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**Mrinji, Apenda W. M. (1996). Genotype and nitrogen effects on yield and nutritional characters of finger millet (*Eleusine coracana* (L.) Gaetn.) varieties. (Supervisor: Dr. D. M. N. Mbewe).**

An experiment was conducted during the 1994/95 cropping season at Misamfu Regional Research Center in Kasama and Senga Hill, Northern Province of Zambia to study the effects of genotypes and nitrogen supply on yield, yield contributing characters and nutritional characters, as well as adaptability of finger millet varieties over different locations under rainfed condition. A split plot design was used with three finger millet varieties (Lima, ZFMV6 and Mutubila) as main plots and five nitrogen levels (0, 20, 40, 60 and 80kg/ha) as sub-plots in four replications per location. The sites were basal dressed with 10kg K/ha, 20kg P/ha and 10kg S/ha and topdressed with urea-N at a rate of 0, 62.86, 125.71 and 251.43kg/ha, respectively, four weeks after germination. The parameters measured were plant height, productive tillers per plant, spike length, straw weight, head count, head weight, grain weight, protein content and diastatic power. Plant height, straw weight, grain yield, protein content and diastatic power responded significantly ( $P \leq 0.05$ ) to nitrogen. Genotype significantly affected all characters at both locations. The results indicated that nitrogen increases the vegetative growth of plants, grain yield, crude protein and diastatic power but did not show significant difference on dry head weight. Variety Lima is earlier maturing, taller and higher yielding than ZFMV6 and Mutubila. Location by genotype interaction effects were significant for height and grain yield. The location by nitrogen interaction effects were significant for height as well as for grain yield. The three way interaction effect of location, genotype and nitrogen was significant for height as well as for grain yield. The protein content and the diastatic powers of the three finger millet varieties were significantly different but variety Mutubila outweighed the other two varieties