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Feed efficiency of quality protein maize (*Zea mays L.*)

Anusheela V, A. R. Muthiah, and A. Johnjoel
Tamil Nadu Agricultural University, India

Maize (*Zea mays L.*; 2n=20) occupies a prominent position in global agriculture and is grown for both feed and fodder purpose. Lysine (1.2 per cent of protein) and tryptophan (0.4 per cent) are limiting amino acids in maize. Hence genetic manipulation for improved nutritional value, particularly, protein quality was considered as a noble goal. This effort was stimulated by the 1963 discovery that a little known mutant maize contained proteins that are nearly twice as nutritious as those found in normal maize called "opaque 2 maize", its protein had a nutritive value about 90 per cent of that of proteins found in skim milk. The discovery of this mutant and subsequently its modifier were considered remarkable and lead to the concept of "Breeding for Quality Protein Maize (QPM)".

A feed trial was carried out to assess the effects of replacement of normal maize with that of QPM hybrids on broiler performance in terms of body weight gain, feed intake and feed efficiency at the end of six weeks. Best performed five QPM hybrids viz., UQPM 15 X UQPM10 (T1), UQPM 9 X UQPM 12 (T2), UQPM 10 X UQPM 15 (T3), UQPM 5 X UQPM 14 (T4), UQPM 11 X UQPM 9 (T5) were fed to the birds along with COH(M) 5 (T6) as control. For 0-6 week period, broilers fed with UQPM 10 X UQPM 15 gained maximum body weight (T3,1826.67g) followed by T1, T5, T4 and T2. Weight gain in all hybrids differ significantly from that of control, T6 (1570.00). The cumulative mean feed intake of broilers at 0-6 weeks ranged from 2959.33g (T6) to 2961.00 g (T1). Thus all QPM hybrids groups differ significantly from control. The cumulative mean feed efficiency of broilers for the period of 0-6 weeks was 1.62 (T3, UQPM 10 X UQPM 15). Hence treatment T3 (UQPM 10 X UQPM 15) was considered as the best among hybrids followed by T1 (UQPM 15 X UQPM 10), T5 (UQPM 11 X UQPM 9), T4 (UQPM 5 X UQPM 14), T2 (UQPM 9 X UQPM 12) and control T6 (COH (M) 5).

sheelasai007@gmail.com

Effect of organic manures and amendments on quality and post harvest studies of banana cv. grand naine

K Vanilarasu and G Balakrishnamurthy
Tamil Nadu Agricultural University, India

An investigation was carried out during 2010-2011, to study the effect of organic manures (Farmyard manure, Vermicompost, Neem cake and Wood ash), organic amendments (*Arbuscular mycorrhizae*, *Azospirillum*, Phosphate solubilising bacteria and *Trichoderma harzianum*) and green manures (sunhemp and cowpea) in comparison with inorganic fertilizers alone on yield, quality and post harvest attributes of banana cv. Grand Naine. Results of the experiment revealed that combined application of organic manures, amendments and green manures (Farmyard manure @ 10 kg + Neem cake @ 1.25 kg + Vermicompost @ 5 kg and Wood ash @ 1.75 kg /plant + Triple green manuring with sunhemp + Double intercropping of Cow pea + biofertilizers viz., Vesicular Arbuscular Mycorrhizae @ 25 g, *Azospirillum* @ 50 g, Phosphate solubilizing bacteria @ 50 g and *Trichoderma harzianum* @ 50 g/plant) registered the maximum quality (TSS - 23.23% , Acidity - 0.82%, Ascorbic acid - 12.92 mg. 100 g⁻¹, Non-reducing and Total sugars - 6.06 and 14.92%) and post harvest (Least physiological loss in weight and Shelf life - 7.44% and 14.03 days) characters under drip irrigation.

Biography

K Vanilarasu is doing his Ph.D. (Fruit Science) in Horticultural College and Research Institute, Tamil Nadu Agricultural University, India. He is presently working on Organic Farming in Banana.

arasuvani88@gmail.com