

think the seed could be injurious, as I did not for a moment suppose the intelligent, far-seeing and thrifty farmers of Ontario would allow their fields to be over-run with so ruinous a weed.

Perhaps the people to whom I am writing will say, "What does the trade amount to anyway? We won't be hurt if we don't get it." Perhaps not; but for their information I will say that the county of Cumberland has about 35,000 inhabitants, that we buy annually from 250,000 to 300,000 bushels of oats for seed and feeding purposes, that our flour trade will reach 20,000 barrels, besides some 50 carloads of mill feed and other coarse grains. If the trade is no good all right. If it is worth having the farmers and dealers had better have a care about what they are giving us, as it will take years to get the idea into our people's heads that it is safe for them to buy Ontario oats for seed. And any seed grain grown west of New Brunswick will be looked upon with suspicion.

B. W. RALSTON.

Amherst, N.S., Aug. 16, 1899.

Winter Wheat

Results of Tests Made by Ontario Farmers

To the Editor of FARMING:

Eighty varieties of winter wheat have been grown in the experimental department of the Ontario Agricultural College for at least five years in succession, and the power to withstand the cold weather, strength of straw, amount of rust, yield of grain, weight per measured bushel, etc., of each variety, have been carefully determined each year. The results of these practical field experiments at the college form the basis for the selection of a few of the very best kinds for testing on the farms throughout the province. The co-operative experiments of the past few years show that those varieties which have given the best average results in the experiments conducted at the college for five years in succession have nearly always given good satisfaction on the farms of the province.

In the autumn of 1898, seven varieties of winter wheat were used in the co-operative tests. These were divided into three sets with three varieties in each set; the Dawson's Golden Chaff being used in all the sets as a basis by which the results of all the varieties could be compared with one another.

The past winter was exceptionally severe on the winter wheat crop throughout Ontario, consequently the number of complete tests is not so large as usual. Reports of successfully conducted co-operative experiments with winter wheat were received from seventy-two experimenters before the 12th inst. at which time we started to work up the summary results in order to place the information before the wheat growers at as early a date as possible. It is interesting to know that these seventy-two good reports came from no less than twenty-seven counties and districts in Ontario, including Essex in the west, Carleton in the east, and the District of Algoma in the north. As we sow about one million acres of wheat in Ontario each autumn, the results of the winter wheat experiments conducted on the different farms throughout the province are of inestimable value to those interested in wheat-growing.

The following table gives the comparative yield of straw and grain per acre of the varieties of winter wheat tested on seventy-two farms in 1899:

	Straw per acre. (Tons.)	Grain per acre. (Weighed bushels.)
Dawson's Golden Chaff.....	1.3	22.5
Stewart's Champion	1.1	22.4
Early Red Clawson	1.3	22.1
Early Genesee Giant.....	1.2	21.3

Imperial Amber	1.3	20.4
Bearded Winter Fife.....	1.1	19.4
Golden Drop.....	1.0	16.2

Three of the foregoing varieties have been used in the co-operative tests over Ontario for each of the past six years. The next table gives the average results of the six years' experiments with each of these varieties at the Agricultural College and also throughout Ontario.

Varieties	O.A.C. Tests average 6 yrs. (Bushels per acre.)	Ont. Tests. aver. 6 yrs. (Bushels per acre.)
Dawson's Golden Chaff.....	47.5	30.4
Early Genesee Giant	42.5	27.6
Early Red Clawson.....	43.5	27.6

CONCLUSIONS.

1. In the average yield of winter wheat per acre, the Dawson's Golden Chaff stood highest among 11 varieties tested over Ontario in the year 1893, among 9 varieties in each of the years 1894, 1895, and 1896, and among 7 varieties in each of the years 1897, 1898, and 1899.
2. In the co-operative experiments for 1899, the Stewart's Champion, Bearded Winter Fife, and Dawson's Golden Chaff came through the winter the best, and the Golden Drop the poorest.
3. The Early Red Clawson and Imperial Amber were the first and the Bearded Winter Fife and Stewart's Champion were the last to mature in 1899.
4. Dawson's Golden Chaff and the Early Genesee Giant possessed the strongest straw and the Bearded Winter Fife the weakest straw in the tests of this year.
5. Stewart's Champion and the Bearded Winter Fife produced the longest and the Golden Drop the shortest straw in 1899.
6. In the co-operative experiments of each of the past six years, the Dawson's Golden Chaff was one of the least and the Early Genesee Giant was one of the most affected by rust.
7. In 1899, all varieties were practically free from smut, which is nearly always the case when no smut is sown with the wheat.
8. The Stewart's Champion and Dawson's Golden Chaff produced the plumpest and Imperial Amber and Early Red Clawson the most shrunken grain in this year's tests.
9. The Stewart's Champion and Dawson's Golden Chaff were the most popular varieties, and the Golden Drop was the least popular variety with the experimenters in 1899.
10. During the past seven years, the Dawson's Golden Chaff has been an exceedingly popular variety with the farmers who have been conducting these co-operative experiments throughout Ontario.

DISTRIBUTION OF SEED FOR TESTING PURPOSES.

The following two sets of winter wheat varieties will be sent free, by mail in one-half pound lots of each variety, to farmers applying for them, who will carefully test the three kinds in the set which they choose, and will report the results after harvest next year. The seed will be sent out in the order in which the applications are received as long as the supply lasts.

Set 1.	Set 2.
Dawson's Golden Chaff.	Dawson's Golden Chaff.
Early Genesee Giant.	Diamond Crit.
Early Red Clawson.	Gold Coin.

Each person wishing one of these sets should apply as early as possible, mentioning which set he desires; and the grain, with instructions for testing, and the blank form on which to report, will be furnished free of cost to his address, until the supply of grain for distribution is exhausted.

All communications should be addressed to

C. A. ZAVITZ,
Experimentalist.

Agricultural College,
Guelph, August 17th, 1899.