

28. Ram Babu, Agarwal, M.C., Samraj, P. and Chinnamani, S. 1980. Size and shape of plots and blocks for field trials on natural grasslands in Nilgiris hills. *Indian J. agric. Sci.*, 50(8):598-602.

A uniformity trial was conducted in 1977 and 1978 on natural moderately grazed grasslands at Nilgiri hills on 35% slope. The coefficient of variation decreased with an increase in plot size upto 8 m². The equation $y = ax^{-b}$ gave a good fit to the relationship between coefficient of variation (y) and plot size (x). Plot shape had no consistent effect on coefficient of variation. However, long (along the slope) and narrow (across the slope) plots showed lower coefficient of variation. The block efficiency decreased with an increase in block size. The shape of the block had no consistent effect on CV, but long and narrow plots along the slope had shown smaller CV. The relationship $y = ax^b$ between the coefficient of variation (y) and block size (x) was fitted to 6 different plot sizes and shapes. Confounding proved more efficient. With Smith's cost structure, the optimum plot size was worked out to be 3-4 m².