

bag almost as good as new. While this method has its advantages it also has its disadvantages, and one of the drawbacks is that it takes two bags to make one. But I believe that in case of an emergency trifles like that would be overlooked."

Another reader of the Advocate of a more practical turn has advised me of a method of mending bags that is entirely sensible and not shiftless like the ways I gave.

"Trim the edges of the hole so that there will be no unravelled threads. Then cut a piece of bagging considerably larger than the hole and coat it, except a space the size of the hole, with fresh flour paste or fish-glue. Place it inside the bag and go over it carefully with a hot smoothing iron." This is said to be a practical patch that will last as long as the rest of the bag. So you see our foolishness was not all in vain. We brought out one method of mending bags that is really worth knowing.

Parliament will be open in a short time and there are indications that the truce that has existed since that declaration of war may prove to be only "a scrap of paper" or something equally worthless. It is quite true that the leaders of both parties who seemed anxious for an election some time ago have apparently decided to be good but the danger threatens from another quarter. There is a storm brewing in High Finance that may cause trouble. Some expedients that have been resorted to by the Minister of Finance are disapproved of by a certain group of capitalists and an issue may be forced that would have disastrous results. Although it may not be forced to the point of bringing on an election it may be forced to a point that will enable certain interests to gratify their greed and revenge. As a rule these rows in the domain of High Finance do not concern the public greatly for so long as we are being fleeced and do not mind being fleeced it does not matter greatly who handles the shears but if an attempt is made to make political capital out of the present situation it will work wide injury to the public and work good only to a small number of powerful interests. Although existing conditions are the logical outcome of the banking system which the Advocate has criticised for some years past this is no time for criticism. The financial systems of all nations are being tried by the war and it will do no good to embarrass them by suggestions or objections. I believe that those in authority realize the gravity of the situation and are trying to do their best in a perplexing situation. But when the war is over we can take up the fight again and perhaps accomplish something. It is to be hoped that the financiers will show themselves to be at least as public spirited as our politicians, but—

I am told that Sir Jingo McBores
Will soon make a horrible roar,

For the Currency Tango
Will sure make a gang o'
Big pirates exceedingly sore.

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It is certainly very gratifying to the farmers to have the cry going up that they "Must save the country." They must save it by producing food for the warring Empire and by increasing exportable products that will save the credit of the nation. Very well, they will save it. But surely no one will object if they ask with due humility whom they are to save it for. Are they to save it for the Trusts and Mergers and Privileged classes or has the time come when they can expect some measure of justice themselves? There has never been a time in the history of Canada when farmers had so good a chance to have their problems of marketing and transportation solved as the present. The power is in their hands if they will only exercise it. They should get plenty of farmers into parliament, but not farmers of the kind that will always heed the crack of the party whip and vote according to the orders of leaders who take their orders from the interests that supply the campaign funds. A few up-to-date farmers with the interests of the farmers at heart might work wonders in parliament during the next few years. Men of this type have already done wonders in the West and it is high time that they were being discovered and brought forward in Ontario.

The Experimental Union and Its Efficient Service.

Only those who are intimately connected with the organization can form a conception of the real significance of the Agricultural and Experimental Union that has been conducted in Ontario for thirty-six years. Its headquarters are at the O. A. C., and the farmers of Ontario are its members. Perhaps an occasional farmer has never heard of the Experimental Union, yet the probabilities are that the farmer in question is growing some variety of grain that has been introduced into Ontario agriculture through the good offices of the Union. The co-operative work of the Experimental Union has been conducted for twenty-nine years, during which time there have been 76,888 distinct tests made throughout the Province. Last year nearly 5,000 experimenters engaged in the work which is encouraging indeed when it is considered that they do so without remuneration of any kind. Such a widely-spread clientele insures for the organization efficient work and profitable service. The addresses were earnest and to the point at the annual meeting, held at Guelph, on January 11, 12 and 13, 1915. The steady earnestness of the people during these trying times has imbued each and every one with a desire for efficiency and service, and the sentiment found expression at the Union meetings.

The office of president for 1914 was occupied by T. H. Mason, Department of Agriculture, Ottawa, and he presided at the annual meeting. Mr. Mason considered that many men were drawn from the farm by the liberal way which money was borrowed and expended in the towns and cities. Such an outlay of money created a demand for labor, the farm hand responded, and the farmer was left with the inexperienced immigrant. Under such a condition Mr. Mason regarded it as a wonder that the volume of production is as great as it is. However, it was thought by the speaker that changing economic conditions will rectify these matters in due time.

Great stress was laid on the significance of Marquis wheat and O. A. C. No. 21 barley. "We have passed the day of chance selection," said Mr. Mason, "for we now have trained investigators to determine which kinds are most profitable to grow."

FIELD RESULTS.

The report of the Secretary, Professor C. A. Zavitz, is always a complete resume of the season's work of the Experimental Union. With his long and valuable experience, coupled with the efforts of an efficient staff, he is able to bring into the crucible of experimentation the varieties that will likely be of value to Ontario farmers. In their early youth these varieties give promise of worth on the plots at the College, which have been the birth place of many grains that are likely to be the chief varieties grown in Ontario. Prominent among these may be mentioned O. A. C. No. 21 barley, and O. A. C. No. 72 oats. When the farmer corroborates the opinion of the staff of the Field Husbandry Department then these varieties are recommended for general use. During 1914 there were no less than thirty-seven distinct experiments in agriculture conducted under the auspices of the Experimental Union. The Ontario Agricultural and Experimental Union conducts experiments with those classes of crops which are grown on about nine-tenths of the cultivated land of Ontario. Oats occupy 2,776,883 acres, and their market value annually amounts to nearly \$40,000,000 in Ontario. This

is a large sum for one single crop, and anything which is done to increase or decrease the value of the oat crop in Ontario to the extent of 1 per cent. in one year would make a difference of approximately \$400,000, or a change of 10 per cent. would make a difference of about \$4,000,000. An increase or decrease of 1 bushel of oats per acre per annum would make a difference in the value of Ontario's oat crop of approximately \$1,000,000. Thus readers will see that any experimental work conducted along the lines of this single crop alone might be of inestimable value to grain growers of Ontario.

In the spring of 1914 three varieties of oats were used for the co-operative tests, namely, the O. A. C. No. 72, the O. A. C. No. 3, and the Alaska. The aim of the Union is to introduce as few varieties as possible, and only use in the co-operative work those which have proven to be highly worthy.

Varieties.	Comparative value	Yield per acre.		
		Straw (Tons)	Grain (Bus.)	Grain (Lbs.)
O. A. C. No. 72—100	1.52	52.38	1.781	
O. A. C. No. 3.....	73	1.26	48.96	1.665
Alaska	60	1.26	43.64	1.484

The accompanying table illustrates the relative value of these different varieties. As has been mentioned in these columns before the O. A. C. No. 72 and the O. A. C. No. 3 are products of the Experimental plots at Guelph. The O. A. C. No. 72 was chosen for its thinness of hull, strength of straw, and general desirable characteristics. The O. A. C. No. 3 is an early oat, and in the annual test has proven itself superior to other varieties in yield and quality of grain. The O. A. C. No. 3 was distributed in 1913 for the first time, when it also occupied second place in yield per acre. The Alaska, which has been largely recognized as one of the best varieties of oats, was surpassed in each of the past two years by the O. A. C. No. 3, which is a thinner hulled variety and one which is likely to take the place of both the Alaska and the Daubeny in general cultivation throughout Ontario.

In barley the famous O. A. C. No. 21 led again. In this case, which was a test between common emmer and barley, in eighteen different localities the O. A. C. No. 21 barley took the lead, with an average of 35.7 bushels per acre. The heads of this particular barley are six-rowed, fairly compact and of good size. "We know of no other variety," said Prof. Zavitz, "in the Province equal to the O. A. C. No. 21, which is probably grown more extensively than all varieties combined, even including the Mandscheuri."

Two-rowed barleys have exerted but little influence in the Province, and unless some better varieties can be found the attention of Ontario farmers will probably be directed almost entirely to the two six-rowed varieties. With tests this past year the Hanna, a two-rowed barley, did particularly well, yielding even a little more than the O. A. C. No. 21. This is very exceptional, however, as in a series of years the O. A. C. No. 21 considerably surpassed any variety of two-rowed barley which has been grown by the College authorities.

Winter wheat is still quite largely grown, and in consideration of the agitation now on foot to increase Canada's food crop, experiments with these varieties of winter wheat will be of interest

to farmers. Five varieties were given a trial, and the accompanying table of results will demonstrate their relative merits

Varieties.	Comparative values	Yield per acre.		
		Straw (Tons)	Grain (Bus.)	Grain (Lbs.)
Imperial Amber.....	98	1.63	31.69	1.901
American Banner.....	87	1.40	30.80	1.848
Crimean Red	100	1.34	30.40	1.824
Banatka	72	1.28	28.83	1.730
Yaroslaw	80	1.57	28.27	1.696

The Imperial Amber occupied highest place in yield per acre. The American Banner, which closely resembles the Dawson's Golden Chaff, occupied second place. Particular attention was drawn to the Crimean Red, which, as a popular variety in Ontario, gave a good yield per acre, and is a superior wheat for bread production. Unfortunately, Crimean Red is much weaker in the straw than either the Dawson's Golden Chaff or the American Banner.

According to the Ontario Bureau of Industries the average yield of field peas per acre was 14.7 bushels in 1914. An average result of 21 bushels per acre for the Canadian Beauty variety grown on twenty-five Ontario farms shows that this pea has made a very fair record. The last three or four seasons have been particularly unfavorable for pea growing in this Province. However, it is hoped with the introduction of improved varieties and the recurrence of more suitable seasons that the tendency will be to increase the area used for this important crop in Ontario. Out of twenty-five tests the Canadian Beauty averaged 21.07 bushels per acre, while the early Britain averaged 20.67.

The aspect of the bean market for the succeeding year or two looks favorable to the growers of beans in Ontario, and there will probably be some increase in the production of this field crop. The result of seven tests shows that of three varieties tried this year, namely the Marrowfat, Pearce's Improved Tree and Common Pea, that the former led with an average yield of 24.28 bushels per acre. The others ran 24 and 20.15 bushels respectively. It will be seen by the adjoining table that the Pearce's Improved Tree variety gave an average yield of only 17 pounds per acre less than the Marrowfat in the results for 1914. In 1913 this result was reversed, as the Marrowfat fell 66 lbs. per acre below the yield of Pearce's Improved Tree.

Varieties.	Comparative Values	Yield per acre.		
		Straw (Tons)	Grain (Bus.)	Grain (Lbs.)
Marrowfat	83	1.08	24.28	1.457
Pearce's Improved Tree	100	1.18	24.00	1.440
Common Pea	75	.87	20.15	1.209

A large amount of systematic experimental work has been conducted relative to the growing of grains in combination. The results of five years' experiments show that throughout Ontario 1 bushel of the Daubeny oat and 1 bushel of the Mandscheuri barley gave a higher yield of grain per acre than any of the other mixtures used in these experiments. However, during the two years just past it has been found that 1½ bushels each of these grains have given best results, but