

duction possibly as any she gets while in lactation. There are possibly some people that think large milk records are made by cramming the cow full of feed. Many inexperienced feeders fall down right there. We had better consider the results of cramming feed into a cow. It seems to work all right to cram feed into a chicken. But a chicken has a gizzard and a cow has a stomach. Her stomach was intended to furnish nourishment for herself and, for a period, for her calf. If we want her, therefore, to do this and also give milk for our "kids," some for "Billy" and yes, and "Nanny" too, in fact, for all humanity, for all clamor for the product of the cow, then it is up to us to aid her all we can. We must supply that stomach with good succulent food, and surround her with comfort and other things quite as necessary to her as food.

We must be careful not to feed her too much. Heavy work gives her a keen appetite. And a cow would eat, for two or three days, much more than she could handle. This point is very important. I can bring it home in no better way than this. As it is near Xmas, and I hope that all will have a good full feed that day, it is quite likely that with some of us it may be necessary to "unbutton" slightly. One day will not do us much harm, but follow that up for two or three days and, well, the feeling will tell you more than can my words. Possibly you would need a doctor, and you are lucky if you do not need the undertaker. Feeding of this sort is about the same with the cow.

Co-operative Forestry*

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The Forestry Department has sent out about 400,000 plants to farmers for making plantations during this last season. This material was chiefly composed of White Pine, Scotch Pine, Jack Pine and Black Locust; these trees being best adapted to waste land planting. In addition to material sent out for waste land planting the Department has supplied Public Schools with collections of small forest trees to be used in the school gardens or places otherwise provided on the school grounds.

Collections this year were composed of the following species: White Pine, Scotch Pine, Norway Spruce, Arbor Vitae, White Ash, Black Walnut, Butternut and Whitewood. This material is not large enough for final planting about the grounds but is placed in nursery lines in a plot on the school grounds. It is expected that the children will be interested and educated in the care of these trees and later may take them home or plant them about the school grounds.

At a meeting of this Union held in 1903 there was a resolution adopted, two classes of which I would like to discuss. The Union at this time urged upon the government the necessity:

"For collecting accurate information from the municipal authorities as to the amount of lands unfit for agriculture in the settled townships of Ontario."

"For undertaking the practical reforestation of areas sufficiently large to afford forest conditions."

At the last session of the legislature we find a vote for waste land reclamation which marks the beginning of a policy to fulfill the needs outlined in the above clauses. During the last two years a study has been made of conditions in the older townships. A report dealing with this will be published by the government.

We have in Ontario two classes of lands which it is advisable to manage for forest crops. First the small isolated patches of non-agricultural soils to be found throughout otherwise good farm lands. These are sand, gravel or rock formations, steep hillsides, etc. The reclamation of these worthless soils must depend upon local initiative, although

* Read before the Ontario Agricultural and Experimental Union.

Government assistance of an educational nature is advisable. The Department of Agriculture's co-operative distribution of planting material aims to do this. Second, are those large, contiguous areas of non-agricultural soils which can only be reclaimed through state management.

AREAS OF WASTE LAND

We have in old, agricultural Ontario, some few hundred square miles of these lands, some of which have been roughly surveyed and are as follows:

South Norfolk.....	10,000 acres
Lambton.....	40,000 acres
Simcoe.....	60,000 acres
Durham.....	6,000 acres
Northumberland.....	8,000 acres

These lands are all pure sand formations and have all had much the same history. The lumberman in early days look out the good timber. Some sections have been cleared for farming purposes and have since been abandoned. In many cases the land is still being farmed, or rather an attempt is being made to farm them. This fact presents one of the worst features of the waste land problem.

Through the vote given by the last legislature reclamation work has been commenced in Norfolk County so that I will describe conditions there more in detail. The first land was purchased in South Walsingham where a block of about

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3,000 acres exists. The land purchased lies at the border of the area and is an abandoned farm. It left the crown in 1804 and comes back to it in 1908, a period of over 100 years. It has all been cleared with the exception of about 15 acres. This 15 acre is representative of the entire area. It is covered with Scrub Oak, and scattered scrubby White Pine. If protected from fire this would soon fill with White Pine. A large proportion of these lands in Norfolk County and other counties do not present so much a problem of reforestation or replanting as of protection from ground fires through proper management. The scattered old scrub or defective pine which the lumbermen left are always endeavoring to reproduce, but periodical ground fires sweep through and kill the young pines.

This first land purchased has enough soil suitable for nursery work so that the Government nurseries have been moved to this district. They can be managed there at less cost and can supply material for the co-operative work as well as for local needs.

THE ABANDONED FARMS

This farm is one of many which are gradually being abandoned and I give you the following to show the reason. There are two supposed sources of revenue on these farms—growing rye and buckwheat. I will illustrate with the rye crop, which is probably the better investment.

Full rye produces on this land an average of ten bus. to the acre which at 75c would be \$7.50. Cost of preparing one acre of land.

(Team and man figured at \$2.50 a day).

Plowing (man and team plows about 2 acres a day).....	\$1.35
Harrow and Roll (man and team H. & R. about 10 acres a day).....	.50
Seeding (man and team seed about 10 acres a day).....	.10
Seed (1½ bus. an acre at 75c).....	1.12
Cutting.....	.75
Threshing (2c a bush—10 bus.).....	2.00
Balance.....	\$3.78

This shows an annual revenue of \$3.78 an acre but does not take into consideration taxes, etc., which should be charged against the crop.

The policy of putting such lands under forest management has many arguments in its favor. It will assist in insuring a wood supply for the future; protect the headwaters of streams and insure breeding grounds for wild game. These areas being properly managed for forestry purposes will be splendid object lessons to visitors from surrounding communities.

Besides the economic aspect there is one of a moral character which appeals even more strongly as one studies the local conditions. The story of the abandoned farm with its struggles if written would not be a mere fanciful sketch. As one writer has said, "It is a story of grim tragedy, written in varying forms as to detail in blood, and sweat, and tears, in Clarke, in Thorah, in Innisfil, and in a hundred townships of what we now call Older Ontario."

A Method Unfair To Many Farmers

"Now that the patrons of factories have commenced the holding of their annual factory meetings," said Chief Dairy Instructor G. G. Publow, recently, at the district dairy meeting held at Belleville, Ont., "we are again hearing the question asked on all sides, 'how much milk did you require for a pound of cheese.' Most patrons seem to think that if the percentage of fat is high the maker must be to blame. In some cases he may often be so but generally the percentage depends mainly on the fat content of the milk sent to the factories by the farmers themselves.

"Last winter at the Kingston Dairy School, we conducted a number of experiments on this point. Three farmers each let us have 225 lbs. of milk. The milk of one patron tested 3.0 per cent. and produced 27 lbs. of cheese, which at 12 cents a lb. was worth \$3.24. The milk of the second patron tested 3.0 per cent. and produced 29½ lbs. of cheese, worth \$3.54. The milk of the third patron tested 3.8 per cent. and yielded 35½ lbs. of cheese, worth \$4.26. In the first case it required 12.03 lbs. of milk to produce a pound of cheese, in the second case 11.61 lbs. and, in the third case only 9.15 per cent. That shows that the milk of one patron was worth \$1.02 more than the milk of one of the other patrons. Yet, when farmers send their milk to a factory where it is paid for by weight and not by test, those farmers whose milk tests low are being paid too much, while those patrons whose milk tests high are not paid enough.

"This year we have prosecuted over 100 patrons for watering their milk, and the public believes that we have done right to prosecute them. On the other hand there are patrons who send milk to the factory that tests four per cent. on the average, while the milk sent to the same factories by other men sometimes tests as low as three per cent. and even less. Still, vary little is being done in most factories to see that patrons are paid for their milk according to its butter fat test, as it should be if the patrons are to receive a fair price for their milk."