

EDITORIAL.

The Brown Swiss Cattle.

Though only about one-twelfth the size of the Province of Ontario, the little European Republic of Switzerland has exported in a single year as much as over 1,800,000 lbs. of butter, over 25,500,000 lbs. of condensed milk and over 57,000,000 lbs. of cheese, some 17 different kinds of the latter, exported to most of the civilized countries of the world, being manufactured. Besides this, large numbers of cattle for breeding and other purposes are exported. The milch cows of Switzerland number over half a million, belonging chiefly to two distinct breeds, which in certain essential qualities are unsurpassed, if equaled, by any other bovine races in Europe. One of these is the "Spotted" race (Bernese Spotted), Simmenthal or Saanenthal cattle, and the other the Brown Schwyz race, bred for many centuries in the Cantons of Schwytzer, Uri and Zug, and in fact they have spread through the whole mountain region of Switzerland. This breed is the best known and most largely exported of the two pure breeds of the Swiss cattle. Briefly put, their leading characteristics are:—

- 1st. Good milking qualities.
- 2nd. Perfectly mild disposition.
- 3rd. Adaptability to most climates, localities and foods.
- 4th. Its beauty of form and color.

After making most careful investigations, U. S. Consuls in Switzerland agree in reporting that a good Brown Swiss cow will average for 365 days in the year not less than 10 quarts of milk daily, and that on grass and hay alone. This is not an exceptional rate resulting from special care and special feeding, but the average of thousands of cows taken from whole herds. For example, the 6,000 cows (ordinary animals of the breed) supplying the Anglo-Swiss Milk Condensing Co., at Cham, yield on an average 9 1/2 quarts in the milking season, but choice herds average far more than that. She is a large, plump cow, averaging from 1,200 to 1,400 lbs. in weight. The percentage of fat in the milk ranges from 3.3 to 4.5, so that not only is the quantity large, but the quality excellent. Experienced Canadian breeders at the World's Fair last year were most favorably impressed with the appearance of the exhibit of these cattle.

Our front page illustration in this issue is of a well-known imported Brown Swiss cow, but the artist and the photographer have not done her justice by any means. Further reference to her is made, in the following sketch concerning this breed, written for the ADVOCATE by Mr. N. S. Fish, Groton, Conn., Secretary of the Brown Swiss Cattle Breeders' Association of the United States:—

"The Brown Swiss cattle, which are attracting much inquiry at this time, are a large-sized animal of fine form and proportions; color from light to dark chestnut-brown or mouse color; white spots are not often seen except on the bag or under the belly occasionally; horns rather short and waxy, with black tips; nose, black, surrounded with a mealy-colored band, sometimes running up the sides of the face; black switch, hoofs and tongue; hind legs noticeably straight. They have a healthy, vigorous constitution, are gentle and hearty, not over dainty feeders, yielding generous returns for care and feed. They endure cold, having a fine silky, thick coat of hair, and are persistent milkers, frequently giving milk up to calving. The Brown Swiss cattle in America are mostly from the famous Canton of Schwytz, where they are kept in summer on the mountains Rhigi and in the valleys in winter. Having been thus raised, they are inured to cold and storms, are not subject to disease, and it is said there has never been known a case of pleuro-pneumonia in Brown Swiss cattle. They have fine well-shaped udders, good-sized teats and are extremely even in appearance, and for crossing give as good results as can be desired. The surplus in Switzerland are in demand to improve the cattle in Germany, Italy and France. In some of the dairies for infants they use them in preference to all other breeds. In the report of a dairy for infants, in Dresden, Dr. Chalbans says:—"In selecting cows for an infant's cow stable we must look for especially healthy cows, and an excellent quality of milk," and, concludes his report, "The healthiest breeds of cattle are the mountain breeds, and above and before all we name the Brown Swiss cattle as strong and thoroughly sound, and totally free from all pleuro-pneumonia." At the International Show of Paris, 1878, every Swiss cow exhibited bore away a prize in competition with exhibits from Holland, England, Denmark and other famous cattle countries. There have been several importations into the United States of small lots. The number registered in the Herd Record for America is now about 1,600, and they are owned in almost every State and some in Mexico. They stand the climate well in all sections. They are particularly adapted for butter-making, the cream globules being large, churn

easily and quickly. When properly handled the butter is of good color, fine nutty flavor, delicate and sweet to the taste. The milk has a rich, sweet taste, and for selling for family use will give the best of satisfaction. There was a cow shown at the Fat Stock Show, at Chicago, in November, 1891, which in an official trial gave in three days 245 lbs. of milk, containing by the Babcock test 9.32 lbs. of fat. The first day her yield was 81.5 lbs. of milk, containing 3.25 lbs. of fat, and was the greatest yield of fat ever recorded in any official test from any breed up to that time, so far as I can learn. A record of another Brown Swiss cow (not official) shows a yield of 86,304 lbs. of milk in ten years. She made in one year 610 1/2 lbs. of butter. Another from Oct. 15 to June 15 gave 9,207 lbs. of milk. The last named cow gave 50 1/2 lbs. of milk, January 23, 1894, with good farm care and feed. [A portrait of this cow appears in our illustration.] The calves are large and strong, sometimes weighing at birth 110 lbs. They grow and mature rapidly. Cows weigh from 1,100 to 1,200 lbs. and some 1,600 lbs. And for working oxen, they are easy to train, learn quickly, are strong and very fast walkers. The grades show the Swiss blood, and make beef of the best quality—heavy in the back, loin and hams. All breeders agree that no breed show more good points than the Brown Swiss cattle."

Haymaking.

As farmers will soon be busy at hay-harvest, a few words on this important subject will be in order. Be sure and have everything ready before the rush begins. Take some rainy day and get the knives ground and all repairs made, the mows cleaned out, the forks hunted up, the hayfork, if one is used, put in readiness, the car oiled, the pulleys and ropes hung in their proper places. Do not wait until there is a load in the barn and then find that the rope requires splicing or that a new one is needed and thus lose half a day of good weather.

Though the principles of haymaking are few in number and easily understood, they admit of many variations, and nearly every farmer has his own way of managing his hay crop.

It is often stated that hay should be so made that it is dried grass. Though this idea, at first sight, appears reasonable, still the conceptions of hay and dried grass are quite distinct in the mind of the practical farmer, for grass, which has not attained its full growth, makes a soft non-nutritious feed, hence the popular conviction that horses need old or riper hay.

TIME TO CUT.

In order to obtain the best hay, the grass should be cut at the time when it contains the greatest amount of nutriment, and the crop should be secured with as little waste as possible. If the hay is cut too soon, the yield will be small, and the feeding value will be less. Another disadvantage of early cut hay is, that it will be so full of sap that, unless the weather is very favorable, it will be almost impossible to cure it properly, though with the introduction of improved tedders and horse-rakes, this objection has less weight.

It has been found that at about or shortly after the full bloom, the plant has drawn all the substance that it can take from the soil, so it will easily be seen that there is a direct loss if cut before this period.

After the period of full bloom, the stalk increases in weight and becomes dryer, but it is owing to the carbon which is taken from the air. This process changes the digestible cellulose into the more indigestible woody fibre. If a farmer were selling hay, it might pay as well to let it stand somewhat longer than it would for his own use, for he would get a greater weight of hay, which would sell for nearly as much as earlier cut hay.

Another disadvantage of late cutting is, that a large proportion of the nutritive material is deposited in the seeds, which, owing to their small size, are liable to be shelled out and lost, or if saved and fed, being so small to be thoroughly masticated, will escape digestion.

Practical men say that when about one-half the heads of the clover plants turn brown, it is fit to cut. Timothy they would prefer to cut when it is in what is called the second flower.

WASTES IN HAYMAKING.

There are many wastes to be guarded against in the proper curing of hay. Late cutting is one of these: for very few people will begin cutting their hay early enough, and before they are through the latter part will be so ripe that it will be little better than straw. Another waste, and one which should be guarded against in clover, and especially if it has been cut on the ripe side, is from the shaking off of the foliage and the fine leaves, which are the richest part of the plant in nitrogen. Other wastes are the washing out of the soluble parts by rains, and the moulding and rotting due to insufficient curing.

One of the chief remedies against washing by rains is the improved machinery, such as tedders, horse-rakes and loaders, by means of which the hay is dried so rapidly that it is not necessary to cut down much at a time. Many farmers, nowadays, do not cock their hay—deeming it a waste of time. Both science and practice agree that where hay is put into cock, it is possible to make the best quality of hay. But in this country, where the weather is so uncertain, the rule to go by is not

to cut down more than can be handled easily at a time, and to get it into the barn as quickly as possible.

The improved agricultural implements of the present day, including mowing machines, tedders, horse-rakes, loaders, hay-forks and slings, not only facilitate the hay-curing process, and thus obviate loss in quality by the grass becoming over-ripe before cutting, or exposure to rains after being cut, but are also a great saving of labor, time and expense, and the best of such machines are not only exceedingly useful, but also a necessity in the economy of every well-managed farm. A good tedder will toss the grass lightly, exposing it to the sun and air, and leave it in a loose mass upon the ground, allowing it to dry rapidly, thus conducing to improvement in the quality of the hay and adding to its value; for the sooner the curing process can be completed, the better the quality of the product.

Hay, as a rule, should be housed the day after cutting, if possible. Of course, much will depend upon the temperature and state of the atmosphere in curing grass, even on a bright sunny day.

If the hay is cut after the dew has dried off, start the tedder as soon as the grass begins to wilt, and turn it frequently. In this way the hay may be sufficiently dried to rake up and draw the same day. If the grass is very green and heavy, or if the weather is unfavorable, the above could not be done, and a somewhat longer time would have to be given to the curing process. When it is thought best to cock hay, the use of hay caps will be found advantageous. A very light, easily-handled cap is being manufactured out of paper, which appears to fill the bill, and does away with weights, pegs or any other method of fastening of the caps.

Prof. Robertson has ascertained that by churning sweet cream at 46 degrees temperature all the butterfat can be recovered; but it takes about 30 minutes longer to do the churning. Ripened cream he churns at from 54 to 55 degrees in summer and from 58 to 60 degrees in winter.

It has been demonstrated by practical experiments that 100 pounds of sand will absorb 25 pounds of water; 100 pounds loam, 40 pounds; 100 pounds clay loam, 50 pound; 100 pounds clay, 70 pounds. This explains why some soils always appear dryer than others, why some soils will stand a drought so much better than others, and why, after a shower, some soils become like a thick paste, while others are only comparatively damp.

The new appropriation bill for the maintenance of the Agricultural Department of the United States carries a total of \$2,240,000, being nearly \$100,000 less than for the current year. The Bureau of Animal Industry is to receive \$500,000, and tuberculosis is added to the list of diseases of animals, to prevent the spread of which the Secretary of Agriculture is authorized to use any part of the sum. The sum of \$10,000 is set apart for the purpose of making inquiries in regard to the system of road management throughout the United States.

The resignation of Prof. C. V. Riley, Ph. D., for many years head of the Bureau of Entomology at Washington, when made public some weeks ago, created much surprise. In a letter to the public Dr. Riley states that this action was due to a regard for the wishes of his family, for the sake of his health and for his peace of mind. He states that he can never lose his interest in the subject of entomology, and relieved of the drudgery connected with office work, he hopes, in connection with the honorary curatorship of the Department of Insects in the U. S. National Museum, to be able to do some long-contemplated work of a purely scientific character.

The well-known writer on economic subjects, Mr. Edward Atkinson, has a somewhat remarkable paper in the May number of The Forum, on the subject of The True Meaning of Farm Mortgage Statistics, from which we take the following extracts:—"There are within the United States 4,564,641 separate farms, averaging about 137 acres each, of which, in the Eastern, Middle, Western and Pacific States, 80 per cent. are occupied and managed by their owners. Far more than half these farms are free of any mortgage whatever. The rest are mortgaged for far less than half their value. Only about one-third of the area of the United States (exclusive of Alaska) or, in all, 623,000,000 acres are occupied, assessed and valued as farm property. This is divided up as follows:—There are 1,300,000 farms under fifty acres, nearly the same number between 50 and 100 acres, 2,000,000 between 100 and 500, and 31,500 over 1,000 acres. During the last ten census years—1880-1889 the mortgage indebtedness has increased 156 per cent. on all these farms. But the production of grain has only increased 43 per cent. The national debt has decreased in almost the same proportion as the mortgages were increased, viz., 157 per cent."