out of doors an hour when not in actual use. His wagon, too, although 28 years old, has wheels and running gear almost as good as ever. Besides being never unhitched outside, it is given an occasional coat of paint. Harness, too, is referred to as being aged, but good, because it is cleaned and oiled whenever it needs it. It is plain that when one has not to buy tools, wagons, machinery and harness frequently he has more money with which to provide comforts or to put away for old age. Mr. Terry concludes by recommending a proper tool house, even if it is necessary to scrimp a little more at the time in order to get it. No matter how plain the tool house is if it is only tight. Have doors and close it all up. Do not leave one side open for sun, wind and rain or snow to enter. Make the building long, with doors on one side, and one pair of doors on the other side, so that wagons and heavy tools can be driven through. The earth makes the best floor, as it relieves the necessity for frequent setting of tires on wagons and buggies. One may have an upper floor on which to store light tools and numerous other things. According to our observation the most men who leave tools and implements standing out exposed to the elements are equally careless about other things. It is not an "eyesore" to them to see a few boards off the barn, a door off its hinges, or a gate having to be lifted open and shut, and falling apart. Often, too, the need of repairing a broken panel in the fence does not impress itself until the stock has made two or three destructive excursions over a grain field. We believe the proverbial "stitch in time" has not a more fitting application than in such cases as we have cited, and which are far too frequent; and in nine cases out of ten the careless one will excuse himself on the ground that he has not time to attend to these little things. It is when a man allows his business to get control of him in this way that he commences to fall behind, and before he is quite aware of it the foundation of his business has commenced to crumble, his hope has lost its buoyancy, and failure follows. Failure is a gloomy gulf, and the more we dread it and keep away from it the better we will conduct our business, by adding to our wealth by preventing it slipping from our grasp in premature decay.

New Way to Kill Weeds.

A notable discovery of a new method of destroying weeds in young grain is announced by Mons. Hitier in the *Journal d'Agriculture Pratique*, France, namely, that of spraying the weeds with a solution of sulphate of copper. Attention was first directed to the plan by Mons. Bonnet, a vine grower, who noticed, when spraying his vines, that certain wild plants accidentally sprinkled with the copper solution were killed. This spring it has been tried more extensively by agriculturists. One Mons. Jules Bernard found that the dressing caused wild mustard to turn black first, then white, and if the weeds did not perish they were prevented from further development and consequently from the production of flowers and seed. Mons. Brandin, President of the Society of Agriculture at Melun, tried the dressing in fields of wheat and oats infected with wild mustard and thistles, and while the corn continued to grow vigorously, the two weeds perished, except in one field where rain fell abundantly in the night after the application; even there the weeds were so nearly killed that they were no longer dangerous to the welfare of the corn. He used what is known as the five per cent. solution of sulphate of copper, and he applied two hundred and ten gallons of the solution on the acre.

An attempt to verify the genuineness of this discovery has been made by an Agricultural Experiment Station at Laon, France, by spraying grain fields, in which were growing wild mustard and wild radish, with five per cent. solutions of copper sulphate. The result was that the mustard was destroyed, but the radish and other weeds were unaffected, although they were quite young. A stronger solution might have destroyed the other weeds. The leaves of the grain were slightly injured, but quickly recovered. No effect was noticed on clover or lucerne sown with the cereal. It is stated that a fifteen per cent. solution of iron sulphate, where it would be cheaper, may be substituted for the copper sulphate. The cost of treatment where power spraying machines are used is given at approximately $2 per acre.

To Carry a Lantern and Two Pails of Milk.

BERNARD BAKER, Ontario Co., Ont.—In May 15th issue of the FARMER'S ADVOCATE, in the Helping Hand Department, a plan is shown for carrying a lantern and two pails of milk. I consider I have a better plan, because by it the lantern does not have to be carried over the milk, in which case, if the lantern were leaking just a little, it would give trouble. It is to have a stout string from the lantern handle just long enough that when it is held in the hand which is also holding a pail of milk, the lantern will hang down beside the pail and rest against it.

"Worth Its Weight in Gold."

Chas. S. Bavidge, Selkirk Municipality, Man.:—"I am very well satisfied with the FARMER'S ADVOCATE. In fact, it is worth more than its weight in gold, and no wide-awake farmer should be without it."

"Illustration Stations" Considered.

To the Editor FARMER'S ADVOCATE:

SIR,—I think Prof. Robertson's estimate that the products of Canadian agriculture might be increased 25 per cent. without increasing the cost of production, by more advanced and intelligent methods, is a moderate one. His scheme for promoting that increase would depend for its success very largely on the way it was worked out. It would have to be divorced entirely from politics; the slightest suspicion of its being made an excuse for "doles" to government supporters would kill it. The selection of farms, etc., should be left to local organizations, the selection of "Illustrations" and the management of them only being in the hands of the Department. His scheme for recouping the farmer for any loss in the cultivation of the "comparatively small plots" is not a good one. If these are to be "Illustration Stations," and not "Experiment Stations," nothing whatever should be attempted but what has passed the experimental stage, is of immediate and practical interest to the neighborhood in which it is conducted, and then it should be tried on a scale that any farmer could attempt. A strict account of the work expended on it should be kept and the product valued. If it does not show a profit, but a loss which has to be made up from the Dominion Treasury, then the "Illustration" is a poor one. There would be no object in having only one-quarter or one-eighth acre plots in this Province, as the "Illustrations" would probably be largely grain, and no farmer has an equipment for handling these plots accurately. No threshers with their large gangs would put off time threshing them. There is, however, an item Prof. Robertson takes no note of, but which might probably swallow up his fifty or one hundred dollars. A part of the programme would necessarily have to be that each farmer who conducted the "Illustrations" would have to explain to visitors their objects, methods, results, etc., if the stations were taken advantage of to anything like the extent indicated, viz., from 500 to 1,000 visitors to each. This would necessarily make pretty large demands on the farmer's time. With regard to moving the stations frequently, I think this would be a mistake. Many "Illustrations" involve more than one season's operations in preparation, etc.

If no other "Illustration" were attempted but one which would convince the farmers of this Province (Manitoba) that a systematic rotation to include grass must be adopted, that the capacity of our soil for absorbing and retaining moisture depends almost entirely on the amount of humus in it in the shape of rotting sod, grass, roots, etc., that the same thing will prevent the drifting which is becoming more alarming every year and which is already making some parts of the Province look like a desert, then the expense of these stations would be repaid many times over. This would necessarily involve the leaving of the station in one place for some length of time.

I confess that I have not had the time to give such a radical innovation the consideration it deserves, but would imagine that the cost of the scheme, properly conducted, would be so small that it might be worth while giving it a trial.

Municipality of Morton. JAMES FLEMING.

Manitoba Crop Bulletin.

The June bulletin issued by the Department of Agriculture shows an increased area under wheat over 1897 of nearly 200,000 acres, and an increase in the total crop area of over 250,000. There is a marked increase in the oat area, a falling off in flax, and a very large increase in potatoes and roots. Fodder growing is receiving more attention, and this must continue from year to year as the settlements fill up and cultivation and drainage convert the wild hay lands into wheat fields.

This is the first year any estimate has been attempted on the cultivated grass area; Brome grass being reported to the extent of 973 acres, which is a good showing. An increase in milk cows of over 9,000 is a hopeful sign to the dairy interests.

AREA UNDER CROP.

District.	Wheat, acres.	Oats, acres.	Barley, acres.
North-western	122,600	83,162	15,400
South-western	595,134	168,882	32,454
North Central	305,224	89,155	31,302
South Central	374,614	113,000	51 334
Eastern	90,660	60,625	27,568
Province	1,488,232	514,824	158,058

	Acres.
Total area under Flax	14,561
" Rye	3,198
" Peas	1,594
" Corn	1,195
" Brome	973
" Buckwheat	68
" Potatoes	19,791
" Roots	8,448

Total area under all crops is 2,210,942 acres.

A comparison with the acreage of 1897 shows:

	1897. Acres.	1898. Acres.
Area under Wheat	1,290,882	1,488 232
" Oats	468,141	514,824
" Barley	153,266	158,058
" Flax	20,653	14,561
" Potatoes	13,576	19,791
" Roots	6,130	8,448
Total	1,958,025	2,210,942

The rains and favorable weather of the first ten days of June are reported as being general all over the Province, and the general prospect is good.

Farmers' Excursions to Experimental Farms

To the Editor FARMER'S ADVOCATE:

SIR,—I should be pleased to see any such scheme as that of Prof. Robertson's for "Illustration Stations," as reported in your issue of May 2nd, carried out to a successful issue, but from my experience with farmers I do not believe the results of such a scheme would be at all favorable. There are many difficulties in the way of such a scheme. The $100 or $200 mentioned is not sufficient remuneration for any person undertaking the extra work and trouble of such a position. If some of our municipal councils who are at a great distance from the Experimental Farms were to take this matter in hand, under the guidance of the present heads of the Experimental Farms, something practical might be worked out. I have often felt ashamed at the apathy of my brother farmers in not taking a deeper interest in our Experimental Farms, for in my mind these farms are doing a wonderful amount of good. The very fact that the proverbially grumbling farmers have found no cause for complaint against the superintendents of the western farms is sufficient proof of their great utility. Some claim that they get all the benefit to be derived by reading the results of experiments as given in the agricultural press or in the bulletins issued. But do they read them? And even if they do, they would receive much greater benefit from visiting the farms during the growing season. It is always an inspiration to me to visit these farms and see the methodical way in which the work is done. People speak of the monotony of farm life, but were they to take an interest in doing even the ordinary farm work thoroughly and in the best possible way, they would find an interest in every operation.

I would like to suggest that steps be taken to induce our farmers to visit the Experimental Farms in greater numbers, and more frequently cheap excursions might be organized under the management of the Minister of Agriculture, and if the railway companies could not afford to offer a rate of about $1 per head, the Government might make up the necessary amount by a small grant. I think a great many farmers might avail themselves of the opportunity if they could get to the farm and return for an outlay not to exceed $1 per day and the loss of a day's work on the farm. The change of air and scene would be beneficial for the sake of health, even if there was nothing to learn. It would be necessary to advertise the dates well ahead. I have no doubt the superintendents of the Experimental Farms will be pleased to take charge of the excursion parties and give all information possible. I have always received the greatest courtesy and attention when visiting the farms, although I am aware that it is a considerable tax upon the time of those busy men. W. WENMAN.

Glenwood Municipality, Man.

The Elevator Monopoly.

To the Editor FARMER'S ADVOCATE:

SIR,—Having read your editorial in reference to the above subject in your issue of June 1st, and also Dr. Rutherford's letter in June 15th regarding the same, I trust you will allow me space for a few brief statements regarding this matter.

I notice with a good deal of pleasure that notwithstanding the vast amount of discussion as to the *means* to be adopted in order to secure the abolition of the elevator restrictions, there appears to be very little debate as to the desirability of retaining the monopoly. The latter question has been settled finally by a most emphatic negative from nearly every right-thinking man in the country. All of the resolutions, propositions or measures brought up in the Local House at Winnipeg or the House of Commons at Ottawa during the recent sessions (with the exception of the Compromise Bill), reveal a desire of more or less strength to secure the removal of the present elevator restrictions. I only hope that after all methods to that end have been fully discussed and thoroughly weighed, those will be adopted and promptly acted upon which will most quickly secure to the farmers of Manitoba and the Northwest Territories the shipping privileges of which they have been most unjustly deprived during the past fifteen years.

In reference to Dr. Rutherford's letter, it is only due to him and the other representatives from the West for me to state (as one of the delegates present during part of the proceedings at Ottawa upon this question) that I do not believe that either he or any of the Western members were actuated by C. P. R. influence in accepting (for the time being) the compromise measure. I have good reasons for concluding that it was an error of judgment due to other causes than this. Neither does the writer believe for one moment that the members in question withdrew their support to this measure simply to oblige the delegates who were opposed to it. I am satisfied that when they saw that the Bill would be detrimental to the interest of the Western farmers, and decidedly unpopular with the vast majority of their constituents, they acted in accordance with those convictions, and exerted themselves to secure the withdrawal of the unfortunate compromise measure.

I cannot but admire the candid and manly way in which Dr. Rutherford explains how he came to support this Bill in the Railway Committee, and how, on receipt of "further light" as to the nature of its contents, he withdrew his previous endorsation of the measure. I sincerely hope that the same honest motives will now prompt him to commu-