PSXV-33 The effect of dietary sodium bisulfate and Monensin on growth performance of experimental Eimeria inoculated broiler chickens.

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The coccidiosis is one of the most important parasitic diseases in birds. In addition to direct damage of disease, such as increasing mortality and reducing the quality of carcasses; annually entail huge amounts of money for the poultry industry. In this study we evaluated the effect of sodium bisulfate and monensin on growth performance of broilers experimentally inoculated by Eimeria. Two hundred and forty 1-d-old chicks (ROSS 308) divided into four treatments and four replications (fifteen birds per replicate) in a completely randomized design. Treatments included: 1. Control (fed basal diet without any feed additive), 2. Sodium bisulfate (5 g/kg of basal feed), 3. Monensin (1 g/kg of basal feed), and 4. Sodium bisulfate + monensin (5 g /kg and 1 g /kg of basal diet, respectively). All birds were orally inoculated by Eimeria (50,000 oocysts per bird- %70 tenella, %15 maxima, %15 necatrix and acervulina) on 14 day of age. The likely synergistic effect of monensin and sodium bisulfate resulted in better growth performance (greater body weight and feed efficiency- $P < 0.05$). In conclusion, the combination of monensin and sodium bisulfate dietary supplementation is recommended when the potential risk of coccidiosis is expected.

Key Words: Broiler chicken, coccidiosis, Monensin, sodium bisulfate

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PSXV-34 Effects of feeding either pelleted concentrate and TMR or only TMR from 10 to 18 weeks of age on performance of dairy calves.

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Rosé veal farmers using TMR want to feed calves high-energy TMR already from weaning, either alone or in combination with a pelleted concentrate. The objective was to test how weaned dairy bull calves perform from 10 to 18 wk of age when offered either free choice between pelleted concentrate and TMR (FREE) or only TMR (TMR). The experiment used 32 Holstein bull calves purchased at 11 ± 1 d of age and 47 ± 1 kg LW (Mean $\pm$ SE). From 2 wk until weaning at 8 wk of age,

calves were offered a total of 224 L milk replacer (23% CP, 19% fat). From 2 to 10 wk of age, calves had free access to a pelleted concentrate (20% CP) and chopped hay (14% CP). At 10 wk (97 ± 2 kg LW) calves were assigned to FREE or TMR. The pelleted concentrate and the TMR had (kg DM basis) similar NE (8.8 MJ), CP (213 g), NDF (195 g), and starch contents (328 g), but varied in DM (88 vs. 70%), feed composition, and physical form. The TMR included 31% first-cut grass silage. Hay comprised 2.5% of NEI for both FREE and TMR. TMR intake comprised 61% and concentrate pellet intake 36.5% of NEI for FREE calves. LW at 18 wk was 178 and 173 kg (n.s.) and ADG from 10 to 18 wk was 1.46 and 1.36 kg/d ($P < 0.05$) for FREE and TMR, respectively. The long-term consequences for growth was studied from 18 wk until slaughter at 42 wk. In this period, all calves were fed the same TMR (15% CP). The TMR calves compensated with higher ADG than FREE (1.44 vs. 1.36 kg/d) leading to similar ADG from birth to slaughter for FREE and TMR. In conclusion, both post-weaning feeding strategies can be applied without long-term consequences for overall productivity in rosé veal calves.

Key Words: Dairy calves, feeding, concentrate, total mixed ration, growth

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PSXV-35 Impacts of bovine maternal nutrition on muscle fiber type in skeletal muscle of the progeny.

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We investigated how nutritional restriction of cows during the second trimester of gestation impacted the muscle fiber type proportions of offspring at 10 months after birth. Cows were bred by the same sire, stratified by body weight ($P = 0.80$) and body condition score (BCS) ($P = 0.72$), and allocated to one of two treatment groups during the second trimester of gestation: maintenance ($n = 16$, 2309 kg/ha dry matter (DM)) or restricted ($n = 18$, 1662 kg/ha DM). Restricted cows had a BCS 1.55 lower ($P = 0.001$) than maintenance cows at the end of the period and a weight difference of 188 kg ($P = 0.024$). After the second trimester, all cows were fed similarly and there was no difference ($P > 0.80$) in body weight or BCS between the dams from either treatment at the end of the third trimester. There were no differences ($P > 0.05$) in body weight of offspring at birth, throughout growth, or during the feedlot. Skeletal muscle biopsies were collected from the