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DIGESTION CUM METABOLISM TRIAL IN BROILER RABBIT FED ON SWEET POTATO BASED RATION

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ABSTRACT

Two breeds of broiler rabbits raised on rations containing various levels of sweet potato (*Ipomoea batatas*) as an energy source at ICAR Research Complex for NEH, Barapani, Meghalaya. Five groups of each weaned Neazealand White (NZ) and Soviet Chinchilla (SC) rabbits, six in each group were fed five is onitrogenous concentrate mixtures containing 0,10,20,30 and 40 percent boiled sweet potato replacing equivalent amount of maize grain for a period of 45 days. Chemical analysis and GE estimation revealed that concentrate mixtures during metabolism trial were isonitrogenous and isocaloric. The percent CP, TDN, DE and ME were almost similar in the composite rations, however, DCP decreased significantly along with the increased level of incorporation of sweet potato in the rations during metabolism trial. DM intake per kg, per 100 kg and per $kgW^{0.75}$ body weight were significantly ($P<0.05$) higher in Ration 1, 2 and 3 groups than Ration 3, 4 and 5 groups. The values were comparable within Ration 1, 2 and 3 groups and again in Ration 3, 4 and 5 groups. The digestibility coefficient of DM and all organic nutrients were significantly affected by incorporation of sweet potato during metabolism trial. The values of DM, OM, CP and CF were higher in control group (Ration 1) than the experimental groups (Ration 2, 3, 4 and 5), whereas EE was higher in experimental groups. Digestibility as well as metabolisability of GE intake did not differ significantly due to the various rations. The experimental groups show positive balance of N, energy, Ca and P during metabolism trial. All the groups utilized the various nutrients with similar efficiency except DCP utilization. It may be concluded that incorporation of sweet potato as a replacement of maize as energy source in broiler rabbit ration has a positive effect.

KEYWORDS: Digestibility, Feeding, Metabolism, Rabbit, Sweet Potato