

# ***Practical Range Management in the South<sup>1</sup>***

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The Southern Range is scattered from the Atlantic seaboard to eastern Texas and Oklahoma, and from Virginia to south Florida. Some portions of this broad area are predominantly range, but generally timber growing is the major land use. Native range forage is a secondary crop on many woodland sites; on others, little if any forage is produced once the land is stocked with timber. Range forage is an important resource in parts of the Arkansas highlands, throughout the longleaf, slash pine, pondpine areas and marshes of the Coastal Plain, and in the flatwoods and prairies of Peninsula Florida. Natural forage is an important

part of some individual cattle operations in the loblolly-shortleaf belt, the delta country, and in the mountains, but these operations are somewhat scattered.

Cattle is the main class of stock. As fence laws and better management in general increased, and the open range decreased, sheep and hogs have declined in numbers. Fencing is the first requirement for practicing practical range management. Without fences cattle cannot be controlled, and without control of the livestock, the range cannot be managed.

## **Historical Background**

Many of these natural grazing areas in the South are older in history of use than the Western Range. Some writers claim that the first cattle to enter what is now the United States were

brought by Coronado in 1540 to supply food for his great expedition in search of the Seven Cities of Cibolo. Other reports on the first importation of cattle show that Ponce de Leon brought cattle and other livestock when he landed in the vicinity of Charlotte Harbor, Florida, on his second voyage in 1521. This would be nineteen years before Coronado's entrance.

According to some writers, DeSoto also scattered hogs and some cattle during his march through the South in the early 1540's. Travelers who visited the Southeast before 1700 wrote of great numbers of cattle and of Indians on horseback.

Due to the mild climate, long growing seasons, and the great reservoir of natural forage, cattle and hogs were able to increase.

William Bartram wrote of "cow pens" and horse herds on the southern savannahs during his travels through the Carolinas, Georgia, and Florida, 1773-78. He also told of the Indian chiefs bearing the title of "cow-

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Good calf crops and profitable beef are realized by southern range cattle operators when good range management practices, including adequate supplemental feeding, are used.

keeper" and of their vast herds of cattle and horses.

Livestock production on southern ranges was relatively low, however, due to deficiency in nutritive value of range forage during fall and winter months, insects and diseases, and to poor management. What increase was realized cost little if anything other than the effort to harvest it. Except for recognition of ownership, livestock were treated with little more attention than wild animals.

By way of contrast, the western rancher was often faced with short growing seasons, severe winters or prolonged droughts. Forage quality was higher, and cattle also got more supplemental feeding and better care in general. With higher quality forage and the better care required due to climatic conditions, livestock generally fared somewhat better on the western range.

#### **Livestock Production Potential Realized**

In the last few years the livestock producing potential in the South has gained wider recognition, and native range forage is recognized as a valuable resource. Great progress has been made in the last two decades in controlling insects, better feed-

ing, and improved breeding. Range livestock are now recognized as domestic animals by many operators and cared for as such. Improved pastures have given rise to outstanding breeding and commercial herds. On native ranges progress has been slower, but progressive cattlemen and researchers are showing what can be done toward producing beef at a profit with cheap natural forage.

#### **Practical Range Management**

Sound management of ranges in the South as elsewhere must be based on the following points:

1. Knowledge of the different kinds of land or sites and their potential for producing forage.
2. Setting of management goals as to the kinds of forage plants to be encouraged on each site through range management practices.
3. Recognition of the seasonal variation in forage value on each site.
4. Provision for supplemental feeds or tame pasture for use when the range forage is so deficient that it will not adequately support livestock.
5. Application of the proper combination of range man-

agement and development practices which will move range condition toward the management goal and still produce livestock at a profit.

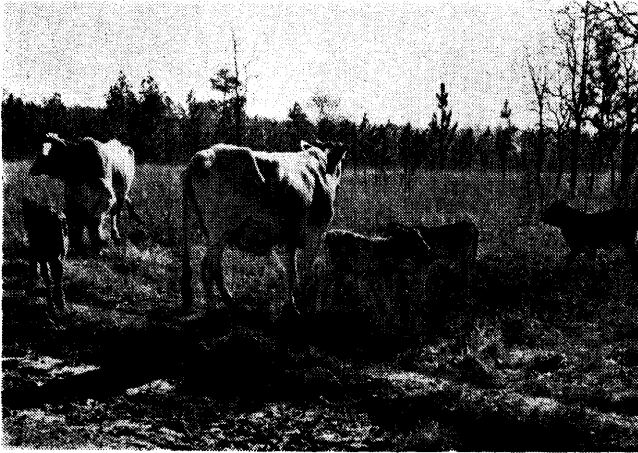
Management goals and practice selection must be compatible with timber production on woodland ranges. A decrease in forage volume occurs as timber stands develop. On well-managed pine woodland areas control of undesirable woody plants, proper thinning, and harvest cutting encourage the highest forage production consistent with timber production. Managed grazing of some pine woodlands in turn, reduces fire hazard, contributes to hardwood control by use of sprouts, and is sometimes helpful in years of pine seed production by keeping the rough down and getting seed in contact with the soil.

#### **Examples of Practical Management**

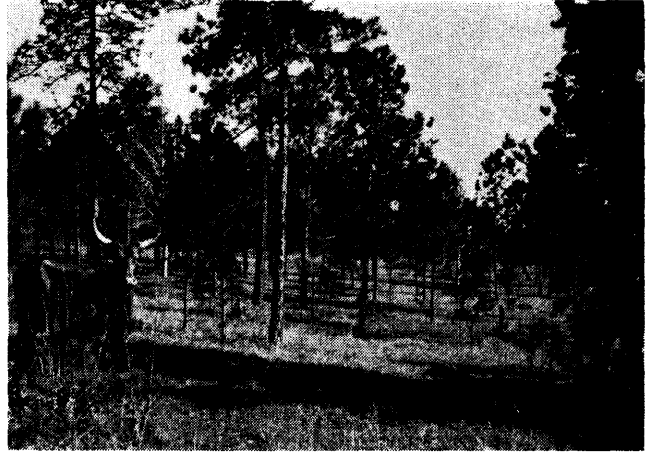
Now let's take a look at a few of the many successful cattle operations across the South and see how range forage fits into various livestock enterprises:

##### **Switchcane—Pond Pine Area**

Robert Stokesberry, Plymouth, North Carolina, is a farmer typical of the area. He has 100 acres of switchcane range with very little pond pine. This range is grazed May 1 - October 1, a period of five months with twenty head of cows. Cattle glean aftermath in corn fields during October and November. From December 1 until April 30, the cows are on a 30-acre tall fescue-ladino clover pasture. The cattle receive no other feed. The calf crop on this farm has been at least 90 percent for the past five years and calves dropped in January weigh 495 pounds by October. 1. Although switchcane range is used only five months, this is the period of critical feed supply on this farm. The major range problem is control of wild



On woodland range, quality and quantity of forage are affected by site, conditions due to past use, and the density of the timber stand. As the canopy of trees develops, production of understory forage plants declines.



Woodland-range in the longleaf pine belt partially stocked with trees. Environmental conditions in this area favor the growth of considerable grass even when fully stocked with longleaf pine trees.

fires which can seriously deplete switchcane stands. There are other operations in the switchcane area which are much larger and on which switchcane is grazed for a longer period. Further south switchcane is used mostly for winter range.

#### East Coast Marshes

Due to daily tidal variation of five to seven feet, much of the East Coast Salt Marsh is too hazardous for range use. On broad areas where considerable acreage is subject to only one-half to two feet of daily tidal overflow, and on some fresh marsh areas, range grazing is practiced. Frank Williams of Meridian, Georgia, a cooperator in the Coastal Soil Conservation District, operates a marsh range cattle outfit. This unit consists of 2,000 acres of salt marsh range covered mainly with smooth cordgrass. Creighton Island, a 1,000 acre wooded upland area lies in the center of the marsh. The marsh is grazed from October 1 until May 1, varying a few weeks due to seasonal conditions. About 9 accessible marsh acres per cow are allowed, but more firm and uniform areas will require only half this acreage. Cattle graze wooded range from May until October on the island including some improved pastures of Pensacola

bahiagrass. Cattle receive no other feed. Calf crops in this area average 60 percent with a weaning weight of 250-300 pounds at six months. Problems include inaccessibility of some range areas, uneven use with easily accessible areas overused and badly trailed, and lack of reserve feeds for period of storm or drought.

#### Peninsula Florida

South-central Florida is the location of many cattle ranches. The land is mostly slash-pine flatwoods, but prairies, hammocks, sand scrub ridges, and grassy pond sites are also common. A considerable acreage of some ranches has been developed into highly improved pastures of pangolagrass, bahiagrass, white clover and other improved species. Operations vary from straight improved pasture setups to almost straight native range units. Some authorities estimate that a majority of the land in this area, or about 10,000,000 acres will remain in native range.

The Monreve Ranch near Stuart in the Martin Soil Conservation District, consists of 1,680 acres of irrigated, highly improved pangolagrass - white clover pasture and 2,800 acres of native range. The cattle have

been improved through breeding, culling, sanitation and the forage program. Here, cattle graze improved pasture March 1 through October. Irrigation is used during the first part of the grazing period prior to the rainy season. During November, December, January and February, cattle are placed on unburned wiregrass-palmetto range and fed a 2-1 meal-salt supplement free choice. Cattle use native forage well through this season, even though it is mature and tough, and Dick Kelley, manager, states that they lose no weight. Furthermore, he believes burning is unnecessary when adequate supplement is used. While cattle are on the range, improved pastures are rested and fertilized, and the clover has a chance to start growth. Although the bulk of the forage comes from developed pastures, the range forage is a very important cog in the feed and forage schedule of this operation.

Another large land and cattle company in the Hendry County Soil Conservation District consists of 5,000 acres of pangolagrass pasture and 31,000 acres of woodland-range, mostly slash-pine flatwoods. Dry cows are left on the range until they calve. Cows and new calves are placed

on improved pasture as soon as possible and remain there until the calf is weaned at about seven months of age. Cows then return to the range and the calves are grown out on the pangolagrass. Cattle are marketed as two-year olds after about 120 days in the feedlot. Cow-calf, stocker cattle, and the feedlot enterprises are well coordinated operations based on the improved pasture-native range forage base. Roughly, one acre of pasture and 10 acres of range are used per breeding animal. They are realizing a 400 pounds calf at 9-10 months of age and a 70 percent calf crop.

Conservative use of forage, mineral supplements and provision for adequate nutritional level 12 months out of the year keep range, pasture, and cattle in good productive condition.

Some types of operations are based on range use year-long with varying degrees of supplemental feeding, burning, and other practices. Control of sawpalmetto, proper use of fire, supplements for range use, and proper degree of use of range forage are some of the management problems in this area.

#### Longleaf Pine Belt

The area originally covered in longleaf pine extends along the

Coastal Plain from the Carolinas around to East Texas. Growing conditions in this type of country favor considerable grass production, even when management is designed to favor production of pine timber.

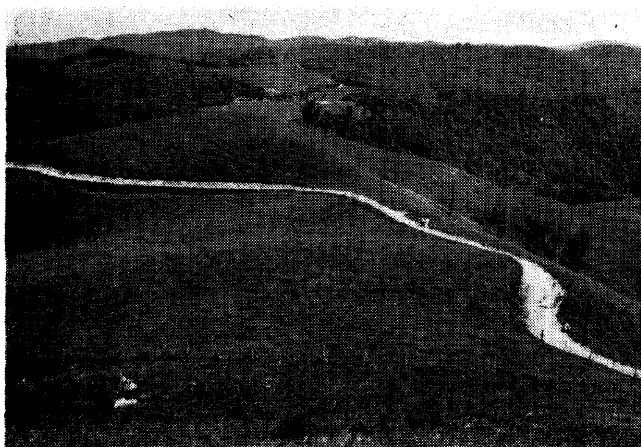
C. C. Williams & Sons, Mobile, Alabama, are range operators who have a well-balanced range management program. One of their units is a 1,000 acre longleaf tract. Ten percent of this area is in natural longleaf reproduction and the other 90 percent was planted to slash pine in 1953. It has been stocked at an average rate of one cow to ten acres year-long, although this has varied some years due to change in growing conditions. They feed the cattle oat hay and cottonseed meal during the fall and winter months. The hay is fed mostly during inclement weather—the meal for about 120 days at a progressive rate as the season advances and grass value declines. Calves from this unit are dropped in January, February and March and marketed by September 1—weighing 300 pounds. The soundness of the Williams' management program can readily be seen by comparing this area with numerous others where good management is not being followed. Range is

in excellent condition, and young pines are flourishing. Grass production will drop some as trees grow, but stocking is based on forage production. Some cattle will be moved to other areas when necessary.

#### Gulf Coast Marsh Range

Firm areas of fresh and salt marshes along the Gulf from Texas to Florida are grazed by cattle and to some extent by hogs. Extensive areas of such range are found in Louisiana and Texas and lesser areas in the other states bordering the Gulf of Mexico.

Harris Pitre of Galliano, Louisiana, grazes 8,000 acres of fresh marsh range. Principal grasses are maidencane and giant-cutgrass. One thousand animal units graze this area year-long. About 800 acres of undeveloped hardwood ridges furnish some forage and shelter. No improved pasture or other feed of any kind is used except salt and minerals. The calf crop has averaged 70 percent. Calves dropped February-April are weaned in September and October—weighing 275 pounds. After calves are separated and weaned, they are carried over one full year and sold at about 600 pounds average weight. Calves dropped in the



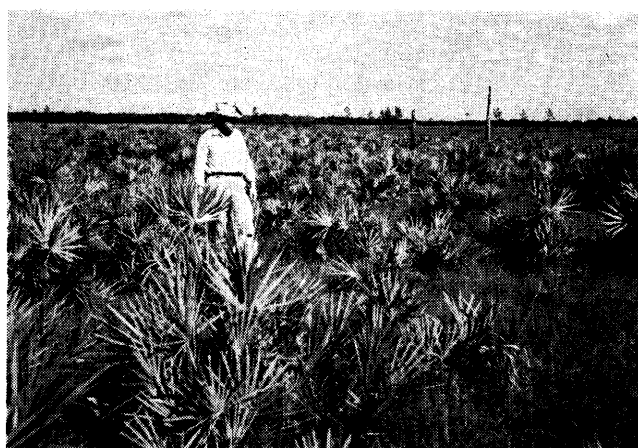
Mountain grassland in western North Carolina serves as summer range for both sheep and cattle operations. "Grassy balds" are natural grassland, but the bulk of the summer grazing area was once in forest.



Salt marsh ranges along the East and Gulf coasts are valuable for winter grazing. Operators who use salt marsh range in the winter and woodland range for spring-summer grazing have good natural forage yearlong.



Control of low-grade hardwoods and good grazing management practices improve quality and quantity of forage in the savannah range area of northwest Arkansas.



Saw-palmetto is one of the greatest problems on South Florida ranges. Control is difficult and costly.

spring of 1956 brought 16¢ in September of 1957.

A considerable amount of this range is not accessible. Additional walkways and water facilities planned but not yet completed will double the production. During the past six years good management has been followed and range conditions have improved. The range is divided into several units to permit some flexibility in range and livestock management.

It is hoped these examples will give some indication of the different types of range in the South and the part range forage plays in livestock production. While these stockmen are using range forage in a practical manner for economical beef production, all have unsolved problems.

### Research

Research information is aiding southern stockmen in solving their problems. It is making their operations more practical and profitable. Work is currently being done on range problems in North Carolina, Georgia, Florida, Alabama, Louisiana and Arkan-

sas. Federal and state experiment stations, colleges, various agencies and local interests are carrying on this work. Studies on values of range plants, seasonal value and deficiencies of range forage, supplemental feeding, control of undesirable plants, prescribed burning, and various aspects of management have yielded much valuable information. Additional studies are needed on the ecology of range plants and plant communities on different range sites, trends in range condition as related to types of management, and determination of practical management goals based on the potential of each range site. More information is needed on prescribed burning as a tool of management on some range sites, and the control of undesirable vegetation needs more attention. Finally, there is a need to determine the best management for areas which will be used for both timber and livestock production.

### Summary

A tremendous volume of natural forage is produced in the

South. The quantity and quality of this forage varies in accordance with range site differences and potentialities. In addition to site characteristics, production is affected on woodland areas by the species of trees being favored and by timber stand development. Judicious use of native forage can contribute greatly to economical beef production. By using native range forage as a source of cheap pasture and roughage in combination with supplemental concentrates, or tame pastures, stockmen have developed successful operations throughout the South. Opportunities for further improvement in management are tremendous.

A greater awareness of these opportunities and problems in range management will result in better land use and treatment of the entire Southern Range. Stockmen, woodland owners, soil conservation districts, and state and federal agencies are working toward this goal. More effective soil, water, and plant conservation and greater returns to the owners and operators will be the result.

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