RELEASE OF "LLANO" INDIANGRASS (Sorghastrum nutans)

by the
Plant Materials Center
of the
Middle Rio Grande Substation

I. The New Mexico Agricultural Experiment Station, in co-operation with the Soil Conservation Service, United States Department of Agriculture.

Co-operative work is being done on the Los Lunas Plant Materials Center of the Middle Rio Grande Substation, Los Lunas, New Mexico, under Sponsored Project No. 10.

II. Notice of release of "Llano" Indiangrass, an excellent seed and forage producer, with very good seedling vigor.

III. Summary of Development

A. Origin: Composite of seed hand-collected near Hudson and Clovis, New Mexico, from a deep-sand site. Elevation, 4,000 feet; average annual precipitation, 16 inches. Carried and tested as PM-NM-275.

B. Method of Breeding or Development: Original source material from Clovis, designated as PM-NM-11, and from Hudson, designated as PM-NM-160, was planted in comparison plots, and also in small initial blocks. Seed from the two block plantings was bulked and planted to a seed increase block of two-thirds acre, and resulting increase carried as PM-NM-275. Both accessions were quite similar as to growth type and flowering date. Purpose of the composite was to develop one variety with a wider range of adaptability.

IV. Summary of Performance

A. Plant Description: A tall, coarse, erect, deep-rooted, long-lived, warm-season, native perennial grass, with short rhizomes. Plants are quite uniform, having stem height of 5 to 6 feet with good leaf production carrying up to 4 feet on stems. Type of reproduction: cross pollinated.

B. Seedling Vigor: Seedling vigor is very good as indicated in production blocks on the Station, and also in field evaluation plantings.

C. Seed Production: Seed yields of "Llano" have been higher on the Plant Materials Center than any of the other strains of Indiangrass in production. Seed yield in a two-third acre production block, for the three years in production, averaged 351 pounds of high quality seed per acre. Yields are from material collected by combine, scalped,

hammermilled, and fanned to a PLS of 63%. Other accessions of Indiangrass averaged 250 pounds per acre -- all were below "Llano".

D. Maturity Date and Harvesting Characteristics: Seed maturity date depends on time of water application or precipitation in the spring or early summer. Under conditions on the Plant Materials Center, production blocks given the first irrigation of the season in mid-May will come into full flower around August 20th, and seed is ready for harvest the last week of September. Although "Llano" under irrigation may exceed 6 feet in height, it is easily harvested with a regular type farm combine.

E. Forage Production: "Llano" is superior in herbage production to the average of other accessions being tested on the Center. Under irrigation on the Center, herbage production averaged 7,000 pounds per acre, air-dry. Clippings were at a stubble height of 5 to 6 inches, and only one clipping per year. The average herbage yield for all other accessions of Indiangrass was 6,020 pounds per acre.

F. Disease and Insects: "Llano" has been free of disease, and insect control has not been needed at this location.

V. Summary of Field Performance

See attached summary sheet.

VI. Justification for Certification

"Llano" Indiangrass is needed for reseeding on sandy plains and deep sand range sites in eastern New Mexico and as far north as Burlington, Colorado. Seed and forage production is well above average of other accessions tested on the Center. (See Section VI, C and E, under Summary of Performance, for seed and forage production figures.) This variety has proven to be well adapted for commercial seed production, and field tests show it to be adapted to the above mentioned range sites. "Llano" is equal to or superior to other strains of Indian grass tested.

VII. Proposed Handling of Release

A. Foundation material will be maintained at the Los Lunas Plant Materials Center.

B. Limited quantities of foundation material will be released to growers approved by the New Mexico Crop Improvement Association.

C. Production will be limited to registered seed produced from foundation, and certified seed produced from registered seed, with no re-certification from certified seed.

D. Specific seed standards of all classes shall be not less than 20% PLS for foundation, 20% PLS for registered, and 20% PLS for certified seed. Isolation in rods shall be 80 for foundation, 40 for registered, and 10 for certified. Further details on certification standards can be found in the Official Handbook of Seed Certification for New Mexico.

E. Approval, signatures as follows:

Marvin L Wilson — Oct 16, 19

Marvin L. Wilson
Associate Director
New Mexico Agricultural Experiment Station

A A Baltensperger — [illegible]

A. A. Baltensperger
Head, Agronomy Department

J W Carpenter — 10-29-63

Head, Horticulture Department