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Plant Certified Seed Irish Potatoes This Time

"Growers of Irish potatoes in Mississippi are often at a loss to explain why their yields are so small, even when the crop is planted on good soil, fertilized highly, cultivated properly, and has seemingly suffered no injury from climatic causes. This reduction in yield is due to several potato diseases, chief of which is mosaic. The only practical method of preventing this loss is the use of disease-free seed each year. Since practically all seed Irish potatoes are produced in the northern and western states, several of these states have provided for the certification of seed potatoes that are so nearly free of disease as to meet the requirements of the inspection officials. Usually two or more field inspections and one or more

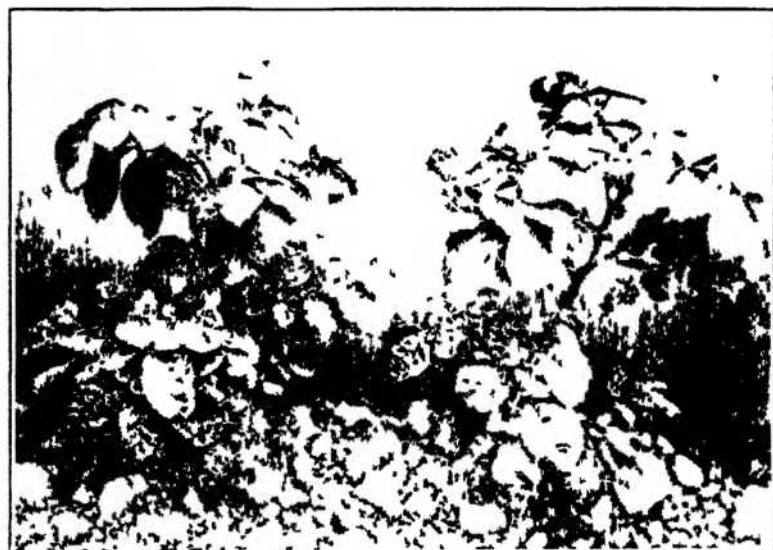


FIG.1—Plants showing typical mosaic symptoms on the lower leaves and much less distinct on the upper leaves. (Miss. Exp. Sta.)

storage inspections are made, and to be eligible for certification the amount of disease present must not exceed a certain limit. Such certified seed potatoes have given splendid results wherever used. In the South, Louisiana has been a leader in the use of certified seed, planting 22 cars in 1922, 85 cars in 1923, and 255 cars in 1924 "



FIG 2.—Comparison of a healthy plant with mosaic plant. (Miss. Exp. Sta.)

Above is quoted the opening paragraph in Mississippi Experiment Station Circular 60, "Value of Certified Irish Potato Seed in Mississippi", which describes an experiment conducted this year at the Raymond Branch Experiment Station by H. H. Wedgworth, Inspector of the State Plant Board, in cooperation with Assistant Director C. B. Anders, in charge of the Station. Every farmer or gardener in Mississippi should have a copy of this circular, which may be secured from the Agricultural Experiment Station, A. & M. College, Miss.

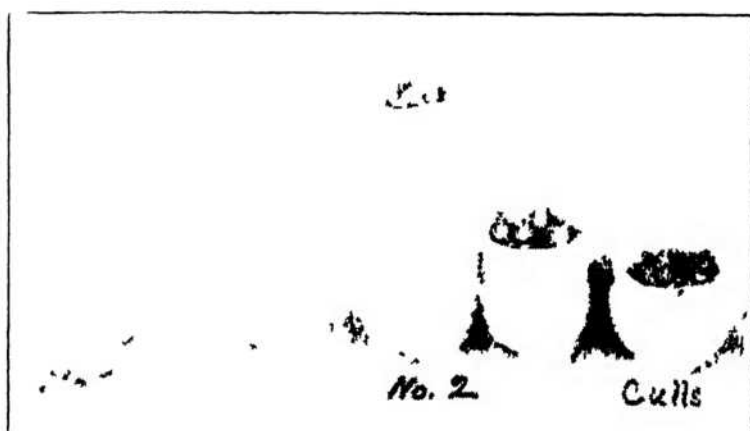


FIG. 3.—Grown from uncertified seed—yield 110.7 bushels per acre.
(Miss. Exp. Sta.)

Two lots of certified seed from Nebraska and Wisconsin were compared with two lots of uncertified seed purchased from seedsmen in Jackson and Vicksburg. All the lots were given exactly the same treatment in regard to fertilization and cultivation. The following table shows the results of the test:

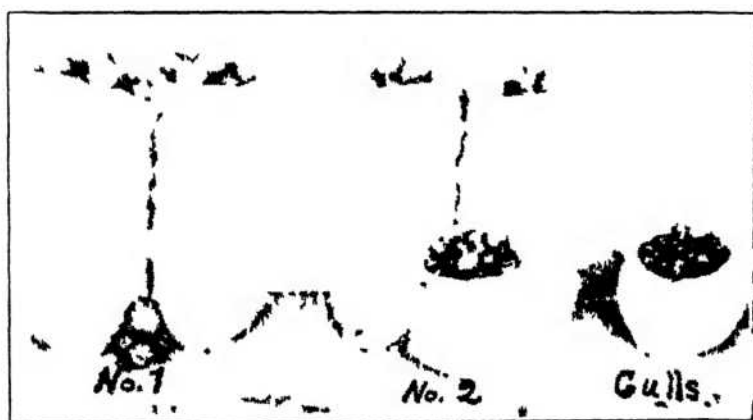


FIG. 4.—Grown from certified Nebraska seed—yield 204.62 bushels per acre. (Miss. Exp. Sta.)

**Comparison of Certified and Uncertified Irish Potato Seed
on the Percent of Germination, Average Height of
Plants, Percent of Mosaic Plants, and Yield Per Acre.**

Kind and Source of Seed	Germination	Average Height of Plants	Percent of Mosaic Plants	Yield Per Acre		
	per cent	inches	per cent	No. 1 bu.	No. 2 bu.	Total bu.
*Uncertified Lot No 1 Vicksburg, Miss.	90.56	10.61	68.07	36.81	58.98	110.70
*Certified Wisconsin Eagle River, Wis.	99.72	10.15	2.78	83.84	86.11	186.87
*Uncertified Lot No. 2 Jackson, Miss.	93.61	9.74	32.24	33.34	80.14	136.33
*Certified Nebraska Alliance, Neb	99.17	14.49	2.52	91.51	96.88	204.62

*Average of three plats.

The certified seed were far superior to the uncertified seed in germination, growth and vigor of plants, and in total yield. The fact that the certified Nebraska seed yielded at the rate of 204.62 bushels per acre as compared with 110.7 bushels from the uncertified seed purchased in Vicksburg, or nearly 94 bushels increase per acre, should prove to anyone growing Irish potatoes that it is folly not to plant certified seed. The cost is but very little more, since all seed potatoes planted in Mississippi are shipped from northern and western states anyhow, and the freight charges will be no greater.

Mosaic disease dwarfs the plants and reduces the yield, as shown in the accompanying illustrations. The disease is widespread in the United States, but seems especially severe in the southern states. It is believed to be transmitted from plant to plant by plant lice and other sucking insects, as well as by other means. It is carried over the winter in the tubers produced by diseased plants, and also passes the winter in the bodies of certain plant lice. It is not advisable to try to save seed Irish potatoes in Mississippi from one year until the next, even from fields planted with certified seed, as a high percentage of mosaic is certain to show up in the next crop. New seed should be bought each year from certified growers in northern and western states.

Individual growers, seed dealers, county farm bureaus, or anyone interested in buying certified Irish potato seed may secure a list of certified growers in northern and western states by writing the State Plant Board, A. & M. College, Miss.

EFFECT OF POTASH IN COTTON WILT CONTROL

(Quoted from Miss Exp Sta Press Circular 160, by Asst Director E. B. Ferris, in charge South Mississippi Experiment Station.)

"On land in our main experiment field where cotton has frequently been grown for the past seven years, rust was present everywhere except on plats that had received potash, and wilt was present in several places where it had never been seen before. On two plats where from 1919 to 1924 we had conducted work with fertilizer under cotton, wilt had become so bad by 1924 as to practically destroy the stand.

On one-half of these two plats last named we used in 1925 acid phosphate and nitrate of soda alone, and on the other one-half we used these two with kainit added. The cotton wilted badly over the entire area in 1925, but nothing like so badly where kainit had been used as where it had not been used. The yields on both tests were very low at best, but on the plats without potash they were at the rate of 468 pounds of seed cotton per acre, while on plats receiving potash they were at the rate of 828 pounds per acre. The addition of the potash affected the yield both in its control of rust and in its partial control of wilt. We do not believe that any form of potash will control wilt, but on land deficient in potash we feel sure its addition will give healthier and stronger plants that will better withstand any disease that might attack them."