REGISTRATION OF CROP CULTIVARS

REGISTRATION OF McNAIR 701 WHEAT
(Reg. No. 529)

G. K. Middleton, J. R. Bennett, and H. Calvin Newton, Jr.

'McNAIR 701' wheat (Triticum aestivum L. em. Thell.), C. I. 15228, is a soft red winter wheat reselected from McNair 2203, C. I. 15228, which came from the cross 'Redcoat' sib/'Norin-10'/Brevor'/6/'Seneca'/5/'Asosan'/8/'Supreza'/Redhart'/Chancellor'/4/'Transfer,' the final cross having been made at the Virginia Agricultural Experimental Station.

McNair 2203 has shown good resistance to leaf rust but proved to be segregating for susceptibility to powdery mildew. McNair 701 consists of a composite of seven apparently identical lines selected from McNair 2203 on a basis of having resistance to the prevalent races of both leaf rust and mildew. These seven lines have been tested separately for 3 years and have shown no significant differences in growth habit, yield or reaction to prevalent races of these two diseases. McNair 701 also resists the Hessian fly races prevalent in the southeastern states. It is susceptible to Septoria nodorum and to stem rust.

This variety is best adapted to the coastal plain, east and north, through the Delmarva Peninsula. It will be useful also in the upland areas of the southeastern states. It is one of the earliest varieties being tested in the southeastern states and matures 6 to 8 days earlier than 'Blueboy,' the variety most widely grown.

In McNair tests in the coastal plain of North Carolina during 1970, 1971, and 1972, McNair 701 averaged 3662 kg/ha (54.5 bu/acre) compared to 3958 kg/ha (58.9 bu/acre) for McNair 2203 and 3689 kg/ha (54.9 bu/acre) for Blueboy. In five Official Variety Tests in the coastal plain of North Carolina in 1971 and 1972, the average yields for these three varieties were as follows: 3024 kg/ha (45.0 bu/acre), 3145 kg/ha (46.8 bu/acre), and 2271 kg/ha (33.8 bu/acre), respectively. In five tests in the Georgia-Florida area in 1970-1971, average yields for the same three varieties were 3548 kg/ha (52.8 bu/acre), 3662 kg/ha (54.5 bu/acre), and 3494 kg/ha (52.0 bu/acre), respectively. In the Uniform Southern Nurseries in 1971 McNair 701 ranked seventh among 17 varieties tested in 17 locations. Its yield was slightly higher than that of McNair 2203 and Blueboy.

The morphological characteristics of McNair 701 are as follows: winter growth habit — early season, midtall; stem — white, midstrong; spike — awnleted, oblong, middense; glumes — brown, midlong, midwide; shoulder — midwide, shape, wanting to oblique; beaks — midwide acute, short; awns — 5 to 30 mm; kernels — red, midlong, soft, ovate to elliptical.

Breeder seed will be maintained by the McNair Seed Company, Laurinburg, North Carolina. Uniformity of the variety is to be maintained by the growing of head rows which will be rogued of any off-types and followed by 12 foot or longer rows the second year. These will be rogued as elite seed. Increases from this will be bred, registered, and certified.

REGISTRATION OF McNAIR 4823 WHEAT
(Reg. No. 530)

E. L. Smith, L. H. Edwards, H. Pass, D. C. Abbott,
and H. C. Young, Jr.

'McNAIR 4823' wheat (Triticum aestivum L. em. Thell.), C. I. 13874, OK 627514, was developed by the Oklahoma Agricultural Experiment Station and released in 1971 as an F2 head selection from a cross between Nicoma and C. I. 12406. The cross was made in 1964 on the basis of early maturity and yield stability of Triumph, a durum wheat variety, and its gluten properties. Triumph is a very early-maturing variety and a mellow-gluten type. The other parent, C. I. 12406, is an unreleased Kansas experimental strain derived from the cross 'Marquillo'/Oro'/Oro'. C. I. 12406 matures 7 to 10 days later than Triumph and has intermediate gluten properties.

Nicoma has a winter growth habit and early maturity in plant height. The stem is white and awned, and the spike is awned, fusiform to oblong, middense, and 6 to 8 cm long. The glumes are glabrous, white (occasionally with a few awns), midlong, and narrow; the shoulders are narrow, smooth, ovate to elliptical, and white to light brown.

McNair 4823 was the shortest variety tested and Southern Uniform Nurseries in 1970-1971. It is a very stiff straw and produces seed of good test weight.

This variety is resistant to races of leaf rust prevalent in the southeastern states and has shown seedling resistance to seven races of stem rust to which it has been tested in the Cooperative Rust Laboratory, St. Paul, Minnesota. It is tolerable to certain races of powdery mildew and to certain races of leaf blight.

In North Carolina Official Tests, at three locations in the Piedmont area of the state in 1970, 1971, and 1972, McNair 4823 ranked fourth in yield. McNair 4823 and Arthur, and 'Blueboy' averaged 4965 kg/ha (65.5 bu/acre) and 3911 kg/ha (58.2 bu/acre). Average weight for these nine tests were McNair 4823, 74.4 kg/hl for Arthur and 68.5 kg/hl for Blueboy. A number of states have reported excellent yields of McNair 4823 in New York to Texas. The high yield potential of McNair 4823 is shown by the fact that one location in North Carolina and one location in Tennessee reported yields of 109.76 kg/ha.

The morphological characteristics of McNair 4823 are as follows: winter growth habit — medium late, short; stem — white, midstrong; spike — fusiform, dense; glumes — yellowish to dark brown, long; shoulders — narrowing to oblique; beaks — narrow to midwide, oblong, awnleted, awns 5 to 8 mm; kernels — red, short, midlong, oblong to elliptical.

Breeder seed will be maintained by the McNair Seed Company, Laurinburg, North Carolina. Uniformity of the variety is to be maintained by the growing of head rows followed by 12 foot or longer rows the second year. These will be rogued as elite seed. Increases from this will be bred, registered, and certified.

REGISTRATION OF NICOMA
(Reg. No. 531)

E. L. Smith, L. H. Edwards, H. Pass, D. C. Abbott,
and H. C. Young, Jr.

'NICOMA' a hard red winter wheat (Triticum aestivum L. em. Thell.), C. I. 13874, OK 627514, was developed by the Oklahoma Agricultural Experiment Station and released in 1971. It originated as an F2 head selection from a cross between Triumph and C. I. 12406. The cross was made in 1964 on the basis of early maturity and yield stability of Triumph, a durum wheat variety, and its gluten properties. Triumph is a very early-maturing variety and a mellow-gluten type. The other parent, C. I. 12406, is an unreleased Kansas experimental strain derived from the cross 'Marquillo'/Oro'/Oro'. C. I. 12406 matures 7 to 10 days later than Triumph and has intermediate gluten properties.

Nicoma has a winter growth habit and early maturity in plant height. The stem is white and awned, and the spike is awned, fusiform to oblong, middense, and 6 to 8 cm long. The glumes are glabrous, white (occasionally with a few awns), midlong, and narrow; the shoulders are narrow, smooth, ovate to elliptical, and white to light brown.

Nicoma was the shortest variety tested and Southern Uniform Nurseries in 1970-1971. It is a very stiff straw and produces seed of good test weight.

This variety is resistant to races of leaf rust prevalent in the southeastern states and has shown seedling resistance to seven races of stem rust to which it has been tested in the Cooperative Rust Laboratory, St. Paul, Minnesota. It is tolerable to certain races of powdery mildew and to certain races of leaf blight.

In North Carolina Official Tests, at three locations in the Piedmont area of the state in 1970, 1971, and 1972, McNair 4823 ranked fourth in yield. McNair 4823 and Arthur, and 'Blueboy' averaged 4965 kg/ha (65.5 bu/acre) and 3911 kg/ha (58.2 bu/acre). Average weight for these nine tests were McNair 4823, 74.4 kg/hl for Arthur and 68.5 kg/hl for Blueboy. A number of states have reported excellent yields of McNair 4823 in New York to Texas. The high yield potential of McNair 4823 is shown by the fact that one location in North Carolina and one location in Tennessee reported yields of 109.76 kg/ha.

The morphological characteristics of McNair 4823 are as follows: winter growth habit — medium late, short; stem — white, midstrong; spike — fusiform, dense; glumes — yellowish to dark brown, long; shoulders — narrowing to oblique; beaks — narrow to midwide, oblong, awnleted, awns 5 to 8 mm; kernels — red, short, midlong, oblong to elliptical.

Breeder seed will be maintained by the McNair Seed Company, Laurinburg, North Carolina. Uniformity of the variety is to be maintained by the growing of head rows followed by 12 foot or longer rows the second year. These will be rogued as elite seed. Increases from this will be bred, registered, and certified.