NORTHROSE RICE1
(Reg. No. 23)

T. H. Johnston and Seth E. Henry2

'NORTHROSE' (Oryzae sativa L.) C.I. 9407, FAO Genetic Stock No. 1364, is a smooth-hulled, early-maturing, medium-grain rice variety developed cooperatively by the Arkansas Agricultural Experiment Station and the Crops Research Division, ARS, U. S. Department of Agriculture. Approximately 1,200 bags (cwt.) of seed were released to growers in Arkansas in 1962 from the University of Arkansas Rice Branch Experiment Station at Stuttgart, Arkansas.

Northrose was selected at Stuttgart in 1955 from the F3 generation of the cross 'Lacrosse' × 'Arkrose' made by C. Roy Adair at Stuttgart in 1949 (8). The history and characteristics of Lacrosse (Reg. No. 11, FAO G. S. No. 1017) and Arkrose (Reg. No. 1, FAO G. S. No. 207) have been published (3).

The strain which eventually became Northrose resulted from selection of 12 F3 plants and continued reselection through the F5 generation. Seeds from a single F5 head (panicle) row were bulked as Stg 555971 for growing in preliminary tests in 1956 and in replicated yield tests in 1957. The selection Stg 555971 was entered in extensive tests in Arkansas and in regional trials in 1958 (8).

Northrose was selected primarily on the basis of its short, stiff straw, early maturity, and general plant characteristics. It is earlier in maturity and has shorter and stiffer straw than either parent and produces high grain yields.

The name ‘Northrose’ was derived from the fact that the variety appeared to be best adapted to growing in the northern part of the Arkansas rice area, and from the fact that the grains and milled kernels somewhat resembled its Arkrose parent.

Northrose has smooth (nonpubescent) leaves and hulls but it often exhibits a few small hairs on the tips of the grain or along the edge of the lemmas. The panicles of Northrose usually are larger and ripen somewhat more slowly than those of 'Nato.' When ripening, Northrose hulls often show small rust-colored specks or splotches similar to those found on Arkrose hulls. This coloring gives a field of this variety a slightly, or sometimes fairly pronounced, golden cast contrasted with the more whitish appearance of a Nato field.

Grains and unmilled kernels (brown rice) of Northrose are slightly larger and heavier than those of Nato. Grains of Northrose averaged 2.5 grams per 100 and measured 7.8, 3.2, and 2.1 millimeters in length, width, and thickness, respectively (8).

Northrose produced outstanding grain yields in regional tests in Arkansas, Louisiana, Mississippi, and Texas during a 4-year period prior to release. It showed much less lodging than other early medium-grain varieties (8).

In a cooperative nitrogen fertilization experiment at Stuttgart in 1961, Northrose averaged only 16% lodging while producing 5755 pounds per acre of grain compared with 84% lodging for Nato while producing 5298 pounds per acre of grain (7).

As compared with Nato, the leading early medium-grain rice variety, Northrose (a) has much more lodging resistance; (b) usually is more tolerant to cool fall weather; and (c) has slightly larger grains and kernels. However, Northrose (a) is slightly harder to thresh; (b) has lower milling yield (in percent but not in lb./A); (c) requires more careful combining and drying; and (d) has slightly or somewhat chalkier milled kernels when grown in the same tests (8).

Results from cooperative tests indicate that Northrose is similar to Nato and other commercial medium-grain varieties in cooking and processing characteristics (8).

Northrose showed some tolerance to the physiologic disease straighthead in a 1958 test (5) and in more recent tests in Arkansas (unpublished data).

Northrose is classed as resistant to races 1, 5, 8, and 10 of neck blast (Piricularia oryzae Cav.) found in the United States. Since its release, Northrose and the widely grown Nato variety both have been damaged severely by blast in a few fields.

Literature Cited


NOVA RICE1
(Reg. No. 24)

T. H. Johnston, G. E. Templeton, and J. W. Wells

'NOVA' (Oryzae sativa L.) C.I. 19459, FAO G. S. No. 1365, is a high yielding, early maturing, smooth-hulled, medium-grain variety developed cooperatively by the Arkansas Agricultural Experiment Station and the Crops Research Division, ARS, U. S. Department of Agriculture. About 1500 bags (80 lb.) of selection seed were released to growers in Arkansas in 1965 from the University of Arkansas Rice Branch Experiment Station, Stuttgart, Arkansas.

A detailed history of Nova has been published (4). The breeding history of Nova include 'Lacrosse' (C.I. 8985, Reg. No. 1017) and an unnamed selection from a cross (C.I. 7787, Reg. No. 19, FAO G. S. No. 206) and 'Zenith' (C.I. 2702, Reg. No. 21, FAO G. S. No. 215). This unknown parent was rough-hulled (pubescent). It had slightly greater grain size than Zenith, produced high grain yields, and was less susceptible than Zenith to white tip and narrow brown leaf spot and other characteristics.

The initial cross of Zenith and Nova, made by C. Roy Adair, was harvested individually in the F0 generation for further testing.

One of these selections, 1955 row number 5853, later became the new variety Northrose. After a continuing process of selection and testing he crossed the unnamed true-breeding selection seed were released to growers in Arkansas in 1963 from the University of Arkansas Rice Branch Experiment Station, Stuttgart, Arkansas.