

TECHNICAL NOTES

EARTHEN WINDBREAKS, A NEW MANAGEMENT DEVICE FOR SALT MARSH RANGELANDS

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Earthen windbreaks are proving to be effective in the management of marsh ranges in South Louisiana. Lack of shelter or protection from wind during freezing weather has been one of the hazards to cattle raising and good grass management on Louisiana marsh ranges according to Williams (1955).

The marsh ranges in South Louisiana are in the sub-tropical zone where the winters are relatively mild. However, cold fronts move this far south practically every winter that drive temperatures to freezing or lower (USDA Yearbook, 1941). The usual pattern of these storms is a cold wind accompanied by rain or sleet. As the cold front moves south, temperatures drop rapidly. Temperatures have been known to drop as much as 20 to 40 degrees in just a few hours. It is this type of storm that causes cattle to suffer. They bunch up and travel with the storm or mill in fence corners and often go without food or water until the storm subsides. Death losses have been attributed to these severe cold spells. This is especially true when

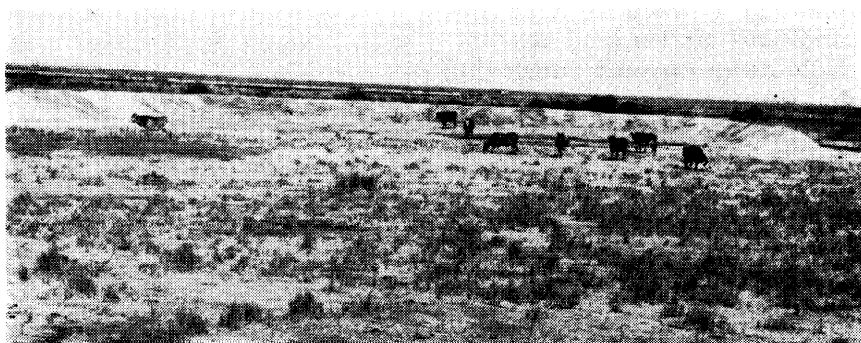


FIGURE 1. Windbreak constructed on the edge of the prairie adjacent to salt marsh rangeland. Wings are attached at a 90° angle.

temperatures drop below 20°F and the storm hangs on for several days. Livestock can stand considerably more dampness, cold and hunger if they can get away from the wind.

Several types of windbreaks have been used by different op-

erators on the marsh ranges with varying degrees of success. However, it wasn't until 1961 that windbreaks of earth were used. Isaac White, a rancher near Hackberry, Cameron Parish Louisiana, constructed two earthen windbreaks on his ranch



FIGURE 2. Inside view of windbreak. Here the wings are attached at a 45° angle.

in 1961 and found them to be effective as well as inexpensive.

Construction

Both of Isaac White's windbreaks were built with a dragline to accommodate approximately 100 head of cattle. Each is 150 feet long east and west with two wings 75 feet in length that project toward the south. The wings were placed at a 45° angle on one structure and at a 90° angle on the other.

The windbreaks and wings were built to a settled height of six feet with side slopes of 1.5:1 and a top width of six feet. This design gives protection against winds that may blow from the northwest or northeast (Figure 1 and 2). After two year's experience Mr. White believes the windbreak that has wings projecting at a 90° angle is the most effective.

The borrow pits which provided the earth taken for construction were located on the windward side. These pits also served as reservoirs for storing fresh drinking water near the windbreak.

Location

Louisiana marsh ranges are relatively flat. They are covered with water periodically throughout the year. However, there are some elevated places or ridges that water does not cover. These areas are good sites for constructing earthen windbreaks. Also, if there is a choice, the structure should be located where it will serve the greatest acreage without excessive travel by the cattle.

If ridges are not available, it is possible to build up an area a foot or two high for a distance of 30-40 feet out from the main structure on the leeward side. This is necessary to provide drainage as well as a high, dry place for more cattle to stand or lay down.

Approximately 1,000 cubic yards of earth are required for

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each windbreak. Figuring the cost of earth moved at 25 cents a cubic yard, each earthen windbreak cost Mr. White \$250.00. This cost, amortized at five percent for ten years, represents an average annual cost of 32 cents per animal protected.

Summary

Earthen windbreaks provide cheap and effective protection for cattle against cold winds and driving rain or sleet on Louisiana marsh ranges during the winter months.

When properly located, windbreaks are an aid to distribution of livestock over the entire range. This results in better and more uniform utilization of the forage.

These earthen windbreaks can be tied into a system of cattle walkways on some marsh ranges making both facilities more valuable as range practices during the winter grazing season.

LITERATURE CITED

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