

1 UNITED STATES DEPARTMENT OF AGRICULTURE
2 AGRICULTURAL RESEARCH SERVICE
Washington, D. C.

3 and

4
5 ARIZONA AGRICULTURAL EXPERIMENT STATION
6 UNIVERSITY OF ARIZONA
Tucson, Arizona

7 and

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9 UNITED STATES DEPARTMENT OF AGRICULTURE
10 SOIL CONSERVATION SERVICE
Washington, D. C.

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12 NOTICE OF RELEASE OF PUHUIMA LEHMANN LOVEGRASS

13 The Agricultural Research Service, U. S. Department of Agriculture,
14 the Arizona Agricultural Experiment Station, and the Soil Conservation
15 Service, U. S. Department of Agriculture, announce the release and nam-
16 ing of Puhuima Lehmann lovegrass. It was developed by the Agricultural
17 Research Service, USDA in cooperation with the Soil Conservation Service
18 USDA and the Arizona Agricultural Experiment Station, Tucson, Arizona.

19 The cultivar, Puhuima, (pronounced **pu hu e ma**, Indian tribe language
20 translated as--"renewing of grass life"), was selected as a single aber-
21 rant plant from Plant Introduction No. 106-088 and designated as experi-
22 mental L-28. Experimental L-28, Eragrostis lehmanniana L., Lehmann
23 lovegrass, was selected among sources through a program-controlled
24 environment in a plant growth chamber. The cultivar Puhuima was signifi-
25 cantly superior to all Lehmann lovegrass sources for seedling drouth
26 tolerance. Natural environmental stress on grassland sites confirmed
27 the response under artificial environmental stress conditions. Stand

1 establishment and survival density were comparatively lower than
2 cultivar 'Kuivato', experimental L-38, and A-68 Lehmann lovegrass, yet
3 forage yield was 15% greater than A-68. An outstanding characteristic
4 was the yield to density ratio which was 105% greater than A-68.
5 Forage yield of cultivar Puhuima was superior to all Lehmann lovegrass.
6 Research has shown that Lehmann lovegrass was more efficient in water
7 use than any other known forage or crop species. Puhuima used 18% less
8 water to produce an equal amount of herbage than A-68. Puhuima is an
9 excellent seed producer with good reseeding characteristics under nat-
10 ural environments. Puhuima was developed for tolerance under stress
11 environments of the Southwest and is adapted to semiarid and arid
12 grasslands for seeding deteriorated rangeland sites at elevations
13 generally below 1,400 m with 30 to 35 cm annual rainfall. Characteris-
14 tics include intermediate seed weight, chromosome number $2n=40$, bunch
15 type growth habit, blue-green foliage color, yellow-anther color, and
16 postharvest seed dormancy. Dormant seed are metabolically alive and
17 seed laboratory tests are effective in evaluating germination.

18 Seed production of Puhuima lovegrass is limited to foundation
19 and certified seed from breeder seed. Breeder seed will be maintained
20 by the Department of Plant Sciences, Arizona Agricultural Experiment
21 Station, University of Arizona, Tucson, Arizona.
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Administrator
Agricultural Research Service
U. S. Department of Agriculture

Date

Gerald R. Stairs

Director
Arizona Agricultural Experiment Station

9-16-76

Date

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