Registration of ‘Shawnee’ Yellow Dry Pea

‘Shawnee’ (Reg. no. CV-17, PI 619079) is a large-seeded, yellow-cotyledon dry pea (Pisum sativum L.) developed by the USDA-ARS in cooperation with the Washington Agricultural Research Center (Pullman, WA) and the Idaho Agricultural Experiment Station (Moscow, ID) and released in 1997. Shawnee has large seed size, bright yellow seed color, and resistance to powdery mildew caused by Erysiphe polygoni DC.

Shawnee originated as an F₅ selection (PS010603) from a cross (X78127//WV341F/WA110-42) made in 1984. X78127 is a backcross derivative of ‘Latah’ that was developed for resistance to Pea seed-borne mosaic virus (Muehlbauer, 1983). WV341F is a breeding line donated by Ardie Gustafson of the former Western Valley Seed Company of Moscow, ID, that was used as a source of resistance to powdery mildew and Pea enation mosaic virus (PEMV). WA110-42 was selected from PI 244251 for dwarf plant habit, exceptionally large yellow seeds, and relatively high seed yields. The cross and subsequent selection was made to combine large seed size, good color qualities, and resistance to powdery mildew and PEMV with improved seed yields.

The F₅ selection (PS010603) that led to Shawnee was grown as a single plant row in 1990 along with other single plant selections made from the same bulk population. Preliminary trials were conducted at Pullman, WA, in 1991 and 1992. On the basis of performance in preliminary trials, PS010603 was entered in advanced yield trials from 1993 to 1996 at three locations each year in the Palouse region of eastern Washington and northern Idaho. When compared with Latah, the predominant cultivar in the region, Shawnee averaged 6% higher seed yields from 1993 to 1996. Shawnee had similar yields when compared with ‘Umatilla’ (Muehlbauer, 1987). Shawnee was resistant to Fusarium wilt [caused by Fusarium oxysporum f. sp. pisi (Mart.) Sacc. f.sp.], Fusarium oxysporum, and Erysiphe polygoni DC. with 21.6 mins for Latah and Umatilla. Shawnee originated as an F₅ selection (PS010603) from a cross (X78127//WV341F/WA110-42) made in 1984. X78127 is a backcross derivative of ‘Latah’ that was developed for resistance to Pea seed-borne mosaic virus (Muehlbauer, 1983). WV341F is a breeding line donated by Ardie Gustafson of the former Western Valley Seed Company of Moscow, ID, that was used as a source of resistance to powdery mildew and Pea enation mosaic virus (PEMV). WA110-42 was selected from PI 244251 for dwarf plant habit, exceptionally large yellow seeds, and relatively high seed yields. The cross and subsequent selection was made to combine large seed size, good color qualities, and resistance to powdery mildew and PEMV with improved seed yields.

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