REGISTRATION OF CROP CULTIVARS

CP 76-331 is resistant to spread of sugarcane mosaic virus in the field, but it is susceptible to the ratoin stunt disease bacterium. CP 76-331 has shown moderate susceptibility to smut caused by Ustilago scitaminea. Syd. in two inoculation tests. It appears to be resistant to rust caused by Puccinia melanosepala H. and P. Syd. CP 76-331 is susceptible to injury by the sugarcane borers (Diatreae saccharalis F.).

CP 76-331 is moderately erect and generally well adapted to machine harvesting. Its fiber content is slightly higher and normal juice extraction slightly lower than CP 65-357, and the variety has been assigned a milling factor of 1.01 compared to 1.02 for CP 65-357. CP 76-331 produces a high population of medium-sized, green stalks of average stalk weight (0.9 kg).

Seed cane of CP 76-331 will be maintained at the U.S. Sugarcane Field Lab., Houma, LA 70361.

D. D. Garrison, R. D. Breaux, and H. P. Fanguy (2)

References and Notes
2. Agronomist, laboratory director, and research agronomist, respectively, USDA-ARS-U.S. Sugarcane Field Lab., P. O. Box 470, Houma, LA. Cultivar development a cooperative effort of the USDA-ARS, The Louisiana Agric. Exp. Stn. and the Am. Sugar Cane League. Registration by the Crop Sci. Soc. of Am. Accepted 5 Nov. 1984.

REGISTRATION OF 'NC 85' TOBACCO

'NC 85' is a flue-cured tobacco cultivar (Nicotiana tabacum L.) (Reg. no. 92), developed and released cooperatively by the USDA-ARS and the North Carolina Agricultural Research Service. NC 85 resulted from a cross of flue-cured cultivars 'Coker 319' X 'Coker 298'. It was tested as breeding material by growers in the Flue-Cured Tobacco Regional Small Plot Test in 1982 and 1983; and the Regional Farm Test in 1983. NC 85 was in the F2 generation when released in 1984 and it will be in the F4 generation when planted by growers in 1985.

NC 85 was developed by a pedigree system of breeding; initial selection for plant type and alkaloid content occurred in the F2 generation under field conditions. Head-to-row selection was made in the F3 generation while in each generation from F4 through F11 individual plants were selected and bulked. Evaluations for disease resistance, yield and quality were carried out in the F4 through F10 generations.

NC 85 has high resistance to the black shank disease caused by Phytophthora parasitica f. nicotianae (Breda de Hann) Tucker and high resistance to the bacterial wilt disease caused by Pseudomonas solanacearum E.F. Smith. It has moderate resistance to the fusarium wilt disease caused by Fusarium oxysporum (Schlecht.) f. nicotianae Johnson. NC 85 received a high average price per kilo and cured leaf quality index and yielded 3514 kg/ha in the 1983 North Carolina Official Variety Test. The yield was 14% more than that of 'NC 2926', a check cultivar. NC 85 produced very few ground suckers and did not flower prematurely. The average height of NC 85 was 109 cm and the cultivar flowered approximately 64 days after transplanting.

Cured leaf of NC 85 from the 1983 Regional Farm Test was predominantly orange in color, medium bodied, and smooth in texture. The leaf was judged high in percent usability (42%) by tobacco company leaf personnel.

NC 85 is a moderately high yielding, disease-resistant cultivar that has good quality cured leaf, desirable field appearance and it should be adapted over a wide portion of the flue-cured tobacco growing region. Breeder seed of NC 85 will be maintained at the Oxford Tobacco Research Laboratory and foundation seed will be distributed by the North Carolina Foundation Seed Producers, North Carolina State Univ., Raleigh, NC 27650.

G. R. Gwynn (9)

References and Notes

REGISTRATION OF 'PHOENIX' WHEAT

'Phoenix' hard white winter wheat (Triticum aestivum L.) (Reg. no. 699), WW33, CI 17962, was selected at the Agricultural Research Institute, Wagga Wagga, Australia by Albert T. Pugsley and released jointly in 1981 by the University of Melbourne and the University of California for use in California. It is a pure-line selection from the backcross WW15 X WW80. The two parents, both having spring growth habit, were introductions to the Australian program from Mexico. WW15 is very similar, if not identical, to 'Anza' and has the parentage ('Lerma Rojo' X 'Norin 10'-Brevor') X ('Yaktana 54' X Norin 10-Brevor) X 'Andes'. WW80 is a selection from ('Penjamo 62' X Gabo 56') X ('Tezanos Pintos Precoc' X 'Nainari 60'). Two important Australian white-grained cultivars, 'Condor' and 'Oxley', both having spring growth habit, were selected from the same cross as Phoenix.

The cross and backcross were completed by J.R. Syme in 1967. The selection of plants with vernalization requirement from line number 7165 was done by A.T. Pugsley from a summer planting in 1971 at Wagga Wagga. The plants having vernalization requirement headed very late. Seeds from these plants were multiplied under the designation WW33. WW33 was sent to California by Pugsley in 1972 where it was evaluated in state regional trials as UC221. The cultivar was multiplied for release by head-rows with selection for uniformity applied before bulking. Pugsley predicted on genetic grounds that segregates should be found within this cross that would have winter growth habit. This prediction was realized and it seems that Phoenix, with the vrn1., and an unidentified gene vrn2, is the first true winter wheaat cultivar to be selected from a cross of two parents having spring growth habit.

Phoenix has been extensively evaluated in eastern Australia and California and was included in the 13th and 14th International Winter Wheat Performance Nurseries (Nebraska, unpublished data). When planted at the recommended period (November-December) Phoenix has grain

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