



Seed quality of pigeonpea [*Cajanus cajan* (L.) Millsp] cultivars as influenced by spacing and fertilizer levels

N.C. TELGOTE AND S.B. TAMGADGE

See end of the article for authors' affiliations

Correspondence to :

N.C. TELGOTE

Department of Agriculture,
M.S.S.C.A., Seed Testing
Laboratory, AKOLA (M.S.)
INDIA

ABSTRACT

Results indicated that hundred seed weight, seed recovery percentage, moisture content, dry matter content, germination, vigour index and protein content were significantly more in case of cultivar ICPL-87. It also had less per cent of hard seed. Where as seed recovery per cent, moisture content, dry matter of seedlings, vigour index and protein content (%) were maximum in case of spacing 45x10cm. Higher germination and less hard seed percentage were noted at the same spacing 45x10cm. However, vigour index protein content were maximum due to application of 50:100kgNP/ha

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Key words : Cultivar, Fertilizer, Seed quality, Spacing pigeonpea

Pigeonpea [*Cajanus cajan*(L.)Millsp.] is one of the most important *Kharif* pulse crop and is grown under varied climatic conditions. Pulse production in the country has almost remain stagnant. The farmers do not grow it as a pure crop. It is mostly intercropped or mixed with cotton, sorghum or groundnut. The higher pigeonpea yield per unit area and per unit time can certainly be obtained by introducing newly evolved short duration varieties with high yielding potential followed by improved management practices. Judicious use of fertilization is necessary for nutrient needs. Its phosphorus requirement is much greater. Phosphorus plays an important role in root development, nodulation, flowering and fruiting. Another improved management practice is to use the suitable spacing for healthy growth of crop and yield of crop. With these thought, present investigation was conducted with the objective, to study the seed quality of pigeonpea [*Cajanus cajan* (L.) Millsp] cultivars as influenced by spacing and fertilizer levels.

MATERIALS AND METHODS

The field experiment was conducted during *Kharif* season in 1999 under irrigated condition at the Post Graduate Institutional Farm, Department of Botany, Mahatma Phule Krishi Vidyapeeth, Rahuri, Dist. Ahmednagar (M.S.). The field experiment was laid out

in Factorial Randomized Block Design replicated thrice. Twenty four treatments were formulated by combining three cultivars, four rows spacing and two doses of fertilizers.

Treatments details are-

Cultivars-

V₁- TAT-10

V₂- UPAS-120

V₃- ICPL-87

Spacings-

S₁- 30x10cm

S₂- 30x15cm

S₃- 45x10cm

S₄- 45x15cm

Fertilizers levels-

F₁- 25:50Kg NP/ha

F₂- 50:100Kg NP/ha

Sowing was done on 9th July, 1999 by dibbling methods at different row spacing and cultivars. Application of nitrogen fertilizer through urea and phosphorus through single super phosphate was done as per the treatments at one time before sowing. The net plot size was 3.60x1.80m². All the intercultural operations were carried out as and when needed and for the control of pod borer complex three sprayings of endosulphon 35EC 1000 ml, monocrotophos (Nuocron) 36 W.S.C.