Deep Litter Housing for Pigs: An Alternative Eco Friendly Pig Production Technology for Rural Farmers of Arunachal Pradesh

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ABSTRACT

Livestock husbandry is one of the important components of the tribal community .Among the livestock pig and poultry is reared by every individual in their household. But over the years there is few noticeable trends to develop alternative pig production systems, which will meet requirements of animal welfare and environment protection, but will not affect the decrease in intensity and cost-effective production. Deep litter systems are living systems in which a thick layer of carbon-rich organic matter hosts a thriving microbial community which works to break down solid and liquid wastes from animals as they are produced. Such as system doesn't require regular cleaning out, and has the added benefit of producing high quality, rich compost. If set up right, they are low maintenance and doubly productive systems. The study was conducted in Basar region of Arunachal Pradesh which is located at round 660msl under which .deep litter pig shed were constructed with area of 0.5 m^2/piglet and depth (3 feet) Yorkshire piglets were reared in 04 different deep litter system. Five treatment groups, shed with cement concrete floor as control group (C), saw dust (T1) ,rice husk (T2), pine leaves (T3) and indigenous tree leaves (T4) available in the region. Standard ration was provided as per BIS standard. Regular deworming was done after 3 months interval using piperazine @ 9ml/10kg bodyweight. 30 weaned piglets weighing (6.23 ± 0.09kg) consisting of 15 male and 15 females were randomly selected.The built up litter material was removed with fresh litter. The Average body weight of pigs at 32 weeks was recorded highest in rice husk 69.2±0.33, followed by 67.7±0.56 ,65.5±62. 3±0.29, and 60.9±0.68 kg under cement concrete, saw dust, *koyom* leaves and pine in DLH system.Similarly,it was found out that out of all the four substrate in rice husk the temperature was consistently above the ambient temperature (Min17.2°C and Max 29.3 °C) which was comfortable for the pigs during cold months .In terms of replacement rate of different substrate it was economical and minimal in rice husk (3times) and highest (32times) in *koyom* leaves durin the study period respectively.