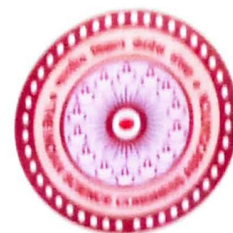


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An experiment was conducted in Kodo millet during *Kharif* 2018-19 at AICRP on Small Millets, UAS, Bangalore. Treatments comprised pre emergent application of Oxadiargyl 80WP at 150 & 200g a.i./ha, Bensulfuron ethyl 0.6G + pretilachlor 6.0G at 0.165 & 0.33kg a.i./ha, Butachlor 50EC 750g a.i./ha, post emergence application (15-20 DAS) of Bispyribac sodium 10SC 10 & 15g a.i./ha, Ethoxysulfuron 15WG 12 & 15g a.i./ha, standard practice of two intercultivation & one hand weeding and a weedy check. Application of post emergent weedicide Ethoxysulfuron 15WG 12g a.i./ha indicated higher yield, economics, lower weed density with higher WCE(%).

Key words: *Chemical Weed Control, Economics, Kodo Millet, Weed Control Efficiency, Yield.*

F -61] 5: ZN-BIOFORTIFICATION IN GROUNDNUT SEED THROUGH ZINC SULPHATE AND ZN-EDTA

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Zn deficiency is a common problem of world population due to consumption of food crops mainly grown on most prevalent Zn deficient soil. The groundnut seed, with about 50 ppm of Zn if grown under well fertilized condition, is a good source of Zn and also response to Zn fertilization in enhancing its Zn further in the seed. Hence inclusion of its consumption can help alleviate Zn malnutrition in India. However, in India about 50% of the soil is Zn deficient, and mostly the groundnut is grown on poor fertility soils resulting in poor Zn content in seed.

E-124: IN SEARCH OF GROUNDNUT CULTIVARS WITH HIGH ZINC AND LOW PHYTATE IN THEIR SEED FOR ALLEVIATING ZN MALNUTRITION IN INDIA

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The dietary deficiency of Zn is affecting over 2 billion people worldwide and is more prevalent in areas representing a major proportion of cereal based diet. Groundnut consumption can provide 40% ($4 \text{ mg } 100\text{g}^{-1}$) of the RDA for Zn but, the presence of phytic acid in seeds interferes with its availability. Thus, identification of groundnut cultivars with high Zn and low phytate in seeds is an effective alternative to alleviate the malnutrition due to Zn deficiency. A field experiment was, therefore, envisaged by undertaking 20 groundnut cultivars wherein their Zn and phytic acid content was estimated. The inhibitory effect of phytic acid on Zn absorption was further studied on the basis of molar ratio. Among 20 groundnut cultivars, 6 cultivars reflected seed Zn content more than 55 mg kg^{-1} (GJG 31, GG20, GG7, Tirupati 3, Tirupati 4 and TAG 24) while 8 cultivars displayed their Zn content between 50- 55 mg kg^{-1} . The phytic acid content showed its highest value in JL 24, Tirupati 2, TMV 2 and Tirupati 4 ($> 2 \text{ g } 100\text{g}^{-1}$) while it was $< 1.5 \text{ g } 100\text{g}^{-1}$ in cultivars GG7, Tirupati 3, GJG 31, GJG 22, Kadiri 9, TMV 13, DRG 12, SG 99, MH 4, TG 26 and Girnar 1. The cultivars GG7, DRG 12, Tirupati 3, Girnar 1 and TG 26 showed their molar ratio below 18:1.

Keywords: Groundnut, High Zinc, Malnutrition
Section I: Agriculture and Forestry Sciences.