Burn-Chop-Rest on Flatwoods/ Bluestem Range

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Southern Manatee County and the surrounding areas in South Florida have some of the most productive ranching country anywhere. Cattle have grazed south Florida rangelands since 1521, when Ponce de Leon introduced domesticated livestock to the area. Centuries of open range, abusive burning, and excessive grazing have converted flatwood/bluestem range to flatwood/saw palmetto-wiregrass range. Impressive recovery has occurred with the introduction of range management and good grassland principles on many south Florida ranches.

The growing season is about 8 months long—March through October, with an average annual rainfall of 55 inches. Highly productive, tame pastures are commonly used during the growing season, allowing rangeland to rest until after seeds set in the fall. This rest allows a forage build-up for winter grazing the remaining months—November through February. A protein supplement is provided to brood-herds during the 4-month winter dormancy period. Commercial cow-calf operations have done well with this combination of winter range grazing and protein supplementation. Calves are dropped on the range in October through January and the usual breeding season begins around January 1.

Raymond Hullinger is a cow-calf rancher in Manatee County, who purchased his 602-acre ranch in 1975. Upon purchase, Hullinger quickly constructed needed fencing, cattle pens, and reestablished a 41-acre pangola (*Digitaria* spp.) pasture which was being invaded by wax myrtles (*Myrica cerifera*). Many south Florida ranchers in Hullinger's situation historically have continued with tame pasture establishment, clearing rangelands until about 75 to 90% of the ranch consisted of domesticated grasses. However, Hullinger, after consulting with the Soil Conservation Service and the range conservationist on staff, concluded that his tame pasture:rangeland ratio was adequate for a most efficient commercial cow-calf operation. Following the range conservationist recommendations, a rest-rotation grazing system was started such that the tame pastures provided most of the summer grazing and the rangeland pastures provided all of the winter grazing.

The rangelands were in poor condition from continuous heavy grazing, resulting in a low-producing range, incompatible with Hullinger's newly designed winter grazing plan. Saw palmetto (*Serenoa repens*) was the major brush invader, and nonpalatable wiregrasses (*Aristida* spp.) made up most of the herbage. Desirable species such as creeping bluestem (*Andropogon stolonifer*), chalky bluestem (*Andropogon capillipes*), and lopsided indiangrass (*Sorgastrum secundum*) were present under the saw palmetto canopy, which protected these species from being completely grazed out. Hullinger's objective for making his rangelands a greater part of his cow-calf operation was to release these desirable grasses by reducing the brush and wiregrass.

These roller choppers are providing 6.5 inches of blade penetration cutting through saw palmetto rhizomes. As the blades revolve, wiregrass clumps are turned up killing them as soil stimulation enhances the opportunities for desirable range plant production.

A prescribed burn was conducted in January, 1980. Saw palmetto and wiregrass, which is extremely fire tolerant, greened up more quickly than the desirable species during spring, as was expected. Research has shown that after a January burn, stored carbohydrates in saw palmetto roots reach their lowest level in May. With this research data available, Hullinger decided to chop his pasture with a tandam roller chopper in June and allow it a complete summer rest. "I do not mind resting this pasture all summer," he said. "We are not able to put any cattle in it anyway for any length of time as it is."

Roller chopping is the most common brush control treatment used on Florida rangelands. Choppers are made in a variety of sizes from small pastureland types suitable for aerating sodbound pasture to extremely large choppers capable of controlling small trees. Using a variety of length and diameter of the drum, roller choppers have a large range of

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Saw palmetto is responding to 4 months of spring growth following a January burn in 1980.

Saw palmetto is showing good control 1 month after chopping. A 50-90% kill on the saw palmetto is expected. Here switchgrass seed has been broadcasted on a 1-acre, range reseeding trial. Due to abnormally dry conditions, the reseeding project failed.

Vigor is regained by the desirable native grasses such as this stand of chalky bluestem. They have recovered from the stress of chopping and the shading effect of the saw palmetto brush. As the end of the second growing season approaches, these and other desirable species will be allowed to reseed before being grazed.

weights available. Marden chopper company of Alburndale, Fla., produces the choppers used in this part of the country. Their choppers range from the TW-4, which has a drum length of 4 ft and a diameter of 20 inches yielding a water-filled weight of 3,500 pounds, to the SB-16GK, having a drum length of 16 ft and a diameter of 72 inches yielding a water-filled weight of 63,000 pounds. Hullinger used L7 Marden chopper pulled in tandem. The L7 has a drum length of 7 ft and a drum diameter of 24 inches yielding a water filled weight of 8,000 pounds. The estimated cost of chopping south Florida flatwoods by this method is $14.00/acre.

After providing the planned summer deferment of the treated pasture, Hullinger grazed his brood herd in the pasture for 2 weeks from October 1 to October 15, 1980. This pasture again received 2 weeks of grazing from July 1 to July 15, 1981, in an effort to improve the quality of the roughage for next winter's grazing. The following winter, 81/82, the pasture provided 4 weeks of grazing yielding a total of 180 animal-units months for this year. The range condition improved from low-poor to low-fair in a rather short time, and probably would have improved more were it not for the dry spring of 1980 and the summer drought of 1981.

At last observation, areas of the treated pasture which were formerly in low-fair condition have reached good range condition. Hullinger has already planned and implemented chopping in other range pastures. He has learned that by giving adequate rest after brush control and by using grazing as a grass stimulator, Florida saw palmetto/wiregrass range can be restored to desirable bluestem grasses.

Sand Bluestem-Andropogon Hallii

Sand Bluestem is a vigorous perennial native grass, closely resembling Big Bluestem with which it intergrads. It is commonly found on sandy soils throughout Nebraska. Sand Bluestem is highly palatable and has good forage value throughout the year. Except when associated cool season grasses are making rapid growth, Sand Bluestem is normally one of the first Sandhill grasses to be grazed. Because of its rhizomatous growth habit, Sand Bluestem withstands considerable grazing.—Nebraska Section Newsletter

Management of Public Lands

A workshop on "Management of Public Lands In The Northern Great Plains" will be held in Bismarck, North Dakota on March 14, 15, 16 and 17, 1983 at the Kirkwood Motor Inn. The information at the workshop will be of use to private ranchers as well as government agencies that manage public lands.

Major topic areas of the workshop include: policies of federal, state and provincial land management agencies; public land user expectations and perceptions; land management techniques for grasslands, woodlands, wetlands and cultivated lands; and regulation of public use.

The workshop is sponsored by the North Dakota Chapter of the Wildlife Society, the Central Mountain and Plains Section of the Wildlife Society, the North Dakota Game and Fish Department, and the U.S. Fish and Wildlife Service. For more information contact: Jerry Kobriger, North Dakota Game and Fish, Rt. #1, Box 56, Dickinson, North Dakota, 58601.