Registration of Crop Cultivars

REGISTRATION OF WL 306 ALFALFA¹
(Reg. No. 49)
D. F. Beard²

'WL 306' alfalfa (Medicago sativa L.) was developed by the Waterman-Loomis Company and first made available for trial plantings in 1969. It was tested under the designation 303 AWR. WL 306 is adapted to the same general area as 'Buffalo' and 'Cod' where it has given higher forage yields than those cultivars. It is less dormant as measured by late fall growth. Forage yields of 'WL 303' and WL 306 have been similar until bacterial wilt seriously thins stands, after which WL 306 excels in yield. WL 306 is resistant to the spotted alfalfa aphid, the pea aphid, bacterial wilt, and is somewhat more resistant to anthracnose than the Flemish cultivars. The diverse background of WL 306 includes 941 plant selections from the following sources at the conclusion of three cycles of screening with selection for pea and spotted aphid resistance: 75 selections from polyycous progenies derived from four M. falcata × 'Vernal' crosses; 254 from WL 303 and 'WL 304'; 207 from 'WL 292', 'WL 210', and 'WL 211'; 292 from 'Atlantic' and Atlantic × Flemish crosses; and 118 from surviving polyycous progenies (mostly Vernal and 'Ranger') with spotted aphid resistance. The M. falcata source was P. L. 231,731. Each of the five populations was increased under a screen cage to provide isolation from other flowering alfalfa, and is the source of breeder seed for WL 306. Though predominantly purple in flower color, WL 306 has approximately 20% blue or bluish green flowers, and 10% yellow, yellow-variegated, and white flowers.

WL 306 was favorably reviewed by the National Certified Alfalfa Variety Review Board in December 1969.

Seed of WL 306 will be produced under the three-generation sequence: breeder, foundation, and certified. Breeder seed is the composite from the five parent populations with the WL 303, WL 304, Atlantic, and Atlantic × Flemish crosses comprising 50% and the three harder populations 50% of the total. Foundation seed is produced only from breeder seed between the 37⁰ and 44⁰ parallels. Certified seed is produced from fields planted with foundation (or breeder) seed.

¹Registered by the Crop Science Society of America. Received May 29, 1970.
²Vice President-Research, Waterman-Loomis Company, 1015 Chester Ave., Bakersfield, California 93309.

REGISTRATION OF MOAPA 69 ALFALFA¹
(Reg. No. 50)
O. J. Hunt, R. N. Peaden, W. F. Lezeman, and E. H. Stanford²

'Moapa 69' alfalfa (Medicago sativa L.) was developed and tested cooperatively by the Crops and Entomology Research Divisions of the U.S. Department of Agriculture and Agricultural Research Stations of California and Nevada. It was released by these agencies in March 1970.

Moapa 69 was intended as a replacement for 'Moapa' in areas of Utah, Nevada, and California where Moapa is grown. Two of the parent clones of Moapa were replaced by two widely tested clones known to have better performance. The nine parent clones of Moapa 69 are C904, C905, C906, C907, C908, C909, and C910 from Moapa, C937 from 'Sonora' and 'El-Unico,' and 'Atlantic.' The nine paricent clones were evaluated for resistance to the spotted alfalfa aphid and the pea aphid; bacterial wilt; and anthracnose. The survival following heavy infestations with biotypes -F, -E, and -D of the spotted alfalfa aphid were 35.1, 17.9%, and 7.6, 39.7, 2.6, and 0.0% respectively.

Breeder seed is a composite of equal amounts of each of the nine parent clones intercrossed under each class: breeder, foundation, and certified. For each cultivar, the first generation seed increase of breeder seed planted at elevations below 2,500 feet in Arizona and the 40° parallel in California and Nevada. Length of foundation seed production shall not exceed 5 years of seeded. Certified seed is the production from either foundation or breeder seed. No other generation is to be certified. Parental clones and seed will be maintained by Nevada Agricultural Experiment Station.

The National Certified Alfalfa Variety Review Board presented a favorable report on application for certification in December 1969.

| Variety | Grain yield* | Test weight* | Heading date+ | Heights | Will
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</thead>
<tbody>
<tr>
<td>Kerr</td>
<td>2,672.0</td>
<td>48.0</td>
<td>5-1</td>
<td>7.1</td>
<td>7</td>
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<tr>
<td>Will</td>
<td>2,885.1</td>
<td>45.9</td>
<td>4-28</td>
<td>7.1</td>
<td>9</td>
</tr>
<tr>
<td>Rogers</td>
<td>2,716.9</td>
<td>47.2</td>
<td>4-30</td>
<td>7.1</td>
<td>11</td>
</tr>
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* Average of 43 replicated tests over a 7-year period. ² Average of 4 replicated tests over a 7-year period. ³ Average of 5 replicated tests over a 7-year period. + Average of 5 replicated tests over a 7-year period. Survival 100% in the remaining 39 tests. $ Average of 4 replicated tests over a 7-year period.

Agronomic data on Kerr compared with Will is presented in Table 1. Kerr is similar to Rogers in agronomic characteristics including yield; however, it is superior in hardness and exhibits greater greenup in the fall than Rogers. Kerr is superior to Will in total weight. Kerr does not usually yield as well as Will when grown in areas where greenup is slightly better than Rogers in forage production. Kerr is superior to Will in test weight forage yields. Kerr is superior to Will in test weight forage yields.