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## **Body Condition and Age Affect Pregnancy Rates on South Central Florida Ranches**

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Beginning in the spring of 1991, five ranches in south central Florida, including Buck Island, Keen, Longino, Silver Harbour and Yucatan ranches have been cooperating on a project aimed at establishing production efficiency under a variety of management practices. Body condition score was determined on about 4000 females during the breeding season on the five ranches this spring and on about 2000 females on four of the five ranches that have completed pregnancy examinations this fall. In general, body condition scores were higher at pregnancy check than at breeding with more than 80% in adequate body condition at pregnancy check versus 47 percent during the breeding season. Most of the two-year-olds (81 percent), which include both virgin and first-calf heifers, had adequate body condition at breeding and would calve in adequate body condition this winter. About 51 percent of the first and second calf three-year-olds had adequate body condition at breeding, but these females were able to gain over the summer such that 97 percent were in adequate body condition at preg-check. Between 40-50 percent of the young, mature and old cows had adequate body condition at breeding and had lower body condition scores at preg-check compared to the yearlings, two and three-year-olds.

Overall, pregnancy rate was 72 percent. About 41 percent of the heifers bred as yearlings became pregnant, but more than 90 percent of the two and three-year-olds were pregnant with their first or second calf. Pregnancy rate was lower in females that had two calves (four and five year-old young cows) than mature or old cows. Females in poor body condition at pregnancy check had a lower pregnancy rate (54 percent) than females in adequate body condition (76 percent). There was an interaction between age group and body condition that was particularly apparent in the young versus the mature cows. About 50 percent of both the young and mature cows in poor body condition were pregnant.

However, 84 percent of the mature cows in adequate body condition were pregnant compared with only 62 percent of the young cows in adequate body condition.

The lower pregnancy rates observed on our cooperating ranches occurred in two groups: 1) females that were in poor body condition, regardless of age and 2) females that had calved twice and should be carrying their third calf (four and five-year-old cows).

Our cooperating ranches are currently collecting calving data. Updates will be published as more data becomes available.

<b>Table 1. Effect of age group and body condition on pregnancy rates.</b>			
Group		No. of Females	Pregnancy Rate (%)
Overall		2106	71.8
<u>Age Group</u>			P<.0001
Yearlings		254	40.9
Two-yr-olds		318	91.5
Three-yr-olds		171	94.1
Young (4-5 yr olds)		299	59.5
Mature (6-10 yr olds)		870	74.1
Old (<10 yr olds)		194	68.6
<u>Body Condition</u>			P<.0001
Poor (BCS≤4)		395	54.2
Adequate (BCS≥5)		1711	75.9

<u>Age Group x Body Condition</u>			P=.01
Young (4-5 yr olds):	Poor	64	51.6
	Adequate	235	61.7
Mature (6-10 yr olds):	Poor	284	53.5
	Adequate	586	84.1