

KP BT Pelt

APPLICATION OF VARIETY CERTIFICATION

Name of Variety: Poco Barley

Name of Applicant: Anderson, Clayton & Co.
Oilseed Processing Division
P. O. Box 2988, Phoenix, AZ 85062

1. Origin and Breeding History: Poco barley was developed by Anderson, Clayton & Co. from an early barley line received by D. G. Lorange in 1976 from the International Maize and Wheat Improvement Center (CIMMYT). The parentage and pedigree, as designated by CIMMYT, was:

Hja C4715 x OLLi-M64-69
CMB73-383-2Y-2B-Y-OB
P C 238
Y-75-76

The shortest, earliest plants were bulked in late 1976 at Plainview, Texas and 1977 at Mesa, Arizona. An increase planting was made in late 1977 at Huntley, Montana. There was a one acre planting in Mesa, Arizona in 1978. In 1979, there was another increase at Mesa, Arizona and a late increase at Roundup, Montana. Increase plantings were rogued for off-types, except the 1978 Mesa planting, in which individual plants were selected and bulked.

2. Botanical Description:

Poco is a six-row spring barley.

It is extremely short (50cm) regardless of planting date, whereas other varieties vary in height with different seeding dates. (Arivat varies from 100cm to 130cm.)

Poco is very early compared to other commercial barleys. There are 60-80 days from seeding to heading in Poco; there are 75-100 days from seeding to heading in Arivat.

Straw strength is good compared to other commercial barleys.

Grain color is white.

Head is approximately 7cm in length compared to 8cm for Arivat heads. The heads are nodding. Awns are white at maturity.

Bushel weight of Poco (49 pounds) is heavier than Arivat (46 pounds).

Poco has a lighter green color than Arivat during periods of high moisture.

3. Variety Maintenance:

Breeding and foundation seed will be maintained by Anderson Clayton. The only class of seed for certification purposes will be the certified class.

Poco will be maintained plant progeny row selection, eliminating rows with off-types or inferior performance.

Variety protection is anticipated under the Plant Variety Protection Act.

4. Area of Adaptation: Poco is intended for cotton rotations in the irrigated southwestern United States. It is adapted to grow in a cotton rotation because of its early maturity and short growing season.

- A. For maximum land usage in restricted water areas because the water requirement is much lower than other barleys. It requires one to two less irrigations during higher temperatures than Arivat.
- B. Poco can be grown following late removal of cotton and can be planted later than Arivat because of its shorter growing season.
- C. Poco can be grown with less competition with cotton for moisture because Arivat irrigations coincide with cotton's early irrigation.

5. Variations: Poco has a low frequency of early maturing taller plants (60-75cm) with shorter heads (5cm).

6. Disease or Insect Resistance: No differences have been noted between Poco and other barleys in Arizona. General disease or insect resistance is unknown.

7. Other Information:

- A. Yield: Because Poco is extremely early, short and different agronomically than other commercial barleys, it is difficult to make meaningful comparisons. The six-acre increase field of Poco at Mesa in 1979 yielded 4,500+ pounds/acre. This field was planted on January 4 and harvested on April 20. Yields were estimated by harvesting plots from the 1978 Mesa increase. These plots averaged 5,500 pounds/acre. High plots reached 6,000 pounds/acre. Yields of 2 to 2½ tons/acre were obtained at the University of Arizona, Mesa Experiment Station, in 1979. (Tables 1 and 2)
- B. Earliness: Poco is much earlier than Arivat and other commercial barleys. (Table 2)
- C. Winter Hardy: Poco is similar to other spring barleys grown in Arizona.
- D. Use: Poco is to be grown as an early maturing feed barley to be grown as an interim winter crop in the irrigated southwestern United States in the cotton rotation.
- E. Days from Planting to Heading: There are 15 days fewer from planting to heading in Poco (60) than Arivat (75). (Table 2)