

Japan is Falling into Line,

We have often chronicled the enterprise of modern go-ahead governments in building up and improving agricultural trade and industry. The latest nation to fall into the line of progress is Japan, but this nation, as we all know, is now as enterprising as any, and that it should endeavor to improve its agricultural conditions by the quickest methods possible need not surprise us. Three commissioners from Japan have lately been in Europe and in the United States purchasing stallions for the Japanese Government stud farms. In the United States they purposed to purchase thirty or forty stallions. The stallions desired were those that could breed good cavalry horses; runners, not trotters. Now surely this is a sort of horse that Canada could have supplied as well as the United States. If we had had a good enterprising, sharp-eyed live stock commissioner, he would have got hold of these gentlemen, brought them to Canada, and introduced them to our horse breeders. How long have we to wait? It seems very long.

Denmark and Her Swine Industry.

This is what Denmark has accomplished in one line of industry only since it began its system of government encouragement and supervision of agriculture. Before 1888 the whole export of swine and swine products from Denmark was confined to living swine, which were exported principally to Germany, where they were bought by the bacon curers there. But in the autumn of 1887 swine-fever attacked Denmark, and the export of swine, which in 1887 had been 230,000, fell in 1888 to 16,000. This was a terrible loss of trade. The Danes, however, then set to work under government assistance and direction, and determined to do their own bacon-curing and to build up a great pig-rearing industry. This has been so successfully accomplished that from an entire swine export in 1887 of 230,000 (or 16,000 in 1888) there has been built up a business which now amounts to an annual export of *cured products* equivalent to 1,250,000 swine in 1895, and probably to 1,500,000 in 1897. The annual government expenditure for agriculture is \$550,000, of which, however, a large sum goes for education and the payment of salaries to instructors, superintendents, etc.

Beet-Root Sugar Again.

Here are a few items of practical interest concerning the newly established beet-root sugar factory at Rome, New York.

The factory has just begun operations. It is called "The First New York Beet Sugar Factory." It is the pioneer factory in the Eastern States. The factory nearest to it is one located in Illinois. Its capital stock is \$300,000. About 860 farmers have taken stock in it. The buildings cost \$10,000. The machinery cost (originally) \$253,000. One hundred men are now employed. The factory will run this year for three months; when in full operation it will run seven months each year. The price paid to the farmers for the beets is fixed by the charter of incorporation at \$5 a ton. In consideration of this minimum price the State of New York grants a bounty of 1 cent a pound on all sugar manufactured from New York beets. The seed this year is furnished to the farmers free. Next year the farmers will pay for it at cost. About 860 farmers are furnishing roots this year, that is, all the farmers who have taken stock in the company are growing roots. About 20,000 tons of roots will be delivered at the factory this year. These will make 16,000 barrels of granulated sugar. About 200 barrels will be made a day during the working days of the running period. About 100 lbs. of white beets will make 15 lbs. of sugar. It takes 24 hours to convert the beets into sugar. The factory was opened Sept. 25th, and the first run was made Oct. 8th. The present output is described as simply *Ar.* For the production of beet-roots, this year (1897) has been only an average one,

the early part of the season being bad, though the latter part was good. New York State is said by the promoters of the factory to be peculiarly well suited to the growth of the sugar beet root. The white beet roots so far received at the Rome factory have from 14 to 20 per cent. of sugar; the red beet roots, however, have not been nearly so good. Though, by the terms of incorporation the farmers must be paid \$5 a ton for their beets, it is claimed that the roots can be grown in New York at a profit of \$4 a ton, when once the methods of cultivation are thoroughly understood. The pulp is sold back to the farmers at \$2 a ton. From three tons of roots is extracted 700 lbs. sugar and 3,300 lbs. water, the rest (or one ton) going back to the farmer as pulp. This pulp is claimed to be an excellent feeding stuff, rich in nitrogenous matter. It is calculated that the pulp at \$3.40 a ton is as cheap as hay at \$10 a ton. From 8 to 30 tons of beet roots per acre have been raised by the farmers supplying the Rome factory this year, but the average has been 15 tons. The farmers are enthusiastic, and next year a great deal more land will be put under beet-root cultivation, than has been this year. The manager of the Rome factory says that the soil required to raise beet roots properly is one that will permit the beet roots to grow and expand, the preferred soils being a sandy loam, a gravelly loam, and a clay loam, and the objectionable soils being heavy clays, and wet muck or stony ground. This year 1,150 acres are under cultivation, and 20,000 tons of beets are expected to be got. Next year the factory proposes to contract for 6,000 acres of roots, and to be able to put out 500 tons of sugar a day, running for seven months, that is from Sept. 1st to April 1st. By terms of incorporation the farmers must be paid cash for their roots, not stock or scrip; but any farmer may become a stockholder in the company whether he grows roots or not.

This sugar beet factory at Rome is one that has been incorporated as the result of a bill introduced into the legislature of New York by Assemblyman Charles F. Tupper, of Broome County. The whole business of making beet root sugar in this part of the world is in such an elementary stage, while the good results to flow from it, should it be successfully established, will be of such immense importance to the farmers of the country, that it was felt that some definite financial encouragement should be given by the legislature; and this is provided for by the terms of Mr. Tupper's bill, which authorizes a bonus of one cent a pound to be given for all sugar manufactured in the State of New York from beet-roots grown in the State of New York, for which a cash price of not less than \$5 a ton is paid. We are not certain, however, that the factory at Rome has been started under the best auspices. The machinery which has been put in is machinery obtained from a factory formerly started and run unsuccessfully at Farnham, Quebec. The capital of the Rome factory does not seem to be large enough. The great factories of the Western States have been brought to their present successful condition largely because of the ample capital behind them. The very successful Watsonville factory of California is owned by Carl Spreckels, the millionaire sugar king of the Sandwich Islands. The factory in Utah cost \$700,000. A new factory is just being established at Denver, Colorado, with a capital, it is said, of \$1,000,000. Of course capital in such amounts as these will never be forthcoming until it is established beyond peradventure that the climate of a district where it is proposed to locate a factory can be depended upon for the growth of the beet root to perfection. So high an authority, however, as Professor Roberts, of Cornell Experiment Station, thinks there is not a particle of doubt but that New York State can furnish the beet root in as great perfection as any other part of the Union.

The bonus, therefore, of one cent a pound which New York State grants to sugar manufactured from beet roots grown in the State seems to be necessary to get the certainty of the fitness of that State for the growth of the roots com-

mercially established. But we may add that the fixing of a price like \$5 a ton for all sorts of beets, no matter what their percentage of saccharine matter may be, though perhaps it was necessary to assure the State that its bonus would not be misapplied, is not commercially sound. In the Grand Island factory of Nebraska, which has been run successfully for ten years, a scale of prices is adopted. For beets averaging 12 per cent. sugar, and 80 per cent. purity or better, \$4 a ton is given. For beets of 11 per cent. sugar and 75 per cent. purity, \$3.25 a ton; for beets of 10 per cent. sugar and 70 per cent. purity, \$2.50 a ton. And yet under the influence of prices such as these, which it will be noticed are very much lower than that which must be paid under the New York Beet Sugar Bill, the value of land suited for beet root growing near Grand Island, Nebraska, has gone up from \$20 an acre to \$100 an acre.

There is no doubt at all that the growth of beet roots for the manufacture of sugar is an industry which the farmers of this continent are entitled to, and the farmers of Canada no less than the farmers of the United States. It happens to be one of those industries which modern science has quickly brought to the front, not the accumulated experience of hundreds and thousands of years. Therefore it has to be developed by modern methods. The old method of allowing the individual farmer, with his limited capital and his limited resources, to go on experimenting blindly for generations, will not do in this matter. A nation's resources and a nation's command of knowledge and skill are required to develop such an industry as the beet-root sugar manufacture, and to make it a practical success. The whole of Southern Ontario and Southern Quebec, not to speak of the other provinces of Canada, lie within the theoretical sugar beet-root belt. This is positively known. What is wanted now is a systematic and persistent system of experiments, made under the authority and supervision of the Provincial and Dominion Governments, with the view of establishing the fact that the sugar beet-root can be grown here in sufficient excellence and with sufficient certainty over sufficient areas to warrant the opinion that the beet-root sugar industry can be commercially successful here. That is the first step to be taken. *Individual* experiments have established this fact, so far as it can be established by individual experiments, again and again. It is now time for the Governments to step in and establish the fact generally—high time. Then when *that* fact has been established, the next step will be for the Provincial and Dominion Governments to devise some practical and sensible plan for encouraging capital to come in and take up the work. When it is remembered that for even one factory, a capital of \$500,000 is required, it will be acknowledged that a good deal of preliminary work has to be done, which the Governments alone can do. But the game is worth the candle. We are spending \$10,000,000 a year for imported sugar, every dollar of which should be spent at home.

The Decadence of the Fair System.

It looks as if the old-fashioned agricultural fair—a fair in which the gate receipts, together with an equitable grant of public money, are sufficient to pay for the prize list and defray running expenses—will have to go. Too many fairs, too great a straining after attendance, too much competition to keep up with the standard as to prize lists set by the few successful fairs, etc.—all this is having a tendency to make fair managers resort to "outside attractions" to secure a revenue. How hard it is to obtain attractions that will "draw the crowd" and yet be unobjectionable, the fair managers only too well know. The boards of management of several State fairs have this year, in their enthusiastic desire to be successful, furnished large prize lists and have tried hard to secure large revenues. The prize lists they easily promised, the revenues they hoped to get from "attractions." The results, in some instances,