REGISTRATION OF ATLAS 68 BARLEY¹
(Reg. No. 111)

C. W. Schaller and C. I. Chin²

'Atlas 68' barley (Hordeum vulgare L. emend. Lam.) CI 13824, was developed at the University of California, Davis. It is a composite of 140 F₂ generation lines from the backcross [(’Atlas’ × CI 3920-1) × ’Atlas 46’] × [(Atlas × CI 1179) × ’Atlas 57’]². Final observation of the individual lines was completed in 1968.

Atlas 68 is the fourth backcross-derived composite of the original Atlas cultivar which has been released for production in California. Atlas 68 embraces the cumulative transfer of six characters—two sources of resistance to powdery mildew, resistance to Rhynchosporium scald, tolerance to the barley dwarf virus, white aleurone color and semismooth lemma awns. The basic characteristics of the original cultivar have been successfully retained throughout the backcrossing programs.

Atlas 68 differs from the previous release, ’Atlas 57’, by the addition of tolerance to the yellow dwarf virus derived from 'Abate' (CI 3920-1) and the Algerian gene for mildew resistance transferred from CI 1179. It is a six-rowed, semi-smooth awned, spring-type barley with erect early growth and early to mid-season maturity. The straw in midfall, moderately stiff with medium-dense, erect spikes. The kernels are large, with white aleurone, and a short-haired rachilla. Except for its disease reaction, it is similar to Atlas 57 in all other characteristics, including malting and brewing quality.

The Algerian gene for mildew resistance, MI₄, provides protection against all pathogenic races occurring in California. In addition, the ‘Hanna’ gene, MI₄, first introduced into Atlas 46, was retained, providing added protection against new races which might originate. The tolerant reaction to the barley yellow dwarf disease provides ample protection against losses resulting from infection by the virus. Although infected plants will exhibit limited discoloration, little or no dwarfing occurs and yield does not appear to be adversely affected. Comparative yields of Atlas 68 and Atlas 57 in four tests under artificially induced epiphytotics of yellow dwarf were 3318 and 1754 kg/ha, respectively, an increase of 89% attributable to the tolerant reaction to yellow dwarf. In 13 location-year comparisons throughout the state, CM 67 yielded 21% more than California Mariout, with a maximum difference of 55% at one location. Since the yields of the two cultivars are expected to be similar under disease-free conditions, the above figures indicate the widespread occurrence of barley yellow dwarf in California, as well as a measure of its effect on yield.

CM 67 was released by the University of California, Davis, in 1968. Its area of adaptation is similar to that of the recurrent parent, California Mariout, and is recommended for all areas where the latter variety has been successfully grown and in areas where its resistance to yellow dwarf would offset the higher yield potential of the stiff-strawed cultivars, 'Numar' and 'Briges,' especially from late planting dates.

Breeder seed will be maintained by the Department of Agronomy and Range Science, University of California, Davis.

REGISTRATION OF PARK KENTUCKY BLUEGRASS¹
(Reg. No. 4)

H. L. Thomas⁴

'Park' Kentucky bluegrass (Poa pratensis L.) was released in 1957 by the Minnesota Agricultural Experiment Station. Its primary use is for turf. In Minnesota, 'Park' is also recommended for pastures.

Park was developed by selection among 281 vigorous single plants collected in 1937 from 60 old pastures and waste places throughout Minnesota. The collection was carried through an extensive selection and testing program until 1947. In 1953, seed of 15 superior clones, all characterized as apomictic, was combined under the experimental designation Minnesota 95. The collection was made on the basis of total yield, distribution of yield, amount of crude protein and apparent freedom from leaf diseases in field conditions in the Upper Midwest. Park is characterized as having good seedling vigor, high clipping yield and some tolerance to rust and leaf spot diseases. In Minnesota, Park has produced a denser stand than 'Merion' and Common Kentucky bluegrass. In the Upper Midwest, Park has been superior to other cultivars in stand establishment and persistence under variable turf management.

Four generations of seed are recognized; breeder seed, foundation seed, registered seed, and certified seed. Breeder seed of Park is maintained by the Minnesota Agricultural Experiment Station.

REGISTRATION OF FOX SMOOTH BROMEGRASS¹
(Reg. No. 14)

H. L. Thomas⁵

Fox' smooth bromegrass (Bromus inermis Leyss.) was developed by the Minnesota Agricultural Experiment Station and released in 1968.

Fox is a 5-clone synthetic. Four clones, B-15, C-6, 2-25, and 8-81 trace to a polycross nursery established in 1945 from a broad