

The amount of these feeds to give depends upon the animal. The ever-watchful eye of the good herdsman quickly detects when a ration has been overdone. The appetite should be kept keen at all times. Plenty of washing and grooming will improve appearances. Warm water and soap are used for washing the animals, following by rinsing with clean water. The animal should be rubbed dry after its bath, and the currycomb and brush used. It pays to use the brush frequently as it adds gloss to the hair and greatly improves the appearance. The horns and hoofs should be sandpapered and then polished. Some may consider this unnecessary, but it must be remembered that appearances count for a good deal in close competition. Exercise and training are also essential. The animal should be taught to behave itself on the halter. It should lead freely and stand quietly in such a position as to hide any physical defects and make the good points more visible. A good deal of strategy is practiced in the show-ring by the old exhibitors. It takes practice and experience to fit and show an animal properly. If the stockman's ambition is to enter the large arena it is advisable for him to commence at the small show and work up. Unless he has something extra choice, he might suffer defeat by starting at the top, which would forever dampen his courage and possibly be the means of spoiling what might otherwise be a good exhibitor.

Another advantage which the stockman gains by exhibiting at the different fairs is the information he obtains by conversation with other exhibitors and by observation. No one can remain in the barns during the show and not pick up some new ideas regarding feeding and breeding which can be put into practical use. All our fairs and exhibitions need more exhibitors, and these must be recruited from the owners of small herds and flocks throughout the country. A day or two before the fair is held is too late to commence training the animal. Start now while there are yet eight to ten weeks in which fitting and training can be done.

Stockmen are becoming used to seeing auction sales bring averages of \$1,000 and over. The peak has not yet been reached, despite the fact that many remarkable sales have been held during the past two years. At Bellows Bros. Shorthorn sale, recently held in Missouri, 73 head made an average of \$2,180. There were only 5 bulls sold and they made an average of \$4,450. The top price of the sale was \$15,600 for Standard Supreme, a roan bull calf which went to the bid of an Illinois breeder. Allan & Sons, Nebraska, made an average \$1,182 on their herd, while Ogden & Son, of Missouri, had an average of \$1,344 on 55 head. J. H. Grist, of Missouri, made an average of over \$1,000 on 45 head.

THE FARM.

Crop Conditions Improving in Eastern Ontario.

Going from place to place through the country, one notes that conditions during the past two or three weeks give much greater promise of a successful year for farmers than appeared possible earlier in the season. The excessive wet weather experienced for so long in the spring has been followed by considerable heat and excellent growing conditions. Had it been possible to get the crops sown and planted at the proper time conditions throughout the country would have been very good indeed. Farmers in Western Ontario have very much to be thankful for, nevertheless, in as much as they are infinitely better off in the way of crop prospects than those in the Eastern Counties. Even here, however, conditions have very much improved since early in June when the wet weather gave place to sunshine and conditions under which it was possible to carry on the much belated work of the farm.

Only a few days ago it was the privilege of a representative of "The Farmer's Advocate" to spend a day each in the Counties of Renfrew, Lanark and Grenville, three of the far eastern counties of the Province. In visiting counties such as these, anyone who is used to the rolling stretches of country in Western Ontario and the general type of farming practiced there, must adjust himself to quite different conditions before forming conclusions as to the agriculture of Eastern Ontario. As mentioned previously in these columns, Eastern Ontario has a great deal of flat land, the value of which would be greatly enhanced by adequate drainage facilities. This lack of drainage has, in fact, a very marked effect upon the quality of the farming practiced. In all three of the counties visited there are some very fine farming sections, where live stock is of a high average quality, where the crops are advanced to a much greater degree than in the remainder of the district, and where the land itself is of a type calculated to permit of profitable farming. One can say, however, without disparagement to these counties as a whole, that these sections are more or less limited in extent, and of the three counties visited perhaps this condition is particularly true of Renfrew. In Renfrew County almost the whole of the Western half of the County is unprofitable farming land. The

country is very rough, dotted with little lakes, woods and rock. In some places settlers have to travel from thirty to forty miles eastward before they come to a railway, and it is, therefore, difficult to expect good farming conditions to be commonly met with in this part of the County. Along the river, however, and for some miles inland, from Arnprior to Eganville and Cobden, the country is much better with certain sections such as those found about Renfrew, Douglas, Northcote and Cobden, which are well able to sustain the reputation of the County.

With few exceptions the principal type of farming followed consists of raising hay and spring grain, the hay being largely sold from the farm and, we judge, considerable quantities of the spring grain likewise. Clover and timothy is the favorite hay crop and we saw very many fields showing excellent promise of a splendid crop. The practice seems to be to use the first crop where the clover is present in the greater proportion for feeding purposes wherever required, while the second year, when the timothy more largely predominates, the crop is sold. Spring wheat is sown very largely but this year there are very many fields even now that are just nicely through the ground. Whether any or all of the fields we saw



Awaiting Shipment to Market.

in this condition were spring wheat is hard to say, but judging that some of them are, and knowing that spring wheat to be most successful must be sown early, one can only imagine the extent of the loss suffered by the farmers of these Eastern counties from the extreme wet weather of early spring. Many fields we saw which had evidently been intended for spring grain, but which are now covered with a weedy growth for lack of opportunity to sow them. As might be expected of land after a wet season, and normally needing drainage, weeds were quite prevalent, and this of itself is a very serious handicap which could at least be partially overcome by rain.

Of live stock, it may be said that Eastern Ontario is as a whole fairly well given over to dairying, and in Renfrew County there are several recognized dairy districts. On the whole, however, there seems to be plenty of room for improvement in live stock, because, bearing in mind the results of farm surveys in the Province of Ontario, one must conclude that many of the farms could be made much more profitable with the addition of further live stock. In fact, riding through the country we noticed two farms side by side which seemed to offer the most apparent evidence that this is true. The first thing that struck us was the unusually fine appearance of one of these farms. The fences were well maintained; the fields seemed clean with crops in an exceptionally advanced stage; the buildings were good, and looking for the reason we thought we found it in an unusual amount of live stock on this farm. Here was a good sized herd of evidently well-bred cattle capable of adding very materially to the fertility of the soil, and of furnishing a revenue of no mean size. On the next farm conditions were the reverse. Judging from the country, the opportunities seemed equally good for the two farms, but live stock seemed very noticeably absent from the second.

The Town of Renfrew is situated in one of the best farming districts and land thereabout sells quite frequently, we are told, at one hundred dollars per acre, or better. We visited the creamery in Renfrew, where 12,000 pounds of butter per week are being made, in addition to about 100 gallons of ice-cream per day. Cream is drawn from a very large area, this creamery even entering into competition with the creameries at Belleville. The largest patron sends the equivalent of about 450 pounds of milk per day, or about 400 pounds of 30 per cent cream per week. This creamery is one of the better known creameries in Eastern Ontario, and is steadily building up a big business although the factory is not yet working at full capacity. The total make per year is about one million and a quarter pounds of butter.

Passing to Lanark County, we found conditions somewhat better, due in a large measure to what seemed to be greater numbers of live stock and a greater percentage of fertile, rolling land. It was about Pakenham, in Lanark County, that we saw the first field of hay set up, with one or two mowers working in other fields. Going from Almonte to Perth, we passed over a splendid system of good roads, lined for the most part by farms of a good average character. Clover and hay, among which crops alike seemed to be unusually prominent this year, were universally good, while spring grain and corn were less than seventy-five per cent as far advanced as in Western Ontario. In many cases the percentage would be as low as fifty.

Grenville County, in which is located the Kemptville Agricultural School, now being established by the Ontario Government, is a County of rather varied soil containing both sandy and clay-loam areas well intermixed. Merrickville, in this County, is a well and favorably known dairy district, boasting several promi-

ent breeders of pure-bred cattle. One of the best stretches of farming country in the County lies along the river road, between Kemptville and Merrickville, just across the river from the County of Carleton. The day, however, was very rainy and in lieu of a wider excursion than had been possible on previous visits, we sought refuge from the weather at the Kemptville Agricultural School, where, under the practical and enthusiastic guidance of W. J. Bell, Superintendent, a real start has been made in the building up of a valuable educational institution for the young farmers of Eastern Ontario. Live stock has been made a feature of the farm, and in horses, dairy cattle, sheep and swine very creditable beginnings have been made toward the upbuilding of worthy flocks and herds for the institution.

Sweet clover is being tried as a pasture crop, and seems to be giving the best of satisfaction. An experiment is being tried with part of a field cut for hay to see whether a second crop can be induced to grow later in the season. From an experience gained last year at Weldwood Farm, however, we would be led to think this highly improbable. Three varieties of oats are being tested out in sizable plots side by side, the varieties being O. A. C. 72, Banner and Alaska. The season, however, is too early to judge the results, although the Alaska has shot up two or three inches above the other two varieties. A twenty-five-acre sheep pasture of the roughest kind, and of which there are large acreages scattered throughout Eastern Ontario, is being experimented with. The ground is too rough to hold the plow and is almost completely covered with King Devil, a very persistent and bad weed. Mr. Bell is trying to seed this ground to cultivated grasses after merely disking it up, but as yet the seeding is just showing through the ground. In the meantime, however, the sheep are being allowed to run over both the new seeding and the old wild grass. The hope is that eventually the weeds can be crowded out and replaced with a permanent useful pasture.

Weeds, according to Mr. Bell, are growing very luxuriantly this year and because of a scarcity of labor which affects Government institutions as well as any other, they are very difficult to keep down. Noticing an unusual number of thistles in some of the spring grains, we enquired why they should be so prevalent on a Government institution, and received in reply some very pointed remarks about the advisability of purchasing manures from towns and cities to use on the farm. "Last year," said Mr. Bell, "there were very few thistles on the farm, hardly any in fact, but, due to the wet weather this spring, and because of the fact that the live stock is not yet up to the quantity necessary to furnish all the manure required, the necessary amount was drawn from the town, with the result that manure full of weeds was secured and this source of manure had to be cut off." Mr. Bell is a great advocate of clover, and believes that plenty of manure combined with a short rotation will make it possible to grow clover on almost any soil. All of the clover fields on the farm are in excellent condition and are, we were informed, the result of good applications of manure to well-cultivated hoed crops in 1917.

AUTOMOBILES, FARM MACHINERY AND FARM MOTORS.

Spark Plug Troubles.

A large percentage of high tension ignition troubles are due to short circuits in the spark plug which are generally caused by deposits on the surface of the plug insulation. An over-rich mixture in the cylinder, or an excess of lubricating oil will deposit a coating of carbon on the insulation of the plug and then the trouble will begin, misfiring being the first symptom and a dead cylinder the final result, if the deposit is not removed. When engine misfires examine the plugs before making any adjustments on the ignition apparatus. Soot or carbonized oil is a good conductor for high tension current, and usually offers less resistance than the spark gap. Electricity like many other things follows the path of least resistance so it takes a short cut through the soot to ground without jumping the gap and causing a spark. Soot and oil may be removed from a spark plug by means of gasoline and a tooth brush. To thoroughly clean a plug, unscrew the bushing and remove center electrode and core from the metal shell. This will give access to the insulation, which should be scrubbed with gasoline thoroughly over its entire surface. While the plug is apart examine the porcelain carefully for cracks and if any are found, no matter how small, the core should be thrown away and another substituted for it. A cracked porcelain will always be a source of trouble, as carbon will be deposited continually in the crack, the rough surface of which forms an ideal lodging place for the soot. Soot does not deposit readily on a dead smooth surface.

To test a plug for short circuit remove it from the cylinder, reconnect the wire and lay the plug on some bright metal part of the engine in such a way that only the threaded sleeve makes contact with the engine frame. (Do not allow the binding screw or wire to touch the engine.) Close the battery switch, make sure that the coil is operating, and see if sparks are passing between the electrodes of the plug. If no sparks appear at the gap or if the sparks that do appear are thin and weak, open battery switch and disconnect the wire from the plug. Hold the end of the high tension wire one-quarter of an inch from the engine frame and close the switch. If a heavy discharge of bright sparks occurs between the end of the wire and the frame, the trouble will be found in the plug, clean it or replace broken

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