

PUBLICATIONS

1980



**Interrelationship of Endocrine
and Physiological Events
During the Estrous Cycle
in Brahman Cattle**

Research Center

**T
E
C
H
N
I
C
A
L

R
E
P
O
R
T**

**NO.
80-2**

CORPUS LUTEUM WEIGHT AND PROGESTERONE CONTENT IN
BRAHMAN, BRAHMAN X HEREFORD AND HEREFORD HEIFERS

R. D. Randel and H. J. Irvin

SUMMARY

Corpora lutea (CL) from Brahman heifers were smaller ($P < 0.005$) than CL from either Brahman x Hereford or Hereford heifers. Progesterone content of CL tended to be the highest in Hereford heifers and the lowest in Brahman and Brahman x Hereford heifers. As the CL produces progesterone, the hormone responsible for pregnancy, the smaller CL with less available progesterone may be a factor in lowered conception rates in Brahman and Brahman cross cattle.

OBJECTIVES

As previous researchers had noted that Brahman CL were smaller by rectal examination this research was begun to accurately define the effect of Brahman breeding upon CL size and progesterone content.

PROCEDURE

Corpora lutea (CL) were removed surgically on days 8 and 13 after standing heat from 10 two year old heifers each of Brahman, Brahman x Hereford and Hereford breeding. CL were frozen and assayed for progesterone content using a colorimetric procedure.

RESULTS

Brahman CL were significantly smaller ($P < 0.005$) than were Brahman x Hereford or Hereford CL (Table 1).

Progesterone content of the CL was determined with Herefords tending to be the highest followed by Brahman and Brahman x Hereford CL (nonsignificant). The amount of progesterone available is a function of size and functional ability of the tissue (Table 2).