

T243 Performance of modern vs 1970's heritage broilers fed drug free recommended and low protein diets. T. A. Woyengo^{*1}, A. Golian², W. Guenter¹, C. Bennett³, and H. Muc¹, ¹*University of Manitoba, Winnipeg, Manitoba, Canada*, ²*University of Ferdowsi, Mashhad, Iran*, ³*Manitoba Agriculture, Food and Rural Initiative, Winnipeg, Manitoba, Canada*.

A study was conducted to compare the performance of a modern broiler breed (Ross; RS) with those of two 1970's heritage broiler breeds (HB1 and HB2) fed drug free recommended protein (RP; 22% CP) and low protein (LP; 19% CP) diets from 1 to 63 d of age. Six hundred mixed sex day old chicks from each of the three breeds were divided into ten groups of equal weight and randomly placed in 30 floor pens. Five replicates pens of each breed were randomly assigned to the RP and LP starter (1-16 d of age) and grower (16-30 d of age) diets, respectively. The LP grower diet was used to feed all birds from 31-63 d of age. The BW gain (BWG) and feed intake (FI) of the RS birds were higher ($P < 0.05$) than those of the two heritage breeds at 16, 30, 35, 49 and 63 d of age. Among the heritage breeds, the BWG

and FI of HB1 birds were higher ($P < 0.05$) than those of HB2 birds at all the measured periods. For the entire experimental period, the BWG and FI of RS birds were higher than those of HB1 and HB2 birds by 35.6 and 53.4%, and 21.7 and 37.5%, respectively. The feed conversion ratio (FCR) was also better ($P < 0.05$) for RS birds than for HB1 and HB2 birds. The HB1 and HB2 birds were, however, similar ($P > 0.05$) in FCR. The BWG and FCR of all the three breeds were depressed ($P < 0.05$) when they were fed LP starter and grower diets up to 30 d of age, but not ($P > 0.05$) when they were fed a common finisher diet from 30 to 63 d of age. Regarding FI, a significant depression ($P < 0.05$) of a LP diet on the same was only observed for RS birds from 1 to 35 d of age. For the entire experimental period, the LP starter and grower diets only negatively affected BWG of the RS birds (3992 vs 3771 g/bird). The results show that the modern RS broilers compared with the 1970's heritage breeds have superior performance, but are more sensitive to dietary protein level.

Key Words: Broiler, Breed, Performance

Physiology & Endocrinology - Livestock and Poultry: Estrus Synchronization

T244 Evaluation of 5-day versus 7- day CIDR treatment on reproductive performance of beef cows using a timed AI protocol. D. Gunn^{*1}, J. B. Glaze, Jr.², R. Findlay³, D. Falk⁴, and A. Ahmadzadeh⁴, ¹*University of Idaho Extension, Fort Hall*, ²*University of Idaho, Twin Falls*, ³*University of Idaho Extension, Pocatello*, ⁴*University of Idaho, Moscow*.

The objective of this experiment was to determine the effect of reducing the length of CIDR exposure in a CIDR-based timed AI synchronization protocol (CIDR-PGF_{2α}-GnRH and AI) on conception and pregnancy rates in multiparous, suckled beef cows. British cross-bred cows ($n = 138$) were stratified by days postpartum (dpp), age and body weight (BW) and were randomly assigned to one of the following two treatments: 1) cows ($n = 68$) received CIDR (d -7) for 7 days, PGF_{2α} (25 mg) at CIDR removal (d 0), GnRH (75 μl) 56 h after CIDR removal and immediate AI (d 3; **7-d CPG**); or 2) cows ($n = 70$) received CIDR (d -5) for 5 days, PGF_{2α} (25 mg) at CIDR removal (d 0), GnRH (75 μl) 56 h after CIDR removal and immediate AI (d 3; **5-d CPG**). Cows were exposed to bulls 19 days after timed-AI. Pregnancy status was determined by ultrasonography 35 and 68 days after AI. Treatment had no effect on conception to AI (54.41% and 55.71% for 7-d CPG and 5-d CPG, respectively). Pregnancy rate was also unaffected by the treatment protocols (79.41% and 77.14%) for 7-d CPG and 5-d CPG, respectively). Age, BW, and BCS did not have an effect on conception percentage and pregnancy rate. However, dpp had a significant effect ($P < 0.01$) on conception to AI (30% for < 60 dpp vs 80% for >60 dpp) and overall pregnancy rate (50% for < 60 dpp vs. 82% for >60 dpp). Results from this study indicate that reducing the length of CIDR treatment (5 days vs. 7 days) in a CIDR-based timed AI synchronization protocol did not influence conception to AI and pregnancy rate in suckled beef cows.

Key Words: Cattle, CIDR, Timed AI

T245 Effect of reusing CIDRs on the pregnancy rate of beef cattle. M. L. Borger^{*} and W. A. Greene, *The Ohio State University, Wooster*.

The main objective of this study was to determine the effect of reusing CIDRs, as a part of a synchronization program, on pregnancy rates (PR) in beef cattle. One hundred-fourteen animals were allotted to two similar groups, new CIDR (N) and used CIDR (U), based upon breed, age, postpartum interval, and postpartum cyclicity (as determined by ultrasonography). All cattle received 100 μg GnRH i.m. on d 0. Also on d 0, cattle in the N group received a new intravaginal releasing device (CIDR), containing 1.38 g progesterone, while U group cattle received a CIDR previously used for 7 d. On d 7, jugular blood samples were collected for plasma progesterone (P4) analyses, CIDRs were removed, and all animals received 25 mg PGF_{2α} i.m. Each removed CIDR was evaluated for signs of vaginal infection and scored from 1 to 5 (1= clear, 5=heavy pus). Animals were observed for estrus 0700 and 1900 and were artificially inseminated (AI) 11-13 h after estrus was observed. If estrus was not observed, animals were timed AI (TAI) and received 100 μg GnRH i.m. 70-72 h after PGF_{2α}. Following the synchronization period, repeat breedings were done until d 61. Cows were pregnancy diagnosed by ultrasonography on d 88. N and U groups had similar ($P > .05$) estrus detection rates [EDR] (47.4 and 59.7%), PR to synchronization (52.6 and 57.9%) and overall PR (86.0 and 93.0%). Cycling ($n=91$) and anestrous animals had similar ($P > .05$) EDR (55.0 and 47.8%), PR to synchronization (58.2 and 43.5%), and overall PR (89.0 and 91.3%). Cattle with high vaginal scores (4 & 5, $n = 76$) and low vaginal scores (1, 2, and 3) had similar ($P > .05$) PR to synchronization (55.3 and 55.3%) and overall PR (85.5 and 97.4%). The N group had more ($P < .05$) high vaginal scores than the U group (77.2 and 56.1%). Mean P4 levels (ng/ml) were similar ($P > .05$) for N (1.9 ± 1.2) and U (1.9 ± 1.4) cattle. P4 levels were higher ($P < .05$) at CIDR removal for cycling (2.0 ± 1.3) than anestrous (1.4 ± 1.0) cattle. There were no noticeable differences between synchronizing beef cattle with previously used CIDRs and new CIDRs.

Key Words: Synchronization, CIDR Reuse, Progesterone