

THE PREPARATION OF LAND FOR FALL WHEAT.

Now that the fall wheat harvest is over it is time to begin preparing for next year's crop. In order to secure a proper seed-bed, early preparation is necessary. In a larger measure than many farmers seem willing to admit the character of the seed bed will control the yield of wheat. If the wheat is sown on a rough, unprepared seed-bed a large yield need not be expected unless the other conditions are extremely favorable; and, even if other conditions are very favorable, there will be a larger yield when the land is in a perfect state of cultivation before the wheat is sown. It is better to sow a smaller area with the land well prepared than a large one with the land unprepared.

According to reports received from a number of farmers last year a summary of which was published in *FARMING* for August, 1897, there are several methods practised in the province of preparing land for fall wheat, and we cannot do better here than repeat the information gathered then on this particular point.

According to the replies received, the modes of cultivation usually practised are (1) to plow the land in the fallow, sow peas in the spring, and after the peas are harvested plow and cultivate well, and sow wheat about the first of September; (2) to plow under clover sod with or without manure, and, where no manure is used, to plow under the second crop of clover; (3) to sow after corn or roots; and (4) to summer fallow.

Sowing wheat after peas preceded by clover seems to be largely the practice, and which has given very good results, providing everything else is done in the proper way. There is no use in advocating a certain line of procedure if the work is not half done. It makes no difference what the method advocated may be, good results cannot be obtained unless the conditions involved are all fulfilled. And it is just here where many wheat-growers fail, and why one farmer will get good results by following a certain line of practice, while his neighbor who adopts the same methods invariably fails. Every detail of the plan must be carried out to the letter or the best results cannot be obtained.

During the past few years the system of shallow cultivation has been practised at the Ontario Agricultural College for fall wheat and, for that matter, every kind of grain. Mr. Rennie, the farm superintendent, believes in this system thoroughly, and the results obtained on the College Farm in wheat growing bears him out. This year a magnificent crop of wheat was grown by this method of cultivation, which tends to conserve the nourishment in the soil as near the surface as possible and within reach of the plants.

In brief, Mr. Rennie's usual plan is to sow fall wheat after peas. The peas are grown on sod land, plowed thoroughly, harrowed, and cultivated the previous fall. In the spring, before sowing, coarse barnyard manure is applied at the rate of fifteen loads per acre, and mixed with the surface soil by shallow gang-plowing, harrowing, and cultivating. After the peas are harvested, the land receives surface cultivation by gang plowing, harrowing, and cultivating at intervals with a broad share cultivator. Before sowing the wheat the soil is loosened to a

depth of six or seven inches with a grubber. To do this work thoroughly three horses are required. On heavy clay land it may be necessary to use a sub-soil plow. In no case is the decomposed vegetable matter plowed under with the ordinary plow, and covered with sub-soil which is unavailable for plant food. Fall wheat at the Guelph Farm is usually sown the last week in August, at the rate of less than one and a-half bushels per acre. In the spring, as soon as the land is dry, the crust is broken by a horse weeder or harrow.

The essentials then of successful preparation for fall wheat are a method of crop rotation, manuring and cultivation that will tend to conserve and increase the plant food in the soil and the production of a perfect seed-bed, in order that the plant may have the very best opportunity for growth possible. With these in view every farmer in this province ought to be able to grow fall wheat successfully. The work of preparing the land will take time, but it will pay in the long run and be the means of building up and improving the soil.

EXHIBITION POINTERS FOR CHEESE AND BUTTER MAKERS.

During the month of August dairy products are prepared for the fall exhibitions. With dairy products more perhaps than with any other product no good results can be obtained by chance. In order to obtain a quality of product that will be a credit to his workmanship when placed on exhibition, the cheese and butter-maker must exercise the greatest skill, and use his very best judgment in getting ready his exhibit. While it may not be advisable to adopt any other than the usual practice in making exhibition cheese or butter, it is well to give a little more attention to all the little details in the process of manufacturing. August is not the easiest month of the year in which to make either cheese or butter because of the difficulty of getting the milk delivered at the factory in prime condition. It would be advisable then to notify the patrons to take special care of the milk for a few days. If they take any pride in the reputation of their factory they will not object; and it might be well to have them believe that it will take two or three weeks to get the show cheese or butter made so that they will get into the way of giving this extra care to the milk, and be induced to continue the treatment after the shows are over.

When good milk has been secured, then the responsibility of making a good product devolves wholly upon the maker. If he fails to make a quality of butter and cheese that will win a prize, then he will have to admit that the skill and intelligence which he has put into his work is of a lower grade than that of his brother maker who has won the prize. Everybody, however, cannot win the prize, and, if success is not attained after your very best efforts have been put forth, do not be discouraged, but try again the next season. The special effort to do your very best will be helpful in your every-day work, and you will be a better cheese or butter-maker from having put your skill to the test.

At the leading exhibitions the score

card containing the points made by the exhibitor in the dairy products section is always forwarded to his address after the show. This is a valuable education in itself, and even if a cash prize is not secured it will pay every butter and cheese-maker to make an exhibit and find out in what particular his cheese or butter is lacking. To get the full benefit of this the maker should keep a detailed account of every stage in the process of making his show cheese—and for that matter the maker should keep a report of the operations of each day's make through out the season—and then he will be able to point to the particular parts of his method of making, which have given good results, and which have given bad results.

There can be no doubt about it, that in addition to the value to the trade in a general way in making a good display at the leading fairs, the making of either butter or cheese for exhibition purposes is an excellent dairy education and training for every maker. Therefore, we would advise every cheese and butter-maker to make a display of his goods at some leading fall fair. It will help your factory, bring your name before the dairy public, and will supply an opportunity for bringing out what is best in you.

THE EXPORT FRUIT TRADE.

The following letter, signed by Prof. Robertson, Agricultural and Dairy Commissioner, has been sent by the Department of Agriculture to the several steamship companies sailing from Montreal and Halifax, and will be of interest to fruit-growers generally:

Last season a lot of early varieties of apples was shipped from Western Ontario to Great Britain. About one-half of the quantity was forwarded in cold storage, and the remainder was sent as ordinary cargo.

Those sent in cold storage were reported to have arrived all in good condition, and to have been sold at an average price of 18s. per barrel.

Those sent as ordinary cargo were reported to have been sold at an average price of 8s. per barrel, and 63 per cent. were reported to have been landed in a "wet" or "slack" condition.

For the safe carriage of early varieties of apples, it seems necessary that they should be carried at a temperature at or below 40° Fahr.

On examining the returns from twenty-nine cargoes of apples last year, I find that the same varieties of apples were sold at the same time at prices showing as much as 8s. 6.1. per barrel of a difference between the apples which were landed in good condition and the apples which were reported as being landed in a "wet" or "slack" condition.

For the safe carriage of late fall and winter apples, it seems desirable that they should be so carried that they may be thoroughly ventilated, so that the heat produced by the fruit itself will be carried off.

When apples or other fruits are kept at a temperature above 40° Fahr. they continue to ripen or go towards decay. That process generates heat. The increased temperature thus caused makes the fruit ripen still faster.

For the carriage of apples by your Line, could you arrange to have the hold or holds for apples thoroughly ventilated by an air duct leading to the bottom of the hold, and by the use of an electric fan or fans to suck the warm air from the top?

During any particular warm weather on the voyage, the ventilating ducts might be used only during the evenings or nights, when the air was cool.

Our department is calling the attention of growers and shippers of apples to the desirability of packing the fruit in barrels or boxes so constructed as to permit of ventilation through each barrel or box, and packed tight enough to hold each fruit firmly in place.

SUMMER POULTRY NOTES

If any of the birds pull feathers, separate them or the habit will spread.

Coops of young chickens placed beside the cornfield in mid season will do no harm to the crop, and the corn will shade them.

If milk or other food is feed from a pan the top should be covered with very coarse wire netting to keep the hens from getting into it.

Don't leave food in the pen from one meal to another, else they will get sick of it and not eat as much as they need to supply egg material.

Refuse crackers can be bought quite cheaply from the cracker factories. These make a good cheap chicken food for a change.

A good feed for young chicks is a cooked cake made of shorts, Indian meal and beef scraps, wet up and baked fairly dry, but not hard, in the oven.

Dig up the run often. It will sweeten the ground and help keep the hens busy. With a large run a good plan is to divide it into halves and cultivate one section every year.

Unless the ground is mellow in the chicken run, a dust bath should be provided even in the summer. The hens will take care of the body lice themselves where there is dust.

A good summer morning feed is equal parts of cornmeal and shorts. It is better if fed with some beef scraps and boiled potatoes or refuse vegetables. Mix with hot water and let it cool.—*Mass. Ploughman*.

SELLING SHEEP YOUNG.

We have frequently advocated selling sheep which are intended for market as early in life as possible. Under present conditions of the live stock industry the earlier any animal goes to the market the more profitable it may be made to the producer. In the sheep industry this involves two or three contingencies. If a lamb is to be sent to the spring lamb market it is sent quite young and it is useless to castrate it if it is a ram lamb, for it is soon in the market, and no damage can be done by reason of its being a ram. This can only be done where the spring lamb market is available. If the lamb is to be kept until it weighs about 100 pounds it will pay to castrate at the proper age.

A two-year-old wether is not as profitable as a ten months-old lamb. A carefully bred lamb of some of the mutton breeds, if well cared for, will weigh close to 100 pounds at the age of ten months. At this age it will bring the best price it will ever command, and it has cost, for the amount of mutton produced, a minimum price. Some breeders of sheep will say that a lamb cannot be made to weigh 100 pounds at ten months old, and that it is only the pampered lambs that can be made to attain any such weights. On this please let us disabuse your minds, for we know of quite a number of shepherds who are doing this very thing. If one man can do it another can under similar conditions and management. The present writer now has lambs that dropped in the middle of February that will come very close to the weight we have given as that which