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Agents wanted in every village, town and township, to make a thorough canvass for the RURAL CANADIAN. Liberal inducements. Work to commence at once. For full particulars address

G. BLACKETT ROBINSON,

5 Jordan Street, Toronto.

Publisher.

The Rural Canadian.

TORONTO, FEBRUARY 1st, 1883.

AN APOLOGY

Is due our readers for the late appearance of the February RURAL CANADIAN. The pressure of Government work on the presses is the cause of the delay. The March number will be published about the 10th prox., and we hope to send forth succeeding issues on the first of every month thereafter.

THE demand for the January number of the RURAL CANADIAN far exceeded expectation. The impression printed off fell very much short of what was required. This will explain to those readers who failed to get a copy of that issue, why they have been disappointed. Arrangements have been made for printing a much larger impression of succeeding numbers, so that a similar disappointment may not be experienced. Increase in circulation is a gratifying proof that farmers largely appreciate a serial devoted to their interests. The knowledge that its merits are recognized will stimulate us to make the RURAL CANADIAN still more worthy of the favour with which it is received.

PATIENT EXPERIMENTERS.

The Germans are patient experimenters. A recent report gives the result of one of their experiments to show the fertilizing value of clover. An acre of clover sod was tested to the depth of ten inches, and the weight of stubble and roots was found to be 8,921 pounds. Further, it was found that this weight of stubble and roots contained 191 pounds of nitrogen, besides a quantity of potash and phosphoric acid. Doubtless the clover was a strong and vigorous crop; but the important fact is that it is rich in nitrogen, and therefore valuable for fertilizing purposes. It is, indeed, one of the most valuable of all fertilizers for wheat, for analysis shows that a wheat crop yielding twenty-five bushels contains about sixty pounds of nitrogen in the stem and grain. The knowledge of these two facts—of the large proportion of nitrogen in clover and in wheat—makes it clear that soil fertilized with clover may reasonably be expected to give a good yield of wheat. There is nothing of chance in farming; cause and effect are never divorced. And understanding the nature and operations of cause and effect, as we may by the studies of patient and intelligent experimenters, the business of farming may be made as safe and profitable as the elements will allow. The weather is almost the only cause not subject to the control by the ingenuity of man. It will always be a difficult matter to protect crops against the violence of storms or the extremes of heat and cold; but the injury done by these agencies is after all not a serious matter. The large majority of conditions are susceptible of being modified favourably; hence the importance of experiment and observation, and the application of knowledge so gained to practical ends. The knowledge of any number of facts in agriculture is only useful to the extent to which it is applied. Not one farmer in a hundred thousand has the patience to ascertain the weight of stubble and roots in an acre of clover and sod, nor the skill to analyze its component parts; but the one who has is a benefactor of his class and of the world. The value of underdraining was first proven by experiment.

OUR DAIRY INTERESTS.

Hitherto the dairy interests of Ontario have been confined largely to cheese-making, and Ontario cheese has a reputation second to no other in foreign markets. This is due in a great measure to the factory system, under which every improvement in utensils and in processes has been speedily adopted. The gain to the country is certainly large—not less than \$4,000,000 a year, and possibly a million more.

Now this is a result that we could never hope to attain under the old private dairy system. We could never, under that system, hope to produce either the

quantity or the quality, and without quality we could never establish a footing in foreign markets. Besides, if every farmer was his own cheese-maker there would be a great waste of time and appliances. The factory system possesses the great advantage of economy of production.

In this view of the subject we look with confidence to the success of the measure passed in the recent session of the Legislature for establishing public creameries. If properly managed these creameries cannot fail to teach useful lessons in the art of butter-making. Being under the control of the Government all useful information connected with their working will be officially published, and every essential data will be given as to cost of manufacture and value of product. Besides, they will be schools where whoever pleases may gain practical knowledge at the hands of competent instructors.

The cheese factory system is confined mainly to a dozen counties in the Province; consequently there is ample room for the creamery system without any fear of one conflicting with the other. There is no fear of the cheese interest suffering by a new impetus being given to the butter interest. The markets of England will take all the surplus we can ship there, providing the quality is satisfactory; and as lasting profits in any line of business depend on making only first-class goods the dairymen of Ontario know exactly what is before them.

We are quite sanguine of seeing the value of our butter product doubled before the close of this decade. The Hon. Harris Lewis, of New York State, is still more confident on this subject, for in an address to the Eastern Ontario Dairymen's Association he said:

"I presume that within two or three years you will take about the same position in regard to butter that you now do in cheese, for I understand that your Government has decided to establish three creameries for the manufacture of butter, and I have no doubt that they will raise the character of the butter you make very much, and that all the Province will feel their influence. They will, I am sure, add to the value of the butter you make at least \$1,000,000, and possibly two or three millions of dollars. I admire the position your Government has taken very much in this matter."

This statement by such an authority as Mr. Lewis is very encouraging. We trust, however, that the Government will take every precaution to establish the creameries on a well matured plan, and that the service of thoroughly competent persons will be secured as managers.

SEED CATALOGUES.

WILLIAM RENNIE'S SEED CATALOGUE for 1883.—Whether Oscar Wilde's visit to this continent has been a help or a hindrance to æsthetic culture, might be a fit subject for granges to discuss; but there is no doubt that our leading Canadian seedsmen are vying with each other as to who shall issue the most attractive seed catalogue. Happily, we are not called upon to award a premium for the best specimen of catalogues. Mr. Rennie's annual for 1883 is in advance of previous issues. The design for the cover is neat, artistic, and distinct. The contents are valuable to the farmer and gardener, and especially to the increasing numbers who engage in amateur gardening. All will find beyond a correct classification of seeds and plants much useful information. The catalogue will be kept by many for reference after its immediate object has been served.

VICK'S FLORAL GUIDE, 1883, not only contains a comprehensive list of plants, seeds and flowers, but interesting and accurate descriptions of a great number, not only of new and rarer varieties, but of those in which cultivators generally delight. The Floral Guide is profusely illustrated by most delicate, beautiful and accurate engravings, while the coloured prints are of surpassing excellence and beauty. If the possessor of a copy of this catalogue were to leave the page containing the frontispiece open in the summer season within reach of an apiary, bees would cluster around it, so true to nature is the bouquet with which the reader is presented.

J. A. EVERITT'S, Watertown, Pa., ANNUAL CATALOGUE OF O. K. SEEDS is admirable in get-up and concise in contents. The design of the cover is original and striking.

RECEIVED—Lovett's Illustrated Catalogue (Little Silver, N. J.); Gregory's Annual Illustrated Retail Catalogue (Marblehead, Mass.); James M. Thorburn & Co's. Annual Descriptive Catalogue of Seeds (16 John Street, New York).

APPRECIATIVE WORDS.

From a number of kindly notices which have appeared in our exchanges, relative to the enlargement of the RURAL CANADIAN, we select the following:

ENLARGED AND IMPROVED.

FARMER AND FRUIT GROWER:—The RURAL CANADIAN comes to us this year enlarged to twenty-four pages, and otherwise improved. It is among the best of our exchanges, and has practical articles for farmers on this side of the lakes as well as those in Canada.

ONE OF THE BEST OF THE KIND.

COBBOURG WORLD, in noticing the January RURAL CANADIAN, says: "We are much pleased to observe the great success with which the publisher of this agricultural monthly is meeting in giving the farmers and others interested a journal well worthy of their patronage. Their paper is one of the best of the kind on this continent—every department being ably edited and well supplied with information of the most valuable kind. The family department is also most excellent. No farmer should be without this journal; and its price certainly places it within the reach of all."

AN AGRICULTURAL AUTHORITY.

BOBCAYGEON INDEPENDENT is pleased to style the RURAL CANADIAN the Agricultural authority of the Dominion.

"SO SAY WE ALL."

BROCKVILLE RECORDER: "An excellent paper."

We still want agents to push our circulation. Large commissions are paid.

PROTECTING THE OUTLET OF DRAINS.

One of the greatest annoyances in underdraining is the trouble arising from the outlet becoming choked or filled up by the trampling of animals, the action of frost or even of water at time of freshets. This trouble is quite successfully overcome, says a correspondent in the *Agriculturist*, by an arrangement consisting of a plank ten to twelve inches in width and five or six feet in length, with a notch cut in one side near the centre. This plank is set up on edge at the outlet of the drain with the notch directly over the end of the tile, and is held in position by several stakes on the outside with earth or stone thrown against the opposite side. The above plan is recommended for light, sandy soils. The following is advised for heavy clay lands. It consists of two logs eight or ten inches in diameter and from three to ten feet in length, placed parallel with the drain and about six inches apart; the whole is covered with plank twenty inches long, laid crosswise. Flat stones will answer in place of the plank. The whole is covered with earth at least eighteen inches in depth.

NOT MEASURED BY MONEY.

Mr. Robert E. Tomlinson has discussed most interestingly in the *Philadelphia Press* the trite question, "Does farming pay?" (about which there is no question) calling up from real life illustrative examples such as, happily, are within the knowledge of all observers. We make room for some of his thoughtful and suggestive points, which are well stated. The definition of "success" is a better one than superficial persons are able to give, and we especially approve the passing tribute to the wives and mothers of the farm:

"I have in my mind's eye a number of men (I use the term in a connubial sense, for if ever there was a pursuit in which the wife is truly the better half it is in farming) who started in agricultural pursuit with only a few hundred or a thousand or two of dollars saved, it may be, from their wages or the fruit of a small inheritance. In many cases this was barely enough to stock a farm and pay the usual one-third purchase money. But under the double spur of love of ownership and necessity of meeting their engagements, they bent every energy to free themselves from debt, and made their homestead entirely their own."

Brought up in the habit of strict economy, their children shared in the hardships of adversity, as they afterwards shared in the brightening prospects of prosperity. In this stern but hopeful struggle with the force of circumstances, the parents developed in mind and character, and filled their place among the most useful and honoured members of society; while the children, thanks to their early training, to free schools, and an educating press, became fitted for that