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Managing Forages Within the Limits of Weather

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Weather data has been collected at Ona Research Center since 1942. Last year marked the 50 year for the "Range Cattle Station." I want to share with you why I feel these data are important and what they can mean to the rancher's forage program.

Dr. Elver Hodges, long time pasture specialist at Ona once said, "you can tell who the new man is at the research center because he's the one working on alfalfa." This figurative statement illustrates a very important point. Often we try to force forages and management into environments where they don't fit. Even with the grasses and legumes that are well adapted to Florida, our management is often at odds with climate.

First to characterize climate of south-central Florida using Ona data: the region receives about 53 inches of rain annually-49 percent of this rain comes in June to September. Driest months are November and December, both averaging 1.8 inches. Evaporation averages 59 inches annually, and only during the rainy June to September period does rainfall exceed evaporation.

Temperature extremes over 50 years at Ona ranged from 18 to 103 degrees farenheit. January is the coldest with monthly low of 49 degrees farenheit and high at 73 degrees farenheit. August is the warmest with monthly low at 72 degrees farenheit and high at 91 degrees farenheit. At Ona 32 degrees farenheit or lower was observed in almost nine out of 10 winters. The average date when the first 32 degrees farenheit or lower was observed was December 27, and the last average date for this temperature was February 4.

These are just a few facts, but their application in forage management is great-here are just a few. Growing winter annuals (ryegrass, clover, etc.) is risky. Try to establish them in November or December, success is chancy because these are the driest months. Seed

them in October and it is too warm. Seed them in perennial grasses before the first frost, and the competition is too great, plus it is too late in the year. There's not much time left to make a return on that \$ 130/acre investment before it gets too hot and dry in the spring.

Warm season annuals, like *Aeschynomene* are at least better adapted than winter annuals, but they are undependable because of rainfall. Temperature is not limiting after April 1, however, from April to mid-May there is a one in a three chance for a week in which rain totals half inch or more. If you do get rain, soil moisture won't last long since weekly evaporation is about 1.5 inches. After June 1 chance for a week with no rain drops to two percent with chance for a week with half inch or more increases to 76 percent.

Instead of fighting the weather, a smart rancher will use the dry season to advantage by preparing seedbeds for perennial grasses. Set-back common bermudagrass and weeds in the dry season by disking frequently and planting grass when the rain starts. Plant before October-- remember these are warm season perennial grasses.

The spring dry-season is the best time to make good quality hay. There is a 50:50 chance of half inch or more of rain in the first week of March. Fertilize then, and by late April chance for seven straight days with no rain is about 40 percent. Fine tune your timing with local weather broadcasts, and you can increase the odds for getting quality hay.

Get fertilizer on bahiagrass in late February to early March to take advantage of showers before the April dry period. If grass is fertilized in the dry period, there is little water for growth. When fertilization is done in June you probably won't need forage, and the chance of losing fertilizer to a big rain is great.

For managing perennial grasses going into the winter, graze stargrass off before December or sooner. After frost stargrass quality is poor. The chance for a freeze in the first week of December is 12 percent, but this increases to 40 percent in the middle of the month. Fertilize limpograss for cool-season grazing in late September to ensure adequate, not excessive rainfall and mild temperature before the onset of winter.

Weather data collected at Ona has scientific value, but the every-day value is in common sense application. Growing crops is a gamble, and anything you can do to off-set the odds helps.