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Sydney Basic Slag

The British Government recognize the value of Basic Slag and are urging farmers to secure their requirements for season 1917-18 at once.

See extract from Glasgow Herald published in Glasgow, Scotland, of date 14th August, 1917, as follows:

"There is likely to be a larger demand for Basic Slag than the greatest efforts of manufacturers will be able to supply. Farmers are urged by the Food Production Department to place orders with their usual merchants at once and to take the earliest possible delivery of their requirements for season 1917-18."

Canadian farmers should use Basic Slag as recommended by the British Government.

Cross Fertilizer Co., Limited
SYDNEY NOVA SCOTIA

gauges and in laying a foundation for more advanced studies in practical agriculture. The third and fourth years will be devoted almost wholly to courses in applied agriculture. Specialization will begin at the commencement of the third year.

For the past two years a course on the Scientific Basis of Agriculture has been given as an elective to junior and senior students in Arts. The first Short Course in Agriculture to be given under the auspices of the University was given last year and was a pronounced success. With this foundation already laid the Faculty of Agriculture is looking forward to a steady growing interest in all matters pertaining to the advancement of agriculture in the Province of British Columbia.

Farm Management

Cooperative Experiments

AS long as the supply lasts, material will be distributed free of charge in the order in which the applications are received from Ontario farmers wishing to experiment and to report the results of any one of the following tests: 1, three varieties of winter wheat; 2, one variety of winter rye and one of winter wheat; 3, spring applications of five fertilizers with winter wheat; 4, autumn and spring applications of nitrate of soda and common salt with winter wheat; 5, winter emmer and winter rye as fodder crops. The size of each plot is to be one rod wide by two rods long. Fertilizers will be sent by express for Number 4 this autumn, and for Number 3 next spring. All seed will be sent by mail except that for Number 4, which will accompany the fertilizers—Prof. C. A. Zavitz, O.A.C., Guelph, Ont.

The Wheat Midge.

EDITOR, Farm and Dairy.—After many years of freedom from its attacks, the wheat midge has made its unwelcome appearance in the county of Wentworth, Lincoln and Welland, and also in Elgin. On some farms it has injured the crop to a considerable extent, and has caused much alarm among the farmers in those sections of the Province.

The parent fly is a very small winged insect, with a yellow or orange-colored body, about an eighth of an inch in length. It appears when the ears are formed on the growing grain, and lays its egg at the tip of the chaff covering the soft kernel. In about a week there hatch from them small, dark red maggots, which enter the grain and feed on its milky contents, leaving only an empty shell. When numerous, the destruction thus wrought is enormous. When full grown, the maggot descends to the ground, aided sometimes by a rain-drop, and there, burying itself a few inches below the surface, changes to the torpid pupal state in which it passes the winter.

Nothing can be done to destroy the maggots while feeding in the ear. It only remains, therefore, to guard against future attacks. For this purpose it is most important to sweep up and burn at once all chaff and refuse from the threshing machine, which will contain many of the insects. If practicable, the stubble in the field should be burnt over, and in any case the whole should be deeply plowed in order to bury the wintering pupae so deeply that the flies will be unable to emerge next year. Rolling the ground after plowing will help materially to produce this result. No wheat should be grown on the same field, or very near it, for one or two seasons.

When the midge was so terribly destructive, some fifty or more years ago, it was found that certain varieties of wheat were "midge-proof," due to the flinty character of the straw and the chaff covering the grain, which were too hard for the newly-hatched maggot to penetrate. The general adoption of these varieties saved the situation and the midge became practically extinct. It would be well for farmers in the localities affected to sow next year only such varieties of wheat as are likely to possess this resistant quality. The Red Fife is one that can be recommended, and probably the Marquis would be equally satisfactory.—C. J. S. Bethune, O.A.C., Guelph, Ont.

Winter Crops in Ontario

Prof. C. A. Zavitz, O.A.C., Guelph, Ont.

ABOUT 300 varieties of winter wheat, and many selections and crosses have been grown under experiment at the Agricultural College within the past 25 years. Of the named varieties 14 have been grown in each of 22 years, and the results of these are of special value. The following gives the average for 22 years in yield of both grain and straw per acre and in weight per measured bushel of a few of the leading varieties: Dawson's Golden Chaff, 50.2 bushels, 2.9 tons, and 59.9 lbs.; Imperial Amber, 47.2 bushels, 2.1 tons, and 61.1 lbs.; Early Genesee Giant, 45.9 bushels, 3.0 tons, and 60.1 lbs.; and Egyptian Amber, 45.5 bushels, 3.1 tons, and 61.5 lbs.

The average results of the 14 varieties are as follows: Yield of grain per acre 25.6 bushels for 1917, and 44.3 bushels for the 22 year period; yield of straw per acre 1.9 tons for 1917, and 2.5 tons for the 22 year period; and weight per measured bushel 56.7 lb. for 1917, and 60.9 lb. for the 22 year period.

Of the 34 varieties of winter wheat which have been tested for the past five years the highest yields in bushels per acre have been produced by Imperial Amber 45.8, Kharkov 45.6, Gillespie Red 45.2, McBean's Dawson 45.1, Tuscan Island 44.9, Grand Prize 44.7, and American Banner 44.5.

These varieties of winter wheat which have produced the largest leaves of bread from equal quantities of flour in the average tests of all years made in the bakery branch of the Chemical Department of the College are as follows: Yaroslaf, Banatka, Crimean Red, Tuscan Island, Buda Pesth, Tammara Red, Egyptian Amber, Kentucky Giant, Raby, Treadwell, Bulgarian, Geneva and Turkey Red; and those which produced the smallest loaves of bread are the Early Red Clawson and the Abundance. A cross made between the Dawson's Golden Chaff and the Bulgarian has furnished a new variety which in the last five years has surpassed both its parents in average yield per acre, and is about equal to the Bulgarian in bread production. This variety was distributed over Ontario in connection with the cooperative experiments in the autumn of 1914 for the first time under the name of O. A. C. No. 104, and is not yet grown in sufficient quantity in Ontario to be sold commercially. In cooperative experiments throughout Ontario in the past year, in which five leading varieties were tested, the O. A. C. No. 104 proved to be the most popular with the farmers, the improved Imperial Amber coming second in this respect.

The Petkus variety of winter rye has made the highest record both at the College and in the cooperative experiments throughout Ontario. Winter barley, which has been grown at the College in each of the past 24 years, gave a yield per acre in 1917 of 32.2 bushels, the average for the whole period being about 50 bushels per acre.