

Free Pigs and Bulls.

President Jas. J. ("Jim") Hill, of the Great Northern Railway, gives an amusing account of his fatherly efforts in furnishing the Minnesota and Dakota farmers with free breeding stock. Evidently, it would have been better to have left the business to the intelligent enterprise of those engaged in it—the farmers and breeders themselves.

"There was a time—let me see—twenty years last spring, in this State (Minnesota), and particularly in the northern part of it, when no rain fell from seed-time until the 1st of July. The grain stood green in the fields, barely living. In July some copious showers fell, and they made a little more than half a crop. I didn't know as much then as I do now. I was younger and had less experience. I thought I would help the farmers of the State, so that they would not depend on one crop. I thought I would help them to some good stock and cattle and hogs. And in my innocence (laughter) I thought that when they had the opportunity they would take advantage of it. I got together some excellent herds of beef and dairy cattle for myself, and I brought out within two years, mainly from the north of England and Scotland, about 800 thoroughbred bulls. Something over 600 of them were distributed in this State, and less than 200 in North Dakota. I want to say that the people of North Dakota derived more benefit from less than 200 than the people of Minnesota did from 600. What did they do? Most of them sold them. (Laughter.) I gave them pigs, and they killed them in the fall—and they were good winter pork! (Laughter.) This is actually what they did with the pigs that I brought from the Old Country, or with the stock which was bred from this stock, and for which I paid prices as high as \$300 for a single animal."

Breeding and Feeding Pigs.

We give the following extract from a leaflet issued by the Department of Agriculture for Ireland, where bacon production is very successfully followed:

To produce pigs having the qualities just enumerated, the first consideration must be the selection of the boar. It is said that the boar is half the herd. Even this estimate undervalues his power of reproducing his like. It is, therefore, all-important that a boar possessing the particular points described should be obtained.

At present the improved Large White Yorkshire appears to be the breed which possesses the required points, and a sire of this breed should therefore be selected.

The pig that commands the highest price is an animal which, when well finished, and not over-fat, weighs 170 dead, or about 220 living. A good pig ought to arrive at this weight at the age of seven months from birth. In selecting a sow there are a few points which a good specimen should possess, in addition to those mentioned for the boar. The sow should be docile, and should have at least twelve teats, of an equal size, and evenly placed well forward on the belly. Sows having large flat teats generally secrete very little milk, and on this account prove bad mothers. The fineness of the hair, skin and bone, all indicate a good quality of flesh, and an animal that is likely to become a good mother. Pigs should be well fed, but not overfed. It is only when fed regularly that pigs give the most satisfactory results to the feeder.

During the first half of the sixteen weeks which a sow goes in pig she should be allowed to run on grass if possible, and should receive a limited amount of other food. For the last eight weeks she should be treated more generously, so that she may be in good condition, but not too fat, at the time of farrowing. During the time the sow is rearing her litter she should receive as much good food as she will take, consisting of boiled potatoes, Indian meal porridge, pollard, bran, and skim milk.

At three weeks old the young pigs begin to eat, and at this time should be supplied with skim milk, separated milk, or fresh buttermilk, which may be mixed with a little pollard, bran and boiled potatoes, and given twice or three times daily. Care should be taken to prevent the young pigs having access to the sow's food. The sow may be permitted to eat up the food which the young pigs may have left; but if the young pigs eat the sow's food they are almost certain to scour. When eight weeks old the young pigs may be weaned. After weaning they should receive the same quality of food in a sloppy condition, and be allowed a little exercise.

When the pigs have reached about one cwt. in live weight, the amount of exercise allowed them must be limited. The food should now consist of boiled potatoes, bran, and mixed whilst hot with a quantity of raw Indian meal and pollard

or barley meal. After the pigs have eaten as much as they appear to require, a small quantity of buttermilk, skim milk, separated milk or kitchen refuse should be added, to induce them to clean up all the food given them. The quantity of food which a pig should receive is just what it will eat up clean, no more and no less. Turnips and mangels are sometimes used instead of potatoes, but potatoes give by far the best results.

When being fattened pigs should be fed three times a day. The food ought to be brought to a temperature of 90 degrees F., by direct heating or by the aid of hot water. By so doing much of the food is saved in the animal's body for the production of flesh.

FARM.

Notes of Sugar-Beet Meetings.

James King, of North Dumfries, Waterloo County, who has grown sugar beets for the Berlin sugar factory, in speaking to a meeting of farmers at Inglewood, said: "I received \$50.12 off the acre for my beets in 1903, which is the price of the land upon which they grew. It is a crop which always appealed to me, and is the best business presented to us since I have been on the farm. * * * I like the work of growing sugar beets, and it pays me well."

In answer to a question put to Mr. Frank Shuh, of Waterloo, who grew seventeen acres of sugar beets last year for the Berlin factory, he replied: "The farmers of Waterloo County are satisfied with the sugar-beet crop. It pays them well and makes them money fast. For my crop of seventeen acres I received over one thousand dollars, some nine hundred dollars of which is now lying on deposit in the Molson's Bank. Sugar beets will pay off mortgages."

Dr. Shuttleworth, Agricultural Superintendent of the Ontario Sugar Co., Berlin, is now in receipt of several hundred new contracts for 1904, which comprise a good acreage. From every direction within a radius of one hundred miles from Berlin, sugar beet contracts are being received daily. The Berlin sugar factory may well anticipate a very large acreage for its 1904-5 campaign, now that sugar beet growing is recommended by the best farmers, not only of Waterloo County, but also by those of Ontario, Durham, York, Simcoe, Peel, Perth, etc.

"I am ashamed that I argued against beet growing when it was first introduced here, because I now see that your beet growers have made a success of the crop and are renewing their contracts," said an honest man at a Pickering sugar beet meeting.

Average sugar in beets delivered at Berlin for the 1903-4 campaign is 15.3%, worth five dollars and ten cents per ton.

A well cultivated beet crop will yield more tons than a turnip crop, and beet cultivation cleans and improves the land.

Ontario can produce Canada's granulated sugar.

Cistern Under Barn Driveway.

Now that there are more cattle kept than formerly on most farms, it is necessary to have more water. The space under driveway of many barns is left vacant, when it could be turned into a cistern, and save all the barn water. A description of our own might help those intending building. Under our approach we built a wall 16 by 14 feet, to within three feet of top of basement wall. The bottom and sides of this we cemented with good Portland cement. The first year, we had joists and plank laid over this, and the space in between filled with straw, but whenever we happened to be drawing in when a shower caught us, we always found these planks very slippery, so we made an improvement here. We got some second-hand street railway steel rails, which we run from one side to the other, and supported in the center by a beam. On this we laid siding to prevent the dirt from sifting through. Then on this we laid the largest flags we could procure. The joints of these we cemented. We then filled up space with dirt, till it came to top of barn wall, leaving the usual slant which the dump required. Our north wall was protected from frost by dirt held by posts and plank. This plan can be improved on, yet a cistern like this will greatly aid to supply the wants of cattle, and by running a hose from threshing engine into cistern it will prove a great advantage over filling a tank when one has generally enough other work to do. Peel Co., Ont. JAS. B. ROSS.

The Mound Builders.

By Prof. George Bryce, D. D., LL. D.

The presence of mounds in the Canadian West has been a subject of great interest to the settlers as they have come to take up their homes in the prairies and woodlands of Manitoba and the adjoining territory. Investigators have found not less than forty mounds, and there are probably many more. Of those known, about twenty have been opened more or less thoroughly.

Three chief districts contain the mounds which have been examined. These are: (1) Red River; (2) Rainy River; (3) Souris River. While the last of these regions was visited by Professor Hind in 1857, and a few of its mounds were opened, yet he was most unfortunate in having found nothing in them.

RED RIVER MOUNDS.

The writer and other members of the Historical Society of Manitoba made the first scientific examination of a mound on the banks of the Red River, about seventeen miles north of Winnipeg, in the parish of St. Andrew's, in October, 1879. The mound had been partly carried away by the falling in of the bank of the Red River. It was about forty feet in radius, half of it being still left by the greedy river. The mound consisted of the black alluvium for which the Red River valley is famous, and this had been plainly dug up around the site of the mound, and carried to the elevation. Probably the mound had been much higher, but flattened down by the elements; its highest part was from six to ten feet above the surface of the prairie. A trench had been dug from the river bank for a few feet into the mound, but had been refilled.

THE LEGEND.

The native owner of the mound was somewhat unwilling to allow the party of seventy or eighty persons of the Historical Society to dig into the mound. Some said this was on account of superstition, others said of a fear of smallpox, but a silvered palm facilitated the purpose of the society. An old woman, a Saulteaux halfbreed, vouchsafed to tell the story of the mound:

"Many years ago," said she, "my people told me our tribe was living at Nettley Creek—a creek running into Lake Winnipeg—and the mound was then inhabited by an Indian people calling themselves 'Mandrills.' They were cave dwellers, and belonged to a race very few in number. One of my tribe visited them and found them dying of smallpox. The enquirer fled from the dreaded scourge, and on returning from his hunt a few days later, found the mound fallen in, and no trace of a Mandrill has since been seen on Red River."

THE EXCAVATION.

Nevertheless, the society went on with its digging. A foot or two below the surface three layers of flat limestone from the neighboring bank of the river were laid one above the other. At first, keeping the legend in view, these were thought to be a fallen chimney, but were, no doubt, placed in position to prevent wild beasts digging up the dead. This covering stripped off, a circular row of a dozen skulls with faces downward was found. One of these was painted red on the face; another had a tremendous dinge from a blunt weapon on the back of the skull. Beside them were bundles of thigh bones. It was concluded that these were skulls and bones of warriors killed abroad, and brought home to the mound for burial. Going still deeper, skeletons were found. One of these, of a female, was in a sitting position, and beside the bones were a number of trinkets, while underneath were bits of charcoal and ashes, as fire had been employed for some purpose. This seemed the chief skeleton of the mound, but other skeletons were found.

THE MYSTERY.

No traces of smallpox were found, nor evidence of hasty departure. It was plainly a burial mound, and its commanding position on the high river bank made it useful for the purpose of observation as well. It was concluded that the Indian legend of Mandrills meant the Mandans, a tribe of the Missouri, who lived in caves. The Mandan trail is still known from the Missouri to the Assiniboine. Moreover, the Missouri Mandans, some seventy years ago, suffered greatly from the smallpox. No traces of the Red River mound having been a dwelling were found, however. It was plainly a confused myth. The party returned to Winnipeg, with a quantity of spoil from the mound, which we may more fully describe on a later page. Several other mounds along the Red River were afterwards opened.

RAINY RIVER MOUNDS.

In the year 1884, when the British Association were soon to visit Winnipeg, the writer, under commission from the Historical Society, went to Lake of the Woods and Rainy River to secure Indian relics and mound-builders' remains for an archaeological collection. Several mounds were found on the Canadian side of Rainy River, but