REGISTRATION OF CASTOR VARIETY DAWN

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 monoeicous, 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 hutling 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 and hybrids have been introduced.

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.

1 Registered by the Crop Science Society of America, Received March 25, 1970.
2 Formerly Research Agronomist, Crops Research Division, Agricultural Research Service, U.S. Department of Agriculture; now Associate Professor, Texas A&M University Agricultural Research and Extension Center at Lubbock, Texas 79401.

REGISTRATION OF CASTOR VARIETY HALE

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, at College Station in 1958. Seed increase of the line was in the regional testing program as RA 348. This variety produced up to 15% higher yields than available varieties at Plainview in 1958, 1959, and 1960. It was also highest in yield at Lubbock in 1960.

Hale dwarf-internode plants have green stems with waxy bloom. The inflorescence is normal monoeicous, with red stigmas on pistillate flowers. Capsule spines and pedicels are long. When dry, the seed is loose in the indehiscent capsule, which allows easy 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, bacterial leafspot, and susceptible to capsule mold. Yields of Hale were greater than most varieties. Plants develop an extensive root system, which gives ample height above ground 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, which gives ample height above ground for efficient mechanical harvest with minimum seed loss. 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.