produce several good crops in succession without much injury to the land. The following is a good system of rotation : First, wheat, on land well manured ; then beets, followed by barley, and at the same time seeding down with timothy and clover, which is cut for hay the following summer and the second crop ploughed under in the autumn, to be followed the next season with potatoes or oats, which completes the rotation.

COST OF GROWING SUGAR BEETS.

The cost of growing a sugar beet crop is so varied under the modifying circumstances which prevail in different countries that no general estimate can be given which would correctly apply to all. The price of labour and the value of land are the principal factors which influence the cost.

In Germany the cost of raising sugar beets is estimated in the statistical report of the government for 1888-89 to average $40 per acre, while the average yield for that year was 12 tons.

The average cost in France is given by Mr. E. Du Fay, of Chevy, Cossignac, at about $80 per acre, but this estimate seems to be excessive.

In " The Sugar Beet " for 1883 it is stated on the authority of Mr. D. Doff that the cost of cultivating the beet in Saxony is $4.76 per long ton of 2,240 lbs., delivered at the factory, and that the growers realized from $5.71 to $6.19.

In " The Sugar Beet " for 1882, p. 60, it is stated that the average cost of raising this crop throughout the northern States may be put at $45 per acre.

Dr. H. W. Wiley, of the Department of Agriculture, Washington, in his bulletin on " The Culture of Sugar Beets " (1891) says : " It is probable that the actual cost to our farmers for the first few years of the beet industry will not exceed $45 to $50 per acre, and it is believed that, accidents of season aside, a net profit of from $8 to $15 per acre may be expected from the proper culture of the sugar beet in localities near a factory."

Mr. Henry T. Oxnard, of the Grand Island factory, Nebraska, estimates the cost of raising beets in that State at about $40 per acre, where all the labour is paid for.

Prof. H. H. Nicholson, of the State University, Lincoln, Nebraska, is of opinion that sugar beets may be grown in Nebraska and delivered at the factories at a cost of $30 per acre. The yield of the plots at the experiment station at Lincoln, of which Prof. Nicholson is director, was 16 tons per acre in 1891.

Mr. J. Thommsen, of Hall county, Nebraska, found the actual cost of growing 5 acres in 1890 to be $34.30 per acre, but in his estimate nothing is allowed for rent of land, fertilizers or hauling the beets to the factory.

Mr. J. B. Henderson, of Alameda, California, gives the cost of raising this crop at $61.48 per acre, while Mr. A. F. Richardson, of the same place, reports that 11 acres cost him on an average $48.64 per acre.

Mr. Oct. Cuisset, of Quebec, in his pamphlet on " Beet Root Culture," estimates the cost of growing an acre of beets in the Province of Quebec, including rent of land and proportion of cost of manure, at $34 per acre.

In a report to the Minister of Agriculture of Ontario on the cultivation of the sugar beet in Ontario, by Robert H. Lawder, in 1890, the estimated cost of production is given as varying from $15 up to about $35. From a careful estimate prepared by Mr. John Fixter, farm foreman at the Central Experimental Farm, the cost of raising sugar beets at that institution during the past year (1891) was nearly $40 an acre ($39.79). This estimate is based on labour at $1.25 per day; single horse and man, $2 ; team and man, $3 per day. Beets sown in rows 18 inches apart, and the use of 16 lbs. of seed per acre, at 18 cents per pound.

The estimate includes also $4 for fertilizers, being one-fourth the cost of 20 tons of barn yard manure per acre used in the rotation, and $3 for rent of land, equal to 6 per cent on $50 per acre.

VALUE OF BEETS FOR FEEDING STOCK.

It is very difficult to arrive at the exact value of roots as food for stock, since there are advantages in feeding them apart from their chemical constituents. The use of a cer-