

## THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN  
THE DOMINION.

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boys and girls as they engage in life's duties to do the right thing at the right time and in the right way. It will further enhance the appreciation of youth for natural objects and processes, and give them an intelligent love for outdoor life; and while it will qualify them especially for the avocation of the farmer, it will really prepare them better for any useful sphere or calling than any course heavily loaded with classics and modern languages to the exclusion of the natural sciences. Unless, possibly, it be a little history, we are not aware that it will involve eliminating any subjects from the present Ontario rural school course, but some of them, such as composition, may be modified or utilized indirectly to turn attention to subjects that have a direct bearing upon agriculture. The rural school teachers now in service will do well to make preparation for the coming change. It will be a great reform in educational methods, and cannot wisely be hurried, but if effectually carried out it will redound lasting credit to the administration of Hon. G. W. Ross, the Provincial Minister of Education, and invest the pursuit of agriculture with added respect, interest, hope and confidence.

### The Secretary of the Western Fair.

Mr. Thos. A. Browne, the efficient Secretary of the Western Fair Association, at London, Ontario, having received the appointment to the office of Postmaster for the City of London, will, it is understood, retire from the former position about the 1st of July, at which time he will assume the duties of his new office. Mr. Browne has displayed good judgment, energy and fidelity in the performance of the arduous duties which have devolved upon him in the management of the Western Fair, which, during the years of his incumbency, has steadily grown and improved from year to year until it now ranks as one of the most successful institutions of the kind in the Dominion. While congratulating Mr. Browne on his preferment, we cannot but feel that it will be difficult to find a successor equally qualified for the important duties which he has so faithfully and efficiently performed in the position he vacates, but we trust that his successor and the Board of Directors will still have the benefit of his judgment and counsel, as we feel sure his interest in the success of the fair will not end with his retirement from the secretaryship.

### Agriculture in the Public Schools.

At a convention of the East Middlesex Teachers' Association, held in London, Ont., on May 5th, Mr. C. C. James, M. A., Deputy Minister of Agriculture for Ontario, and author of "Agriculture," a textbook for public and high schools, delivered a stirring address, designed to arouse the interest of rural teachers in the importance of agriculture and the teaching of its first principles to the children entrusted to them. At the outset Mr. James remarked that it was not the *how* but the *why* of agriculture that should be taught in public schools. In order to do this, teachers require to qualify themselves that they may be able to start the pupils and get them interested, when the work would become one of directing.

In order to emphasize the importance of teaching agriculture, it was pointed out that a change was rapidly overtaking the calling of agriculture. While the farmer has too often been pictured as the horny-handed white slave, whose whole energy was exhausted in manual labor, and again as the personification of ignorance and hard work, he is rapidly acquiring a more desirable reputation, his avocation has become one based upon science and filled with intelligent interest. That agriculture should hold a prominent place in any country, but especially in Ontario, there is no question, since from the four chief sources of revenue of the Province, viz., fisheries, mines, forests, and agriculture, the returns last year ranked, per head of population, as follows: Fisheries, \$4; mines, \$6; forests, \$16; and agriculture, \$120. Agriculture is, therefore, the great source of wealth to the people of Ontario. While last year the entire output of gold for the world was \$280,000,000, the returns from agricultural products to the Province of Ontario alone was a similar amount. Should we not, then, prepare the rising generation to grapple with this growing and important industry? It is an old truism that good times, good crops and good prices go hand in hand. It is on these that prosperity to the whole people depends. We find that the difference between the grain crop of 1898 and that of a poor year of recent date was 12,000,000 bushels, which shows the difference between favorable and adverse conditions. When agriculture is understood and conducted in the light of scientific knowledge, many adverse conditions can be avoided, so that there is no more profitable expenditure of money and effort than that which will enlighten the tillers of the soil.

Mr. James dealt with the romance of a piece of bread and butter. Dealing with the bread, which came from flour, and flour from wheat, he showed how far short of the possible Ontario comes in producing a full yield of this cereal. A grain of good wheat, planted in suitable soil and allowed to mature without adversity, should, at a moderate calculation, produce four stalks, bearing at least sixty grains of wheat. By the same moderate estimate, a bushel sown should produce sixty bushels, or one and one half bushels sown per acre should yield ninety bushels of good wheat. This is a reasonable deduction to draw where all conditions for growth are favorable and insect and fungus enemies are prevented doing injury. Now, the actual yield of wheat on the Ontario farm is from twenty to twenty-five bushels per acre, while in many other countries it is little more than seven, eight or nine bushels per acre. The difference between the possible and actual yield of wheat is a mighty gulf, that can be bridged only by a knowledge of the various sciences which touch agriculture. We grow 1,000,000 acres of wheat, so that an increase of a bushel per acre would mean a million bushels of wheat. Referring to the reasons for the low yields of grain grown, the speaker mentioned defective soil, defective preparation, insects, and adverse weather conditions, most of which could be met, in a degree at least, by an application of a knowledge of agricultural science. A knowledge of the science of entomology alone on the part of farmers would prevent a tremendous annual loss. It is estimated that in North America alone, \$300,000,000 worth of crops are destroyed annually by insects, and Mr. James expressed the wonder that almost all vegetation is not devoured, when the rapidity of increase that characterizes insect life is taken into consideration, but, he said, we have the birds on our side, which annually destroy myriads of insect life. The birds are great wealth-savers, and just here is suggested a field for nature study in the schools. The speaker expressed a wish for a law that would forbid the destruction of all bird life. While some birds may do damage to grain crops and also to other birds, etc., even these do good in the destruction of vermin of one sort or another. The multiplication of insects is also held in check by other insects and diseases, and it is when through study we become familiar with these natural enemies that we can turn them to good account. It was cited that injurious insects have on several occasions been introduced into countries where they threatened serious destruction to vegetation until their natural insect enemies or diseases were brought from their original countries and spread among them. It is only through study of these things and the application of knowledge that we can hope to increase the returns of our farms. A great field for interesting and profitable investigation is just opening out in these lines.

Returning again to the wheat plant, it was remarked that it may be struggling for an existence in a soil where it may not be able to acquire its

proper food. The wheat plant needs nitrogen, which it can appropriate only in the form of nitrates, the formation of which requires suitable conditions for nitrification, such as proper temperature, drainage, a supply of humus, etc. The value of growing legumes was also emphasized and explained, showing the teachers the vastness, interest and importance of the subject they are asked to teach.

The value of new and improved varieties, selection of seed from best and earliest portions of fields, etc., were dwelt upon. These can all be taken advantage of by those who have been taught to see the importance of them. Some of the most valuable acquisitions, especially in the field of fruit-growing, have been secured by the discoveries of men whose powers of observation and discrimination have been trained. For instance, the Baldwin apple and the Concord grape were chance discoveries, and these have been of incalculable value to the world.

Turning to the subject of butter, Prof. James for a short time dwelt upon the importance of the dairy industry, showing the wisdom of turning all buttermaking into the co-operative creamery system. The separation of cream from milk was explained, and the science of bacteriology was dwelt upon sufficiently to show the importance of study in this direction. As has been announced in the FARMER'S ADVOCATE, Mr. James stated that the subject would be placed in the curriculum about September next. At the conclusion of his address, in replying to a vote of thanks, he mentioned that discouragements might be expected, even from those whom the teaching was designed to help.

In a discussion that followed, it was brought out that the Public School curriculum required some adjusting before the important subject of agriculture could receive its due attention. The conversion of some of our High Schools into elementary agricultural colleges was recommended by one teacher, Mr. J. C. Robson, who, having taught agricultural science in his school from Mills' and Shaw's text-book to a few larger boys, was encouraged in seeing two or three of them take courses at the Ontario Agricultural College at Guelph. He also mentioned having last winter used Prof. James' new book on agriculture with quite a large class, with very satisfactory results. Inspector John Dearness, who has for years been an enthusiastic exponent of agricultural teaching in the schools, urged upon the members of the profession to make a special effort in one or more of the lines of natural science subordinate to agriculture—agricultural science, botany, entomology or chemistry, etc., according to the qualification or opportunity of the teacher. He pointed out that if, through greater enlightenment, the average yield of wheat could be increased two bushels per acre, the returns would be sufficient to pay the salaries of all the public school teachers of the country.

## STOCK.

### The Honor Roll of the Royal Show.

(Continued from page 206.)

The following is a continuation of Mr. Richard Gibson's article commenced in our issue of April 15th, giving names and exhibitors of mature Short-horns winning first prizes at the Royal Show from its inception to the present time:

MANCHESTER, 1869.

Earl of Derby (21638); bred and exhibited by Mr. Wiley, Brandsley.

Lady Fragrant, Vol. XVII., p. 568; bred and exhibited by Mr. T. C. Booth, Warlaby.

1869 is remarkable for being the last show at which Warlaby contended for honors. Lady Fragrant again won, and it has generally been conceded that she was the best cow shown for many years. She was so "ladylike" that she looked small, but she would be a monster in the present day. We never expect to see her like again. Mr. Booth's Patricia was 1st in two-year-old class, and afterwards was purchased by Messrs. Walcott & Campbell, New York Mills, but died on shipboard in New York harbor—overcome by heat. Queen of Diamonds, that beautiful heifer that Col. King showed so successfully in the West (imported by Mr. Cochrane), was 2nd, and those who remember the Queen will readily recognize how good Patricia must have been to win over her. In the yearling class Baron Oxford's Beauty won, and again the next year as a two-year-old at Oxford for Col. Towneley. She was also purchased for America (New York Mills) at a cost of \$2,500. Her breeding, Booth & Bates; her dam being of Mr. Bates' Foggathorpe family.

OXFORD, 1870.

Bolivar (25649); bred by Mr. J. Meadows; exhibited by Mr. C. W. Brierly.

Lady Lavinia, Vol. XXI., p. 597; bred and exhibited by Mr. Garne.

Bolivar, the Irishman, wins his third Royal, and a Garne was winner in cow class. She was a commoner.

WOLVERHAMPTON, 1871.

Edgar (19680); bred by Mr. Saunders, Nunwick Hall; exhibited by Mr. H. Thompson, Penrith.

Warrior's Plume, Vol. XIX., p. 774; bred by W. Torr; exhibited by Mr. J. Beattie, Newbie House, Annan.

1871 produced Edgar. We may be wrong, but have always considered him the best bull, after Commander-in-Chief, we ever saw, and in many ways he was Commander's superior—bulky, thick-fleshed, evenly distributed. He walked with such strength and resolution, one would expect the earth to tremble at his approach. His breeding was mixed—sound old North Country sorts. The sires in his pedigree were prizewinners, in order as follows: Prince Patrick, McTurk, Heir-at-Law, Baron of Ravensworth. Had he not a right to be good? The "dairy cow" won for Simon Beattie's uncle. She was a Booth-topped Bates Waterloo, swinging an under such as a Holstein breeder would covet.