REGISTRATION OF 'CENTENNIAL' HOP

'Centennial' hop (Humulus lupulus L.) (Reg. no. CV-17, PI 546055) was developed at the Irrigated Agriculture Research and Extension Center in Prosser, WA, and was released cooperatively by the Washington Agricultural Research and Extension Center and the USDA-ARS in September 1990.

Centennial is a selection from the cross OR6619-04/USDA63015M made at Prosser in 1974. Selection OR6619-04 is a cross of 'Brewer's Gold'/Brewer's Gold/19040M. Selection 19040M is from a cross of 'Fuggle'/Fuggle/unknown male. USDA63015M is from a cross of Brewer's Gold/Brewer's Gold/19062M. Selection 19062M is from a cross of 'East Kent Golding'/Bavarian/unknown male. The genetic composition of Centennial is 3/4 Brewer's Gold, 3/32 Fuggle, 1/16 East Kent Golding, 1/32 Bavarian and 1/16 unknown.

Centennial was tested as selection W415-90 for 15 yr in single-hill and five-hill plots at the Roza unit of the Irrigated Agriculture Research and Extension Center. During this time it had a calculated average seedless hop cone yield of 1870 kg ha⁻¹, an average α-acid content of 11.2%, and an average β-acid content of 4.1%. Selection W415-90 was tested in five-hill plots near Corvallis, OR, for 7 yr, where it had a calculated average cone yield of 1630 kg ha⁻¹, an average α-acid content of 12.1%, and an average β-acid content of 4.3%. In a 3-yr nine-hill plot at Wilder, ID, it had an average α-acid content of 11.5%, and an average β-acid content of 4.2%. Between 1985 and 1989, selection W415-90 was tested in a 0.8-ha commercial planting near Prosser, WA. During this time it had an average seedless hop cone yield of 1996 kg ha⁻¹, an average α-acid content of 11.5%, and an average β-acid content of 4.6%. During the same period, the average commercial seedless hop cone yield in Washington was 2077 kg ha⁻¹.

Centennial is an early- to midseason-maturing cultivar. It has excellent spring regrowth and good vigor. The shoots cling well to the supporting string and climb rapidly to the top of the trellis (5.5 m). The lateral branches range between 0.6 and 1.3 m in length, and the plant has a clavate growth form. Centennial is moderately resistant to hop downy mildew caused by Pseudoperonospora humuli (Miyabe & Takah.) G.W. Wils. Field stocks infected with hop mosaic virus, hop latent virus and American hop latent virus show no apparent symptoms.

Centennial produces small, dense cones evenly distributed on the upper half of the plant. Seedless cones average 33 mm in length and 245 mg in dry weight. At maturity, bracts are light green, ovate, and average 17 mm in length; seedless bracteoles are yellow-green, lanceolate, and average 14 mm in length. The cones are borne in loose clusters on the lateral branches, and thus are easily picked and cleaned. The abundant lupulin is yellow and has an average α-acid homologue composition of 61% humulone, 29% cohumulone, and 10% adhumulone. After 6 mo storage at room temperature, >50% of the original α-acid content remained in the dried hops, suggesting fair storage stability of the α-acids. The average oil content is 1.5% (v/w) of the dried compressed hops, suggesting fair storage stability of the α-acids. The average oil content is 1.5% (v/w) of the dried compressed hops, suggesting fair storage stability of the α-acids.

REGISTRATION OF 'KASOTA' SOYBEAN

'Kasota' soybean (Glycine max (L.) Merr. (Reg. no. CV-17, PI 546038) was developed by the Irrigated Agriculture Research and Extension Center. Kasota was released because of its superiority in yield and excellent lodging resistance.

Kasota was derived from an F₃ plant of the cross M73-105 × 'Vickery' (1). M73-105 is derived from the cross M68-49 × 'Clay' (3). The line M54-143 has the pedigree 'Lincoln' × 'W34-244' × 'Korean'. The line M54-139 is the result of a cross of 'Renville' × 'Capital' (7). The population from which Kasota was selected was advanced by the pedigrees M54-240 and M54-139. Kasota was tested for yield in Minnesota from 1983 through 1989 under the designation M54-240 × M54-139. Kasota was released in 1990 because of its superiority in yield and excellent lodging resistance, and for its early maturity.

Kasota is of Maturity Group I and is an indeterminate in growth type with white flowers, gray pubescence and brown pods at maturity. Seeds are 16 mg seed⁻¹, with buff hila. In comparison with 'Sibley' (5), Kasota is approximately 1 d later in maturity, has about 3% higher seed yield, better lodging resistance, and 5 cm shorter plant height at maturity. Seeds of Kasota are 1.7% higher in protein content, similar in oil content and similar in seed quality to Sibley. Kasota has a Fe chlorosis score of 2.5 compared with 3.9 for Sibley. Kasota has a Rps1c gene for resistance to Phytophthora megasperma (caused by Phytophthora megasperma D. E. T. Kuan & D.C. Erwin).

Kasota was released on 15 Feb. 1990 to approved seed growers in Minnesota and South Dakota, and will be maintained by the Minnesota Agricultural Experiment Station.

J.H. ORF,* B.W. KENNEDY AND P.J. SCHAUS (8)

References and Notes