

Agriculture.

We solicit correspondence from our friends throughout the Province, on all matters relative to country life. The business of the Farm in all its various branches will receive particular attention from us. We wish to enlist among our contributors those who desire to advance and improve the condition of the farmer and elevate and improve his profession. There are many practical farmers who are well able to impart information on the work they are engaged in, and their experience would benefit others; we intend to make the AGRICULTURIST a medium through which such experience may be made useful. The farmer feels the keen competition of the present day as much as the business man, and he requires all the advantages to be derived from good management, the most improved mode of doing his work, the best labor-saving implements, the stock most suitable for his purpose and such kindred subjects. To give him this information and assistance will be the aim and object of the AGRICULTURIST, and we trust we will have the assistance and support of all who wish our Province to take the position it is so well entitled to, both by its natural capabilities and the character of its people.

IMPORTATION OF SHEEP.

A portion of the Grant, under the head of Agriculture, made by the Legislature is to be expended in importing sheep from Great Britain. For some time past there has been generally expressed desire for some new blood; while there are many good sheep in the Province, there are few flocks that would not be improved by the introduction of change of blood. Sheep are a class of stock that deteriorate or run out very soon, and require renewing often. Nearly all the sheep that have been imported for many years, came from Ontario, and the result has shown that they do not thrive with us. We do not know why it is so, but it is quite clear that we cannot depend upon importing our flocks by getting rams on this side of the Atlantic. Every care has been taken to get good healthy animals those that were not forced for show purposes, and bought from farmers, but the result has been anything but encouraging, no doubt some have turned out well and proved superior animals, but the larger number have done little good. It is therefore thought that to send across the water this time, in hopes that a strong hardy class of animals will be obtained.

Our experience would lead us to hope that the order may be principally for Border Leicester. This is a class of sheep that is highly appreciated in the North of England and Scotland now, and we think will meet the wants of our people better than any other. They combine more good qualities for this Province, than any other breed. We do not mean to say that none other will do, and we have no doubt but many good judges will prefer some other breed, but we think that the Border Leicester will please more breeders here than any other breed, and if this opinion is well founded the order should be principally for this breed. Cotswolds are very much admired by many, while others consider them too tender for our climate. We would like to see a few Oxfordshire Doves added to the order. We are not aware of any of this breed having been brought to New Brunswick, and we would like to see them tried. They seem to be very hardy animals, and we will be very much disappointed if they do not turn out well. It is worth the expense and trouble to give them a trial, they are growing in favor in Ontario and the States, and we think our people would like them.

Those who have information and experience about the different breeds should now let it be known, and give their aid and assistance in procuring the best. It has been rather too much the habit to keep silent until too late, and then find fault with what is done. Would it not be better to give these views in time, so that advantage may be taken of the information.

INSTINCT IN SHEEP.—A Cheviot ewe, which had been driven in a flock from Northumberland to Sutherlandshire, was found one day on her old pasture, followed by her lamb, having traced her way back, hundreds of miles, probably from hill to hill, with many devices unrecorded in writings. An other ewe of the same breed found her way back from Caithness-shire to Roxburghshire.—N. B. Agriculturist.

A WEEKLY JOURNAL DEVOTED TO AGRICULTURE, LITERATURE, AND NEWS.

ANDREW LIPSETT, Publisher.

VOL. 1.

NOVA SCOTIA EXHIBITION.

The Nova Scotia Exhibition will be held this year at Truro, Sept. 30th to October 4th. The amount offered in premiums is over \$6,000. The Regulations and Prize List are very like our own. The fine buildings and grounds at Truro and Kentville, make it much easier to hold the exhibition in Nova Scotia now, and we see it stated that a bill is sent to the Legislature authorizing Halifax to issue debentures to the extent of \$25,000 for the purchase of ground and the erection of buildings in that city for the same purpose. When Nova Scotia has three first class Exhibition Buildings there will be no trouble in holding Annual Shows. We would like to see this Province follow her sister in this respect, and by the time we have three or four buildings erected in as many suitable localities, we will be prepared to hold Annual Shows also, in the mean time we must be content with one every two or three years.

The experience of other countries prove that these Exhibitions are of far more importance than some of our people are willing to admit, they are the only opportunity the larger number of country people have of seeing what others are doing and comparing their own productions with those from other districts. As a means of comparing stock they are invaluable. Breeders can bring their animals together, and in many cases effect changes that will be of advantage to both parties, and would not have taken place under ordinary circumstances.

Farmers are just like other people, they must see improvements to appreciate them, it is all very well to tell of them, and write about them, but they must be seen before they will spend money for them. Our Exhibition will be a favorable opportunity to bring the stock that was imported in 1875 together, so that they can be seen after a residence of three years in their new homes. Many of those who now own the Bells will want to see with them and get others, this will be an excellent opportunity for their doing so, and in fact it would be quite equal to another importation, and we believe the Government are alive to the importance of this, and propose assisting the owners in bringing the animals forward by contributing to the expense. This is another instance of the care and forethought of the Government in their desire to help the farmers.

The exertions of the Government during the past four years to improve the stock of the country is without a parallel and we have no doubt it is appreciated by those who will reap the benefits. The following letter addressed by Mr. Taylor to the Country Gentleman, is so thoroughly in accord with our own views on the important subject of cattle raising, and so applicable to this Province, that we transfer it to our columns. Raising and feeding cattle for the butcher, first for the home supply and when that is accomplished for export, must be one of the principal objects of our farmers in the future, and to do it successfully they must adopt a very different course from the usual practice here. To feed an animal for five or six years before it is fit to send to the market cannot pay; it has consumed double the amount of food required to produce the same weight of beef under the system advocated, and if this is true why should the raiser take the trouble and waste the food in keeping and feeding an ox four years when he can get as much money for it at half the age. We confess it will be difficult to do quite as well as this with the present stock we now have, but better is within the reach of nearly all our farmers, and much can be done with those we have under a proper system of feeding. We have much to say on this subject in the future, and will be content to give the article alluded to for the present.

The farmers in the Middle and Eastern States have regarded beef production as unprofitable, and have given their attention to the production of grain and other marketable crops. Instead of improving a business that is regarded unprofitable, they have abandoned it as hopeless. They think that in the production of beef they cannot compete with the cheaper and fresher soils of the West. I contend that these Western advantages can be fully counterbalanced by a system of feeding that I will explain and submit to the judgment of the reader. I will endeavor to show that the improvement of the soil and the increased fertility of husbandry demand that the farmers of New York become beef producers. We must not abandon the production of beef, but adopt a system that will produce meat with a profit, and keep the soil in growing, perpetual fertility. The exportation of dressed beef and live cattle to England, and the success thus far attending the

enterprise gives new interest to the subject of cattle feeding. And what I further contend for, is that the amount of grain raised can be greatly increased by increasing the live stock raised and fed on the farm.

The system of feeding that will produce a steer of 1,400 pounds when two years old, will enable the eastern farmer to compete successfully in his own home market, with beef of western growth. This system offers a plan by which all the crops of the farm may be fed at home, and so go back to the soil, and still secure the full market value of the crops in the sale of the beef. But if we follow the prevailing custom at the present time, and let it take four years to grow an animal of 1,400 pounds weight, the cost will exceed the market value of the production. Recent and numerous experiments that cannot be contradicted, prove that full feeding and early maturity is the true system for the eastern farmer. The best growing beef increases with the age and weight of the animal; and hence those intended for beef should not be kept beyond two years, or two years and a half at farthest. By this system the gain is secured at an early age, calves may be grown to the weight of 800 or 1,000 pounds in one year. By the common system of feeding this weight is seldom reached at the age of two years. It is found to be a universal law, that the young animal takes the least amount of food to produce a pound of growth; and that each succeeding pound of weight, up to full maturity, costs more than the preceding pound. This has been established by facts and may be laid down as a law. Hence full feeding and early maturity must be always kept in view. I will now verify this position by actual results.

Mr. C. S. Marvin of Oxford, N. Y., raised a steer, and Best growing beef has published a statement of the cost of food, and the monthly weight of the steer, as he grew to four years of age. The figures show that if the animal had been killed, and the beef sold when two years old, he would have paid a fair profit over the cost; but that after that time, the increase of growth fell below the cost of production. Prof. Miles of the Michigan Agricultural College, by an experiment made, ascertained that when the animal was three months old, three pounds of meal, or its equivalent, made a pound of growth; when six months old, it took four pounds; when one year old, four and a half pounds; when eighteen months old, five and a half pounds; and when two years old, six pounds—just double what it took when the animal was three months old. Prof. Miles also made an experiment with a number of pigs, and ascertained that it took 50 per cent. more food to make a pound of live weight when six months old, than it did when three months old.

In the Live Stock Journal of 1873, the history of a pair of twins, called "the Eldsworth twins" is given. They weighed on the 2nd of October 1,340 pounds, at six months old. Their gain the first year following was 1,780 pounds; the second year, 1,345 pounds; the third year, 1,195 pounds—a constant decrease the older they grew, and with a constant increase in the consumption of food. Mr. Woodruff, in a discussion before the Agricultural Board of Indiana, said that the cattle should be fattened for the butcher at the age of two years. Mr. Alkman said that a calf, by proper treatment, increased in weight at the rate of 100 pounds a month; while a steer three years old, which would eat twice as much as the calf, would increase only at the rate of about 50 pounds per month. The reason of this decrease of weight with increase of age, is because a certain amount of food is required for this purpose. It takes more than double the food the second year. It has been proved by hundreds of experiments that as the animal grows older and heavier, an animal consumes of good food daily about three per cent. of its live weight, to support life and supply waste. Calves may be grown to the weight of 800 to 1,000 pounds the first year, and from 1,200 to 1,400 the second year. The utmost growth should be forced up to two years, and then turned into beef. It is important that a full flush feed be kept up. If there is, for any length of time, a suspension of growth, the digestive organs and the powers of assimilation in the secretory vessels become morbid. The organs of the animals should be kept in an active state, and capable of digesting and assimilating a large quantity of food.

The calf should have sweet milk three times a day for the first three weeks, and after this time, sweet skimmed milk may be given, a little salt meal, cooked and added to the milk. If a little hay tea, with an egg broken in it, should be given, less milk will do. When three months old, a little corn meal, cooked, or flax seed meal, should be mixed with the oat meal porridge. The milk should be continued until the calf is three months old, and after this, in combination, oats and corn ground, one bushel of corn to two of oats, mixed with wheat bran. Grass in summer, and clover aftermath in winter. Keep the appetite strong, and never overfeed. A variety of food is found preferable to any single kind. Steamed food promotes growth more readily, and the quantity required is less. Hay, roots, straw, cornstalks, with meal, aided, and a little salt, should be steamed together. A favor is given to the hay, straw and cornstalks from being steamed with the meal, that provokes the appetite, and causes the whole mass to be eagerly devoured. The animals should be kept in a dimly lighted, warm stable, and allowed to run in the open yard and sunbath for two hours every day, and abundance of dry litter be kept under them.

But the farmer will ask me where the margin of profit, under this system of full feeding and early maturity, is a very natural and business-like question, and I will answer in a business-like conclusive way. We will take the average gain of good, thrifty calves of the short-horn or the Holstein breed, fed upon ten quarts of milk a day of skimmed milk for the first ninety days, with an average of a half pound of oatmeal and one pound of wheat middlings after the first ten days, giving a total of 1,400 pounds weight, the first six months, will be for milk, 1250 quarts, at half a cent a quart for the skimmed milk, \$6.25; 30 pounds of oatmeal, 90c; 91 pounds of corn meal, \$1.82; 275 pounds of middlings, \$2.75; 100 pounds of hay, or its value in grass, during the first 90 days—50c; pasture three months, at 15c. per week, \$1.37—in all \$13.87. With this feed a calf should weigh 500 pounds at six months. The second six months it will require 10 pounds of hay per day, or 1,820 pounds, \$2.75; 182 pounds of corn meal, \$3.64; 3 pounds per day of middlings, 540 pounds at \$16 per ton, \$4.10—amounting to \$11.99; and the gain should be 23 pounds per day, or 410 pounds, averaging at one year old 910 pounds, costing \$20.72.

The second summer, pasture at 30c. per week, \$1.37; 17.80; 4 pounds per day of middlings or oatmeal, \$4.10, total, \$11.90. The second winter he will require 15 pounds of hay per day, or 2,730 pounds, \$4.10; 6 pounds of corn meal per day, \$1.82; 4 pounds of bran per day, \$1.82; total cost of second year, \$11.93. The steer will gain on an average 15 pounds per day, or 547 pounds, weighing, at two years old, 1,437 pounds. The cost of the steer, and Best growing beef, at two years old, is \$22.85. The market value at this season of the year, and for this kind of beef, will be at least 65c. per pound live weight, and he will be worth \$934.70. This leaves a profit of \$222.85, and certainly a handsome one, as the manure made is worth all the labour, and it will be seen that we have given full market prices for the most expensive food.

While looking at these figures it is surprising that farmers should raise grain and abandon the production of beef; that they do not take into consideration this wise policy of raising and selling grain on the future sale of these articles from the South and sell it, robs the soil; it is to the farmer murder in the first degree. But if he will feed his crop, he makes a market at home, increases his profits, and what is of the utmost importance secures the fertility of the land. He has to compete with the rich cheap lands of the west, as surely in raising grain, as in making beef. The price of grain, and its value in his home market, is high, and he has not occupied the competition. If he raises small fruits, and garden truck, his profits will not be certain; for such are the facilities of rapid transportation, that the supplies of these articles from the South have taken the first market and the best prices; and in fact, the only prices that are remunerative. I say the production of beef; the full year, and early maturing system will pay. The old system of raising year-old steers and keeping them in the pen will not pay; for when the animal is bought, the time of life is past when feeding could be made to pay. The farmer who raises the right breed, raise his calves, crowd them from the start, and then realize when two years old. This system will pay, and so increase fertilizers as well as the grain crop in a very short time—for manuring is the life of farming.

We learn from the Woodstock Sentinel that quite a number of families have left Carleton County for the West. We are sorry to hear of our people leaving the Province in this way, both for their own sake and ours. We never see our active young men going away without thinking they are committing a great error; if they would only be content to live and work here, as they will be compelled to do in the West, for ten or twelve years, they will have a better chance of prospering than they will have in their new home.

Since the above was written we see it stated in the Sentinel, that some of these people have already returned, and more would willingly do so, if they could. Will this not satisfy our people that it would be better to remain home than to go to a strange country where they encounter hardships unknown at home.

BEST STROK.—A correspondent in the N. Y. Cultivator asks which are the best breeds of cattle sheep and swine and is answered,—"I have tried most kinds of cattle, and the Devons make the best work oxen; the Durhams are best for beef; the Alderneys or Jerseys for butter, and for all these purposes take Durhams. After a trial for 40 years with South-Down sheep, and a short time trial of five other breeds, I am satisfied that the Downs, for wool, lambs, good mutton, beauty, quietness and hardiness, are ahead of all others for eastern and southern farmers. I have tried several breeds of hogs, and think the Chester White, Berkshire and Poland-China the best breeds for the common farmer, and would recommend the new work on swine by Coburn as containing much new and interesting matter about treatment, diseases, &c., of swine.

FOREIGN MARKET FOR HORSES.

We have it from what we esteem good authority, that one firm in this city, last year, realized a profit of one thousand dollars on the horses they shipped to England. We believe this to be literally true; but whether it is or not, there is certainly a very liberal margin between the prices at which horses can be bought here and the prices they bring on the other side. We clip the following from the London Field:—"The Canadians are evidently determined to extend this trade. It is estimated that nearly three thousand Canadian horses have been exported to Europe during the last few years, and these shipments are to be vastly supplemented during the coming season. Last spring a special sale of six hundred horses, selected to suit this market, was held at Toronto. This was attended with such marked success, that three sales are being arranged to take place this spring, commencing at Toronto, on the 9th, 10th, and 11th of April. As all these cities are only about forty miles apart, and situated in the province of Ontario, one of the best horse-breeding districts on the American continent, they must offer great advantages to buyers. In the absence of regular horse fairs in Canada similar to those held in this country, this is expected that these sales will supply this deficiency, and afford English buyers a better opportunity than has heretofore existed of selecting suitable horses for this market without having to scour the country. As an instance of the superior quality of the Canadian horse, a pair of bay carriage-horses were sold by auction in Glasgow, a few days ago, to Mr. Coats, Woodside House, Paisley, for 320 guineas; a Canadian trotter realized 230 guineas; 250 guineas were refused for another pair of bays; and a very large number of these horses have been sold by Messrs. Lucas and Co., of Liverpool, at high prices. More than one witness examined before Lord Rosbery's committee gave testimony to the valuable quality of the Canadian horse. Colonel Soame Jenyns told the Prince of Wales, who stamped his success of this new trade with great interest in his examination, that "Canadian horses are fairly bred, and make excellent hacks, wonderful, sound, and hard, capital fenceers; in short, admirable animals." Among the purchases of Canadian trotters and carriage-horses may be mentioned Colonel Anstruther Thomas, Lord Lansdale, Lord Leigh, Colonel Leigh, M. P., Captain Macbell, and several of the Liverpool merchant princes. From recent returns it appears that 49,763 horses were imported from foreign countries into Great Britain in 1876, and 24,379 during the first eight months of 1877. Under such circumstances the success of this new trade will be watched with great interest on both sides of the Atlantic."

The trade from this port has been much larger than generally supposed. There appears to have been an effort to keep it out of the newspapers as much as possible, so that the prices might not advance here, nor the capital be strengthened abroad. What we want now are men of capital and enterprise to embark in this business. Instead of one firm shipping twelve hundred horses, we want twenty firms shipping twenty thousand horses.—The forty thousand horses imported by Great Britain in 1876, must have come largely from the continent of Europe, and at prices far above what we could supply them for at a liberal profit. There is now a deficit in the horse-stock of all the European countries, and American shippers may try their choice of markets. The Russo-Turkish war has used up the surplus in the empire of the Czar—the greatest of all horse-producing countries, and he is seeking to buy of his neighbors, who promptly assure him they have none to spare. If England should become involved in a struggle with Russia, there would not be ships enough to carry over the horses she would want from this country; but, war or no war, there is a market there inviting American horses.

In the paragraph quoted above, it appears a Canadian trotter realized two hundred and thirty guineas; and to understand this, we must not forget that a 2.50 or three minute horse is called a "trotter" in England, and among English horses he is a trotter of superior excellence. In this place we speak only of the better class of work horses, and the advantages of sending them abroad to a remunerative and active market.—Wallace's Monthly.

COAL ASHES IN THE GARDEN.

It has been long known that coal ashes have the effect of mellowing the soil, particularly clay. A rigid clay may thus be greatly improved in its texture. It has been held that the fertilizing properties of coal ashes are small—repeated analyses have shown this. Yet used as they have been here in gardens, without other manure, the effect has been such as to lead irresistibly to the conclusion that they do develop in some way a considerable amount of fertility. All cannot be accounted for by the mechanical improvement, as in cases where this is not lacking, the effect is still present, and apparently undiminished, if not

sometimes increased—in this case acting seemingly as wood ashes do, requiring other (organic) fertility to aid, if full results would be obtained. I was surprised, early in the season, on seeing unusually thrifty tomatoes and beans, to learn that the only manure used was coal ashes, scattered in the garden to get them out of the way. This was practiced for several years and no manure other than that had been used. I was shown another garden to-day which was treated exactly in the same way, the only dressing being coal ashes. Here the growth seemed all that it could be. I was shown a potato grown here that weighed one pound eleven ounces and a half. It was the Early Vermont, a variety not noted, I believe, for its large specimens. But they were all large, averaging from half a pound to a pound; no small ones among them, and many exceeding a pound. They were planted fifteen inches apart in the rows, a small potato dropped in each hill. The owner of this garden lays the success to the coal ashes, and says there can hardly be any mistake about it. This is the opinion of others also. My own experience is confirmatory. But the effect I find is not immediate. It is more tardy than with wood ashes, whose potash and soda act promptly.

I would advise by all means that coal ashes, instead of being thrown away, be used in our gardens, removing the coarser parts; also on potato ground, always mixing well with the soil, and as early the ground will admit and be repeated yearly, giving this time for effect upon the soil. I find the best success where the ashes have been applied for several years. The second year is sure to tell, even when thrown upon the ground and left to lie there undisturbed, as I have abundant evidence. But the place for full action is in the soil. I should have stated that in the second garden mentioned where the ashes were omitted, as was the case with a small space, there was a uniform lack in the growth, both in the size of the vines and the tubers. About a quarter of the soil of this garden was composed of ashes. In places where the proportion of ashes was greatest the largest tubers were raised. There is no doubt of the general benefit of coal ashes in a garden, and their decided effect upon the tomato and potato family. They doubtless effect more or less favourably all plants, in the improved texture of the soil, which most of our old cultivated fields need. Add to this their known manurial properties which science has pointed out, little though they be, and there is no reason why coal ashes should not be used on our land, to say nothing of what may seem an occult influence when they are put in union with the fertility of the soil, resulting thus, as appears to me, in an increased growth. I have faith in the discarded coal ashes, and I am using them to advantage.—Country Gentleman.

Every attempt hitherto, as far as I know, to propagate a breed of general-purpose horses has proven a failure. The reason of this seems to be that all such attempts have been by cross breeding. The Cleveland bay, now about extinct, was the nearest approach, perhaps, attained in modern times; presumably so, because of the large infusion of thoroughbred blood he inherited. But his lack of pure breeding was fatal, and he has practically passed away. Now I affirm that the cross-breeding is resorted to, nothing better can be attained than individual horses of "all-work." What is needed is a race or breed of "general-purpose" horses. To attain this, we should avail ourselves of ascertained principles of breeding, to wit:— 1. A pure or thoroughbred race can alone be relied on to transmit its type. 2. The type of any pure breed may be modified by outward conditions. The pure Arabian might be chosen as a breed to be depended on for the certain transmission of characteristics, but there is another breed more accessible, less expensive, and already nearer the size required than the Arabian. It is none other than the English thoroughbred. He is not only size, but strength, beauty and intelligence, to furnish a good foundation for such an experiment. To select from thoroughbreds such specimens as are distinguished for large size, soundness, good temper and high finish, and also pure pedigree and sufficiently close conformation, should be the aim of any one who should undertake this venture. As to size, the "topped" should not be applied to the legs, but, starting at the elbow, measure to the point of the shoulder, thence to the withers, thence to the root of the tail (including a short lock), thence to the point of the stifle. The longest

horse by such measurement is the largest essentially, and will prove himself so in the long run. As to soundness, leave out the Lexingtons, with their poor eyes, and so also, as to finish. If this experiment had been ordered upon when thoroughbred descendants of Messenger and Mambrijo were to be had, perhaps nothing better could have been desired; but as such of the blood of American Eclipse as could be obtained, even now would be a good contribution to this end. If there are offspring of imported Consternation and Warfield's Roxans to be had, these, with imported Leamington, should work in well. Individuals of such strains that evince a tendency to heaviness of bone and knee-action would, of course, further the attainment of the desired object.

Now, upon the second principle above, let animals so selected be bred, and their produce reared under some such conditions as the following:— 1. Flat land, as the place of pasturage is somewhat more favorable to large, though less compact development of bone and muscle. Dairy rather than wiry constitutions are promoted by lowland pastures. 2. Liberal feeding of largely soft food, both to mares in foal and those nursing, as well as to the growing foals. This, of course, would tend constantly to enlarge the visera, frame and muscular system. 3. Never permit them to run races, but let their fastest work be to trot on the road. Rather let them have plenty of slow and heavy work—that is, "farm-work." Let them be habituated to the collar, the wagon, the plough, as also to the carriage, and saddle, and cutter. Winter-driving through the snow will prove the secret of knee-action. 4. There is always to be promoted the employment of intelligent and careful management in stable, field and road; especially kindness and patience are requisite in the conduct of such an experiment. The employment of men whose intelligence and amiability are not superior to those of the horse would be suicidal. From such blood and such conditions I should expect to derive the distinctively all-purpose horse. Not merely individual all-purpose horses, but a race or breed worthy to be called the general-purpose horse. While I should occasionally have a fine saddle-horse, or a fast road-horse, I should not doubt have the finest carriage-horses, and once in a while, a flying trotter, and always stout and tireless draught horses. And one unity in each case would be that he is thorough-bred, and could be depended on to produce his like again. Now, but a few years would suffice to attain this desirable end, and the man who accomplishes it will do more for both men and horses than did Count Orloff or Lord Godolphin. The higher civilization that is casting off the barbarism of Bedouin and gambler, need not and should not destroy or neglect the noble animal that they, as "the blind instruments of Providence," have, in a measure, preserved. And inasmuch as a century of the racing-turf has not improved, but rather degraded, the thorough-bred, as well as his master, let him grace his true position in the higher civilization, and furnish his master legitimate use and gain.

FEEDING ROOTS TO MILCH COWS.

About the middle of May last, an editorial article on "Roots" appeared in the Farmer which interested me most deeply. As advised in that article, I have raised beets and turnips this season, and have a nice supply of them. If my impressions are correct, the article above referred to makes roots of more value for milch cows than any kind of provender. Having spent, in years past, more money than I like to spare for meal and bran, it is very gratifying to feel that an equivalent, and more than an equivalent is found in an article so easily raised as the beet. Are my impressions correct? The article spoke of fattening hogs on the mangold or sugar beet. Should they be cooked for either swine or for cows? Dr. Loring of Massachusetts speaks highly of Swedish turnips for horses. I presume these are not cooked, but finely sliced or chopped. Are they not so? [The language used regarding the use of roots as a feed for milch cows in the article of which our correspondent makes mention, was not that they were of more value than any other kind of provender; but the exact words were, "the feeding value of roots can hardly be over-estimated." For milch cows . . . they are admirably adapted." The facts in the case will be found to show that such a statement is not unfounded. The subject of roots in the winter season (gathered with warm stables and good care) is one of the most necessary agencies in keeping up a good flow of milk; and in no way can this food be so successfully and economically furnished as by roots, fed raw—sliced or chopped. Meal or shorts made into a thin mush would furnish the

moisture needed in connection with the dry fogs of winter, and no doubt give a richer milk—but it would be more costly, and not furnish so healthily a food as early cut hay fed in connection with roots. Moreover, it is evident that cows will continue their milking qualities for a series of years better with this food, than when fed with the more stimulating corn meal. Without doubt, some meal in connection with the roots would be of advantage, if the highest results were to be reached, as the laxative nature of the roots would counteract the heating tendency of the meal, while the meal would serve to keep the cow in good flesh. The Swedes and mangolds are invariably fed raw to swine, horses, and in fact all farm animals.—Cor. of Maine Farmer.

BET SUGAR INDUSTRY IN MAINE.

Arrangements are being made towards the introduction of the beet sugar industry in this State, in accordance with the resolve passed by the Legislature of 1877. This resolve authorizes the Governor and Council to contract with any responsible party or company for the manufacture of beet sugar in this State, and to pay to such persons or company a sum not exceeding one cent per pound on all sugar manufactured here from beets raised in the State—the bounty so paid not to exceed seven thousand dollars in any one year, and to lapse in ten years from the time of the first payment.

Under the provisions of this resolve, Mr. Ernest Th. Gennert proposes to establish a factory for the manufacture of beet sugar in this State. This he designs to establish through the organization of a stock company with a capital stock of \$25,000; and Mr. Gennert himself proposes to furnish beet seed to farmers who will contract to grow the beets for this purpose, (as was briefly explained in the Farmer last week), he having already imported \$25,000 of beet seed from Germany this spring, for this purpose. We learn he is to issue circulars to farmer and agricultural societies, at once, in order to ascertain who will undertake to grow beets for the factory, which is to be established at Portland, and to be in operation by October next.

At a special meeting of the Executive Council held for the purpose on Wednesday last week, a hearing was given Mr. Gennert on this matter, resulting in the passage of an order which is as follows, and which, so far as the State authorities are concerned, determines the first step in the inauguration of this new industry in Maine: "That, the proposition of Ernest Th. Gennert is hereby accepted, so far as it conforms to the provisions of the Act to encourage the introduction of the manufacture of beet sugar, approved February 7, A. D. 1877, and upon condition that a factory in running order, for the manufacture of beet sugar, be established in this State within the year 1878, and that the Attorney General is hereby instructed to draft a contract for execution, between said Gennert and his associates or assigns, and the Governor and Council, in accordance with the above conditions. Said contract to be of no force or virtue unless said factory is established in A. D. 1878."—Maine Farmer.

IS CRIB-BITING CATCHING OR CURABLE?

A young mare bred on the farm has acquired the habit of crib-biting. I have had a strap put round her neck, but that does not prevent her from catching at the manger with her teeth and losing her oats, or going to the bars of the gates when out at grass. Is there any probability of her offspring inheriting the same habit? Is there any danger of the horse in the stable catching the fault?—NORTHMAN. Crib-biting is a troublesome habit, sometimes engendered by indigestion often produces or aggravates indigestion. Well bred horses groomed in a stall, out of fun and mischief, and where tickled by the wisp or brush, seize the manger and learn to crib. The habit appears to be easily learned by horses, especially when they are left for hours in the stable, and one crib-biter will soon quickly have imitators. The habit, however, is not one which is transmitted from a parent to its offspring. An inveterate crib-biter is rarely cured; whenever he has the chance he will lay hold of a manger, a rail, or any other such object with his teeth. The broad strap with attached spikes which ran into the lower jaw, and the neck is reined preparatory to cribbing, sometimes cures; but the more certain plan is to plate with iron, tin, or zinc, the manger, the staves, and any other such articles likely to be laid hold of by the crib-biter. Occasionally the habit is stopped by putting the subject in a box without feed or manger, and without any object on which to fasten the teeth.—Ed.