

Farmers' Department.

Beet Sugar Making in England.

The London Times notes the commencement of beet sugar making in England. The works at Lavenham, in Suffolk, where beet sugar was manufactured from 1869 to 1873, have been acquired by a private company, for the purpose of recommending the industry, with the advantage of recent and more economical processes. The company has an authorized capital of \$1,000,000 and includes many gentlemen of high standing. The purpose of the company, as explained at a large gathering of agriculturists, is to start the new industry so that sugar factories may soon be dotted about many parts of the kingdom.

Lavenham is chosen for the beginning, because the best crop is not new to farmers in that neighborhood. The projectors of the company, after four years of study and experiment, have reached the conclusion that recently invented methods of extracting sugar from the beet are simpler and less expensive than those formerly employed, and they are confident that the industry will be remunerative if only a sufficient supply of beet is forthcoming. Not only has there been improvement in processes, but in the qualities of the beets themselves, the experiments of the Sugar Association of the Zollverein having resulted in the development of roots richest in sugar. The plant has been so improved as to grow the heaviest weight per acre compatible with the most syrupy quality of juice.

The present agricultural depression in England specially invites to any experiment which offers a reasonable chance of profit. About one-half the 1,000,000 tons of sugar consumed in the United Kingdom last year, was made from beet in countries of Europe no more favorably situated than England. There are thought to be suitable tracts of land in England on which the beet sugar industry may bring a wealth of production similar to that seen in France and part of Belgium, of North Germany and of Prussia. Germany has increased its beet crop in ten years from 3,000,000 to 8,500,000 tons. The company offers 20 shillings per ton, delivered, as their price for the roots. The yield per acre may be safely estimated at from 15 to 20 tons, and the total cost of cultivation per acre is estimated at \$55. A yield of 15 tons would make the market value of the crop about \$75, or a field of 20 tons about \$100. The Times suggests that the company might probably go shares with the farmers in growing the beet, the occupier finding land and horses and the company finding manures and manual labor. American farmers will watch with interest the result of the English experiment.

Experiments with Onions.

The onion trials of the last season at the New York Experiment Station were with thirty-four named varieties, which were planted in rows ten feet long and eleven and one-half inches apart, the seeds being covered one-half inch deep. Three rows of each variety were planted, in order to note the difference in effect upon yield of closeness in planting. In the first row the plants were thinned to three inches apart; in the second to two inches, and in the third to one inch apart. The earliest variety to mature its bulb was the Extra Early Red, in 116 days from planting; the latest, ten varieties, in 163 days. In nearly every case the yield was the smallest in the first row, where the spaces were three inches, and the largest in the third row, where the spaces were one inch, but in no case was the increased yield of the second and third rows in proportion to the increased number of plants. As a rule, the largest bulbs were in the first row.

There seems to be some foundation for the opinion held by some onion growers, that the bulbs develop better, offering fewer scallions, where they are so close in

the row as to crowd each other. The following experiment with onions is quite suggestive: The soil was thoroughly pulverized over a small plot of ground, and on an adjoining plot of equal size the ground was packed as hard as possible by repeatedly pounding with a heavy maul. The surface of both plots was then covered with finely pulverized soil to the depth of half an inch, and on June 3 three rows on each plot were planted with seed of the large red Weatherfield onion. Late planting was disadvantageous to the yield, but the three rows on the compact soil yielded nine pounds seven ounces of merchantable bulbs, while the three rows on the pulverized soil yielded but three pounds three ounces. The percentage of vegetation in the two plots was not noticeably different, although the vegetation was prompter on the compact soil.—*Elmira Husbandman.*

Care of the Cattle.

A cow does not turn fodder and water into milk, as a mill turns corn into meal. The cow herself turns into milk, and the food she eats goes to repair the cow. To speak more plainly, the lining tissues of the cow's udder are continually throwing off cells of their own substance in the form of milk, and the digested food is supplying the material for new cells. Consequently, the proportion of cream in any cow's milk depends mainly upon the cow, and not upon the food she receives, although if this goes to improve her physical condition, it may thus in a roundabout way increase the flow of milk, and thus the amount of cream. It behooves us, then, to bring our cattle as quickly as practicable, into the higher physical condition—which is most easily done in warm weather, when feed is plenty—and to maintain them at that point whether milking or dry. A sick cow often requires months of care.

For the normal secretion of milk certain natural conditions must be complied with. This function requires a contented frame of mind, we may say, a freedom from labor and exposure, and an entire absence of sources of annoyance and irritation. The pasture should have abundant shelter from excessive heat and storm; if not a natural one, something which will answer the purpose should be put up. The herd ought not to have to travel miles upon mile to pick their living from a scanty pasture, and so use up their food to supply the force spent in traveling. Neither should it require a half-hour's journey under a blazing sun to reach the water for drinking. If the pasture is far from the yard, and the cattle are driven from it, the driver should understand that the cows must not be hurried, especially on their homeward trip. The excitement and chase of a single cow will induce a secretion in the udder, which will taint the whole milking and the consequent butter.

Exercise is beneficial and necessary to health. Provide for it in winter as well as in summer; but, under all circumstances, avoid exposure to any extreme of temperature or weather. Exposure is a direct and often serious drain upon the system, and increases the amount of food necessary about one-third in extreme cases.

For winter exercise, except on the pleasant days, a covered yard is the best arrangement, and the time allowed should be regulated according to the weather—from 20 minutes twice a day, upward.

FEEDING.

The secret of successful feeding is good food and plenty of it. The only question is as to the means of providing it in each special instance. Where land is plenty, pasturage is an efficient system, if care be taken to have good grass.

The European cattle diseases, according to Consul Tanner of Liege Verrier, are traceable to the manures that have been used on an impoverished soil.

Des. Mayberry of Windham, Me., re-

cently sold a quantity of hay that had been cut twenty-two years. He has been holding it all that time for \$22 a ton, and finally got his price.

Sashes covered with unbleached cotton which has been treated with oil are recommended as being better than ashes filled with glass for the covering of hot-beds. They keep out the frost, admit sufficient light and heat, and the plants grown under them are not only "stockier," but bear transplanting better than those raised under glass.

The Dominion Cattle Company, which has now nearly 67,000 cattle on the 284,000 acres of the Cherokee reservation, which it leased for two cents an acre from the United States Government, has thus far proved a decided success. Last year its capital stock, amounting to almost \$650,000, brought a net profit of \$250,000 out of which a dividend of 20 per cent. has been declared.

Chickens when first hatched should not be hurried out of the setting nest. For twenty-four hours at least, from the time the earliest commence to show themselves, it is better to leave them under or with the hen mother. They need no food for from a day to a day and a half usually. When they get strong enough to venture from beneath their mother's wings it is time to move the brood.

The London Agricultural Gazette says that Brittany cattle are small, silky-skinned, docile, and gentle animals, giving as rich a milk as one can well desire. Brittany butter, delicate and superior, of which thousands of tons are annually imported into England, is produced from the milk of these cows. They are also naturally hardy, thriving on coarse food, and another important characteristic is their freedom from disease incident to cattle generally.

A correspondent of the Rural New Yorker describes the following method by which an extraordinary crop of watermelons was raised: Holes were dug ten feet apart each way, eighteen inches square and fifteen inches deep. These holes were filled with well-rotted manure, which was thoroughly incorporated with the soil. A low, flat hill was then made and seed planted. When the vines were large enough to begin to run, the whole surface was covered to the depth of a foot or fifteen inches with wheat straw. The straw was placed close up around the vines. No cultivation whatever was given afterward; no weeds or grass grew. The vines spread over the straw, and the melons matured clean and nice. The yield was abundant, and the experiment an entire success.

For worms in children, be sure and inquire for Sizer's Vermifuge Candy. The genuine article bears the signature of the proprietor on each box. The public are respectfully informed that the Vermifuge Candy can be purchased of the principal druggists and dealers throughout the United States and Canada.

Flowers and feathers figure largely in evening, dinner, and ball toilets.

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"Hutto, Tex., Sept. 24, 1882.

ULCEROUS SORES "At the age of two years one of my children was terribly afflicted with ulcerous running sores on its face and neck. At the same time its eyes were swollen, much inflamed, and very sore. Physicians told us that a powerful alterative medicine must be employed. They united in recommending AYER'S SARSAPARILLA. A few doses produced a perceptible improvement, which, by an adherence to your directions, was continued to a complete and permanent cure. No evidence has since appeared of the existence of any scrofulous tendency; and no treatment of any disorder was ever attended by more prompt or effectual results.

Yours truly, D. E. JOHNSON."

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