

Value of Indian Ricegrass in Range Reseeding

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Indian ricegrass (*Oryzopsis hymenoides*) is a perennial bunchgrass with widely spreading seed heads which grows from Canada to New Mexico and all states west of Montana, Nebraska and Texas. It thrives best on foothills and plains, especially where the soil is well aerated as rocky or sandy areas, but in some cases occurs on sandy loams near anthills where the competition is not great. Indian ricegrass has been found in deserts where the average annual rainfall is six inches and from sea level to sunny exposed mountain slopes at 10,000 feet elevation.

As a climax species, this grass thrives throughout most of the dry lands west of the Great Plains. It is ecologically sound that Indian ricegrass be given consideration in many revegetation programs. Its importance for reseeding lies in its drought resistance, palatability, alkali tolerance and sand dune stabilization, as well as its ability to grow and spread by natural reseeding where practically no other species can be established.

Stands that have been reseeded naturally and been given light grazing use will increase rapidly. Seeding at a rate of 10 to 15 pounds per acre will give a very satisfactory stand within five year period. When seeded in mixtures Indian ricegrass grows well with blue grama, galleta, needlegrass, wheatgrasses and dropseeds, or with three-awn grasses. Also, it maintains its rank when growing in competition with sagebrush.

Indian ricegrass continues active growth later in the fall than the bluestems and their relatives. The lower portions of the stems may remain somewhat green during

most of the winter which induces livestock to utilize the plant closely. The only protection against excessively close utilization is the old stubble from previous growth.

Palatability ratings of Indian ricegrass are high for all classes of livestock. Chemical analyses show that Indian ricegrass, although low in phosphorus, carotene and digestible protein, is, nevertheless, a relatively good source of energy. Its energy value accounts for its being grazed extensively and being relished by livestock especially in early spring and winter.

The only strain of Indian ricegrass commercially produced at the present time goes by the name of P-2575. This strain is from White Bird, Idaho. The seeds vary in size with the different strains and has been classified by L. A. Stoddart and K. J. Wilkinson of Utah State Agricultural College into five general sizes: (1) very large, over $\frac{1}{12}$ inch in diameter; (2) large, under $\frac{1}{12}$ inch in diameter but over $\frac{1}{14}$ inch in diameter; (3) medium, under $\frac{1}{4}$ inch but over $\frac{1}{15}$ inch in diameter; (4) small, under $\frac{1}{15}$ inch but over $\frac{1}{18}$ inch in diameter; and (5) very small, under $\frac{1}{18}$ inch in diameter.

When fresh Indian ricegrass is used in planting the caryopses should be scarified with sulfuric acid to insure germination. Older seed will germinate readily without such treatment. It grows well on dry sites on mountain brushlands, but it is not shade tolerant. Because of wide variation in adaptability between the many geographical variations, the most reliable seed is that from places similar to the site being seeded. Indian rice-

grass should be seeded at rates of six pounds to ten pounds per acre depending on the amount of rainfall. In general, the higher the rainfall, the higher the seeding rate should be used.

The seedbed should be firm and even. The implements that can be used are the single-disc surface drill and double-disc deep-furrow type drill. The deep-furrow drill throws up a ridge and plants the seed into firmer and moister ground. This is best on weedy ground without prior tillage, as it eliminates more weed competition than the surface drill. Indian ricegrass seeded in early September and early April will give superior stands. However, on clean-tilled ground the grass stands from fall seedings may result in failure because of wind action. Consequently, clean-tilled land should be seeded in early April to obtain the best results with least risk of failure. This grass can be planted at a depth of three-quarters of an inch to one inch depending on the type of soil. Generally, the heavier the soil, the shallower the seed should be planted. If a high amount of cover and fast thickening of the stand is desired along with a high hay yield, the plantings should be drilled. However, the wide row spacing may prove more productive in extremely dry years.

Adaptations in planting methods should be considered in desert and plains reseeding. When reseeding plains areas, the seedbed should be prepared as previously discussed with the added stipulation that the seeding be done later in the spring. In the desert region, Indian ricegrass can be reseeded by broadcast seeding with no further treatment than trampling by sheep as they graze over the area during the following fall and winter. If sheep are not used, the area should be disced after the seed is broadcast. This will also eliminate brush and reduce competition. If the soil is very sandy, wind action will cover the seed after broadcasting. Seeding on this type of area should be done in the fall.

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