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. 15288, is a soft red winter wheat reselected from McNair 2203, C. I. 15228, which came from the cross 'Redcoat' xib//Norin-10//Brevor//Seneca//Asan//Supreza//Redhart//Chancellor//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 — awned, oblong, middense; glumes — brown, midlong, midwide; shoulder — midwidth, 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. Seed stock will be maintained by head rowing followed by planting 12 foot rows from the head rows, giving 2 years for roguing any off-types. Uniform 12 foot rows of the seven lines will be bulked to produce elite seed. Following generations are to be breeder, foundation, registered, and certified.

REGISTRATION OF McNAIR 4823 WHEAT
(Reg. No. 529)

McNair 4823 was the shortest variety tested in Southern Uniform Nurseries in 1970-1971. It matures about 2 days later than 'Blueboy,' the 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 resistant in the Cooperative Rust Laboratory, St. Paul, Minnesota. It is susceptible to certain races of powdery mildew and to Septoria nodorum.

In North Carolina Official Tests, at three locations in the Piedmont area of the state in 1970, 1971 and 1972, Arthur, and 'Blueboy' averaged 4368 kg/ha (65.6 bu/acre) and 3911 kg/ha (58.2 bu/acre). Average weight for these nine tests were 4689 kg/ha for McNair 4823, 74.4 kg/ha for Arthur and 68.5 kg/ha for Blueboy. A number of states have reported excellent yields from New York to Texas. The high yield potential of McNair 4823 is shown by the fact that one location in North Carolina reported yields of 109.73 kg/ha.

The morphological characteristics of McNair 4823 follow: winter growth habit — medium late, short, midstrong; spike — fusiform, dense; glumes — yellowish to dark green, midlong, narrow; shoulders — narrow, wanting to oblique; beaks — narrow to midwide, obtuse; awns — 5 to 8 mm; kernels — red, short, medium elliptical.

Breeder seed will be maintained by the McNair Seed Company, Laurinburg, North Carolina. Uniform seed stock will be maintained by the growing of head rows which will be rogued of any off-types and followed by 12 foot rows the second year. These will be rogued again as elite seed. Increases from this will be breeder, foundation, registered, and certified seed.

REGISTRATION OF NICOMA
(Reg. No. 531)


'NICOMA' a hard red winter wheat (Triticum aestivum L. em. Thell.), C.I. 13874, OK 627514, was developed by the Cooperative Wheat Breeding Laboratory of the Agricultural Experiment Station and released in 1971 in cooperation with the Kansas Agricultural Experiment Station. The cross was made in 1954 and derived as an F, head selection from a cross between 'Triumph' and C.I. 12406. The cross was made in 1954 and released in 1971 in cooperation with the Kansas Agricultural Experiment Station. 

Nicom 12406 matures 7 to 10 days later than Triumph and has strong gluten properties of C.I. 12406. Triumph is a widely grown, early-maturing variety and a mellow-gluten parent, C.I. 12406, is an unreleased Kansas experimental hard winter wheat developed from the cross 'Marquillo'/Oro'/Oro'.

Nicom 12406 matures 7 to 10 days later than Triumph and has strong gluten properties. 

Nicoma has a winter growth habit and early maturity in plant height. The stem is white and is awned, fusiform to oblong, middense, and white. The glumes are glabrous, white (occasionally with black markings), midlong, narrow; shoulders — narrow, wanting to oblique; beaks — narrow to midwide, obtuse; awns — 5 to 8 mm; kernels — red, short, medium elliptical.

Breeder seed will be maintained by the McNair Seed Company, Laurinburg, North Carolina. Seed stock will be maintained by head rowing followed by planting 12 foot rows from the head rows, giving 2 years for roguing any off-types. Uniform 12 foot rows of the seven lines will be bulked to produce elite seed. Following generations are to be breeder, foundation, registered, and certified.

1 Registered by Crop Science Society of America. Received May 14, 1973.

2 Small grain breeder, former Research Assistant, and Small grain breeder, respectively. McNair Seed Company, Laurinburg, North Carolina 28352.

3 Small grain breeder, former Research Assistant, and Small grain breeder, respectively. McNair Seed Company, Laurinburg, North Carolina 28352.