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EDITORIAL.

Raise the Quality Standard of Stock.

Following up the idea advanced in an article in our last issue, advocating the use of only pure-bred sires of good quality, with a view to improving the character of the general live stock of the country, we desire at this time to emphasize the advantage of such a course, by calling attention to the very marked improvement visible in the progeny of a pure-bred sire from a common or low-grade dam, an improvement which is attractive and from the first appearance in life of an animal engenders a feeling of pride and pleasure in the mind of the owner, and at the same time gives an increased relative value, whether a calf, lamb or pig, before it is many weeks old, an increase more than equal to the extra cost of the service fee of the sire, if hired, or to its share of the price where the sire has been purchased. This is due to the fact that the first cross of a pure-bred sire gives to the offspring fully 50 per cent. of pure blood, which in its influence really amounts to much more than 50 per cent., owing to the prepotency of the pure blood of the sire, which stamps its impress so forcibly on the produce that often the result of the first cross is an animal bearing nearly all the appearance and quality of a pure-bred, and which, with reasonable care in the feeding and treatment, will, for the practical purposes of the butcher's block, or the dairy, make as good return for the feed it consumes as a pure-bred animal of the same age, that has received similar treatment. And when pure-bred sires of the same breed, of good quality, are persistently used, it requires only four or five crosses to produce a herd or flock that will breed true to the desired type with reasonable certainty and with much satisfaction. This is a method by which the average farmer may, in a short time, and at little cost, greatly improve the standard of his stock, and find himself in possession of a class of animals that will respond quickly to good feeding in gain of weight for the meat market or of milk for the dairy, and will sell for much higher prices than the ordinary, at any age, when he wants to dispose of them. In regard to early maturity, we are quite sure we are within the mark in stating that, given the same treatment, a grade steer sired by a pure-bred bull will, owing to his superior form and quality, sell for at least one third more at two and a half years old than a scrub will at three and a half years, besides being more satisfactory in every way to the feeder, the dealer, and the butcher. One only needs to visit the stock yards, and read the reports from week to week, to be convinced of the soundness of this opinion. It will be observed that we have been careful to stipulate that the sire must be not only pure-bred, but of good quality, even to breed good grades, and we stand by this, that even the owner of a grade herd of cattle can not afford to use an inferior pure-bred bull, but that it will pay him well to give a higher price for a good one, for we regret to say that it is too true that there are more than a few pure-bred scrubs in the country, as was evidenced at the Government sale at Guelph last week, where much inferior stuff was offered, with little more than a paper pedigree to recommend them. There are hundreds of far better bulls in the hands of reputable breeders in the country than three-fourths of those put up at these sales, that can be bought at reasonable prices, and better worth the money than were those at the prices they brought. To buy intelligently, a man should see the sire and dam of the animal he selects, and know something of the general character of the family from which it comes. Pedigree is well in its place, but there are

scallawags in some families that bear a high-sounding name, and it is seldom, if ever, safe to base one's judgment of the value of a beast on the paper that represents his breeding, if he be not individually robust, of good form, and possessed of good feeding and fleshing qualities. The failure to observe this precaution accounts for most of the misfits found in pure-bred herds, and to breed from one of those generally means the perpetuation of its meanness in its offspring, and in future generations to which its influence extends.

Sugar Beet Growing, from the Farmer's Standpoint.

The consumption of sugar is increasing enormously in northern civilized countries. It is a heat- and energy-producing food, so that as people develop energy and enterprise in rigorous climes, they eat more sugar. Of sugar, the people of the United States consume an average of over 60 pounds each per year, as compared with only 38 pounds twenty years ago. The ratio of increase will probably be about the same in Canada. The States consume over 2,000,000 tons per year, and of this they produce only 270,000 tons, or, including Porto Rico, Hawaii, and the Philippines, some 460,000 tons might be added, still leaving more than one-half to be produced by foreigners.

Twelve years ago the States produced only 255 tons of beet sugar; in six years it reached 16,000 tons; in 1899 it was 80,000 tons; and in 1900 the production was put at over 150,000 tons. The industry is forging ahead in eight or ten States. California has the largest beet-sugar factory in the world, costing \$2,750,000, with a capacity of 400 tons sugar per day, produced from 30,000 acres of land. In two years, Michigan has built ten factories, the cheapest of them costing not less than \$300,000. Last year three factories paid out for beets to farmers, within a radius of 25 miles of Bay City, \$400,000 cash. One Bay City factory, in 1900, produced 6,000,000 pounds of sugar, but yet Bay and Saginaw counties alone, out of a great State, consume 7,500,000 pounds of sugar in a year. That will give an idea of the sugar needs of the country, observes Mr. R. S. Baker, in a recent article, the figures of which we quote from the *Review of Reviews*.

The sugar beet is therefore fairly in the field as a competitor with sugar cane. The two sugars are the same in composition, appearance and taste, though it is claimed that cane sugar is of a higher grade. Apart from fiscal and tariff considerations, what chance has the industry in Canada? It is said that a large percentage of the sugar now consumed here is the product of foreign-grown beets, the raw sugar being imported and refined. Why not grow the beets here? Our soil and climate, in large areas, correspond fairly well with that of Michigan, our land probably being richer in fertility, and better farmed. Beets have long been successfully grown for stock food, and the Ontario experiments, under the direction of Prof. Shuttleworth, of the Ontario Agricultural College, in several localities last year further demonstrated the capability of the country to produce them for sugar purposes. The Canadian farmer, at whatever branch of the industry he turns his intellect and hand, has no superior, and in ordinary field-root growing, the average American farmer can take lessons from him. The Canadian farmer is sprung from root-growing Old Country parentage. The Canadian can and will grow sugar beets, if he finds that it will pay him to do so. Prof. C. D. Smith, of the Michigan Experiment Station, one of the best-informed Americans on this subject, and whose efforts have been of immense service to the industry in that State, states in this issue of the *FARMER'S ADVOCATE* that 12 tons per acre is a fair yield, worth say \$5 per ton, and grown at a cost

of \$30 per acre. Mr. J. J. Ferguson, a Canadian, for several years past one of our contributors, and now on the staff of the Michigan Agricultural College, gives our readers the benefit of his investigations on the subject in another column, and puts the profit, on a fair average, at \$22 per acre. How does that compare with wheat? Assuming an average yield of 25 bushels per acre, selling at 65 cents, we have a return of \$16.25, and the cost of production might be put at \$10 per acre, leaving a profit of but \$6.25.

Now, any farmer who has grown field roots to any degree of perfection, knows that it means work and high-grade farming; slipshod methods will not do. For sugar beets, manuring and some preliminary soil preparation must be done in the fall. The soil must be in fine tilt in the spring for early sowing; thinning and weeding, with constant cultivation, particularly in times of drought, follow in quick succession. The sugar beet, growing almost wholly under the surface, is more difficult to harvest than turnips or mangels, and they must be delivered at the factory or railway station when wanted. Securing the necessary labor is another point which the farmer will find it needful to take into account when going into beet-growing on a large scale. These difficulties need not prevent the success of the industry, but it will be better if they are fairly considered beforehand. If the pulp be fed to stock, and the manure restored to the land, beet-growing will not be hard on the soil, for sugar itself is composed of carbon, hydrogen and oxygen—obtained from air and water—hence it does not remove these costly elements, nitrogen and phosphoric acid, as is done in the growth and sale of wheat.

The Clover Catch.

Next to the feeding of stock on the farm, as a means of maintaining its fertility, there is no one question of greater interest and importance to the farmers of Ontario and the Eastern Provinces than the clover crop. On this, more than on any other crop, depend the necessary supply of vegetable matter to keep the soil in the best condition for feeding plant-life and conserving moisture sufficient to enable the land to produce good crops of grain or roots. On light or loamy land, the difficulty of securing a catch of clover is not generally experienced, but farmers in many sections, of Ontario especially, having clay and clay loam soils to deal with, are finding it a very serious difficulty, and in view of the great importance of the crop and the high price of the seed at present prevailing, the able article appearing elsewhere in this issue, contributed by Mr. A. McNeill, dealing with the best means of insuring a successful catch, is worthy of careful consideration. The failure to secure and hold a catch of clover leads directly to impoverishment of the soil, and each failure makes the situation more serious, as the elements necessary for the protection of the young plant are depleted by every grain crop that is grown, so that unless special precautions are taken, it is only from an unusually favorable season, by reason of frequent rains, that relief can be hoped for.

Where fall wheat is grown, a successful catch, by sowing the clover seed early in the spring, is generally assured, and it will be wise, wherever other circumstances warrant it, to seed down with that crop, even though the prospect for the wheat, from the depredations of the Hessian fly, may not be very promising. A clover crop is of greater value than a wheat crop, since it not only feeds the stock, but feeds the land also. Where seeding must be done with spring grain crops, every suggestion calculated to render it a certainty should receive careful consideration, and to this end we shall be pleased to publish the experience and methods of our farmer readers who have had success in overcoming the difficulty we have here outlined.