from any source, except Professor King, and an editorial appearing in Hoard's Dairyman, which shows such an utter lack of knowledge of the principles involved that it plainly answers itself for anyone who thinks enough to care for ventilation in his stable. I know of only good reports from anyone who has properly used the system in ventilating any kind of a building where animals are housed, and the only unfavorable report that I have ever had was from two different people, who each conceived the idea that, in order to keep out the rain, the muslin should be oiled, which, of course, defeated the very object of its use.

E. M. SANTEE, Assistant Dairyman.
United States Department of Agriculture.

THE FARM.

NEED FOR A UNION ABATTOIR AT MONTREAL.

A union abattoir company for Montreal is again being discussed by the various interests which would be affected by such an organization. At present, there are a number of abattoirs in Montreal. The two main markets are half a dozen miles apart, being situated almost at the opposite ends of the city, and known as the Eastern Abattoir and the West End, or Point St. Charles Market. These markets are held on the same days, and at the same hours, so that it is difficult, and sometimes impossible, for the butchers to visit more than one market. The time has now come when it would seem opportune to raise the whole subject of live-stock markets again, and to take action for the establishment of a union abattoir, where all the live stock would be brought and handled in a thoroughly up-to-date and systematic manner. A "Farmer's Advocate" representative interviewed Mr. R. Ironside, of the live-stock-exporting firm of Gordon, Ironside & Fares Co., upon the subject:

"Nothing has really developed in the matter as yet," said he, "but the question is of such importance, and the time is so opportune, that an effort is being made to bring about the organization of a union abattoir. The railway companies require the land which is now occupied by the abattoirs in the very worst way. The butchers need a market where all the business is concentrated, and the exporters and country dealers and shippers find the same need. The market should be situated at a point outside the city terminals, in order that the cars would not be delayed en route as they now are. Such a point could be found anywhere out by Lachine. Now that the street cars are to be allowed to carry freight, it would be a simple matter to have the animals slaughtered in a large abattoir, situated on the grounds, and placed in cold-store till they were required, and then brought in by freight street car. As for the exporters, they could just as easily have the stock unloaded, fed and inspected there, and placed back on cars and forwarded to the ship side, as by the present method of loading on barges at Point St. Charles and transhipping to the ship side. In fact, it would be better for the cattle. A union abattoir of this nature is of the utmost importance. An area of fifty acres would be sufficient."

Mr. Donald Munro, another exporter, expressed similar views. "It is an old story," said he, "and I don't know whether the subject is nearer being accomplished than it was a dozen years ago. If the railways would only give up their jealousy, and get down to business, they would find that it would be to their advantage to combine on a single point, just as it is to the advantage of the dealers. I think that Point St. Charles would be the most suitable place, now that the packing-houses are situated there. There is lots of territory available. Certainly it is a great nuisance the way things are being run at present, and everyone concerned would be benefited, if the railways would only get together and decide to meet each other in the matter, and deliver all their live stock to the same market. The situation in Montreal has been getting worse year by year, and shippers have been gradually withdrawing and sending their stock to Toronto. Action in the matter should no longer be delayed."

SOFT-WHEAT FLOUR FOR PASTRY.

Editor 'The Farmer's Advocate":

With reference to your inquiry regarding pastry flour, I may say that there has been very little data published showing the results of actual experiments conducted to determine whether hard-wheat flour is better than soft-wheat flour for pastry purposes, but it is very generally stated in all books on domestic-science work that the soft winter-wheat flours are superior for this purpose. Furthermore, it is evident that the baking trade concur in this conclusion, for in practice, the soft-wheat flour alone, or mixed with a small percentage of strong flour, is used almost exclusively for making pastry. For breadmaking, the trade demands a granular flour, of good color, and rich in gluten. This is what is called a strong flour, for it will absorb more water, stand more fermentation, and, as a result, produce a large loaf of good color and texture. In making pastry, there is no fermentation process, and the question of expansion is not so important. Consequently, a softer flour—that is, softer to the feel, and of greater mellowness or freeness in working, generally associated with comparatively low gluten—is considered the best. This is the nature of the flour procured from our Ontario winter wheat. Moreover, there is a more desirable flavor secured in the products of this flour. One trouble with the exclusive use of the soft flours, in making pastry, is that the product is lacking in color, or rather that it is deficient in a desired richness in appearance. To overcome the difficulty, many of our bakers use a mixture of 80 per cent. of soft flour and 20 per cent. of hard flour. The latter flour gives a little more body or strength to the mixture, and makes a richer-looking pastry.

Recently we made some comparative tests to ascertain the difference in the quality of pastry made with strong and weak flours. To show clearly the difference in the strength of the flours used, a loaf of bread was made from each. Equal weights of flour were doughed up and baked, according to the process followed in all our work in comparing the strength of flour. These loaves were photographed, and are reproduced in Cut No. 1. The largest loaf was made from a strong

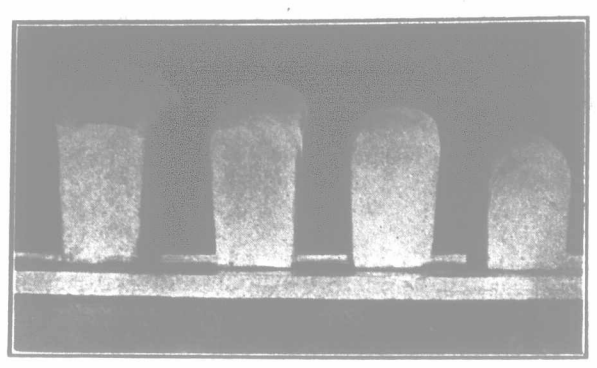

Fig. 1.—Comparing Spring and Fall Wheat Flours for Bread-making.

Manitoba patent flour, and the smallest from an Ontario winter-wheat, straight-grade flour. No. 2 loaf was made from a blend of 50 per cent. of each of the flours, and No. 3 from 20 per cent. of the strong patent flour and 80 per cent. of the Ontario winter-wheat flour.

As the 50-per-cent. blend is not commonly used for pastry work, our experiments were conducted with the other three flours. In all the experiments, both with short and puff pastry, nothing but water, salt and shortening were used, and in most cases the latter substance amounted to two-thirds of the weight of the flour. In every case, when less than this amount was used with the weak flour, the pastry was not so good. When larger quantities of shortening, up to pound for pound with the flour, was used, the pastry was improved in quality, but more especially that made from the strong flour. Throughout all the experiments, the general conditions were kept as uniform as possible, but each flour was treated so as to bring out the best results. As, for instance, it was soon found that the patent flour had to be made into a much slacker dough to get good results. To illustrate somewhat the appearance of the pastry, in each case two tarts made from each of the flours were photographed,

Fig. 2.—Comparing Spring and Fall Wheat Flours for Pastry-making.

and are shown in Cut No. 2. In every case the dough was rolled out to as nearly as possible the same thickness.

Lot 1, which was made from the strong flour, always raised higher than the others, and it had a clearer, richer, more-delicate appearance, but in tenderness, crispness and flavor, No. 2 Lot—the 20-per-cent. blend, was superior. The pure Ontario-wheat lot was not so rich in appearance, but was almost equal in crispness to No. 2, and superior to No. 1, while in flavor it was inferior to none. Every lot of pastry was judged by unprejudiced persons who were not aware of what flour was used in making the different samples.

Without a doubt, good pastry can be made from the strong spring-wheat flours; but our experiments, so far as they have gone, corroborate the teachings of domestic science, and the practice of the baking trade in that better pastry can be made from the softer flours. It must be remembered, too, that while the strong flours absorb more water, and thus will take more pastry for equal weight of flour, they cost more. In the case of the flours used in these experiments, the strong patent cost about $1.00 per barrel more than the winter-wheat flour, and the indications are that it requires more shortening to give the best results, thus making them more expensive. We hope to continue these experiments, so as to gather more complete data. R. HARCOURT.
Ontario Agricultural College.

BISULPHIDE OF CARBON FOR WOODCHUCKS.

Editor "The Farmer's Advocate":

I noticed in last week's issue of "The Farmer's Advocate" a question asked as to the best way of killing woodchucks. I have just been trying a method, which I find to be simple, easy and effective. It is this. Pour from one to two tablespoonfuls of bisulphide of carbon into an old cup, tin or can; place it arm's length in the mouth of the hole, leaving it in such a position that it will neither upset nor get filled with earth; then fill up the opening, and the deed is done. Bisulphide of carbon quickly evaporates when exposed to the air, and the gas thus formed, being heavier than the air, and deadly poison, finds its way to every part of the hole, and smothers everything in it that breathes. ADAM BATY.
Middlesex Co., Ont.

THE DAIRY.

THE MARKS OF A GOOD COW.

To tell whether a cow will give rich or poor milk, there are no outward or visible signs about the animal to guide us in the matter. The man who milks her even cannot tell how much butter is in the pail; but, in the Babcock test, dairymen have a simple means of testing the milk of individual animals and weeding out the unprofitable members of their herds. Every farmer should make it a rule to test his cows regularly, and know exactly what each animal in the herd is doing. It is not sufficient to depend entirely upon the returns from the creamery, as, when all the milks are mixed, it is impossible to select the most profitable cows in the herd with anything like accuracy of judgment. However, the marks of a good cow, showing whether she is capable of producing a large quantity of milk, are tolerably plain to all who are acquainted with cattle, yet there are such a variety of relative points requiring consideration that we can only picture them in the model. The best milk cow, as a rule, is of medium size, and small-boned. The head is small and rather long, narrow between the horns and wide between the eyes. The ears are thin, covered with soft, silky hair, the inside of the ears being of a rich orange color. The eyes are large and bright, with a placid expression; the horns set on a high pate, bending wide apart at the base, and curving inwards and upwards at the points; the neck long and thin, slender, and well-cut under the throat, thickening handsomely as it approaches the shoulder, but entirely free from anything like a "beefy" appearance. The shoulder-blades should meet narrow at the top, widening gradually towards the points, which should be broad and well rounded; the ribs rather straight and wide, indicating a good digestion and constitution, for everything depends on that in a good milk cow. The loins should be broad, and the hips high and wide, the rump even with the hips, the pelvis wide, giving plenty of room for the udder; the thighs thin; the hind legs a little crooked, with a long, large foot. The skin should be soft and mellow, and of a yellow butter color.

The milk veins in front of the udder are usually a fair indication of a good milk cow, and the larger they are, the better the indications. In extra good cows they branch out into four branches along the belly, but they all unite before reaching the udder. The more irregular the course, the better the indication that the cow is a good milker, but the veins give no indication of the richness of the milk. The udder should be covered with a short, downy coat of hair. This hair should begin to turn its backward course from the front teats, running in the direction between the teats, then on the back part of the udder, called the escutcheon, and on as far as the vulva in the best cows. The wider the belt of this upturned hair, the better. It should be short and velvety, covering a soft, orange-colored skin. The shape, and size of the udder is, however, by far the most reliable index of a good cow. All the other marks are only of relative importance, and it is better to have a scraggy-looking cow any day, with a good udder, than a grand-looking beast with a miserable bag. No matter how good-looking a dairy cow may be, except she has a well-developed udder, with its accompanying network of mammary glands, she cannot be expected to excel as a pail-filler.

The ideal udder is the one which is well developed both fore and aft, one that is carried high up towards the escutcheon, and at the same time goes a long way forward under the belly. In addition to this, the udder must be deep and square in shape—the deeper and squarer the better. Its four teats should be of good size, and placed as nearly as possible at equal distances apart. Cows possessing udders of this kind may always be counted on to prove good milkers, just