

The Canadian Seed-growers' Convention.

"Seeds and weeds are the two great things in crop production that loom up for the consideration of farmers," said Prof. Jas. W. Robertson in his presidential address before the Canadian Seed-growers' Association, which held its annual convention at Ottawa, June 27th, 28th and 29th. "I believe," said he, "this association is laying out work that will enable the farmers of Canada to get hold of a few great fundamental principles and apply them in practice. When they do this they will raise good crops, clear of weeds, and the millennium will be ten years hence instead of ten thousand years in prospect." His words epitomized the objects of the organization, and sounded the keynote of the convention. Although a comparatively small delegation had been arranged, the information presented in the valuable papers read will be broadcasted through the press and annual report, so that the educational effects of this representative national gathering will be widespread.

RESOLUTIONS AND BUSINESS.

On Tuesday morning, 27th, an executive and afterwards a directors' meeting were held, the opening regular session being in the afternoon. At the latter meeting certain recommendations of the directorate, regarding a few changes in the constitution, were adopted. Clause 7, as printed in the annual report, had provided that the Chief of the Seed Division of the Branch of the Commissioner of Agriculture and Dairying should, by virtue of his office, be secretary-treasurer of the association. It appears that a departmental regulation prevents consulting officers of the Minister from being directly connected with any organization which may look to the Government for financial aid; hence Mr. G. H. Clark, formerly Chief of the Seed Division, now Seed Commissioner, is debarred from the above office, although he will continue to assist the organization. Provision was made for the employment of a salaried secretary-treasurer, the choice of the directors later falling upon Mr. L. H. Newman, who has been doing excellent work as district superintendent in the Province of Ontario.

The necessary alteration, with a few accompanying changes, are embodied in amendments to clauses 4, 5, 6 and 7, the new provisions being substantially as follows:

The general officers of the association shall consist of a president, three vice-presidents, a secretary-treasurer and ten directors, which body shall have power to add ten directors to its number, and the vice-presidents shall be elected by and from the completed directorate. The president and ten directors shall be elected each year at the annual meeting, and the secretary-treasurer shall be appointed by the directorate.

In clause 10 a requirement is inserted, that applicants for membership carry on selection according to the rules of the association for one year before being admitted.

A resolution was passed, affirming the principle of using any surplus funds of the association for the offering of prizes for selected seed at district seed exhibitions.

The report of the secretary-treasurer was brief, and mainly statistical, he having delegated most of his report to the four district superintendents. The financial estimate indicated that \$1,200 would be required to defray the expenses of this meeting and finish up the work of the association for the current year, and that \$2,550 would be required next year. The meeting later received Hon. Mr. Fisher's assurance that the grant would be forthcoming, the needs of the Seed-growers' Association being one of the first claims upon the revenue of the country. Prof. Robertson jocularly remarked, that with a first mortgage upon Canada's revenue the prospects of the association were bright. The reports of the district superintendents indicated satisfactory progress. In the Maritime Provinces, Superintendent F. W. Broderick had found the greatest drawback to be a general lack of interest in all matters of this kind. He recommended short courses in seed-grain judging. Joseph Cote said that in Quebec the farmers had long been duped by unscrupulous dealers making all sorts of false representations concerning seeds, and were disposed to welcome a disinterested Government expert, upon whose advice they could rely. He emphasized the necessity of great care in the admission of members.

In Ontario, L. H. Newman has the work of seed selection fairly well established, almost every county being represented, but although the membership has grown considerably, it is still far from commensurate with the importance of the work. The largest quota of members in his district are interested in corn. He thought a more aggressive policy of pushing the work was necessary, particularly with a view to securing more general dissemination of the improved seed, and suggested local organization. He thought prominent farmers here and there might be induced to act as representatives in their several localities, being allowed a certain sum for each new member secured. They might thus act as nuclei for the work in their respective sections.

Jas. Murray had found peculiar difficulties in the West. A deplorable practice prevails, of selling all the good wheat and buying inferior, sometimes feed wheat, to sow, many persisting that quality of seed makes no difference in yield. However, the work is gradually progressing, as instanced by the following sample of letters received: Thomas Thomson, of Roden, Man., who last year sold 250 bush. of seed wheat at \$2.00

a bushel, said: "I think every farmer ought to sow yearly a small plot with wheat got from hand-selected heads. In this way he could always be sure of having the greater part of his crop sown with pure seed. Owing to the extent of the field it has become necessary to divide the work in the West, by confining Mr. Murray to the eastern portion, viz., Manitoba and the new Province of Saskatchewan, assigning Alberta and British Columbia to a new appointee, Mr. W. C. McKillican, of Glengarry County, Ont., who leaves some time this month, to establish his headquarters in Calgary.

At a business session on the final afternoon, it was resolved to provide in the constitution for the appointment of a couple of auditors, one by the Department of Agriculture, and one by the Board of Directors; also that provision be made for naming the head office of the association, which meantime should be in Ottawa.

It was further decided that, as the C. P. R. had intimated its willingness to provide next summer a train of one or two cars to travel all over the West and hold seed meetings, in which case it would be desirable to distribute a large number of copies of the association's report, an edition of 50,000 copies should be printed. Resolutions of thanks were passed to the Minister of Agriculture, Hon. Sydney Fisher, for his interest and support; to Mr. Clarke, retiring secretary, and to the four district superintendents, who (with the exception of Mr. Newman), though serving henceforth under somewhat different titles and acting as attaches of the Agricultural Department, will continue in alliance with the association. With regard to the issuance of a catalogue of seed for sale by members, Prof. Robertson stated that although such a publication might in many ways seem desirable, it would not be a sound principle for the association to use any of the funds received by it as a grant from the public treasury in doing that which might be considered as interfering with private business interests, by giving the members a form of free advertisement. Whatever action of this kind were taken at any time would have to be the outcome of individual members co-operating among themselves.

The full complement of officers stands: President, Prof. J. W. Robertson. Vice-Presidents, Prof. C. A. Zavitz, O. A. C., Guelph, Ont.; G. A. Gignault, Quebec, Que., and John Mooney, Valley River, Man. Secretary-Treasurer, L. H. Newman, Ottawa.

Directors elected: Thos. A. Peters, Fredericton, N. B.; G. A. Gignault, Quebec, Que.; Prof. C. A. Zavitz, O. A. C., Guelph; John Mooney, Valley River, Man.; Thos. H. Woolford, Cardston, Alta.; Thos. S. Waugh, North Bedeque, P. E. I.; W. L. Davidson, Bethel, Que.; J. O. Duke, Olinda, Ont.; Hugh W. Gibson, Wolseley, Assa.; Morris Middleton, Vernon, B. C.

Directors appointed: Prof. M. C. Cumming, Truro, N. S.; Geo. Harcourt, Winnipeg, Man.; J. W. Wheaton, Toronto, Ont.; W. L. Smith, Toronto, Ont.; Geo. Ratho, Winnipeg, Man.; W. J. Black, Winnipeg, Man.; W. Thompson, London, Ont.; J. C. Readey, Charlotte-town, P. E. I.; L. S. Klinck, St. Anne, Que.; D. Innes, Tobique River, N. B.

PROGRAMME.

In order to present them more fully, we are holding for later publication a number of the papers delivered. The list of contributors included: Dr. H. J. Webber, Physiologist, in charge of the Laboratory of Plant Breeding, Washington, D.C.; Dr. Wm. Saunders, Director Experimental Farms, Ottawa; G. H. Clark, Seed Commissioner, Ottawa; Prof. W. Lochhead, formerly of the O. A. C., Guelph, Ont., now of Sir Wm. Macdonald's College at St. Anne, Que.; Prof. Frank T. Shutt, Chemist, Experimental Farm, Ottawa; Prof. C. A. Zavitz, Experimentalist, O. A. C., Guelph; Prof. L. S. Klinck, Agricultural College, St. Anne, Que.; Prof. J. H. Grisdale, Agriculturist, Experimental Farm, Ottawa; S. E. Briggs, Toronto; Wm. Thompson, London, Ont.; W. L. Smith and J. W. Wheaton, Toronto. Hon. Sydney Fisher addressed the first evening meeting briefly, and a few papers were read by men who have been carrying on seed selection, viz., Donald Innes, Tobique River, N. B., and F. Kirkham, Saltcoats, Assa.

Prof. Robertson opened the Tuesday evening meeting with a few characteristic observations. He urged the value of the work of seed improvement for its effects upon the people. Training people, especially boys and girls, to think was a greater gain than an increased yield of ten bushels of grain per acre. It's the seed we sow in our minds that enables us to put thinking into all our operations, that yields the greatest return. First we observe facts, then we should try to observe the relation of things in our attempts to evolve principles. The great value of the Seed-growers' Association work is its intellectual force. It will not only increase our crops, but deepen and broaden and improve our whole national life.

Following Dr. Saunders, the gist of whose paper will be given next issue, Dr. Webber gave a scientifically interesting paper, on "Pedigree or Grade-breeding of Plants." We used to read in the geographies, he said, of the prescribed limitations of various crop zones. The northern winter wheat area used to be Iowa; now, through the efforts of the plant breeder, this crop is grown in Wisconsin and Minnesota. Similarly the orange area will be extended from Florida up into Tennessee, Arkansas, and Oregon. In this great work of plant breeding the U. S. Department had followed the lead of Dr. Saunders, of Ottawa.

Hon. Mr. Fisher said that he had been struck with the results of corn-breeding in the United States, and affirmed his belief in the claims of the Canadian Seed-

growers' Association, that our farmers could grow much heavier and cleaner crops by using better seed. He had not hesitated in his Department to establish a Seed Division, and he hoped that the work of the association would go on prosperously.

On Wednesday morning, after business had been despatched, the delegates heard Mr. Clark's paper on the scope of work for the Canadian Seed-growers' Association, and after that Prof. Shutt's on "The Action of Certain Smut Preventives on the Vitality of Seed." Bluestone and formalin, he said, are the two principal smut preventives. Iron sulphate had also been used, and likewise a mixture of iron and copper sulphates, in varying proportions, called agricultural bluestone, which had been sold in the Northwest. By means of charts, giving tabulated results of experiments, Prof. Shutt showed that copper sulphate had a somewhat deleterious effect upon the seed, the degree of injury increasing with the length of time the seed was kept after treatment. Iron sulphate had little bad effect, and agricultural bluestone affected the seed mainly in proportion to the amount of copper sulphate it contained. It may be noted that, unlike copper sulphate, iron sulphate appeared to have no injurious after effects, the length of time the seed was kept making no difference in the germination. Bluestone, however, was an effective fungicide, whereas iron sulphate was not, and the fungicidal properties of agricultural bluestone depended principally upon the amount of copper sulphate contained.

Another set of experiments to try immersion in lime water to neutralize the action of copper sulphate on the vitality of the seed revealed the fact that while it lessened the effect on the germination it also decreased the effectiveness of the bluestone as a smut preventive. Prof. Shutt's advice, therefore, is to sprinkle the seed or immerse it five minutes, using a solution of bluestone, 1 lb. to 8 gals. of water, allowing the seed to dry spontaneously. With this treatment there will be no serious loss of vitality, and although the grain may be a few days later in appearing above ground, it will almost or quite make up for the delay before harvest. Leaving the sulphates, the speaker turned to formalin, which had been tested considerably at Ottawa as a smut preventive. While not without a certain injurious action on the germ of the grain, investigation indicated that a sprinkling of the seed with a solution of 9 ozs. commercial formalin to 10 gallons of water could be used with impunity, and that it was completely effective in destroying spores of smut. The Professor stated that analysis had failed to disclose any Canadian samples of formalin seriously below the mark in strength; it should contain 40% of chemically pure formaldehyde.

Inquiries had been received from the Northwest regarding some samples of formalin which were milky, and in some cases partly solid. This was due to a certain physical change in the liquid, technically called "polymerizing." While not pronouncing finally upon this point, Prof. Shutt expressed his opinion that this change, which in no way affects the chemical composition, would lessen the effect of the formalin, not only upon the germ of the grain, but also upon the spores of the smut.

A practical paper was that of Mr. Briggs, on the "Seedmen and the Canadian Seed-growers' Association," who stated that the educational work of the Seed Department was being appreciated by the seedsmen. It has in the past been difficult for them to find supplies of pure seed, and the past year, owing to seasonal causes, was the worst yet. He touched upon the Government free distribution of samples of seed through the Experimental Farms, doubting whether the benefits were commensurate with the cost. What cost the farmer nothing was lightly valued.

Regarding the ways and means of disposing of the pedigreed seed, he suggested sale on the basis of a co-operative society, but thought those interested would find it to their advantage to dispose of the seed through two or three leading seed firms, who afforded the most natural channel for dissemination. In discussion it was agreed that any farmer growing selected seed should receive for his general crop seed a premium of at least 15 cents per bushel above market price, though there is no reason why a man producing very superior seed should not get a greater reward for his enterprise and pains.

Thursday forenoon, 29th, the delegates spent in a most enjoyable visit to the Central Experimental Farm, where they listened to Prof. Grisdale's paper on "Some Common Principles which Underlie Improvement in Animals and Plants," to which space forbids reference at this time.

Determined to Bring Autoists to Time.

It is reported that the Wentworth County Council has decided to grant \$25 for every conviction made under the new Ontario law regarding automobile traffic. This will make it worth while to watch the roads. Men will be on guard at Grimsby, Winona and Stony Creek—all points along the main road from Hamilton to Niagara Falls, which is a favorite highway of motorists—to watch the roads and telephone along, thus keeping track of every machine, and thereby facilitating arrest and conviction of law violators. The taxpayers have stood imposition long enough.

A Fine Knife.

I beg to acknowledge with thanks the receipt of the premium farmers' knife. It is a fine one, and I am well pleased with it. F. SLATER, June, 1905.