

TECHNICAL NOTES

Hurricane Sourgrass: Scourge or Blessing!

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Highlight

A plea is made for research on hurricane sourgrass in the tropics. In spite of its reputation as a troublesome weed under many conditions, it produces feed in time of drought when more palatable species remain dormant.

While the author was in Puerto Rico he became interested in hurricane sourgrass (*Bothriochloa pertusa* [Willd.] Camus). (Other acceptable botanical synonyms are *Andropogon pertusus*, *Holcus pertusus*, *Amphilophus pertusa* and *Lepeocercis pertusa*). Such interest was aroused primarily because of conflicting reports concerning its value as forage. Some technicians considered it worthless — even a troublesome weed. Alberts (1943) and Caribbean Commission (1946) substantiate this general opinion. However, discussing this problem with various pasture and range technicians in the Caribbean many thought it deserved a more careful look, that it had value under certain conditions.

Hitchcock (1936) describes it as a perennial having branching upright stems from 20 to 100 cm. tall. The nodes are bearded. The blades are from 10 to 20 cm long, from 1 to 4 mm wide and pubescent or nearly glabrous. The heads are arranged in fan-shaped clusters, few to many on a short rachis, are hairy and from 2 to 6 cm long. The first glume has a pit or a pin hole in the middle of the back which distinguishes hurricane sourgrass from Turkestan bluestem (*Andropogon ischaemum* L.). The awn of the sessile spikelet is twice genticulate, brown and about 15 mm long. The culms turn to a light straw color during periods of prolonged drought.

According to Hitchcock (1936) it

is a native of the tropics of the Old World where it is found along roadsides and in open grassy places. He also states that in the New World it occurs in Cuba, Jamaica, Dominican Republic, Haiti, Virgin Islands (St. Croix and St. Thomas), Leeward Islands (Antigua, Nevis and Dominica), Windward Islands (Barbados and Grenada), as well as in Trinidad and Tobago. It is now common in Puerto Rico—especially in the poorer and droughty soil sites. Crowder (1960) lists it with the forage species found in the warmer parts of Colombia. It is present in Venezuela, Luces (1942). The writer encountered it in the Canal Zone. Judging from the habitats where it is established, one could be reasonably safe to assume that it may be widespread in the tropics of Central and South America, especially those areas in the general path of hurricanes. It has gained a foothold in Mississippi, Florida, Texas and Hawaii (Fig. 1). It is known by various common names. A few are “herbe blanche,”

“herbe filante,” “herbe esquine,” “yerbe de mono,” and “yerbe de Santa Lucia.”

Hurricane sourgrass has many shortcomings as a forage plant. Apparently its palatability leaves much to be desired, although no research could be found on this. Too, the percentage of nitrogen is inherently low. Samples from Puerto Rico and St. Croix, Virgin Islands, analyzed here contained 0.96 and 1.07% nitrogen, respectively. The only reference located regarding the nitrogen content of the better pasture grasses in the Caribbean is that cited by Chandler et al. (1953) for Napier grass (*Pennisetum purpureum* Schum.). This was 3.07%. Hurricane sourgrass is a prolific seeder. This combined with its ability to grow on poor soils and under limited rainfall may permit it to become a pest.

On the opposite side of the ledger—some of the troublesome characteristics can be advantageous under certain conditions. Its ability to

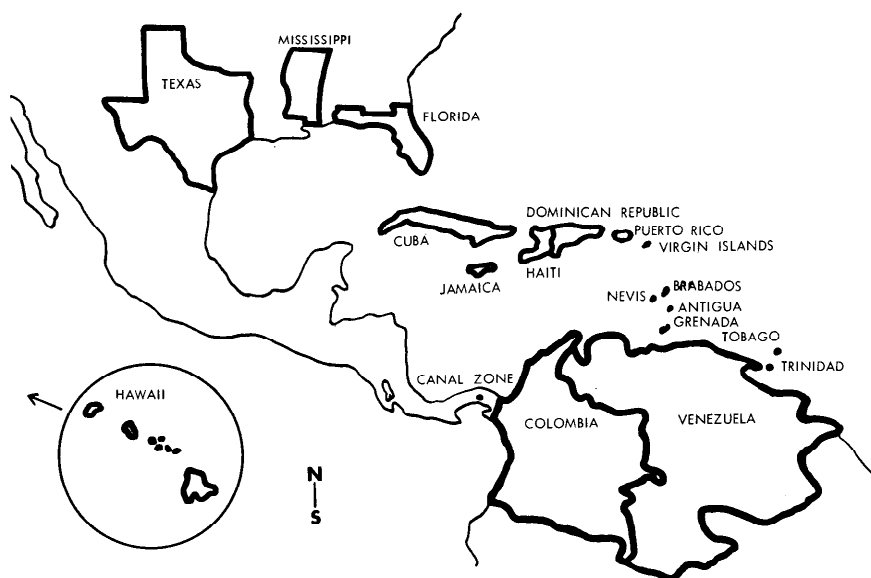


FIGURE 1. Distribution of hurricane sourgrass in the New World.

grow on impoverished soils and in time of drought, when more nutritious grasses can not persist, means that some feed will be available from hurricane sourgrass when other grasses will not grow (Fig. 2).

Often a rancher does not have the money to convert a hurricane pasture to more productive forage. He can obtain considerable feed from the hurricane until finances warrant conversion. It will take about 50% more acreage per animal unit than Pangolagrass (*Digitaria decumbens* Stent.) pasture. In the tropics, if the hurricane pasture is properly managed it will eventually be replaced by the guineagrass (*Panicum maximum* Jacq.) on well-drained sites where the soil fertility is not too low (Ovesen, 1948; Scott, 1963).

Scott (1963), in St. Croix, U.S. Virgin Islands area, found that as far as financial returns are concerned, it is more economical to live with hurricane sourgrass pasture than to convert it to Pangola or other more desirable species. The increased production from conversion does not warrant the additional costs involved. The main advantage of Pangola is that it allows about a

third higher stocking rate than hurricane. Yet it has been demonstrated that continued fertilization is required to maintain the productivity of the Pangola. On the other hand, the requirement for protein will be higher during the dormant periods on hurricane sourgrass.

In view of the foregoing discussion it would appear that research should be undertaken for hurricane sourgrass. In fact, it is strongly recommended that a comprehensive program be initiated in the tropics on this species. The research project should include yield tests, feeding value of pasturage, hay, silage, and green chop. Data on compatibility with legumes, optimum stubble height for grazing and for cutting as well as fertilization levels are needed. It would be desirable to have additional research on the economics of converting hurricane pastures to more palatable species.

There appears to be a number of valid subdivisions of hurricane sourgrass, which in turn may indicate sufficient genetic variations to account for the varied opinions concerning its value. For example:

(var. *barbatus* Camus) comes from tropical Asia

(var. *capensis* Hack.) comes from South Africa
(var. *maroceanum* Maire) from North Africa
(vars. *longifolius* and *wrightii* Huck.) from India
(var. *panormitanus*) from Sicily.
This should further strengthen the plea for research.

Summary

A brief discussion of the range of hurricane sourgrass, a native of the Old World, in the Tropics of the Western Hemisphere is presented. Opinions concerning its value as a forage plant are contradictory. Because of its ability to grow on poor soils and under limited rainfall, it is urged that research be undertaken to determine its values and limitations. To say the least, it has merit as an emergency feed.

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FIGURE 2. Hurricane sourgrass pasture on the Skov Farm, St. Croix, U.S. Virgin Islands. Photo by Bob Scott, Soil Conservation Service.