Phytase in broiler chicken diets & partial replacement of SBM & DCP: Phytase supplementation and partial replacement of protein & Ca resources in feeding of broiler chickens

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The escalating costs and scarcity of protein & energy rich feed-stuffs for poultry triggered to tap alternative resources for total or partial replacement to economise poultry feeding. The agro-industrial by-products such as as sunflower meal (SFM), safflower meal (SAFFM) & til cake were thought raw materials for partial replacement of costly soybean meal (SBM) in broiler feeding. They contained ANFs like phytin/phytates bounding most of the vital nutrients such as protein, energy, Ca, P and other trace minerals making them biologically unavailable. Secondly, DCP (Dicalcium phosphate) is another expensive ingredient used to supply Ca & inorganic phosphorus in poultry diets. Cheaper alternative to this is oystershell/limestone, but again Ca in bounded state by ANFs present in other feed-stuffs in absence of phytase. As per documentation, phytase was explored to work a catalyst to release bounded nutrients in SFM, SAFFM & DCP to economise broiler feeding. Three trials were conducted with identical rearing of broilers with partial (20% mixing level) replacement of SBM along with 50 percent (1% mixing level) with limestone.