

## ABSTRACT

The size of seed of the bean, Phaseolus vulgaris, sown during the dry season, has been shown to affect the size of the resulting plants for the initial three weeks after germination; subsequently, these differences diminish and may even disappear. The main differences were seen in leaf area and plant dry matter. In the wet season, these differences due to seed size were maintained, resulting in differences in the yield of green beans and of dry seeds.

Irrespective of the size of seed sown in the wet season the leaf area and therefore economic yield of the resulting plants varies with the level of fertilizer application, but at the higher fertilizer levels, the yields appear to be less dependent on the size of seed.

There is evidence that the green pods in a cultivar with a low leaf area contribute substantially to the total assimilation by the plant; on plants where the leaf area is low (due to small seed size or low fertilizer level) the relative contribution by the pods is greater than in plants with a higher leaf area.

The seedlings from large seeds are larger than those from small seeds because of larger embryo and food reserves. The relative differences are not maintained



because the growth rate is independent of seed size once photosynthesis has become the chief means of nutrition.