

VALUABLE LESSONS FROM EXPERIMENTAL UNION DELIBERATIONS

Practical Information Such as Every Farmer is asking for Summarized from Many Addresses and over 5,000 Experiments Conducted all over Ontario. Other Notes on the Experimental Union Meeting at Guelph

THE first session of the 35th annual meeting of the Ontario Experimental Union convened under more than usual circumstances. The occasion was the formal opening on Monday evening, January 12, of the new Field Husbandry building.

This building, 146 by 63 feet, and erected and equipped at a cost of \$85,000, is the first building to be paid for with part of the Dominion agricultural aid grant. It was fitting to the occasion that the Hon. Martin Burrell, Federal Minister of Agriculture, on behalf of his Government, presented the keys to the Hon. James Duff, Minister of Agriculture for Ontario.

The president of the Union, Lewis Toole, Mount Albert, Ont., who 35 years ago was one of its founders, remarked in the course of his opening address that about that time he had a 10-acre field of clover that badly winter-killed. He did not plow it down, however, but let it stand, and from the 10 acres saved two bushels of seed. That seed he sowed, and the clover which it produced proved hardy. He then presented a sample to Prof. Zavitz to be tested with other varieties.

"There has been a tendency on the part of some," said the Hon. Nelson Monteith in his reply to the president's address, "to doubt if it is in the best interests of agriculture that so many of the young men who come to the Ontario Agricultural College to the Ontario Agricultural College to engage in teaching rather than practice. I think it is a wholesome condition. It is not well that all should return to the farm; some should return that have to do with the diffusion that is so necessary."

NEARLY 5,000 EXPERIMENTERS

The report of the secretary, Prof. Zavitz, showed that the number of experimenters is nearing the 5,000 mark. In 1913, a larger percentage of satisfactory reports were received than in any other year. It has been the endeavor to give the cream of the results of experiments conducted at the College to the experimenters throughout the province to be tested. The number of district experimenters now numbers 25.

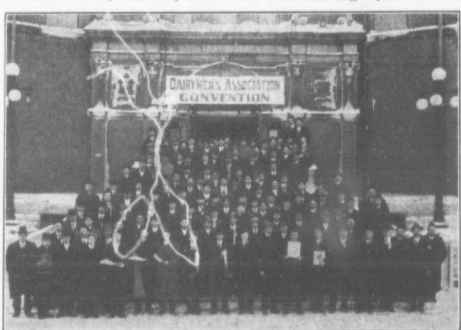
That the work of the College is appreciated is evidenced by the fact that in barley, for instance, 94 per cent of the grain sown in the province is from seed distributed from the O.A.C. The O.A.C. No. 21 barley is still proving the best yielder.

Although \$37,000 worth of oats are grown in the province every year, not much study has been given to this crop. There are far too many "best" varieties. The result is lack of uniformity and therefore a poor market. An endeavor to find a variety that would fill all requirements has resulted in the selection of the O.A.C. No. 72 oat. For two years it has now proved the highest yielder in 187 experiments. It is grown out of fine quality. Another selection, O.A.C. No. 3, has proved a heavier yielder than Alaskan and Doubeney, two early varieties, and is also the thinnest in hull of 300 varieties.

Marquis spring wheat, supposed to be best suited to western Canada, has proved to be the highest yielder in experiments conducted.

A spring rye, O.A.C. No. 61, selected from German seed, surpasses all other varieties by at least three bushels an acre. Of all mixtures of grains tested, oats and barley, sown one bushel of each, gave the highest yield. The addition of other grains to this mixture decreased the total yield.

Canadian Beauty and Early Britain



Representatives of a Great Industry in Convention at Stratford

Well over 300 dairymen, cheese makers, butter makers and farmers from all sections of Western Ontario gathered at the delegates seen in the illustration are

the best varieties of peas; Pierce's improved tree bean, an English variety, yielded 3½ bushels an acre more than the next best variety.

The Yellow Leviathan leads all mangels with an average yield over Ontario of 32½ tons an acre.

WHICH IS BEST COW?

There has been some controversy as to the relative merits of White Cap, Yellow Dent corn and Wisconsin No. 7. It now appears that there is more difference among strains of W.C.Y.D. than between the varieties. The late W.C.Y.D. comes first, then Wisconsin No. 7 and the early W.C.Y.D.

"In planning a rotation of crops," said Prof. Morgan, of Knoxville, Tennessee, "there are many points to which nature furnishes a clue if we but go to her for suggestions. In the first place, she provides for us deep and shallow rooted crops; we have two sources of nitrogen, the air and the soil; there are winter crops that take advantage of the late fall and early spring growing seasons. Then, too, we must learn to protect the soil from heavy rains by keeping it covered as much as possible with crops. With the right crops we can largely control weeds and keep more live stock."

"One man in Tennessee picked up \$2,000 by using a proper rotation. He was obliged to plant cover crops to

protect his soil from winter rains. The cover crops grew so well that he bought in sheep to pasture. He now turns out 300 lambs from a 200-acre farm at \$8 a piece."

"When the manure pile is small," said Prof. W. J. Squirrel, "we must resort to clover. An experiment with wheat on clover sod showed an increase of 21 per cent. over wheat on grass sod."

"My report deals with the most important crop of this country—the boys and the girls," stated Prof. S. B. McCready. "The schools division of the Union is endeavoring, by extending the course in nature study, to better fit the 180,000 pupils in the rural schools of Ontario for country life. By giving agricultural instruction and conducting experiments with

to 34 tons, the increase of roots costing two cents a bushel. When the application was increased to 200 lbs., the yield was 38.7 tons, the increase costing less than two cents a bushel."

FURTHER RESULTS FROM FERTILIZERS

On one college field, that was poor in phosphoric acid, phosphatic and nitrogenous fertilizers gave the best results with turnips, although the soil was comparatively rich in nitrogen. That many Ontario soils need lime was shown by one particular case in which one ton of lime to the acre increase the yield of fodder corn from three tons an acre to nine tons an acre, no fertilizer being used in the first case. An application of basic slag alone gave six tons.

The cooperative forestry work was reviewed by Prof. E. J. Zavitz. Full advantage is not being taken of the free distribution of trees that is made. Last year 200,000 were sent out to 28 counties. These were planted mostly on sandy wastes and hills. This year 500,000 are ready to go out.

While the woodlands of Ontario are not decreasing in area, the percentage area being constant at about nine per cent., the quality is decreasing rapidly.

CONSERVATION SURVEY WORK

F. C. Numuck, of the Commission of Conservation, told of the farm survey work in progress. Over 200 farms in five counties were visited. The survey indicates large room for improvement in methods. Of the farmers interviewed, 93 per cent were making no effort to prevent manure waste; 56 per cent followed a systematic rotation of crops; only two per cent made special selection of seed, such as advocated by the E.S.C.A.; little attention was given to the selection of the best varieties of grain.

Splendid results have been obtained with the experiments in weed eradication. In the case of quack grass and perennial smartweed, the cost of about June 15, following thorough spring cultivation, will eradicate these weeds. The rape was sown in drills, 1½ lbs. to the acre, and cultivated as long as possible. Bladder campion was successfully eradicated by fall and spring cultivation followed by a crop of buckwheat. The next year the land was put in hoed crops.

WEED ERADICATION BY SPRAYING

The spraying of mustard in grain with iron sulphate proved efficient in every case. It was applied at the rate of 1½ to two lbs. an acre, 8 lbs. of sulphate to 40 galls. water. In one case the grain from unsprayed and sprayed plots was measured and nine bushels of barley an acre was the resultant increase.

BROODCALF OFFERING

The bull calf we are offering on our other page is about half black and half white, good marked, good individual. His dam is Jeannette Arrie with an offer of \$100 for the animal. B.M. the butter is seven days. Jeannette Arrie was officially tested sisters, namely Vesta seven days; Ayletoid De Kol seven days; 481 the butter 34.9 lbs. seven days; Vesta 34.9 lbs. seven days; 481 the butter 34.9 lbs. seven days. The four named cows were sired by Sir Vesta, a bull, who was removed from generations away from three of the greatest foundation cows that ever lived, namely, the Dutch, the Red, the Gold and Helena Burke, by such sires as Sir Vesta, the Bull, De Kol, the Netherlands and Mutual Prince, Paul. The sire of Sir Vesta is Fairview, a bull, who was sired by Sir Vesta, the blood of his sire, Pontio Korolyak, greatest bull of the breed. Fairview is a bull, who was sired by Sir Vesta, two years old of milk 34.5 lbs. but 11.65 lbs. in seven days. We have in his daughters in our herd at present which will be tested as they reach five premier, being great producers. Our price on this calf is \$100. Name.

For further information apply to J. Joyce and Son, Hay Bay P.O., Ontario.

Percheron, Clydesdale and Shire

Stallions, Mares and Fillies

We have a better selection of stallions and mares in our barns at present than ever before, and are in a position to sell cheaper than any others in the business. We raise our own feed, do our own buying and selling. No commission agents to share profits with. We have nice, big, stylish blacks and greys, with right kind of bone and feet, and good straight, true action. Every stallion guaranteed a full getter. Every mare a breeder. 4 Lot of prize and show winners, 100 lbs. on head, 100 lbs. on hind, 100 lbs. on fourths and 6 championships. This speaks stronger than words as to the quality of my stock. These horses will be at Fair at Stratford, Ont., Jan. 22-23.

J. E. ARNOLD, Grenville, Que.

Belgian, Hackney and French

Coch Stallions

Grenville & Co. are now showing in Montreal and Ottawa, C.P.R. and C.N.R. These trains daily from each city.