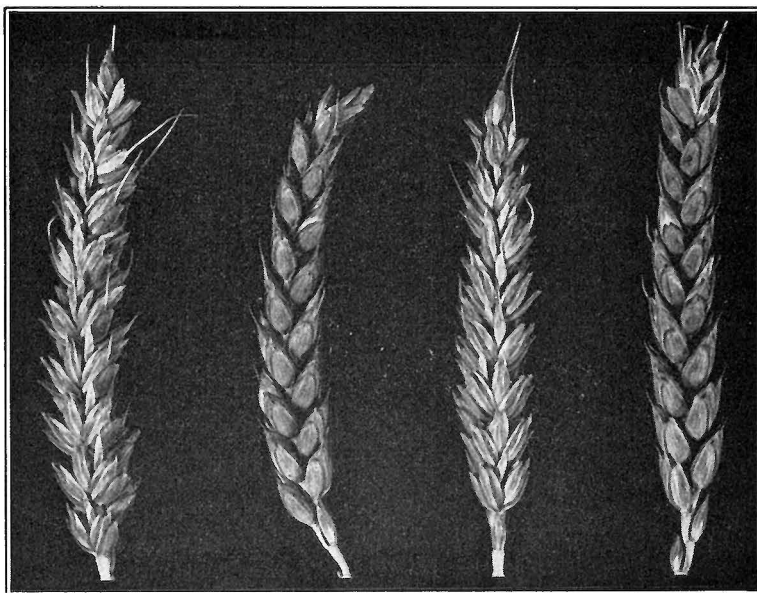


THORNE WHEAT

C. A. LAMB

A NEW VARIETY FOR OHIO

In most parts of Ohio, Thorne wheat offers a definite yield increase over any other variety obtainable. Higher yield without increased cost means greater profits. Once the original supply of seed is obtained, there is no added cost for the higher yield of this new variety. Seed is now available, and producers should give it a trial.



Thorne wheat

The wheat improvement program in Ohio is of long standing, and a number of excellent varieties have been developed. Of these, Trumbull, introduced in 1918, is now sown on more than half the State's acreage. Fulhio, released a few years later, is grown on approximately another quarter of the wheat acreage. Thus, about three-fourths of Ohio's wheat crop is made up of these two varieties. Thorne has been multiplied from 60 bushels of seed in the fall of 1937 to approximately 15,000 acres harvested in 1940. Its record (see table) warrants the expectation that it may in the next few years replace much of the Trumbull and Fulhio now being grown. Data on the new variety follow.

Comparative yields of Thorne, Trumbull, and Fulhio wheats

Variety test plots only

Test at--	Variety	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	Years	Average
Wooster (Wayne County)	Thorne	Bu. 61.5	Bu. 46.9	Bu. 44.8	Bu. 44.0	Bu. 43.6	Bu. 50.8	Bu. 26.9	Bu. 52.0	Bu.	Bu.	Bu. 40.1	Bu. 49.6	Bu. 58.5	Bu. 53.0	Bu. 48.5	13	Bu. 47.7
	Trumbull	56.3	45.7	32.8	40.3	39.8	47.3	21.5	51.5	.....	.....	35.6	37.1	51.1	44.2	48.8	13	42.5
	Fulhio	58.7	46.9	34.8	40.5	40.7	47.4	22.8	48.7	.....	.....	.....	37.2	52.7	40.4	44.8	12	43.0
Columbus (Franklin County)	Thorne								32.8	24.7	46.1	45.8	27.2	39.9	38.7	40.9	8	37.0
	Trumbull								29.1	22.0	43.7	38.7	26.0	34.1	34.3	37.5	8	33.2
	Fulhio								29.3	20.7	45.8	38.8	24.8	.....	30.2	38.1	7	32.5
Strongsville (Cuyahoga County)	Thorne					16.8	45.8	38.0	40.1	.....	.....	.....	.....	.....	.....	.....	4	35.2
	Trumbull					20.1	47.5	35.5	33.8	.....	.....	.....	.....	.....	.....	.....	4	34.2
	Fulhio					19.2	44.3	32.3	33.9	.....	.....	.....	.....	.....	.....	.....	4	32.4
Holgate (Henry County)	Thorne										52.3	29.5	33.2	39.2	20.8	41.1	6	36.0
	Trumbull										47.2	31.4	29.9	32.6	21.1	35.5	6	33.0
	Fulhio										47.2	32.9	33.8	33.1	22.2	37.1	6	34.4
Germantown (Montgomery County)	Thorne				41.3	36.4	50.0	27.4	41.0	41.6	42.4	34.3	32.5	36.3	29.2	39.0	12	37.6
	Trumbull				36.9	34.5	43.7	26.0	36.0	42.3	36.6	29.2	27.7	33.7	27.2	34.2	12	34.0
	Fulhio				35.5	34.9	45.4	27.1	35.6	41.0	41.3	.....	29.0	31.3	27.8	37.0	11	35.1
Carpenter (Meigs County)	Thorne				36.3	35.0	38.8	19.6	26.8	51.4	40.4	21.6	35.0	36.5	34.5	37.7	12	34.5
	Trumbull				31.9	27.8	32.4	18.6	23.6	47.9	36.6	15.5	31.3	31.0	25.9	31.8	12	29.5
	Fulhio				33.2	31.5	31.1	22.0	23.1	45.0	30.8	.....	33.6	29.3	25.8	35.7	11	31.0
Trumbull County	Thorne				29.3	21.5	42.8	40.1	36.2	.....	48.0	31.5	41.5	46.5	37.2	43.3	11	38.0
	Trumbull				27.7	24.6	44.7	36.2	34.8	.....	45.4	29.8	34.0	42.3	35.1	39.5	11	35.8
	Fulhio				27.0	26.0	45.9	34.0	33.8	.....	44.9	.....	39.0	38.0	32.9	38.7	10	36.0
Mahoning County	Thorne				27.2	26.8	38.8	32.2	39.8	8.7	40.2	37.6	35.2	38.3	40.3	42.7	12	34.0
	Trumbull				25.2	24.3	39.7	28.3	35.3	11.7	40.6	33.8	41.0	42.0	38.1	38.7	12	33.2
	Fulhio				26.6	26.8	39.0	28.7	41.5	9.8	40.4	.....	37.3	34.8	28.9	37.3	11	31.9
Paulding County	Thorne								20.5	.....	.....	.....	25.2	37.3	35.8	23.0	5	28.4
	Trumbull								17.4	.....	.....	.....	25.2	36.3	30.0	20.7	5	25.9
	Fulhio								17.9	.....	.....	.....	25.2	33.7	28.3	18.7	5	24.8
Miami County	Thorne					22.4	45.2	24.3	41.0	46.3	30.7	21.7	31.4	55.7	39.3	31.0	11	35.4
	Trumbull					26.2	39.0	20.2	38.5	41.3	27.5	20.6	31.6	47.2	35.5	30.8	11	32.6
	Fulhio					22.7	37.6	24.0	37.5	49.3	22.7	.....	35.3	46.3	34.4	30.2	10	34.0
Madison County	Thorne					34.2	42.7	31.3	41.4	35.5	37.9	36.8	22.4	29.3	42.1	28.5	11	34.7
	Trumbull					31.8	43.3	23.6	36.8	32.9	34.1	33.8	26.9	28.3	37.3	27.3	11	32.4
	Fulhio					33.2	40.6	27.0	40.8	28.3	33.7	33.8	25.6	29.7	37.2	24.7	11	32.2
Hamilton County	Thorne					43.5	57.3	22.0	33.3	.....	.....	.....	49.0	50.8	50.2	40.7	8	43.4
	Trumbull					43.5	54.7	17.7	30.0	.....	.....	.....	43.8	44.2	42.1	38.3	8	39.3
	Fulhio					46.5	61.5	18.3	27.8	.....	.....	.....	44.1	45.4	41.3	37.0	8	40.2
Clermont County	Thorne					23.8	29.5	52.2	17.7	37.3	34.8	27.3	32.0	49.5	30.2	40.2	11	34.0
	Trumbull					25.2	27.7	45.7	16.0	32.8	33.8	26.0	31.0	43.0	25.5	37.2	11	31.3
	Fulhio					29.0	30.0	47.3	18.3	30.5	32.7	27.2	29.3	42.3	27.0	34.3	11	31.6
Washington County	Thorne					35.4	51.5	33.8	32.0	.....	.....	.....	.....	.....	32.3	40.0	6	37.5
	Trumbull					32.0	47.8	30.8	26.7	.....	.....	.....	.....	.....	27.7	34.3	6	33.2
	Fulhio					34.6	47.5	33.3	25.3	.....	.....	.....	.....	.....	31.3	33.3	6	34.2
Belmont County	Thorne										28.5	.....	21.8	30.0	30.5	39.0	5	30.0
	Trumbull										26.2	.....	25.3	25.8	27.6	33.3	5	27.6
	Fulhio										25.5	.....	26.5	26.5	27.3	34.3	5	28.0
Average	Thorne	61.5	46.9	44.8	33.7	31.4	46.9	28.5	36.5	34.7	39.4	33.2	33.5	42.1	36.7	38.3		36.8
	Trumbull	56.3	45.7	32.8	31.2	30.2	44.2	24.9	32.8	33.1	36.4	29.8	31.6	37.8	32.3	34.9		33.7
	Fulhio	58.7	46.9	34.8	32.0	31.5	44.3	26.2	32.7	32.4	36.0	.....	32.4	36.9	31.1	34.4		34.0

Origin.—Thorne wheat is from a cross between Portage (a selection from Poole) and Fulcaster made at Columbus in 1917 by L. E. Thatcher. The bulk material from this cross was brought to Wooster, and the particular line now released as Thorne was selected by Mr. Thatcher at the Ohio Experiment Station in 1922. A further selection was made in 1936 to clean up the strain for multiplication and distribution. Until 1936 it was carried as T. N. 1006. In that year it was named Thorne after the long-time Station Director Dr. Charles E. Thorne.

Characteristics.—Thorne has more the appearance of Portage (Poole) than of Fulcaster. It has a brown chaff, red kernel, and is not bearded. The straw is exceptionally stiff, and Thorne is superior to Trumbull in this important respect. The head is carried erect, and the grain is reasonably plump. Test weight is $\frac{1}{2}$ to 1 pound below Trumbull in some cases. In quality, Thorne is similar to Trumbull and Fulhio and is acceptable to the soft wheat miller.

Thorne is not immune to loose smut, as is Trumbull, but it has never shown more than 0.2 to 0.3 per cent infection, which is negligible. It has good resistance to bunt (stinking smut) but is not immune to this disease. It is very susceptible to leaf rust, but the yield and quality of the crop are satisfactory in spite of this weakness. Stem rust is seldom a factor of importance in Ohio, but such data as are available indicate that Thorne will take this disease readily when exposed to it. Thorne takes scab to about the same degree as Trumbull and Fulhio, according to head counts. Thorne, however, often looks worse, because scab is much more easily seen on the brown chaff. Of the three varieties, probably Trumbull will show the least grain injury and Thorne the most. In average seasons the differences between varieties probably are not measurable. No varieties are immune or show high resistance to this disease.

Thorne is fully as winter hardy as Trumbull and Fulhio but probably not so good as Gladden in this respect. Provided it gets a reasonable start in the fall, it appears to be satisfactory for Ohio conditions.

Yield.—Yield tests have been conducted over a long period of years and at many points in Ohio. The table gives only the results from plots sown with the ordinary grain drill. Yields given are the average of three or four replicates in each case on plots varying from 1/100 to 1/10 acre in size.

It will be noted that without exception Thorne has outyielded Trumbull and Fulhio on the average in every test. In every year except 1928 and 1930 the yields are above those of the standard varieties. In the grand average of all 135 tests (128 for Fulhio) Thorne has outyielded Trumbull by 3.1 bushels per acre and outyielded Fulhio by 2.8 bushels per acre.

If it is assumed that under average conditions Thorne will outyield varieties now being grown by even 1 bushel per acre, which is obviously a very conservative estimate, the new variety can mean much to Ohio agriculture. If it replaces the older varieties on half the Ohio wheat acreage, that is to say on some 1,000,000 acres, it will increase the State yield by at least 1,000,000 bushels. This increase would mean an added income of half a million dollars annually for Ohio farmers, even if prices were as low as 50 cents per bushel.

Seed supplies have been very limited, but the 1940 supply is much larger, and by 1941 anyone interested should be able to get all the seed wanted. Study the results given in the table and give Thorne a trial.