

Home Made Rice Beer Waste (Choak): A Low Cost Feed for Sustainable Poultry Production

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Abstract : The most widely used feed resources in poultry feed, like maize and soybean, are expensive as well as in short supply. Hence, there is a need to utilize non-conventional feed ingredients to cut down feed costs. As an alternative, brewery by-products like brewers' dried grains are potential non-conventional feed resources. North-East India is inhabited by many tribes, and most of these tribes prepare their indigenous local brew, mostly using rice grains as the primary substrate. Choak, a homemade rice beer waste, is an excellent and cheap source of protein and other nutrients. Fresh homemade rice beer waste (rice brewer's grain) was collected locally. The proximate analysis indicated 28.53% crude protein, 92.76% dry matter, 5.02% ether extract, 7.83% crude fibre, 2.85% total ash, 0.67% acid insoluble ash, 0.91% calcium, and 0.55% total phosphorus. A feeding trial with 5 treatments (incorporating rice beer waste at the inclusion levels of 0,10,20,30 & 40% by replacing maize and soybean from basal diet) was conducted with 25 laying hens per treatment for 16 weeks under completely randomized design in order to study the production performance, blood-biochemical parameters, immunity, egg quality and cost economics of laying hens. The results showed substantial variations ($P<0.01$) in egg production, egg mass, FCR per dozen eggs, FCR per kg egg mass, and net FCR. However, there was not a substantial difference in either body weight or feed intake or in egg weight. Total serum cholesterol reduced significantly ($P<0.01$) at 40% inclusion of rice beer waste. Additionally, the egg haugh unit grew considerably ($P<0.01$) when the graded levels of rice beer waste increased. The inclusion of 20% rice brewers dried grain reduced feed cost per kg egg mass and per dozen egg production by Rs. 15.97 and 9.99, respectively. Choak (homemade rice beer waste) can thus be safely incorporated into the diet of laying hens at a 20% inclusion level for better production performance and cost-effectiveness.

Keywords : choak, rice beer waste, laying hen, production performance, cost economics

Conference Title : ICLFPAH 2024 : International Conference on Livestock Farming, Poultry and Animal Husbandry

Conference Location : London, United Kingdom

Conference Dates : October 17-18, 2024