

UNIVERSITY EXPERIMENT STATION.

St. Anthony Park, Minn.
 St. Anthony Park, Minn.
 Aug. 24, 1903.
 Aug. 24, 1905.

During the past several years the acreage sown to winter wheat in Southeastern Minnesota has been gradually increasing. Several years ago the Minnesota Experiment Station began the testing of varieties of winter wheat from different sources. During the years 1900 & 1901 either no crops were secured or very poor ones, owing to winter killing. During the years 1902 & 1903, however, following winters less severe on these wheats, a number of the best winter varieties have yielded two-thirds more than the best spring varieties on University Farm. The following table shows seven of the best and hardiest varieties under experiment:

YIELDS OF BEST WINTER WHEATS; UNIVERSITY FARM, 1902 & 03.

Minn. No.	Name	Received from	Yield 1902-1903	Average Yield
529	Cosgrove's Winter	C.M. Cosgrove & Co. LeTueur, Minn.	45.0 58.8	42.4
550	Bearded Fife	Farmers Seed Co. Fairbault	45.0 52.6	42.3
633	Winter Wheat	Northrup, King & Co. Minneapolis	41.5 40.2	40.7
630	Bearded Fife	Farmers Seed Co.	39.6 57.6	38.6
573	Turkey Red	U.S. Dept. of Agr.	53.5 38.3	38.5
835	Padin	U.S. Dept. of Agr. 5640	37.6 39.3	38.4
695	Turkey Red	Ia. Exp. Station	34.6 40.0	37.3
			Average	39.8

YIELDS OF STANDARD SPRING WHEATS.

51	Haynes Blue Stem		21.7 25.0	23.3
66	Powers Fife		22.8 24.3	23.5
169	(An improved Blue Stem)		23.1 27.5	25.3
			Average	24.0

FOUR BEST YIELDING MACARONI WHEATS.

843	F.N. Oium, Lisbon, D.D.		28.7 36.6	32.7
849	Yellow Gharnovka U.S. Dept. of Agr.		35.3 28.7	31.0
725	Taganrog U.S. Dept. of Agr. 5355		25.8 34.5	30.0
735	U.S. Dept. of Agr. No. 5642		21.7 21.3	29.2
			Average	31.0

From data at hand it appears that these hardiest winter wheats will safely pass through the winter two or three seasons out of five in situations not too much exposed in Southeastern Minnesota, and that when a full stand is secured they yield two-thirds more than spring wheats, as is shown in the table. Where farmers can secure superior varieties from their neighbors or from local seed dealers who have varieties successfully grown in the vicinity, or from general seed houses who may have hardy varieties of Minnesota seed, it will pay them to sow winter wheat instead of spring wheat on many fields in Southeastern Minnesota.

In case the winter wheat partly or wholly winter kills, there is comparatively little loss beside the seed and cost of planting. Spring wheat, oats or barley may be planted on the ground, either among the straggling stand of winter wheat or where the wheat has all died out. Grass seed can be sown with the winter wheat in the spring, or with the spring grain sown where the winter wheat has died out. Winter wheat can be planted on early fall plowed ground, or in some cases it may be planted among standing corn. In any event, the winter wheat should be planted very early, preferably during August, or very early in September, that it may have time to make a good growth before cold weather, both that the leaves may shelter the ground and that the wheat plants may be strong to endure the severe winter and early spring weather. About one and one-half bushels per acre of seed are required, and drilling is preferable to broadcasting.

The yields of the best four out of about twenty varieties of macaroni wheat are inserted in the table, simply to show that the macaroni varieties best adapted to eastern Minnesota stand in yield per acre between the spring bread wheats and the winter bread wheats.

Winter wheats are being bred extensively by the Minnesota Experiment Station in association with the Bureau of Plant Industry of the United States Department of Agriculture and state experiment stations in surrounding states, both to make hardier varieties and to still further increase the yield per acre. Besides the above named varieties the Experiment Station has numerous other varieties collected from different parts of the world; also numerous selected and hybrid varieties originated at University Farm, some of which it is hoped will be especially hardy. It has none of these varieties of winter wheat in sufficient quantity for distribution.

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