## FARMING

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## Get Ready the Harvesting Machinery

Just now, when there is a little slack time on the farm, is a good opportunity to get the harvesting machinery ready. Very often a lot of valuable time is wasted and the crop injured because the mower or binder is not ready to go to work with when haying and harvesting arrive. This can be avoided by having all the machinery and harvesting implements put in thorough repair a few weeks before the crop is ready to be cut. By doing this necessary piece of work a few weeks ahead of time, if any parts are wanting or bolts missing they can easily be replaced before the implements are ready for use.

If this work is left till the last moment, and it becomes necessary to send away for a part of a mower or binder, there may be a delay in its arrival that may mean a serious loss of both time and money. So we repeat, go over carefully the mower, binder, and every implement that will be required to take off the hay and gran crop. Each nut and bolt, the cutting knives and every part of the machine should be examined and gone over carefully so as to make sure that everything will be ready and that no unnecessary breakdowns occur during the harvest.

Repairing the farm machinery and keeping it in order is just as important and as necessary as any other part of the farm duties, and can often be done on a wet day when outside work is impossible. Not only will this save time and money in getting the having or harvesting done, but it will make the machinery for doing the work last longer. If every farm machine were taken proper care of the farmer would be money in pocket in not having to buy new machines so often.

## Maintaining Soil Fertility Dairy, Live Stock and Grain Farming Compared

With the development of the new milk trade in Great Britain has come an increased interest as to the effect selling the whole milk off the farm has upon the fertility of the land. Professor McConnell, in a recent issue of *The Dairy*, strongly advises British dairy farmers where possible to take up the new milk trade in preference to cheese or butter-making, for the reason that the work of the dairy is reduced to a minimum, while the cash returns are immediate. Butter and cheese-making require a certain amount of skilled labor which is more expensive than that required to handle the milk. He might have added, however, that in the new milk trade the British dairy farmer will not have as much foreign con-peution as in the cheese and butter trade.

Professor McConnell goes on to show that, compared with other systems of farming, dairying generally, or milk selling in particular, is not anything like so exhausting. In this connection we quote as follows :

"It is the phosphates only that are carried away; for on pasture land nitrogenous material renovates itself, or at any rate is collected by the leguminous plants that grow in it, and the other materials removed by crop or stock may be left out of account because the soil is never likely to become exhausted of these. Taking the phosphates only, I have prepared the following table, based on the Rothamsted figures, to show the comparative exhaustion of phosphates caused by the different systems of farming :

PHOSPHORIC ACID REMOVED OFF THE FARM IN VARIOUS

PRODUCIS.					
Per acre per annum.					
Wheat	_30 b	ushel	5	14.2	
Barley	40	**	• • • • • • • • • • • • • • • • • • • •	1Ġ.O	
Oats	45	"	••••••	13.0	
Beans	30	"	••••••••	22.8	
Hay	-1½	tons		12.3	
Clover	2	**		24.9	
Turnips	17	• •	· · · · · · · · · · · · · · · · · · ·	22.4	
Swedes	14	44	···· ····	16.9	
Mangels	22			34.0	
Potatoes	6	"		21.5	
Store ox, 1,300 lbs.					
Milk cow (500 gallons of milk) and calf					
Sheep, 150 lbs					

" In the above table the straw, tops, etc., are left out of account. A store ox is taken at two years old, 1,300 lbs. live weight, and is allowed to eat the produce of five acres in two years. A cow is allowed the produce of three acres per annum, and the calf at birth to contain three pounds of phosphoric acid, and sheep to weigh 150 lbs. live weight, and to graze three to the acre. In the ordinary run of farming the three kinds of stock will about equal one another in the phosphoric acid they require. It will therefore be seen that arable farming, where the crops are more or less sold off, really reduces the land in phosphoric acid infinitely more than does the sale of milk, and I would like particu-larly to call the attention of readers to this state of matters. Dairy farming does, of course, reduce the store of phosphates in the soil, but it is done at such a slow rate that a very small allowance of bone meal or Thomas-phosphate, applied at long intervals, will make up for the same. I have elsewhere called attention to the fact that the reduction of the Cheshire pastures took seven centuries to accomplish, and that of the Ayrshire pastures two centuries, and that a comparatively small dressing of bones in both cases made them as good as ever."

Another point brought out in the above comparison is that selling fat cattle and sheep are not nearly so exhaustive on the soil as removing the raw products, such as grain, hay, roots, etc. This is something Canadian farmers should make a note of. Not only does wheat continue low in price, but its cultivation and the subsequent removal of the grain from the farm is very exhaustive to the soil. To grow grain successfully, more particularly in the older parts of Canada, the farmer must give a great deal more attention to supplying plant food in the soil than in raising live stock or in dairy farming. It may be that the growing of grain continually for many years and reducing the supply of soil fertility is responsible for so much killing out of winter wheat this spring. At any rate it seems re sonable to suppose that a fall wheat plant grown from strong and vigorous seed and on soil where it has a sufficient supply of plant food in right proportion, that is, a balanced ration, would be able to withstand unfavorable conditions of climate, etc., better than a plant grown on poor soil lacking in plant food. But be this as it may, the Rothamsted experiments show that it is very much easier to maintain and increase the fertility of the land by stock-raising and dairying than any other system of farming. By supplying small quantities of phosphates to take the place of those removed in the milk or in selling live stock, an equilibrium in soil fertility can be easily maintained.