REGISTRATION OF CASTOR VARIETY DAWN

(Reg. No. 2)

Raymond D. Brigham

‘Dawn’ castor (Ricinus communis L.), RA 11-15-2-20-37-B-B, was developed cooperatively by the Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture and the Texas Agricultural Experiment Station. It was released in 1957. The dwarf-internode variety was developed from a selection made by D. D. Poole at Chillicothe, Texas, in 1953.

The dwarf-internode gene came to J. C. Miller, Louisiana State University, from C. A. Krug in Brazil about 1938. About 1942, selections were sent to the USDA, ARS program at Stillwater, Oklahoma. This material, originally quite late in flowering, was allowed to hybridize naturally with early flowering, normal-internode types at Stillwater for an unknown number of generations before early selections were sent to the USDA-TAES program at Chillicothe, Texas, in 1952. Dawn is the progeny of plant 15, row 57, of the 1951 Stillwater breeding nursery. It was developed by selfing and pure line selection and is maintained by open-pollination in isolation.

Dawn was one of the first two dwarf-internode varieties released for commercial production in the U.S. Plants are 1.07 to 1.52 m (3.5 to 5.0 feet) tall, with strong stems supported by an extensive root system that is very resistant to lodging. Stem color is red with waxy bloom. Leaves are large, cupped, and dark green in color. The primary raceme flowers after approximately 16 nodes are formed.

Long racemes, 3 to 5 in number, are normal monoecious, with red stigmas on pistillate flowers. Capsule spines and pedicels are long. When dry, the seed is loosely held in the indehiscent capsule, which allows easy butting and cleaning of the seed. Seeds are oval, medium size, brown striped and mottled, with a small caruncle. Oil content is near 50%. Plants are resistant to Verticillium wilt. Alternaria leafspot, tolerant to bacterial leafspot, and susceptible to capsule mold.

After release, Dawn was widely grown in the irrigated areas of the Texas High Plains and adjacent areas of New Mexico. It is now used as a source of elite germplasm, as newer varieties developed; the two varieties trace to the same Fo progeny row.

Breeder seed will be maintained by the cooperative USDA-TAES program, Texas A&M University Agricultural Research and Extension Center at Lubbock, Lubbock, Texas 79401.

REGISTRATION OF CASTOR VARIETY HALE

(Reg. No. 3)

Raymond D. Brigham

‘Hale’ castor (Ricinus communis L.), RA 348, was developed cooperatively by the Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture and the Texas Agricultural Experiment Station. It was released in 1961.

The dwarf-internode variety was selected from lines derived of the highest yielding lines at Plainview in 1957. Selection was continued in the regional testing program as RA 348. This variety produced higher yields than other varieties at Plainview in 1958. It was also highest in yield at Lubbock and Halfway in 1960.

Hale dwarf-internode plants have green stem color, with red stigmas on pistillate flowers. The inflorescence is normal monoecious, and branches produce 10 to 20 racemes of medium size. The primary raceme is normally produced after 8 to 9 internodes and branches are formed, which gives ample height above the soil for efficient mechanical harvest with minimum seed loss.

Seed quality of Hale is excellent, and oil content is higher than most varieties. Plants develop an extensive root system that is very resistant to lodging. Stem color is red with waxy bloom. The inflorescence is normal monoecious, and branches produce 10 to 20 racemes of medium size. The primary raceme is normally produced after 8 to 9 internodes and branches are formed, which gives ample height above the soil for efficient mechanical harvest with minimum seed loss.

Hale is adapted to the High Plains of Texas, northwestern Canada, and the adjacent areas of New Mexico. Breeders seed will be maintained by the cooperative USDA-TAES program, Texas A&M University Agricultural Research and Extension Center at Lubbock, Lubbock, Texas 79401.

REGISTRATION OF CASTOR VARIETY LYNN

(Reg. No. 4)

Raymond D. Brigham

‘Lynn’ castor (Ricinus communis L.), RA 349, was developed cooperatively by the Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture and the Texas Agricultural Experiment Station. It was released in 1962.

The dwarf-internode variety was selected from lines derived from a cross of RA 11-154 X ‘Cimarron’ (designated cross T53222) made by D. D. Poole at Chillicothe, Texas, in 1953. This is the same cross from which the variety Hale was developed; the two varieties trace to the same Fo progeny row. Progenitor plants of Lynn were earlier than Hale in F2 nursery rows grown in 1957. Selection of individual selfed plants for earliness, disease resistance, yield, and plant height was made in 1959 when 9 early F2 selections were selected for multiplication at College Station. Nine pounds of open-pollinated seed, with the pedigree T53222-11-7-6-1-1-B-B-B-F, were harvested from the increase in September. This seed, designated RA 349, was used as the male parent in the production of the variety Lynn, which was released in 1962.

Seed quality of Lynn is excellent, and oil content is higher than that of most varieties. Plants produce an extensive root system that is very resistant to lodging. Stem color is red with waxy bloom. The inflorescence is normal monoecious, and branches produce 10 to 20 racemes of medium size. The primary raceme is normally produced after 8 to 9 internodes and branches are formed, which gives ample height above the soil for efficient mechanical harvest with minimum seed loss.

Hale dwarf-internode plants have green stem color, with red stigmas on pistillate flowers. The inflorescence is normal monoecious, and branches produce 10 to 20 racemes of medium size. The primary raceme is normally produced after 8 to 9 internodes and branches are formed, which gives ample height above the soil for efficient mechanical harvest with minimum seed loss.