

tain proportion of such succulent food mixed with the drier rations commonly used in winter promotes the health of the animals, and makes the other food more palatable and more easily digested. It is however generally estimated by farmers in Ontario that a ton of well-grown roots, turnips or mangels is worth about \$4, while carrots are usually valued somewhat higher. In Europe, where labour is cheaper and more easily procured, these roots would probably be rated a little lower in value.

## ANALYSES OF ROOTS.

The following table shows the results of recent analyses of turnips, mangels, sugar beets and the waste pulp from the sugar beets obtained at the beet sugar factory at Farnham, Quebec. These analyses have been made Mr. F. T. Shutt, chemist of the Dominion Experimental Farms.

	Percentage of Water.	Percentage of Dry Matter.	Digestible Matter per Ton.
			Lbs.
Turnips.....	90.34	9.66	179
Mangels.....	91.29	8.71	145
Carrots.....	90.47	9.53	173
Sugar beets.....	84.25	15.76	296
Sugar beet pulp.....	95.72	4.28	83

These figures indicate that the probable value of a ton of sugar beets in feeding stock is equal to about  $1\frac{1}{2}$  tons of either turnips, mangels or carrots, and if this be so the relative feeding value of sugar beets should be about \$6 per ton.

## PRICES PAID FOR BEETS BY SUGAR FACTORIES.

In 1888-89 the prices paid at the factories for sugar beets in France varied from \$4.40 to \$5 per ton, while the yield per acre was from 11 to 13 tons. In Germany the prices paid for the roots varied from \$4 to \$6 per ton, with an average yield of 11 tons. It is said that in Austria some cultivators asked \$6 per ton with a right to claim 60 per cent of the pulp, but that manufacturers of sugar refused to pay such prices. From a statement in "The Sugar Beet" for the year 1890, page 30, it appears that at Watsonville factory in California in 1889 the beets brought an average of \$5 per ton with a yield of about  $6\frac{3}{4}$  tons per acre. At the Alameda factory in the same State the price varied from \$4.50 to \$5 per ton. In Nebraska the price paid at the factory at Grand Island in 1890 was \$3 per ton delivered at the factory for beets not having less than 12 per cent of sugar, and 25 cents per ton for each additional percentage of sugar. Owing to the very dry season the yield was light, and was estimated by some at about 3 tons per acre, by others at from 5 to 8 tons. The roots were very small, and on this account contained an exceptionally high percentage of sugar; hence they probably brought about \$4 per ton. In 1891 the same prices prevailed at both the Grand Island and Norfolk factories, and as the crop has been larger the sugar percentage has averaged less, about 14 per cent, which would make the price paid for the beets \$3.50 per ton.

At Farnham, in Quebec, \$4.50 per ton has been paid, delivered at the factory, added to which a bounty has been given for one year by the Quebec Government of 50 cents per ton, increasing the receipts of the farmers to \$5 per ton. It is said that the factories cannot afford to pay a higher price than \$4.50, and if that be correct it would appear to be more profitable for farmers to raise sugar beets for feeding stock than for the sugar factories. It would also seem to offer a partial explanation of the reason why in Ger-