

Eradicating Sow Thistles.

BY S. P. BROWN.

Having had some experience with the "milk thistle," or "sow thistle," during the past three and a half years, I felt it only just to send you an account of it and my own ideas regarding it.

In 1880 we detected a patch in a piece of barley. We watched them pretty closely and endeavored to secure all those that came in bloom between that and harvest. The piece was seeded down. The next two years they showed but very little in the hay, except the leaves close to the ground. In the fall, or, rather, summer of 1892, after the crop of hay was taken off, we started the gang plow turning it down, plowing about two inches deep. We let it lie as the plow left it till after harvest, then put on the disk pulverizer, cutting it twice; then dragged it thoroughly and let it lie all winter. As we intended to hoe the piece the following season, nothing was done to that portion of the field till preparing for turnips. No sign of the thistles appeared either before plowing first or any time during the season.

In another field which was quite bad in one place we mowed everything down with the scythe at harvest time and let lay on the spot in a pile till all the crop was off and then burned it. We plowed the field twice and sowed buckwheat early, plowed down, and resowed on the 7th of July for crop. No thistles were to be seen any time during the season.

In any case, I do not see why we may be any more fearful of them than our own Canadian thistle, for they are very similar in their natural characteristics and habits, only that the latter is much sharper.

At the initial period of the Canadian thistle it caused a great deal of alarm, but to observe many parts of the country now one would be led to believe that there were at least some people who were not a little bit afraid of it, to see the great number there; while in other parts, where they were once threatening to take possession, there is no reason to be alarmed any more, for they are gone.

I am of the opinion that most of the worst weeds have their weak points, and the enthusiastic and enterprising agriculturist will surely find them.

Experience in Making Sorghum Syrup.

SIR.—I have had fifteen years' experience in growing sorghum cane and making syrup, and think well of it. The variety I find most suitable is the Early Amber; there is a later and bigger kind we call the "Red Top" which will hardly mature before the early frosts. From 5 rows, 4 rods long, and rows 3 feet apart (hills 18 inches apart, 4 to 5 stalks to hill), we manufactured 7½ gallons. This piece was planted and taken care of to get good seed. Although we go in more for the manufacture for farmers who grow the cane, we find a good sale for all we make at 50 to 60 cents per gallon. In planting, the field is marked one way, making straight marks, 3 feet apart and 1 inch deep; hills 18 inches apart, and 8 kernels to the hill, and the plants afterwards thinned to 4 or 5 stalks. The seed can be dropped quite regularly by taking for each hill a pinch of seed between the thumb and first finger. The seed should be counted occasionally. The seed is covered by brushing one half inch of soil over it from the side of the mark with the foot. This leaves the marks in sight, so that the ground may be cultivated before the plants come up. The seed should be planted about one week before corn planting time. Cultivating and hoeing is done through June and early in July, when it is then left to mature. When the seed is in the dough the cane is at its best. We use thin swords of wood for stripping the corn while standing; then the tops are clipped with a sickle or knife. The dead leaves are also removed from the butts of the cane, as they are very injurious to the syrup if not removed. The cane should be cut just before the early frost. We cut a hill of cane, lay it in a sawhorse, then another hill and another, until we have quite a large bundle, about 75 or 100 pounds. After the cane is cut and in bundles, it may be placed under shelter and kept two or three weeks without injury, if it can not be made up right away. The bundles should be tied in two places by binder twine.

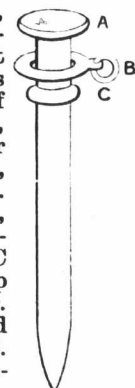
From 90 gallons of sap we have made from 14 to 18 gallons of syrup. The cane will produce from 25 to 35 bushels of seed per acre, which is used for planting, or feeding hogs, poultry and the like; it makes very good feed. We are thinking of putting in an evaporator this fall, but have always as yet used two large pans. The pan is filled nearly full of sap before the heat gets up. Just before it commences to boil the biggest quantity of scum rises to the top, which must be taken off and kept off as long as it rises. If the sap is then boiled quickly into syrup it will be finer and of lighter color than if more cold sap is poured in.

Your paper is all right for everybody, and full of good things. SHELDON GRAY, Norfolk Co., Ont.

P. S.—The result of advanced and improved methods, both in growing the sorghum cane and making the syrup, is summed up in the following extract from *The Riverside*, published at the Minnesota State Training School: "There was fifteen acres of Amber cane planted, and from this there was made 1,850 gallons of prime syrup, just as nice an article of pure, clean, healthful syrup as need be on the table of queen or peasant. At 40 cents a gallon it would amount to \$740.00, or about \$50.00 to the acre." This is a good estimate. S. G.

Tethering Pin.

R. E. BIRDSALL, Peterborough Co., Ont.:—"I enclose a drawing of a tethering pin used by us, which is a great success; the pattern of which was kindly given us by Mrs. E. M. Jones, of Brockville. It is made of ½-inch iron, and is about 15 inches long, with lower end sharpened. The top of the pin, marked A, has a round head put on. B is a band put around the pin loosely, so that it can revolve, with a link attached to it to tie chain or rope to. C is an enlargement on pin, so as to keep the band (B) from dropping any lower. Pin should be driven in the ground down to enlargement in bolt marked C. A swivel link in chain is an improvement to the ordinary chain."



DAIRY.

Educational Dairy Methods in New Zealand.

Mr. J. B. MacEwan, formerly of Canada, where he was for a time on the staff of Dairy Commissioner Robertson, has latterly been acting as Chief Dairy Expert under the New Zealand Department of Agriculture. He recently, on invitation of the Minister of Agriculture in the sister colony, paid a visit to Australia, where he gave the managers of cheese and butter factories and the patrons practical instructions in dairying. He stated in one address that the Government of New Zealand worked more on educational lines in assisting the dairying industry, and did not interfere with the business arrangements. The Department there undertook the grading and freezing of all butter for export. Each box of butter sent in must have the name of the factory and also the date of churning marked on it. Then a sample of each churning was examined by the graders, who marked it "1," "2" or "3," according to its quality, and who made a report on it, which was subsequently forwarded to the manager of the factory from which the butter had been received. By this means any defects were pointed out and the managers requested to remedy them. The butter made at factories is termed "factory"; that made by dairymen, "dairy butter"; and that mixed or milled is branded "milled"; the words "mixed" or "pastry" used here being regarded as objectionable, as having a tendency to prejudice buyers. The arrangements for shipping were made by the Dairymen's Association of New Zealand. In addition to the work of grading, the Department also took up the work of instruction. He had four assistants, who acted in the dual capacity of instructors and inspectors. They visited the factories, and also the dairies, advising managers of the former as to the best system to adopt, and giving the dairymen advice as to the best class of cows, the most suitable food for them, the best way of handling milk, and, above all, impressing upon them the necessity of cleanliness in every particular. During the winter months dairy schools were held. At an appointed time the managers and assistants assembled at a certain factory, where he (Mr. MacEwan) met them. Then they took the several branches and devoted two days to buttermaking, a similar period to the manufacture of cheese, another two days to testing milk, and then to the running of machinery. By this means all the managers were induced to run the factories on similar lines, and as a result an article of uniform quality could be produced throughout the country. He was not in favor of the Government continuing to freeze and grade butter, but considered they should gradually withdraw from these branches and give greater assistance to dairymen on educational lines.

In reply to questions, Mr. MacEwan said the aeration of milk had proved very beneficial in New Zealand. He thought that at least one or two of the inspectors should be veterinarians.

Since Mr. MacEwan's visit to Australia it is announced that the agricultural department there will make an effort to adopt the New Zealand system of grading export butter.

A Jersey Butter Test.

At the recent Show of the Royal Jersey Agricultural Society of England, held at St. Helen's on May 21st, a butter test was carried out under the auspices of the English Jersey Cattle Society. The entries for the contest numbered seventeen animals, only nine of which appeared. These were milked out dry at 6 o'clock the previous evening. They were milked for test at 6 a. m. and 6 p. m., thus securing twenty-four hours' milk from each cow. The milk was passed through a separator, and the cream was churned the following forenoon. The gold medal was awarded to Mr. R. Williams' cow, Fancy, which has won three gold medals out of four trials in four consecutive years. She gave upon this occasion 17 lbs. 6 ozs. of milk, yielding 3 lbs. 3½ ozs. of butter. Next her stood Mr. Bree's Mariette, giving 17 lbs. 2 ozs. of milk, yielding 2 lbs. 12½ ozs. of butter. The bronze medal cow was C. Furzer's Cuning Fox, the giver of 44 lbs. 10 ozs. of milk, producing 2 lbs. 8½ ozs. of butter. The nine cows yielded an average of 39 lbs. 1½ ozs. milk and 2 lbs. 3½ ozs. of butter, being one pound of butter for every seven quarts of milk.

Points in Dairy Practice.

BY F. J. S.

I. *Handling Milk.*—That first and most essential thing in all dairying—cleanliness, must be, ever and always, closely observed. We do not purpose to comment further upon this point, but would refer the reader to the terse and pertinent remarks of Mr. T. B. Millar, when treating on the care of milk from the cows to the factory, in a late issue of the *ADVOCATE*. In this article we treat of home butter-making more particularly. Milk should be strained immediately after milking. If not, it is patent that any impurity dropped into the milk will most likely be dissolved and pass into the cream and butter, spoiling the product more or less. Let the straining be well done. A potato colander is not a suitable article for straining milk. Judging from the appearance of some milks, one would think that they had been strained through some such article. A closely-woven wire-cloth strainer, with three or four ply of strainer cloth, may be relied upon to strain milk. Before setting milk for cream separation it is not necessary to aerate it, since it is set only in small quantities, and not in rooms at highly heated temperatures. It is well to remember, also, that to get a thorough separation of cream from milk by gravitation methods it is necessary to set the milk while still warm, therefore as soon after being milked as possible. To cool it by pouring or stirring is unnecessary and unwise. After being poured into the cans, the milk should not be disturbed at all until skimming time.

II. *Shallow Setting of Milk.*—A milk room, cellar or otherwise, whose temperature is not above 65° F., and of pure atmosphere, is what is required. Neglect of this question of temperature will ensure unprofitable work. It is the chief cause of loss of fat in the skim milk. This loss is often, very often, five to ten times as great as it ought to be. It would be well for us to remember that there is not an immense fortune to be made from dairy work, yet there is a fair and a steady profit if it be carefully attended to. Every one who is making butter at home should have a sample of his skim milk tested occasionally during the season by some one, if he does not himself own a tester. A loss of one pound of butter in 100 pounds of skim milk is common, and in a herd of ten ordinary cows would amount to fifteen or twenty pounds of butter per week. Three-tenths of one per cent. of butter-fat is as much as should be left in shallow-setting skim milk. But skim milk rich in fat makes good calves; ay! and let it be remembered, costly ones. It is high time that we knew better than to feed butter-fat to young stock.

The depth of the milk in the can is important. Not deeper than three inches is a safe guide. Two-quart crocks or sap buckets are, therefore, not good, as the milk is usually set too deep. The deeper the milk is set the colder must be the medium in which it is placed; this is why we place deep cans in ice water and do not so place shallow pans. A rack shelf is to be preferred before a solid board shelf to place the pans upon, since we have then a free circulation of cool air below as well as above. Skim the cream from the milk while both are still sweet; nothing is gained by allowing the skim milk to sour before skimming, since as soon as the milk thickens the cream stops rising, and commences to sour also. Milk soured is not as good for feeding purposes—no mean item in successful dairying. Following these directions, 24 hours is long enough for summer setting and 36 to 48 hours for winter. Be it remembered that the effect of temperatures too high cannot be wholly overcome by longer setting.

III. *Deep Setting of Milk.*—Here, also, temperature is the basis of successful work. Water standing always as cold as 45° F. or colder is the required medium and cannot be ignored under any circumstances, summer or winter. This, in the great majority of cases, means that ice must be kept in the water all the time. Well water standing at 45°—a scarce article—even if changed occasionally, is not satisfactory. More butter is lost in deep setting by inattention or carelessness or ignorance upon this point than any other. Many make the mistake of thinking that a longer period of setting will make up for improper temperatures, but it is not so, except in very slight measure. Let us not forget to set the milk right after milking. We would comment a moment or two upon the use of a patent creamer versus the tank. The former is the more expensive, but is much the better utensil for the purpose. In the best creamers the cans are screwed into the bottom of a box or tank, which also holds the water and ice, and the cream is drawn off through a straight faucet—not a right angle one, which is more difficult to keep clean—in the bottom, which is high enough to admit of a pail being placed under. The cans need never be moved from the creamer, the milk being poured in and the skim milk and cream drawn off without moving the can. It is not moved even for washing. This is a great saving of labor. The creamer is also better for skim milk should be needed during the day for drinking or cooking, as it can be had without disturbing in any way the contents of the can, which disturbance hinders the cream rising. The ordinary box or tank is cheap, but is in no sense comparable to the patent creamer. We would not remove the cream from the deep can with a skimmer, much preferring to draw it from the bottom. For this it is better that the can have a conical bottom, and that the faucet be in the point of the cone. We would not under any conditions use a large milk can, such as is used to send milk to a