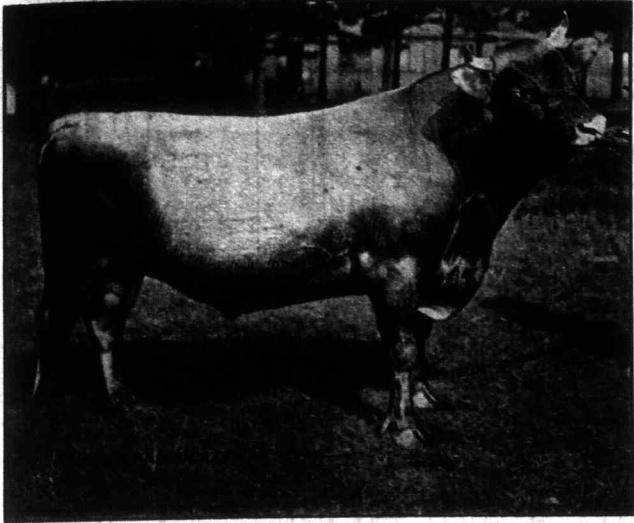


one to two inches. Roll the land at once. Do not allow the seed to lie exposed on the surface to dry out, as the moisture will insure better germination. It is not necessary to harrow after the seed is sown. Should the seed be sown very early in the spring, and the soil be sufficiently moist, the small seeds may be allowed to drop in front of the drill hoes. In no case allow the seed to drop in front of the hoes if the soil is dry or seeding is done late in the season. It is not well to allow meadows to run over three years, and two is better. When clovers and grasses are sown with grain I would not advise harrowing after the seed has germinated, but



FOUR-YEAR-OLD JERSEY BULL, BELVOIR KING, A. J. C. C. 40297.

WINNER OF FIRST PRIZE AT WESTERN FAIR, LONDON, AND TORONTO INDUSTRIAL, 1898. GRANDSON OF BELVOIR PET, SWEETSTAKES COW THREE SUCCESSIVE YEARS AT WESTERN FAIR, LONDON; ALSO AT TORONTO INDUSTRIAL IN 1895. OWNED BY R. B. SMITH, ARKONA, ONT.

where no clover or grasses are sown always harrow with a tilting harrow or weeder when the grain is from four to six inches high to kill seedlings of weeds and loosen up the crust.

A New Method.—Many farmers complain that clover is too hard to save as hay, also of having their pastures run out in the hot summer months. To get over this difficulty, I would advise pasturing the new meadows the first season; that is, the next spring after sowing. They will have a great growth of clover, which will last the entire season, and thus secure a good pasture. When clover seed is wanted, Dr. Fletcher recommends pasturing the new clover fields until June 20th to prevent injury by the clover-seed midge. It may then be left and a crop of seed harvested. The second season take off the timothy hay as usual. In the spring, as soon as the land is sufficiently dry to allow the horses to get on without sinking, the meadow should be harrowed thoroughly to break up any cattle droppings that may be left on the field from the former season. The harrow will loosen up the earth around the roots. After this, roll with a heavy land roller to level the ground, and thus make it easier later on to use the mower and rake. An excellent plan for renewing pastures on stony or stumpy land that has never been broken is to take a strong, heavy harrow and go over your land twice very early in the spring. Then sow the following mixture: Common red clover 4 lbs., alsike 2 lbs., alfalfa 2 lbs., white Dutch 1 lb. per acre. After the seed is sown, harrow once and roll with a heavy land roller.

The following are the varieties of grain that have done best at Ottawa in field lots, 1898.

Several sorts have given larger yields in experimental plots, but have not as yet been grown in quantity.

Spring Wheat.—Preston, Percy, Wellman's Fyfe, Dion's Monarch, Red Fern.

Oats.—Improved Ligowo, Banner, American Beauty, Joannette, Wallis, Golden Giant.

Barley.—Canadian Thorpe (two-rowed), Odessa (six-rowed), Mensury, Royal, Trooper, Champion (six-rowed, beardless), and Success.

Peas.—Prussian Blue, Canadian Beauty, Crown, Golden Vine, Pride, New Potter.

Corn.—Flint sorts: Longfellow, Compton's Early, North Dakota White; Dent sorts: Selected Leaming, New White Cap Yellow Dent, Champion White Pearl, Mammoth Cuban.

Potatoes.—American Wonder, Early Harvest, Henderson's Late Puritan, Early Rose, Wonder of the World, Everett, May Queen Early.

Turnips.—East Lothian, Purple-top Swede, Giant King, Perfection, Jumbo, Mammoth Clyde.

Carrots.—Mammoth White Intermediate, Large White Vosges, Improved Short White, Ontario Champion, Iverson's Champion, Red Early Gem or Guerande.

Mangels.—Gate Post, Giant Yellow Globe, Golden Tankard, Yellow Intermediate, Giant Yellow Half-long, Mammoth Yellow Intermediate.

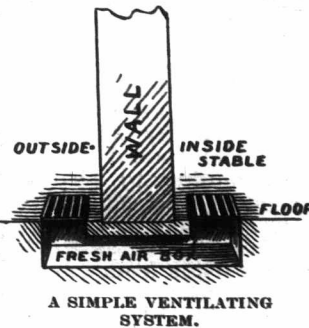
JOHN FIXTER, Foreman
Central Experimental Farm, Ottawa.

Our Scottish Letter, giving reports of the Scotch bull sales and the London Hackney Show, was received too late for this issue, but will be given in our next.

A Simple and Satisfactory Ventilating System.

At the joint meeting of the Live Stock Breeders' Associations, recently held in Winnipeg, Dr. Ruth-erford, M. P., in speaking on "stable hygiene," described briefly the system of ventilation that he had in his veterinary infirmary at Portage la Prairie. It was not his invention, he said, nor was it patented; it was very simple and inexpensive, but the best thing about it was that it worked. After several years' experience he found it did its work in all weathers and under all conditions.

Briefly the system is as follows: In the center of the building is a ventilator shaft about 15 inches in diameter, provided with a damper, which can be opened or closed by rope from the stable floor. At each end of the stable are fresh-air inlets, made by putting a square box or "U" pipe under the wall, as shown by the cut.



An iron grating is placed over the ends of the box. Now, when the atmosphere of the stable becomes warm, the air rises and escapes through the ventilator. If air goes out an equal amount must come in to supply the vacuum thus caused, and so a current of fresh air is drawn in through the fresh-air supply pipes. The whole system is regulated by opening or closing the damper in the ventilator to suit the weather conditions and number of animals in the stable. The supply of fresh air works automatically, coming in only to supply the space of the heated air which has escaped.

Preparing the Seed-bed—Draining the Land—Varieties of Crops.

Perhaps there are but few farmers who have the right kind of implements for all purposes on the farm. For preparing the land for spring crops on fall plowing the spring-tooth harrow or cultivator answers the purpose very well; but not having either, I used the Acme harrow to prepare for sowing. Two years ago we had a very wet seeding, and when I would get a piece worked ready for sowing it would come a heavy rain and beat it solid, so I had either to do the work over again or sow it in poor shape, so I took the tubes off the drill, put on the cultivator teeth, and sowed the oats broadcast at the same time, working it fine with the harrows afterwards. I have followed this course since with good results for oats and barley. Peas require to be sown deeper, and are better sown with the tubes.

It is of great importance to keep a sufficient supply of humus in the soil. This can be done by a rotation, say one or two crops of hay, then break up clover sod and follow with fall wheat, then corn and roots; next year re-seed with oats and barley. You may vary your crops to suit your purpose, but while a clover sod is turned under every four or five years, and the barnyard manure applied, I think there will be an abundance of humus in the soil. By keeping up the fertility of the soil, and the land drained so as to carry off all surplus water, we are masters of the situation as far as our part goes. As far as my experience goes in regard to draining, it pays to do it thoroughly. I prefer putting them three feet deep. If you have enough of fall there is less danger of the tile ever getting displaced, besides they will draw the water farther. We put in a good deal of underdraining two years ago this spring. We had plenty of water, so we could keep the level true, and placed our tile carefully, and it is giving excellent satisfaction.

The man who did the work had done a good deal of ditching, and had a first-class set of tools—one digging spade, a long-handled shovel the right width to follow and lift the loose earth, and a ditching spade, with a blade about eighteen inches long, tapering to about four inches wide at the end. Take out the last spading with this, say twelve or fourteen inches deep. The tool for cleaning out the bottom has quite a long blade, half-round, fastened to a long handle with an angle, so you can stand on top and draw it along until it is full, cleaning the bottom nice and level. For laying the tile, take a round stick about five feet long, large enough at the thick end to stand an inch hole, put in a pin a foot long, stand on top, slip this pin into the tile, lower it into the drain, then another, placing their ends carefully together. In this way you don't need to go into the drain nor step on the tile.

I never did any subsoiling but once. We made a beam and handles, something like a plow, with a bar coming down from the beam with a bottom like a cultivator tooth, but much longer and wider, and followed the other plow, loosening the subsoil several inches deep, but I cannot say that I ever saw any good results from it.

Among the spring grains that give best results in this district (wheat is not grown): Oats—American Banner, and Siberian; Peas—Mummy, Prince Albert, and Golden Vine; Barley—the six-rowed variety is generally grown; Corn—the Improved Leaming and Butler's Dent give the best results for ensilage purposes. In potatoes, the Empire State has been grown very generally, but I am not much struck on it for cooking. The Rural New Yorker is, I think, preferable.

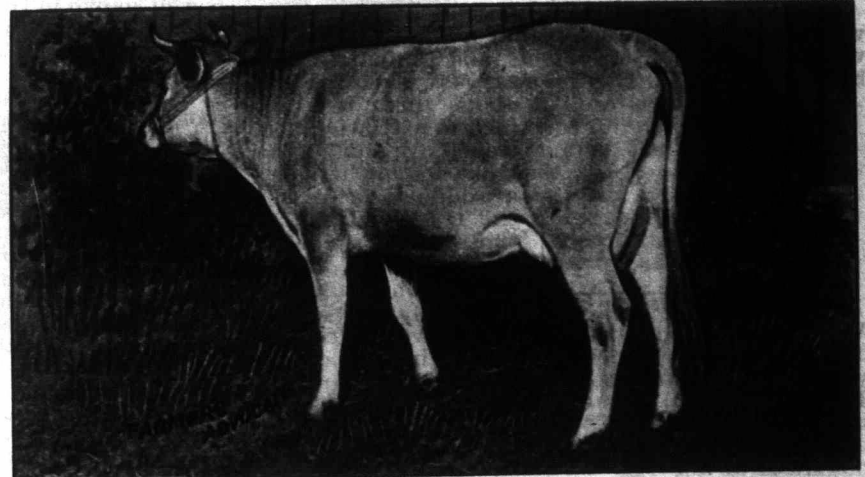
I have not grown many roots for some years, but believe the Danish sugar beet will pay best to grow for feeding cows. It is much better quality, and not liable to flavor the butter. A. B. SCOTT, Middlesex County, Ont.

The Rearing of Speckled Trout.

A sport that a few years ago was generally indulged in wherever a trout stream flowed is now becoming more and more a luxury as the streams are being preserved, protected, and stocked for private patronage. This is, no doubt, felt by some of limited means to be a hardship, but however this may be, trout fishing is going to be less and less a free sport as years advance. While this is true, the recreation will not diminish, but rather increase, as many who have command of suitable waters are systematically protecting and stocking them with spawn and fry from the various hatcheries throughout the country. It will be remembered that the Christmas number of the FARMER'S ADVOCATE pictured Mr. W. E. H. Massey's ponds, which are well stocked and conducted, in connection with a hatchery. At the time of our visit there in November we saw the spawn and milt being extracted and placed in the hatching pans, and it is about now (March 1st) that these fry will be leaving their shells. Another and much more extensive preserve and hatchery is in operation at Credit Forks, by Mr. Chas. Wilmet, former Dominion Fishery Inspector. His ponds now number some fifteen, and in connection with which he has fitted up an extensive club-house for the accommodation of his many patrons, who yearly visit the preserves for really high-class sport. That such an institution is receiving liberal patronage should be an incentive to those who have suitable locations for spring-water ponds to hedge in some of this desirable game by a systematic effort. A pond supplied with springs, and that cannot be overflowed during freshets, is the needful requirement as a field for propagation, and this can be extended as desired.

A Pointer in Round Silo Construction.

SIR,—I see in your issue of Feb. 15th plan for building a round silo. We built one two years ago, the first one in this section of country. There were a great many objections raised. People said the plank would have to be beveled on the edge, and that the hoops would burst, but their prophecies were false. We built ours the same as you have directed, but have found out since that by putting on the top hoop instead of one twelve feet up, or not putting on any but the bottom one, the plank can be set up much easier and a better job done. Fasten the first plank to barn or something solid, then set up the next and toe-nail them together at the top. This can be done by means of a ladder set up on the inside of silo. After three or four planks are set up, put up one plank for a brace on the outside to strengthen; then set up three or four more and put another brace as the ladder is moved around. Then as the planks are continued the first brace may be moved around, as two braces are all that are required. In this plan no nails will be driven through the plank, except the first one. If the top hoop is not put on before commencing it



JERSEY HEIFER, LILY MAY OF BROCKVILLE 124051, A. J. C. C. 22 MONTHS OLD.

PROPERTY OF MRS. E. M. JONES, "BELVEDUE," BROCKVILLE, ONT. TWELVE POUNDS OF BUTTER A WEEK WHEN ONLY TWENTY-THREE MONTHS OLD.

should be put on before the last plank is put in, as it is difficult to get it on after. Tighten top and bottom hoops, then put on the center hoops down close to the ground, where they may be got at handy. Have the nuts on the ends of rods, and the hoops may be slid up the silo by means of light poles until at the proper place; then tighten. It is very inconvenient to get on the upper hoops if the second one is left twelve feet from the ground, as you directed, but by this plan they may be got over with ease.

Grenville Co., Ont.

W. M. McLEAN.