like any other line of life, will never respond to any transitory methods. It requires a clearness of vision, a permanency of effort, and a steadfastness of purpose which brooks no disappointment, and which will discover the true nature of the occupation in the working out of its details.

Witness the practice in recent years of the conversion of so much of our splendid agricultural lands into pasturage, and the ruinous results, financially, which have flowed therefrom—all the result of farmers thinking that in this way they might be able to make money by turning farming into a purely speculative business, and without the resort to manual labor. Had such a system of all-pasturage resulted profitably, it would have been one of the worst experiences which could have affected Ontario agriculture. On the other hand, it stands to-day as a striking object-lesson of the utter folly of departing from any sound and reasonable system of operation which will tend to make the agriculture of this country permanent and profitable.

In such a system as I have outlined, the farmer must so direct his business as to economize labor at every turn. He must adopt Western ideas, do away with needless fencing, enlarge his fields, and employ additional equine labor. In this regard, the single-furrow plow, three-section harrow, ten-hoe seed drill, and five-foot mower and binder, must all largely become a thing of the past. In using additional horses, one hand may thus be enabled to do almost the work of two; and, underlying all, the management must be such that we take time by the forelock and lead our work by doing everything in the proper season. In short, let the aim in our operations be to adorn the pursuit of agriculture in a material sense, the first, most necessary, and useful, as it is the most dignified occupation of man, and it rests in the farmer's hands to show that it is such.

THOS. McMILLAN.

Huron Co., Ont.

GROWING CORN IN WESTERN ONTARIO.

Editor "The Farmer's Advocate":

Corn is one of America's greatest crops. Each year sees an increase in the area grown. In Ontario it is steadily surpassing wheat. In this district farmers are growing more corn each year, and are giving it better cultivation. The farmer who raises one hundred bushels of corn per acre may consider he has a good crop, although nothing phenomenal. Here, corn frequently yields one hundred bushels per acre, but never without proper cultivation. Corn, perhaps, requires more work than wheat, oats or barley, but there is ample profit for the extra work bestowed upon it. I will describe the method we believe to be the best to produce an abundant crop.

As soon after harvest as possible, give the ground which you intend to plant in corn the succeeding year a shallow gang-plowing, then harrow with drag-harrows and roll. The object of rolling is to firm the ground for manuring and fall plowing. Next, give a light coating of manure, and leave until fall plowing commences. This working is of great aid in producing a good corn crop. Some years, when we have found it impossible to give the ground this working, owing to threshing and other work which could not be delayed, the next crop would be full ten per cent. below the average, and we are convinced that this is the cause.

As soon as fall plowing has commenced, plow this ground first, in case that wet weather sets in, and, this ground having been previously plowed, will not be as firm as the other ground.

Through the winter give another light covering of manure; the usual way is to take it fresh from the stable as it accumulates.

When the ground dries up in the spring, give the ground a thorough harrowing with the drag-harrows. This is important, because it destroys the tender weeds which have just commenced to grow; then leave till after grain-seeding is over, and disk, then harrow again. In about a week cultivate with a spring-tooth cultivator; repeat once a week till the time for planting has arrived. This cultivating not only destroys the weeds and grass, but makes the ground more mellow for planting. The usual time for planting here is about the 24th of May; sometimes a few days earlier or later, as the season may be. The farmer must use his own judgment when the ground is fit for planting.

When the corn has been planted a week, harrow carefully. This harrowing removes the weeds and loosens the ground, which is of great advantage, especially if the ground is inclined to bake. When the corn is two inches high, harrow again; light iron harrows are preferable for this harrowing, but if they are unobtainable, heavier harrows may be used with no harmful result. We have a set of drag harrows with adjustable lever, and the teeth may be set forward or back, as circumstances require. When the teeth are set slightly back, a better harrow for this harrowing would be hard to find. A week after this, cultivate with a two-horse cultivator. Use a steady team, and cultivate thoroughly. Go over the field with the hand hoe, uncovering any hills that have been covered and hoeing those that have been missed. In a week repeat cultivating and hoeing. By this time haying will be started, and the corn must be left till it is finished. Between haying and harvesting, cultivate with a one-horse cultivator and hand hoe carefully, removing all weeds and grass, for this is the last work the field will receive.

Some may think this is too much work to put on corn, but it is not, and any farmer who has tried this way will say the same. By this method, with good land and favorable weather, one can raise one hundred bushels per acre, without a doubt.

We have raised the Yellow Dent variety for two years, and believe it to be the best corn that has ever been introduced into this district. It is very popular both for silo-filling and as a grain crop.

BERT SMITH.

Lambton Co., Ont.

FARM FORESTRY IN ONTARIO.

Paper by Prof. E. J. Zavitz, before the Ontario Agricultural and Experimental Union.

Owing to the long time element in growing and harvesting a forest crop, an annual report on this subject may bring forth little of new interest. It may be possible, within a decade, to entirely change the type of hog in the Province of Ontario, but the improvement of forest conditions must naturally take a longer period. We find, even in Germany, where scientific forestry has been practiced for nearly two hundred years, that to-day the private woodland is often badly managed. I venture to state that in Ontario the percentage of badly-managed wood-lots is not so much greater than the percentage of mismanaged farms.

This last season has been especially severe on forest plantations. A late season, with strong, cold winds, followed by an extremely dry summer, will probably result in some failures. On the poorer classes of soil, the Scotch Pine and Black Locust have shown the best results. About two hundred thousand plants have been sent out this last spring, composed chiefly of White Pine, Scotch Pine, Jack Pine, Norway Spruce, and Black Locust. The department is prepared to make planting plans and furnish planting material free to parties having waste lands, the applicant paying cost of transportation of trees and doing the actual work of planting. For planting in spring of 1909, applications should be in before 15th of June, 1908. In this way, officers of the Department may be able to organize their trips into each district.

There has been, in the last ten years, a large decrease in the acreage of woodland in the old part of the Province. The following table has been compiled from the report of the Bureau of Industries, and does not include the newer districts opened for settlement in Algoma and Nipissing:

	Sq. Miles of Land Assessed.	Sq. Miles of Cleared Land.	Sq. Miles of Woodland.	Sq. Miles of Slashland.	Sq. Miles of Swamp and Waste.
1894 ...	34788	19089	11348		4349
1905....	36288	21620	7634	2779	4257

The indications are that an increasing number of woodland owners are giving this question some consideration, but the proportion of woodland will likely decrease much further. Wood prices are such that there is a great inducement to over cut. Elm, soft maple and other one-time inferior trees to-day bring a good price at the local mills, and this price is gradually increasing.

In order to keep up the proportion of woodland in Southern Ontario, we have the opportunity of replanting waste lands. We have in Ontario two forms of waste land: The small areas on the individual farm which are untillable, and may be in the form of steep hillsides, sandy or gravelly ridges, etc. We also have throughout older Ontario large areas of waste land, ranging from 1,000 acres to 60 square miles, which are not being farmed or improved in any way. In some cases this land has been cleared and cultivated, but abandoned. There is in the south-western peninsula of Ontario—that area lying west of a line from Toronto to Lake Simcoe—about two hundred square miles of this second class of waste land. The waste land in small parcels on the farms of Ontario can only be improved by the individual owners, although the state can assist and co-operate, as is being done.

This other problem of reforesting the larger areas is confronting us. Why should we worry about it, and what can we do? Reforesting these lands would give protection to neighboring lands, and to small streams having their sources therein. It should also give a revenue to the local municipality, where at present such lands are a burden in many ways.

Forestry management of these lands would supply work and raw material for local people and industries. Such management would also protect the ignorant settler from being persuaded into a farming experiment on such land. Lastly, it can be shown that forestry on such soils is a good investment, especially for the state.

To give some idea of forest planting as an investment, the following may be of interest:

One of the most promising trees for waste and sand types of soil is the Black Locust. It seems to withstand adverse conditions, and should be of special interest for waste-land propositions. Very extensive work has been done in Hungary with this tree, where it is estimated they have about 200,600 acres of pure locust forest in the form of plantations. The Agricultural Department encourages tree-planting, and sends out every year from five to six million locust seedlings. This planting is done on soils which are absolutely worthless for agriculture, and the following table gives results from some of the earlier plantations:

STAND OF SEEDLING LOCUST ON SAMPLE PLOTS OF ONE ACRE.

Plot.	Soil Quality.	Age Years.	Number of Trees.	Average Diameter Breasthigh Inches.	Average Height Feet.
a	Good	30	558	5.3	63
b	Best	31	512	7.5	60
c	Fair	30	594	4.3	38
d	Poor	30	288	3.0	25

STAND OF SECOND-GROWTH LOCUST ON SAMPLE PLOTS OF ONE ACRE.

Plot.	Soil Quality.	Age Years.	Number of Trees.	Average Diameter Breasthigh Inches.	Average Height Feet.
e	Fair	8	452	3.3	30
f	Good	15	643	4.3	47
g	Fair	15	391	3.7	33
h	Poor	15	324	2.3	20

These figures are for a district where the annual rainfall averages 21 inches, and the temperature ranges from zero, in winter, to 95 degrees F. in summer. This district is very similar to Southern Ontario, and the figures are of more value to us than any results obtained in the Middle Western States, where planting has been done on good soils.

The first table, where plots are of seedling origin, are 30 years old, and would average 488 trees 5 inches in diameter and 45 feet high. Estimating two fence posts to the tree, we would have 976 posts at 20c. a post, which would give an annual gross revenue of about $6.50, and this on non-agricultural soil.

The second table, which represents second-growth or coppice, meaning the sprout growth coming up from the stump after cutting, shows better results than the seedling plots.

The fact that this growth can be had on poor soil in from 15 to 30 years, makes this tree of value to the farmer. Black Locust at this age is chiefly of use for posts, vine stakes, poles, fuel, and general farm work.

The proper management of these waste-land areas in the agricultural part of the Province are of direct interest to the farming community, and I feel that the solution is of vital interest to such an organization as the Experimental Union. What good has been accomplished in this Province along the lines of reformation is largely due to earlier efforts of this Union. The work has only had a beginning, and this organization can do much to further the cause of reforestation.

THE DAIRY.

COW-TESTING ASSOCIATIONS.

ANNOUNCEMENT FOR 1908.

It is now four years since the Dominion Department of Agriculture, through the Dairy Division, began an active campaign for the improvement of the dairy herds of Canada, by inaugurating a cow-testing association at Cowansville, Quebec. The Department provided all the equipment, and loaned each member the scales and necessary outfit for taking and preserving the samples, furnished the requisite blank forms for keeping records, made all the tests and compiled the reports, without any charge.

In 1905, a series of 30-day tests were conducted at seven places, the Department loaning the outfits and doing all the work, without cost to the owners of the herds, as in 1904. The object of this work was to call attention to the importance of the question, and to create sufficient interest in the matter to induce dairymen to organize for the purpose of conducting a systematic test of the individual cows of their herds. The publication of these tests showed the great difference which is found in the yield of cows in the same herd, and of different herds in the same locality.

At the beginning of 1906, sixteen associations were organized under the auspices of the Department. Each member was required to provide his own scale for weighing and taking samples, but