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Efficacy of the 5 day CO-Synch estrous synchronization protocol with or without the inclusion of a CIDR in beef cows

The objective of this experiment was to compare timed-AI (TAI) pregnancy rates in suckled beef cows synchronized with the 5 d CO-Synch protocol with (5CIDR) or without (5NoCIDR) the inclusion of an EAZI-BREED™ CIDR® insert (CIDR). Cows managed at Feldun Purdue Agricultural Center (FPAC; n = 130), Animal Sciences Research and Education Center (ASREC; n = 169) and Voyles Farms (n = 89) were assigned to either the 5CIDR (n = 195) or 5NoCIDR (n = 193) program by breed, age, and calving date. On d 0 all cows received GnRH (100 µg; Cystorelin®) and cows in the 5CIDR treatment received a CIDR. On d 5 CIDR were removed (5CIDR) and all cows received PGF<sub>2α</sub> (25 mg/dose; Lutalyse®) with another dose of PGF<sub>2α</sub> given approximately 10 h later. Cows were TAI on d 8, 72 h after CIDR removal, concurrent with GnRH (100 µg). At ASREC and FPAC, but not Voyles Farm, blood samples were collected on d -7 and 0 to determine estrous cyclicity (progesterone ≥ 1.0 ng/mL). Timed-AI and breeding season pregnancy rates were determined via ultrasonography approximately 35 d after TAI and 35 d after the end of the breeding season, respectively. There were no significant treatment by location interactions for any of the variables measured; therefore data were pooled across locations. There was a treatment by age classification (2-yr old

versus  $\geq 3$  yr) interaction ( $P < 0.05$ ) for TAI pregnancy rates. In mature cows ( $\geq 3$  yr of age), TAI pregnancy rates were similar between the 5CIDR (73.6%,  $n = 159$ ) and 5NoCIDR (74.5%,  $n = 157$ ) treatments. In 2-yr old cows ( $n = 36$ /treatment), TAI pregnancy rates were greater ( $P < 0.05$ ) in the 5CIDR (77.8%) than the 5NoCIDR (58.3%) treatment. Estrous cyclicity status at treatment initiation did not influence TAI pregnancy rates. Overall breeding season pregnancy rates were similar between treatments (94.6%). In conclusion, the 5 d CO-Synch program without the inclusion of a CIDR was effective in mature cows, but TAI pregnancy rates were decreased in 2-yr old cows that did not receive a CIDR.

Beef cow, timed-AI, CIDR, estrous synchronization