

# APPLICATION OF SYSTEM CONCEPTS IN COW-CALF MANAGEMENT

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## INTRODUCTION

Williamson Cattle Company is a beef cattle ranch located in Okeechobee County. We have been producing feeder calves at this location since the 1940s. We raise our own replacement heifers and purchase only performance tested bulls from reputable purebred breeders.

The brood cow herd consists of two separate groups of cows, a Fall calving (September 15 through December 15) group, and a Winter calving (December 15 through March 15) group. The replacement heifers out of the Fall calving cows are bred from March 8 through June 8, at 15 to 18 months old, and thus will become Winter calving cows. The replacement heifers out of the Winter calving cows are bred from December 8 through March 8, and thus will become Fall calving cows. My talk today will concentrate on the Fall calving cows and the ways we use to achieve 90%+ breedback in 90 days and 600+ lb steers at ten months of age.

The Fall calving cows calve from September 15 through December 15. The critical nutrition time for this group is their 90 day breeding season from December 8 through March 8. We use three different systems or a combination of these systems to insure adequate nutrition for these cows during this time.

## I. FALL FERTILIZING AND STOCKPILING OF HIGH QUALITY GRASSES

Hermathria, stargrass, bermudagrass and Pangola digitgrass pastures are fertilized twice a year. The Fall (October through November) fertilizer is a higher nitrogen fertilizer than the Spring (February through April) fertilizer. We mostly use a 21-0-0, 32-0-0 or a 25-5-5 at rates that

will supply about 75 lbs of Nitrogen per acre in the Fall. These pastures are vacated for about two weeks then fertilized and allowed to grow for another two to three weeks before grazing in December. Some of the better stargrass and bermudagrass pastures will be cut for hay. Fertilizing and stockpiling of these grasses substantially increase forage quality and quantity. We fertilize about 1.5 acres per cow, excluding the hay land, so the cost of this fertilizer spread is about \$20.61 per head (21-0-0 = \$77/ton, 21-0-0 @ 357 lbs per acre = \$13.74 per acre x 1.5 acres = \$20.61 per head). These same pastures will be fertilized in the Spring and will be used for the Winter calving cows.

## II. MOLASSES-SLURRY AND HAY SUPPLEMENTATION

The weather and results of our Fall fertilizing program will determine when we start to feed molasses-slurry and hay. In most years around mid-December our older cows (four years and older) will be fed 5 lbs per head per day of a 85% molasses 15% dry feed mix. This 20% protein mix is mixed in a paddlewheel tank and is fed every four days in open troughs. The cost of this mixed feed is about \$.39 per head per day (16% molasses @ \$128 per ton, 52% Feed/Bovatec @ \$304 per ton). These cattle are also fed stargrass and/or bermudagrass hay at the rate of one bale per cow in 90 days. The cost of the hay is \$.17 per head per day (1100 lb bales @ \$15). The total cost of this program is \$.56 per head per day or \$50 per head for 90 days.

### III. RYEGRASS

Ryegrass is our highest quality forage we use. In an adequate rain year the cows on the ryegrass will have the highest weaning weights and the highest pregnancy rates on the ranch, even though they are the youngest group of cows. We plant enough ryegrass for all our two and three year old cows to have 1.5 acres per cow. However, if we have good ryegrass weather this program, with enough fertilizer, will carry one cow per acre. In these good years we will winter our four year old cows on ryegrass also. The per acre cost of this program is as follows:

Tractor-10' Drill, Operator, @ \$30/hr, 4 acre/hr	\$ 7.50
Seed @ \$.20/lb @ 30 lb/acre	6.00
First Fertilizing 25-5-5 @ 300 lb/acre, \$135/ton, \$3/acre spreading	23.35
Second Fertilizing 21-0-0 @ 350 lb/acre, \$77/ton, \$3/acre spreading	<u>16.48</u>
TOTAL per acre	\$53.33

If you are carrying one cow per acre the cost is \$53.33 per cow. In dryer years we will skip the second fertilizing and only carry one cow per 1.5 acres so this would cost about \$55.30 per cow.

Many times we use a combination of the three programs especially on our first and second calf cows. For example, if we have a dry Fall these younger cows may go on our best fertilized pastures with or without molasses-slurry feed to keep them from getting too thin before the ryegrass is available. The general rule is let the younger cows always have the best grass. The older cows will breed in thinner condition than a two or three year old with a calf at her side. We also like to group cows according to age, body condition, age of calf and degree of Brahman/English blood for bull selection. We also try not to waste any money on supplementing or grazing our best forages with dry cows that haven't calved yet! These are our three basic programs we use and a rough idea of the cost of each.