

doing the topping takes hold of the beet roots with one hand, cuts off the leaves and the crown, and throws the beets to piles between the two windrows. From the piles the beets are loaded on wagons or autotrucks and delivered to the factory or beet dump.

#### RELATION OF THE SUGAR-BEET CROP TO THE BEET-SUGAR INDUSTRY

The average annual production of sugar beets in the United States for the three years 1921, 1922, and 1923, as shown in the 1923 Year-book of the United States Department of Agriculture, was 6,657,000 tons, harvested from an average of 667,000 acres. The average production of refined beet sugar therefrom was 858,600 short tons, forming 78 per cent of the total production of refined sugar in continental United States in those years.

Imports of sugar beets are relatively unimportant and originate entirely in Canada. The small quantities coming in are produced near the boundary and are manufactured into sugar in near-by factories, mainly in Michigan. In the last quarter of 1922, following the enactment of the present tariff act, sugar-beet imports amounted to only 11,755 tons, and in 1923 to only 11,722 tons. The revenue collected at 80 cents per ton (par. 764, sec. 7 of the tariff act of 1922) is comparatively insignificant, amounting to but \$9,404 in 1922 and \$9,378 in 1923. In contrast to these small amounts from sugar beets the three-year 1921-1923 average annual revenue collected from imports of sugar was \$115,277,828, or 26.3<sup>1</sup> per cent of the customs revenue obtained by the United States from all imports.

A peculiarity of the beet-sugar industry is that manufacture must take place near the source of the raw material. Sugar beets, being bulky and perishable, are not adapted to distant shipment or to international trade. Their production depends upon the existence of a near-by factory, and in turn no factory can be located far from the sources of the raw material. The industry as a whole is a closely integrated one, factories being entirely dependent upon an ample and regular supply of sugar beets. The future of the domestic refined beet-sugar industry rests upon the maintenance or expansion of the production of sugar beets.

The culture of sugar beets and the manufacture of sugar from them are so closely allied as to constitute virtually a single industry, even though the two operations may not be carried on by the same persons or organizations. Beet-sugar production, considered as a whole, is primarily an agricultural industry, more than 80 per cent of its personnel and about 50 per cent of its total capital being employed in agricultural processes. Costs of producing sugar beets are about 50 per cent<sup>2</sup> of the total costs of producing refined beet sugar.

Practically all of the beets grown in the United States are contracted for each season by the factories before a single acre is planted by the growers; and the factories also assist the grower to secure seed, hand laborers, and sometimes beet drills and other equipment.

<sup>1</sup> Average for 1921, 1922, and 1923 from Foreign Commerce and Navigation of the United States.

<sup>2</sup> Data in the files of the commission show, on the average for the country as a whole for the two crop-years of 1921-22 and 1922-23:

a. That the grower's cost of production of sugar beets was 47.4 per cent of the total cost of production of refined beet sugar if the grower's cost of production of sugar beets is used in determining the cost of sugar production; and,

b. That the grower's cost of production of sugar beets was 49.6 per cent of the total sugar cost if the price paid by the factory for sugar beets is considered the cost of the beets in the production of sugar.

If the expenses incurred by the sugar manufacturer for marketing the refined beet sugar are included as part of the total cost of sugar production, then the grower's cost of production of sugar beets was 41.7 and 43.3 per cent of the sugar costs under the respective conditions indicated.