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EXTENSION SERIES

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ROSEN RYE.

BY FRANK A. SPRAGG, PLANT BREEDER; J. W. NICOLSON, EXTENSION SPECIALIST.

Rosen Rye is a stiff strawed, large headed variety which, when pure, ordinarily has four full rows of grain on over 99% of its heads.

Developing and maintaining a pure strain of rye is one of the most difficult problems of a plant breeder, for rye, unlike most of the other cereals such as wheat, oats and barley, cross fertilizes,—resembling corn in this characteristic. The Danish people grow their pure seed on an island off the mainland. If we expect to keep our Rosen Rye pure we should grow it a quarter of a mile from common rye.

Rosen Rye was selected and improved from an envelope of Russian Rye, furnished in 1909 by Mr. Rosen, a student from Russia at the Michigan Agricultural College. This variety immediately began to show its outstanding superiority, and after proving its ability to double the yields obtainable with any other variety, it was distributed in a number of counties and, where kept pure, is continuing to maintain the record established on the Experiment Station plats.

In 1912 a bushel of Rosen Rye was sent to Mr. Carlton Horton of Albion. This was sown on an acre and produced 35 bushels of rye of such quality that not only that crop but those of following years have been used entirely for seed. Now we find 2,000 acres growing in Jackson County, and 3,500 acres in St. Joseph County, with a total for the state of about 15,000 acres.

Unfortunately, due to ordinary threshing practices and the growing of common rye in adjoining fields, only about five percent of this acreage is 99% pure. The other 95% has been more or less crossed and, though it is increasing yields five to ten bushels per acre and should be used in preference to common rye, yet it cannot be considered equivalent to pure Rosen Rye.

The farmer who grows common rye knows that fifteen bushels per acre is all he can expect in an average year, with twenty bushels per acre as an exceptionally good yield. Yet the farmers who have had experience with pure Rosen Rye will agree that twenty bushels is a

low yield for the variety, and that forty to forty-five bushels per acre yields are not uncommon.

Rye does not belong on every farm, but it is particularly adapted to large areas of the lighter soils of this state. To prevent washing and leaching, these soils should not be permitted to go through the fall and winter without a growing crop of some kind. In nearly every case, the thirty-five to forty bushel yields of Rosen Rye have been obtained from fields sown during the first half of September. While it is far from our desire to advocate late sowing of rye, yet this crop can be used to advantage on thousands of Michigan acres to follow crops of corn and beans.



Figure 1. Shows pure Rosen in the center, and on the right the pure common, and some crossed types on the left. Don't be misled by the large heads commonly found in crossed ryes. See how few kernels they often contain. The test of pure Rosen is the manner in which it fills four complete rows of grains on every head.

Now that Rosen Rye has asserted its superiority in nearly every rye-producing section and will yield over 300,000 bushels in the state during 1917, it should largely supplant all other varieties after that date, for ordinarily Michigan grows about 300,000 acres of rye; but this year (1917) there will probably be twice or thrice that acreage sown. If this occurs, many will be unable to get even Rosen Rye that is somewhat mixed, but by next year (1918) Michigan will not only be the leading rye-producing state, but she will double the four and a half million yield now credited her, largely through the use of the variety Rosen Rye.

However, we should not neglect all the other factors which enter into the production of a good crop of rye, such as proper use of manure,

acid phosphate, and thorough preparation of the seed-bed. For a maximum crop of Rosen Rye, seeding should be done the first half of September at the rate of four to five pecks per acre. October seeding should be made at the rate of six pecks per acre.

Realizing the value of the variety and the necessity for high standards of purity and freedom from weeds, the Michigan Crop Improvement Association has introduced an inspection of this and other pedigreed grains. Any farmer can become a member of this Association on payment of the annual dues of one dollar, but in order to sell his grain under the trademark of the Association, he must submit it to inspection by its agents and pay all attendant costs. The requirements to



Figure II. Shows a rye field on the farm of Mr. R. C. Blackmore, near Leslie, Michigan.

pass inspection include a clause demanding 99% purity of variety, freedom from quack grass, mustard and dodder, and not to exceed one-half of one per cent weed seeds. To sum it up, Inspected Rosen Rye must be good, pure, and thoroughly re-cleaned seed.

Lists of growers whose Rosen Rye has passed field inspection will be available August 1st, 1917, and can be secured on request from J. W. Nicolson, Secretary of Michigan Crop Improvement Association. On receipt of this list, a prospective buyer can get in touch with producers of Rosen Rye.

