

Ontario Experimental Union

The twenty-fifth annual meeting of the Ontario Agricultural and Experimental Union opened at noon on Monday, Dec. 7th, in the Assembly Hall of the Massey Building, O. A. C., Guelph. The increased membership and increased interest taken was plainly manifested by an increased attendance. Secretary Zavitz, in his annual report, referred to an attempt which had been made to secure an increased grant from the government, and was glad to be able to state that they got \$100, and now the Secretary got \$200, which formerly went out of union funds. The work was being carried on more extensively, and so more financial aid must be forthcoming. During the past year the ex-students of the O. A. C., who are now in Western Canada, formed the Western O. A. C. Union, while those of the United States formed the American O. A. C. Union. Besides this we find that Experimental Unions are being formed in many of the States and following in our steps. The president, H. W. Monteith, in his opening address extended a cordial welcome to all, and trusted that they would receive benefit. Farmers and other experimenters are showing more confidence in the good work of the Union and through the wide distribution of seeds and plants the Union is doing its share to show that variety is suited to each locality. A new pleasure and profit has been added to farm life by the distribution of fruit trees, etc. The prosperity of the farmer is shown by increased trade, but still his condition is not altogether satisfactory, in that most of them have to work hard late and early. He was proud of the College and of the college paper, the O. A. C. Review, which was gaining in quality and influence. He thanked the members for making him their president for the past year and expressed great indebtedness to Secretary Zavitz.

Mr. E. C. Drury, leading in the discussion, was pleased to note the success of the Union, but thought they should endeavor to cultivate a more cordial feeling toward our old college. Each ex-student should be a missionary in his district, to stir up interest in the O. A. C. To help to do this he proposed making the O. A. C. Review the official organ of the Experimental Union. Several others endorsed this proposal, and a committee was appointed to report concerning this very important matter. On Tuesday this committee reported, and their motion to make the O. A. C. Review the official organ of the Experimental Union was adopted. Professors Day and Zavitz, W. J. Brown, E. C. Drury, W. H. Mason, G. C. Creelman and N. Monteith will act with the present editorial staff.

EXPERIMENTER OF CORNELL UNIVERSITY

Mr. J. W. Gilmore expressed pleasure at being here for his first time, and to be able to tell us that they were imitating us in the matter of experimental unions, but went further and had reading courses for farmers, farmers' wives and the children. All this served to bring the farmer into closer touch with the higher educational activities of the College. The object of their experimental league was to make farming more attractive and more successful. He extended a hearty invitation to any of the members of our Union to attend their meeting, which was to be held in January.

Mr. W. J. Brown, of the Canadian Correspondence College, Toronto, gave the report of the committee which was appointed last year to decide what should be done regarding a memorial to the late Prof. Pantton. They had decided that it was only right that one who had done so much for ex-students and for Canadians should have more than his great work as a memorial and proposed getting a competent artist to prepare an oil painting, which should be placed in some of the College buildings.

EXPERIMENTS

Mr. W. R. Graham, of the O. A. C., then gave a report of co-operative experiments in poultry raising by incubation. Only six successful reports were handed in. The majority of chickens hatched by artificial means die when about ten days old from a kind of diarrhoea. As yet he could give neither cause nor treatment, but hoped to be able to do so next year. The success of the hatch depends on how the machine is run the first ten days. He asked for co-operation of more who were willing to sacrifice time and labor.

Prof. Zavitz then gave an interesting report concerning experiments with field roots and fodder. Over 3,000 experimenters had taken part in 34 experiments. Every man is responsible for his own experiment and urged to do his best and so help himself, his neighbors and the Experimental Union. The greatest results are gained from the work on the farm in connection with the experiment, and not from printed reports. The reports on three varieties of mangels placed Sutton's Mammoth Long Red first in yield, but Yellow Leviathan is more popular as a food for stock. The Cornish Giant Yellow Globe was the poorest yielder. In sugar beets the new Danes Improved is highest as a food, but Kleinwanzlebener is the best sugar producer. In Swede turnips, Magnum Bonum leads Kangaroo and Hartley's Bronze Top. This year carrots and parsnips were tested, and results show that car-

rots gave about double the yield of parsnips. Pearce's Improved Half Long White is slightly ahead of Improved Short White. Mastodon Dent was the largest yielder in the fodder corn test, but was not so popular as Wisconsin Earliest White Dent, which matured better. Under millets the Japanese Panicke was ranked highest, although it was lower in yield than the Hungarian. Sorghum was also tested and the Early Amber Sugar Cane came highest, with Kaffir Corn second. Grass peas and vetches were tested, but the season was quite unfavorable. The Common Vetch was placed first and Grass Peas last. The Hairy Vetch gives good results when sown in fall. Some recommend sowing it with rye, as they ripen about the same time. The Hairy Vetch may be made a paying farm product by using it for seed crop as well as for fodder. In Rape the Dwarf Bananilla yields better than Dwarf Essex.

FEEDS AND FODDERS

Prof. Day then dealt with the subject of Feeds and Fodders available to the Ontario farmer. There were different elements needed for different parts of the animal body, and only the digestible constituents can be used in building up the parts of the body. We have proteins which contain nitrogen and go to furnish muscle, blood and milk. Then carbohydrates furnish heat. These consist mainly of starch and sugar in different forms. Again we have fatty foods which produce fat in the animal and also furnish heat. Further, we have those constituents which go to build up the bone known as the ash of the food. All these constituents, and water besides, are needed before an animal can thrive. Food with these constituents in the most suitable proportions for a given purpose is called a *balanced ration*. Different standards are needed for different purposes. Experiments show that the most economical gains are made from light grain ration, because the protein food contained in grains is expensive.

Corn is without equal as a fat producer, but is not suited to young or growing animals as it is a poor bone producer. It is better mixed with light food, such as oats or bran. Peas, too, produce abundant fat. For dairy cows it is well to mix bran or wheat middlings with the other food. Pasture grass forms almost a balanced ration for the dairy cow. Out straw is ahead of other straws as a food. Sugar beets lead turnips and mangels as fatteners, but they are about equal for dairy purposes. Some recommend Artichokes as a hog food. Rape is a good food, and cheap. Blood meal is obtained comparatively pure, is a good substitute for milk in feeding young pigs.

In the discussion which followed much prominence was given to the fact that the pulp from our sugar beet factories

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