

AN INDUSTRY IN VEGETABLE OILS FOR SOUTH AFRICA.

A COUNTRY in which the sun shines as brightly as it does in South Africa appeals to one as the home of a vegetable oil industry. Animal oils and fats are a basic element in the industrial structure of any country. A whale-oil industry of considerable proportions already exists, and close attention is being devoted to the development of fisheries in South Africa. A survey of fisheries is being undertaken at present, and the results are decidedly encouraging. (This subject is dealt with in Chapter IX.)

The first and foremost industry as an absorbent of crude oils and fats is that of soap manufacture. The soap industry is firmly established in South Africa; in fact, this is one of the few instances in which the country is self-supporting. As in other countries, a large proportion of the raw material for soap-making is derived from the abattoirs, but at the same time, oils such as peanut oil, soya-bean oil, maize oil, and cotton-seed oil are used. Edible oils are also produced from these sources. In all, there are some fifteen soap plants in operation in South Africa, the largest being that of Messrs. Lever Brothers (S.A.), Ltd., at Durban, who have an oil-expression plant and a hydrogenation plant for producing stearine from whale-oil. There is, in consequence, very small chance of expansion in the soap industry with the present market, but, on the other hand, this industry offers a large and steady demand for oils and fats, both vegetable and animal. In the field of edible and lubricating oils, however, the case is different, only two or three plants being engaged in this line. This is well illustrated by the data on South African imports appended to this chapter. Statistics of

exports and production of vegetable oils and related products are also shown later.

An examination of statistics shows there are possibilities of expansion and consideration here of the sources and possibilities of a number of oils, large quantities of which are at present imported, will provide a selection for final consideration of those oils which show the best chance of commercial success.

Castor-Oil.

In many parts of South Africa the castor plant can be grown successfully. It is a sub-tropical plant, and therefore the warmer, low-lying districts are the most favourable for its cultivation. Above an altitude of 2,500 feet it is killed by frost or its maturation prevented by autumn cold.

In the Transvaal it is stated to be quite at home in the Waterberg, Pietersburg, Zoutpansberg, Lydenburg, and Barberton Districts. In all the coastal districts of Natal, Zululand, and the Cape it can be successfully grown.

The best kinds to sow are the small-seeded wild varieties, in particular the variety known as Madras. These should be replanted each year. On drier soils medium- and large-seeded varieties such as *Ricinus lividus* and *R. zanzibarensis* var. *viridis* do well but should be treated as perennials.

Yield of Beans.—An average yield from the results of many tests is about 1 lb. of beans per tree, and a good average annual yield per acre over a period of years may be taken as 400 lb. beans per acre.