

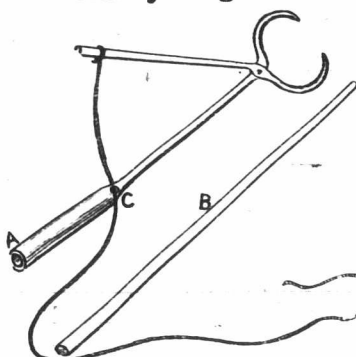
THE HELPING HAND.

Handy Farm Contrivances and Methods.

Upon almost every farm there are some handy, original devices, or improved methods and practices not generally known, which, if given to the public, could be utilized by others in rendering farm management more economical and remunerative. This department is intended to bring out such information for the benefit of our readers, and is to be maintained by them in holding out a helping hand to their fellow-workers by the interchange of descriptions of labor-saving tools and contrivances, particular ways of management, original and successful experiments tried, or any other feature in connection with farming not generally known.

To encourage subscribers to contribute to this department of the FARMER'S ADVOCATE, we offer a cash prize of \$2 for the best, and a second prize of \$1 for the next best contribution received prior to the 15th of each month. These and other contributions deemed of sufficient merit will be published as rapidly as our space will permit, but will not necessarily appear in order of merit. Compensation according to our standing offer for accepted matter will be allowed for suggestions published, but not awarded a prize. The decision in every instance will be final. Suggestions must be written upon one side of the paper with pen and ink, and must bear the contributor's full signature and address. They must be as short and concise as possible, 100 words being just as good or better than 500 if they tell the same story. Where an illustration will assist in making a description clearer, a rough pen sketch should accompany it on a separate sheet from the written matter. Every contributor must be a subscriber to the FARMER'S ADVOCATE. These contributions must not be mere reproductions of what have been published elsewhere. What we want is original matter. Plan sufficiently ahead so that the contributions will be as seasonable as practicable. We desire descriptions of contrivances or methods that have been actually tried and found successful.

Handy Hog Catcher--First Prize.



ELLIS F. AUGUSTINE, Lambton Co. —It is made in the form of large pinchers, as shown in the accompanying illustration. The handle of one jaw is made hollow at A, into which a wooden handle (B) is made to fit loosely. A rope is fastened to handle of opposite jaw, which passes through hole at C. When you wish to catch a hog, place the long wooden handle in socket, when you can advance the pinchers to encircle the leg of the hog; then pull quickly on the rope and withdraw the wooden handle, and you have the hog secure.

To prevent a sow from crushing her pigs against the wall when lying down, before she is expected to farrow nail boards around the sides of nest-room in the form of shelves about eight inches from floor. Then when the sow lies down, instead of crushing the pigs, they will slip beneath this protection. The litter for nest should be of chaff or finely cut straw.

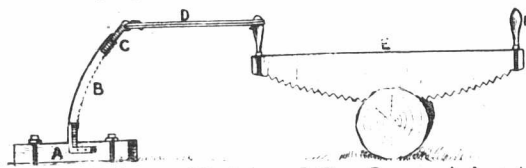
To break a kicking cow, take an old bridle bit and buckle one ring securely to each leg with a short, wide strap. In this way the worst kicker can be securely milked, and in a short time will be completely broken of the habit.

A Good Plow Slide--Second Prize.



SIMEON SNYDER, Waterloo Co., Ont. —Take a two-inch plank two feet long and one foot wide; then take a piece of wood nine inches long and two inches square; cut a notch out so that if it be bolted on this plank with the notch downwards, the plowshare will just fit in. Bevel front end of slide. When all is fixed place the plow on top, let the point of the share slip into the notch, and you can drive out into the field very comfortably, and not wear the plow.

One Man Cross-Cut Saw.



ROBERT WARR, Richmond Co., Que. —A is a two-inch plank, four feet long, staked to the ground; upon it is bolted a right-angled brace, riveted to an old handsaw. B, which is riveted to a short rod (C) which joins with the double fence wire (D). This wire is fastened securely to one handle of the cross-cut saw (E). The handle (F) is grasped by the sawyer. It will be readily seen from the illustration that the old handsaw (B) acts as a spring which aids in hauling the saw (E) back through the log.

Log Wagon Wheels.

While on a trip through the south-western portion of Ontario Province, we noticed a number of low-down wagons in use. The wheels were of buttonwood logs, about fifteen inches in diameter. The logs were sawed off the length of a wheel hub and sent to a wagonmaker to insert the iron boxing of old wheels. Wagons fitted with these wheels or rollers serve a good purpose in hauling manure, stones, etc., as they are as low as a sleigh, and will not cut into the soil even of a plowed field.

Tanning a Sheep Skin.

There is nothing better suited for a buggy or cutter mat or robe than a woolly sheep skin. One Kenosha, a tanner, tells, in the Rural New Yorker, how they can be tanned at home. The method is as follows: Within a few hours after the skin is removed from the animal, put it to soak for 24 hours in a barrel of fresh spring water. Then take it out and lay it on a barrel, flesh side up, and scrape it thoroughly free of flesh, tallow and blood. This is easily done by means of an old scythe, which fits the oval shape of the barrel very nicely. If the skin has become dry in places, more vigorous scraping will be necessary. If the skin is perfectly fresh, it should be scraped all over the second and third day after removing from the water. To clean the wool, tramp or pound it while in the barrel of water before taking out for the second day's scraping. Also scrape lightly on the wool side with a wooden scraper while water is being dashed upon it. Should iron come in contact with the wool it is liable to color it. When the skin is ready for tanning, lay it out flat, flesh side up, and apply the following mixture: Pulverized alum, one-half pound; common salt, about one pound; saltpetre, one-half pound; and about twice the quantity in bulk of bran as of the chemicals. Sprinkle about half of it in a nice even layer over the skin, folding the edges over to the backbone, then roll up tightly from the head. Keep it damp in a cool place for a week, then open up, scrape off the application, sprinkle the skin with a pint of water and apply the remainder of the tanning mixture, and leave rolled up for another week, at the end of which time hang it over a scantling, and after two or three days drying, scrape down towards the ground with a blunt knife until it is softened on the whole flesh surface. Then comb out the wool with a horse-mane comb, when you will have an ornamental and warm foot-rug or laprobe. It may be lined and left white or dyed, according to taste.

One Johnston gives his method, and declares it better than the foregoing: Spread the skin, flesh side up, sweep off all coarse dirt, salt, etc., and cover with a mixture of two parts salt and one of each of alum and saltpetre, fold the flesh sides together, roll tightly, and place in a cool place for eight or ten days. Then brush off all salt and place in a barrel, and pound out in strong soapsuds, with a clothes pounder, until as clean as desired; then rinse. The skins may, with advantage, be put through a large clothes-wringer. Care should be taken that the suds be not too hot. While still warm, stretch and nail to the side of an unpainted building, flesh side exposed to the sun, for several days, the hotter the better. When well dried, take down, lay on a bench, flesh side up, and do some vigorous rubbing with No. 1 or 2 sandpaper; a few minutes will make a skin as soft as one could wish.

DAIRY.

Is the Fat of Milk a Correct Measure of Its Value for Cheesemaking Purposes?

SIR,—The year 1895 has been a trying one for our cheese factories. Many of the new factories will have a struggle to continue another year, while patrons of older factories who have experienced good returns during the past are finding their faith wavering in the old stand-by cheese. Old hands in the business will remember, also, many years ago, when summer cheese once dropped as low or lower than this season; but it did not stay down long. Fortunately, the markets are mending as the season advances, which will put new courage into the faltering ones. In a season like the past, it is more important than ever that each patron should receive his exact share of the fruits of his toil. Inspectors find that in such a season the temptation is very strong to not only recover lawful dues, but also unlawful shares of the milk pooled at the factories. If the energy and money that are now expended in stealing and catching the thief were expended in the solution of a system which would encourage honest milk and honest returns, and discourage all dishonest practices, it would be the better for the cheesemaking industry of Canada.

For two years the Dairy Department of the Ontario Agricultural College, Guelph, has been endeavoring to solve the problem. Last year, when we advocated the two per cent. system, a great hullabaloo was raised in several quarters. The gods of the children to the south were being spoken against, and their worshippers in their native country, and in Canada, were exercised very much; in fact, there was a stirring of the dry bones.

Before giving the results of our work in this connection for 1895, as you suggest, allow me to quote briefly from a letter recently received from the secretary of one of our large factories, where the two per cent. system has been in use during the year. He says: "At the close of the first year that we paid according to the fat readings, I was not altogether satisfied. For, although it might be an improvement on the old system of paying entirely by weight, still I thought there should be something like a sliding scale, as there appeared to me to be too much difference, and to the gain of the rich milk, except extra quality in the cheese made from the rich milk were made out and brought in for consideration. The new system of adding two per cent. to the readings this year accords better with my opinion on the matter, and agrees better with the figures."

He further expresses himself as not altogether satisfied yet, largely for the reason that in some months, when the average per cent. of fat in milk is higher—say, July and August,—it requires more fat to make a pound of cheese than it did in May, when the milk averaged a lower per cent. of fat. I think this can be explained on the ground that spring cheese usually (or should) contain more moisture than summer or fall cheese; there is less loss by shrinkage before the cheese are sold; and there is less trouble with "gassy" milk and "fast workers," which do not produce so well as milk of good quality. But I must come to the experiments. I shall not trouble you with tables of figures showing the yield of cheese per pound of fat in rich and poor milk, as I think that readers generally prefer the results stated in words rather than in figures.

For the months of April, May, June, July and August, which are all the months of which I have the data completed, our experiments give the same result as last year, viz., that a pound of fat in poor milk, testing, say, three per cent. of fat, will produce more cheese than a pound of fat in rich milk, testing, say, four per cent. of fat and over. The average per cent. of fat in one lot of milk during April was 4.21, which yielded 2.54 pounds of cured cheese per pound of fat. The average fat in the other lot was 3.30, which produced 2.72 pounds of cured cheese per pound of fat. In May, when the average was 4.09 per cent. of fat, the yield of cheese was 2.55 pounds per pound of fat, while the other lot of milk, averaging 3.30 per cent. of fat, produced 2.69 pounds of cheese per pound fat. June milk produced 2.54 pounds cheese per pound fat when the milk averaged 3.91, and 2.80 pounds of cheese when the milk averaged 3.16 per cent. of fat. July, with an average of 3.78, produced 2.61 pounds cheese per pound of fat, and the lot averaging 3.00 per cent. fat produced 2.95 pounds cheese per pound fat—the highest yield of cheese per pound of fat we have had up to this time. In August, when we had the lowest per cent. of fat (2.91) that we have had during any month, the yield of cheese per pound of fat was 2.97, while the milk averaging 3.82 produced 2.61 pounds of cheese per pound of fat.

Now, don't let any one run away with the idea that I am arguing for poor milk in our cheese factories, as we need normal milk of good quality and containing about 3.5 per cent. of fat to make good export cheese. Neither do I wish any one to say that this will encourage skimming or watering, as I am not discussing such milk, but normal milk. What we are after is to solve the question as to whether the yield of cheese is in proportion to the fat contained in normal milk. I have no hesitation in saying that the yield of cheese is not in proportion to the fat contained in the milk; therefore the foundation on which rests the system of payment for milk at cheese factories, according to the butter-fat, is insecure and untenable unless it can be shown that extra quality of cheese is produced from richer milk. This point I shall not discuss at present, as my article will be too long.

Having spoken of the incorrectness of one system, it will be in order to suggest an improved one. At the present time I have no apology to offer for the addition of two per cent. to fat readings. Further research may disclose something better; but at present it nearly fills the bill, as the following table will show:

MONTH.	Lbs. milk.	Average fat for month.	Lbs. of cured cheese produced.	Reckoning the cheese at 8c. per lb. net, each lot would be worth the following amounts of money, if divided according to:—			
				Wt. of milk.	Per ct. of fat.	Per ct. of fat + 2.	Wt. of cheese
April	1800	4.21	192.50	\$14 35	\$15 90	\$15 36	\$15 40
	1800	3.39	166.25	11 35	12 79	13 33	13 30
May	4500	4.09	470.50	34 89	38 53	37 31	37 64
	4500	3.30	401.75	34 89	31 24	32 47	32 14
June	3600	3.94	361.00	27 20	30 17	29 11	28 88
	3600	3.16	319.00	27 20	24 23	25 29	25 52
July	3900	3.78	383.50	28 91	32 34	31 10	30 68
	4200	3.00	367.00	31 13	27 70	28 94	29 68
Aug.	3900	3.82	388.75	29 09	32 99	31 56	31 10
	3900	2.91	338.50	29 09	25 18	26 62	27 08

The foregoing table shows that the addition of two per cent. to the fat readings gives a slight advantage to the richer milk, under 4 per cent., when compared with the actual value of the cheese produced. This is the strong point of the system, as it encourages the sending of good milk to the factory (say milk with 3.5 per cent. fat, which is rich enough to make first-class Cheddar cheese); but when the milk tests over four per cent., as in the months of April and May, then such milk does not receive any advantage—in fact, is placed at a disadvantage. It is a question whether milk containing four per cent. of fat and over is best made up into Cheddar cheese for export or into something else.

The average percentage of fat in the milk at the factory referred to (which is one of our best) is as follows:—

Month.	1894.	1895.
April	3.35	3.26
May	3.35	3.35
June	3.44	3.34
July	3.48	3.33
August	3.53	3.43
September	3.69	3.42
October	3.87	
November	4.03	

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