

will be established within the block itself; the transportation cost will then be saved to the farmer, and the beets will net him from \$5.50 to \$5.60 a ton at the station.

The most favorable soil for sugar beets is conceded to be a soil which carries a generous quantity of sand. A clay soil with a tendency to bake is the most unfavorable. The former class of soil abounds almost everywhere in the irrigation block. It is also a well known fact that the farther north the sugar beet can be successfully grown, other things being equal, the better the result. The reason for this is that the long cloudless days of northern latitudes increase the activity of the chlorophyl cells of the beet leaves, which elaborate the sugar, so that a greater quantity of sugar may be made in proportion to the area of leaf surface.

Three samples of sugar beets, selected at random from fields in the company's irrigation block at Strathmore and Gleichen, during the season of 1907, in a test of them made by the Knight Sugar Company of Raymond, Alberta, showed co-efficient of purity 88.1 per cent. and 19.2 per cent. sugar in the beet. This is an exceptionally good showing when the fact is taken into consideration that beet sugar factories in the States are paying the highest market price for beets that test as high as 80 per cent. co-efficient and 12 per cent. sugar in the beet.

It may here be mentioned that the average percentage of sugar in beet, in connection with a series of analysis of Montana grown beets in 1898, was only 11.2, while the total average for Montana analyses for 1897, 1898 and 1899 was 12.1; even in Utah, one of the best beet sugar producing States, the percentage was only 14.3 for the above mentioned period. It may, therefore, be safely concluded that Alberta possesses unequalled advantages on the score of the quality of the beets that can here be produced.

The labor problem has always been regarded as the most serious one in connection with sugar beet culture. In this respect the irrigation block is fortunately situated. The Blackfoot Indian Reserve is located contiguous to the block. The Indians take considerable interest in farm work, and generally hire out on hay contracts and similar farm work during the season.

Live Stock

In studying the economic side of irrigation, the first fact that must be clearly grasped is, that the back-bone and foundation of any irrigation enterprise is not by any means the production of either fruits, cereals, roots or garden truck, but

the feeding and finishing of live stock and the development of dairying in all its branches. This has been the history of irrigation expansion in every State of the Union. The proof of this contention is that the total irrigated acreage in crops in the United States at the time of the decennial census was sixty-four per cent. in hay and forage. The actual figures are: Total acreage, 5,712,000 acres; in hay and forage 3,666,000 acres. This tells the tale.

The lands embraced within the Canadian Pacific irrigation block are destined to serve the same purpose in regard to the highest development of the live stock industry, as do the corn growing States tributary to the great market centres of the Union, and the irrigated valleys of the Western States. The time is close at hand when most of the live stock produced in Alberta, and now marketed in a more or less unfinished condition, will be sent to the rich alfalfa-growing lands east of Calgary, there to be put in prime shape before being exported or slaughtered. A home market will thus be made available for all the fodder that can be produced on our irrigated lands at highly remunerative prices, and with the additional advantage of having the feed consumed on the irrigated farm and ultimately returned to the soil that grew it, thus maintaining the fertility for which these lands have already gained renown.

Horses.

In breeding horses, Southern Alberta occupies a somewhat similar position to Canada that Kentucky does to the United States. Owing to its high altitude, dry and invigorating atmosphere, short and mild winters, and its nutritious grasses and inexhaustible supply of clear, cold water, it is pre-eminently adapted for breeding horses, and the Southern Alberta animal has already become noted for its endurance, lung power and perfect freedom from hereditary and other diseases. There are in Southern Alberta several grades of horses, varying in point of quality from the hardy Indian pony (cayuse) to the beautiful well-formed thoroughbred.

Heavy draught horses are now finding a ready sale at highly paying prices. Teams, weighing 3,000 lbs. and upward, are worth \$500 and more. Between 2,500 and 3,000 lbs., the average price would be \$355, and the value of teams weighing between 2,000 and 2,400 lbs., is \$250 and upward, according to quality.

Owing to the mildness of the climate, horses can be wintered outside at a nominal expense, consequently, no country in the world can compare with Southern Alberta in horse raising.

Inasmuch as it costs no more in Southern Alberta to raise