Registration of ‘Oxford 207’ Tobacco

‘Oxford 207’ flue-cured tobacco (*Nicotiana tabacum* L.) (Reg. no. CV-114, PI 601992) was developed by the North Carolina Agricultural Research Service and was released in 1997 for its high resistance to the major soilborne diseases of flue-cured tobacco and its good yield and quality characteristics. Oxford 207 combines high resistance to bacterial wilt [caused by *Pseudomonas solanacearum* (Smith) Smith] with a high level of resistance to Race 0 of black shank [caused by *Phytophthora parasitica* Dastur var. *nicotianae* (Breda de Haan) Tucker; syn *P. nicotianae* var. *nicotianae* G.M. Waterhouse]. It is also resistant to Races 1 and 3 of the southern root-knot nematode [*Meloidogyne incognita* (Kofoid & White) Chitwood] and has exhibited high resistance to fusarium wilt [*Fusarium oxysporum* Schlechtend.: Fr. f. sp. *nicotianae* (J. Johnson) W.C. Snyder & H.N. Hans.] in greenhouse tests. Oxford 207 is susceptible to the predominant virus diseases of flue-cured tobacco.

Oxford 207 was developed by pedigree selection from a single-cross between ‘Coker 319’ (PI 552426) and ‘K 399’ (PI 552504). Coker 319 has excellent handling characteristics and produces high-quality flue-cured tobacco. K 399 possesses high resistance to both bacterial wilt and black shank. Single plant selections were made in an F3 population grown in a bacterial wilt disease nursery. Further selections were made among F2- and F3-derived lines on the basis of resistance and plant appearance in replicated trials in a bacterial wilt nursery. Selection for black shank resistance was carried out in the F3 and F6 generations in a naturally infested disease nursery. F7 generation seed was composited from five plants and maintained as a bulk thereafter. Final selection was based on performance in yield and quality trials. Breeder seed was in the F7 generation at the time of release.

Oxford 207 was tested as OX2007 in the North Carolina Official Variety Test in 1993 (1), in the five-state Flue-Cured Tobacco Regional Small Plot Test in 1994 and 1995 (2), and in the Regional Farm Test in 1995 (2). Oxford 207 has met the standards for chemical and physical characteristics of the cured leaf and for smoke flavor established by the Regional Minimum Standards Program (2). Average plant height (100.8 cm) and leaf number (19.5) of Oxford 207 are similar to other currently grown flue-cured tobacco cultivars. The average days to flower (69 d) of Oxford 207 is about three days later than other currently grown flue-cured tobacco cultivars. In the absence of disease the yield of Oxford 207 is comparable to many commercial flue-cured cultivars, but is about 10% less than the highest yielding cultivars such as K 326 and NC 71. In contrast, however, both of these cultivars have low resistance to bacterial wilt. Oxford 207 had a two-year average grade index of 68 which was equal to the average grade index of all released cultivars tested in the North Carolina Official Variety Test during 1996 to 1997. Data from the Regional Flue-Cured Variety Testing Program from 1994 and 1995 (2) indicate that Oxford 207 is adapted throughout the flue-cured-producing region in the USA. It is adapted to a wide range of soil and climate conditions and has been grown in over 50 locations. Oxford 207 is susceptible to halo blight [caused by *Pseudomonas solanacearum* (Burkholder) *Fusarium solani* (Mart.) Sacc. f. sp. *phaseoli*] (3) and root rot [caused by *Fusarium oxysporum* f. sp. *pisi* (Pers.:Pers.) Unger]. The F3 progeny were advanced in Puerto Rico. A single-plant selection was made in a bacterial wilt nursery in Michigan on the basis of agronomic traits, seed traits, and resistance to bean rust [caused by *Uromyces phaseoli* (Pers.:Pers.) Unger]. The F4 progeny were also tested in Puerto Rico. The F6 breeding line, coded Dastur, was identified as possessing the desired pinto seed traits. The F5 progeny were advanced in Michigan and tested in Puerto Rico. The F6 breeding line, coded pinto DB, showed advanced yield trials in 1994.

Kodiak was extensively tested for yield and quality at 26 locations in Michigan, North Dakota, Nebraska, and Washington over four seasons (1994–1997). Yield averaged 220 kg ha⁻¹ and has outyielded ‘Aztec’ by 10% and ‘Othello’ by 10% over 21 locations and ‘Coin’ by 52% over 13 locations.

Kodiak averaged 48 cm in height and exhibited a midseason growth habit, with moderate resistance to bean rust. ‘Kodiak’ has white flowers and blooms 51 d after planting. The midseason bean matures 94 d after planting. The cultivar has a wide adapta-

Registration of ‘Kodiak’ Pinto Bean

‘Kodiak’ pinto bean (*Phaseolus vulgaris* L.) (Reg. no. CV-156, PI 604226) was developed and released cooperatively by the Michigan State University Agricultural Experiment Station and the USDA-ARS for its high yield, midseason maturity, and disease resistance.

Kodiak, tested as P94207, was derived from a cross between G91213, made in 1992 between pinto and great northern breeding lines. P90557 is a midseason, rust-resistant (Type II) pinto breeding line and C90012 is a resistant northern breeding line. The F1 plants from the greenhouse and space-planted in an F2 nursery at the Sugarbeet Research Farm near Saginaw, MI, selection was identified as possessing the desired pinto seed traits. The F2 progeny were advanced in Puerto Rico. A single-plant selection was made in a bacterial wilt nursery in Michigan on the basis of agronomic traits, seed traits, and resistance to bean rust [caused by *Uromyces phaseoli* (Pers.:Pers.) Unger]. The F3 progeny were advanced in Puerto Rico. The F5 breeding line, coded pinto DB, showed advanced yield trials in 1994.

Kodiak was extensively tested for yield and quality at 26 locations in Michigan, North Dakota, Nebraska, and Washington over four seasons (1994–1997). Yield averaged 220 kg ha⁻¹ and has outyielded ‘Aztec’ by 10% and ‘Othello’ by 10% over 21 locations and ‘Coin’ by 52% over 13 locations.

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References and Notes