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Leucaena: A Tree Legume for Grazing

By Rob Kalmbacher

University of Florida, Range Cattle REC



For questions or comments regarding this publication contact

[Rob Kalmbacher](#)

Leucaena (pronounced Lew-scenea), a native of Central America, is one of the most versatile multi-purpose tree legumes available to tropical agriculture. Strains used for cattle forage are shrubs that reach a height of eight to 10 feet and grow best on well drained, fertile soil. Leucaena will grow on Florida soils providing they are limed to at least pH 6.0 and the site has good surface drainage. The first one acre planting made in 1988 at the Range Cattle REC is still productive today and has survived wet summers and cold winters.

Once cattle "learn" to graze leucaena, they will straddle the branches, break or ride them down and graze the leaves and eat stems up to the size of a pencil. Production in April after a mild winter at Ona begins at about 1500 Ib/A of leaf dry matter and reaches a peak in July at about 6000 Ib/A, then it declines steadily to about 300 Ib/A in December. Crude protein in leaves average about 25 percent from April to December with TDN averaging about 60 percent. Frost may kill the leaves, but it takes a hard freeze to kill the woody stem, in which case new growth will come from the base. It can survive heavy grazing for several months, and it does not require nitrogen fertilization.

At Ona, three acres of leucaena was seeded in 1992 in 30" rows, much like corn, and has been grazed for three years. In our experiments, weight gains of heifers grazing bahiagrass were compared to gains of heifers grazing leucaena plus bahiagrass. We found that the advantages of leucaena come about after July when Bahiagrass protein falls below about seven percent. Then, heifers having access to leucaena continued to gain weight while heifers grazing bahiagrass alone lost weight.

Australian cattlemen have been seeding leucaena in rows leaving alleys of grass in between. In South America, ranchers have seeded leucaena in blocks which are opened to cattle as a "protein bank" to supplement cattle diets when grasses become deficient in protein. Leucaena will not be a forage that will fit into all Florida operations, but it may

work on some ranches. The major problem now is to get leucacna established in a large scale planting on a ranch. Assuming that soil pH and drainage problems have been corrected, leucacna has such poor seedling vigor that it requires nearly a year for it to establish. During this time, weeds can easily choke it out, and rabbits and deer can have a field day. Based on the latter observation, leucacna may be of value as a deer forage.

We have failed twice in each of the last two years to get leucacna established on a Florida ranch. The seed, which looks like a watermelon seed, must be treated with hot water to break seed dormancy, inoculated with the proper bacteria so that the plant can fix nitrogen, and drilled at 7 Ib/ A. Leucacna may never be on the recommended list for pasture forages in Florida, but our job is to research the many different avenues that could provide better forages for Florida cattlemen.