



## Farmer participatory approaches for improved production technologies in pigeon pea

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### ABSTRACT

Pigeon pea [*Cajanus cajan* (L.) Millsp.] is most important pulse crop of Karnataka. One of the major constraint of its low productivity is non- adoption of improved technologies. The front line demonstrations were conducted in Gulbarga district at 75 farmers fields, to demonstrate production potential and economic benefits of improved technologies comprising of seed treatment, Integrated Nutrient Management (INM), Integrated Disease Management (IDM) and Integrated Pest Management (IPM). The improved technologies recorded a mean yield of 12.2 q/ha which was 20.8 per cent higher than the farmer's practice (10.1 q/ha). The improved technologies resulted in higher income with a benefit cost ratio of 3.3 as compared to local practice with a benefit cost ratio of 2.73. The demonstrated technology also recorded less incidence of sterility mosaic and Fusarium wilt (<5%), Heliothis pod borer (5-10%) and pod fly (<8%) when compared to farmers practice. The technology was further disseminated horizontally through KVK extension approach / activities like training, print media, mass media, field day etc.,

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### INTRODUCTION

Pigeonpea [*Cajanus cajan* (L.) Millsp.] is an important *Kharif* rainfed pulse crop of India. It is highly nutritious grain legume of tropical and sub-tropical regions of the world. In India, it is cultivated in an area of 34 lakh ha with the production of 23.70 lakh tones and productivity of 697 kg/ha. In Karnataka, it occupies 6.8 lakh ha area with the production of 4.78 lakh tonnes (Anonymous, 2010). Gulbarga district, the pulse bowl of Karnataka, contributes 48.31 per cent area and 51.09 per cent production of pigeonpea in the state.

In general, average productivity of pigeonpea continues to be lower (234-704 kg/ha) than the expected from improved technology for the last 25 years. The major constraints responsible for lower yield are inappropriate production technologies *viz.*, lack of seed treatment, use of local varieties, use of disease susceptible varieties, lack of INM, IDM and IPM.

Keeping this in view, front line demonstrations on pigeonpea were conducted to demonstrate the production potential and economic benefits of latest improved

technologies in farmers fields.

### METHODOLOGY

Participatory Rural Appraisal (PRA) method and group discussions were held by the team of Krishi Vigyan Kendra (KVK) scientists to identify the problems in growing healthy pigeonpea crop and recorded the various problems like use of local varieties / non-availability of improved varieties, lack of seed treatment, INM, IDM and IPM down at the field level. Finally, the problems were prioritized and improved production technologies were designed for under taking the participatory activity to solve these problems by involving farmers and scientists of KVK.

Front line demonstrations on improved production technologies in pigeonpea were conducted at 75 farmer's fields in Gulbarga district during *Kharif* season of 2009-10. There were two treatments, one is farmers practice and other one recommended practices comprising of seed treatment with *Rhizobium* @ 500gm/ha, *Trichoderma* @ 4 gm/kg seeds, application of zinc sulphate @ 15 kg/ha, growing

### Key words :

Pegeonpea, Front line demonstrations, INM, IDM, IPM, Net return

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