doubly necessary in Western Australia since most of the vegetables are grown in close proximity to the metropolitan area where the soil is of a sandy nature and relatively infertile.

The planting of a cover crop is therefore becoming more popular with vegetable growers and would probably be practised to an even greater extent if the size of the garden permitted it. To grow vegetable crops all the year round in a market garden of limited size it is necessary for crops to follow each other in rapid succession, leaving insufficient time between crops for growing a cover crop. Many of our market gardens come into this category, having less than five acres under sprinklers. This has led inevitably to a loss of fertility and a consequent deterioration in the quality of the vegetables produced in some gardens.

With such crops as lupins, tick-beans, oats and other plants available it has not been difficult to find a cover crop suitable for growing in the period of the year from mid-autumn to mid-spring; but it has always been a problem to find a crop which would grow quickly and well in the summer months without being a breeding-ground for pests.

Some of the qualities sought for in a cover crop may be listed as follows:—

(1) It should grow quickly and produce plenty of bulk for turning in.

(2) The growth should be soft and should rot down quickly.

(3) It should not be a harbour for pests or diseases, and should be capable of overcoming competition from weeds.

(4) The cost of seed per acre must be reasonable and preferably it should lend itself to production on the property where necessary.

Mr. L. Goodchild, a market gardener in the Spearwood district, grew a cover crop

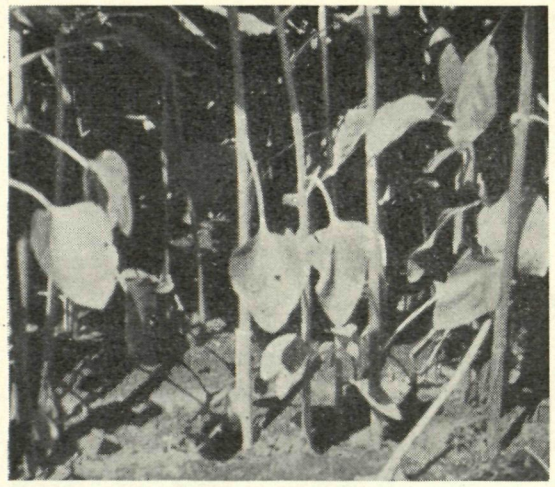

Fig. 2.—A close-up, showing the thick growth of stalks and leaves

this summer which appeared to meet all these requirements. Following the suggestion of a local seedsman, he planted early in February an area of his garden with sunflower seeds. (*Helianthus annuus.*)

Five weeks after planting, at which stage they were still growing vigorously, the plants had reached an average height of five feet and had just started to form flower buds. The growth was dense and even and constituted a good bulk of lush, green material. Had they been left longer, they would have grown considerably more but it was considered that the plants were at a proper stage for ploughing in and it was intended to plant a crop of runner beans in the area.

Although weeds such as nightshade (*Solanum nigrum*), never-die (*Portulaca oleracea*), stinging nettle (*Urtica urens*), potato weed (*Galinsoga parviflora*) had germinated with the sunflowers they were unable to compete with the more vigorous growth of the latter and were soon smothered.

As the area had been manured for growing vegetables previously, no fertiliser was required to grow this crop. Water was applied through the sprinkler system for half an hour each day for the first four weeks and for three-quarters of an hour for the remaining period of growth. Temperatures for most of the growing period were higher than normal.

In spite of the fact that there were plenty of red spider infesting the crops in the garden, the sunflowers were practically free from this pest and were unaffected by any other disease or pest.

The seed for this crop cost 1s. 9d. per lb. and was sown at the rate of approximately 27 lb. to the acre, which was heavy enough to give a good, thick stand of plants. If it is considered that this is too costly, there is no reason why a few plants cannot be grown to produce seed for the following season. Under local conditions, sunflowers grow vigorously and each plant produces a large flower-head with good quality seed.

Vegetable growers whose gardens are limited in area may find in this crop the answer to the problem of maintaining soil fertility at the present time when supplies of organic manure are so limited.