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Research Paper

Response of yield parameters and profitability of mullai to intercropping system (*Jasminum auriculatum*)

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ABSTRACT

Field experiment was conducted to study the response of yield parameters and profitability of mullai to intercropping system. The experiment was carried out in RBD consists of 10 treatments with three replications. The treatments consists of growing of intercrops *viz.*, dolichos bean, vegetable cowpea and cluster bean grown in three different spacing (30 x 15 cm, 45 x 15 cm and 60 x 15 cm). Sole jasmine, without any intercrops was treated as a control. The various yield parameters were recorded and statistically analyzed. The profitability was also worked out. Among the various yield parameters recorded the earliness in flowering, highest number of productive shoots per plant, flower yield per plant, flower yield per hectare and profitability were recorded in the vegetable cowpea intercropped at a spacing of 45 × 15 cm.

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Key words : Mullai, Intercropping, Yield parameters, Profitability

Mullai is one of the most popular jasmine species that is commercially grown in India. The flowers of jasmines are largely used for worship, garland making, general decoration and for hair adorning by ladies. Though it is primarily grown for fresh flower production, it occupies special importance as it is a promising crop for use as a starting material in the perfume and cosmetic industries and as a valuable source for export trade. In this situation, there is an urgent need to extent the cultivation and production of mullai. Normally pruned field of jasmine are left as such without any cultivation except in few places where farmers do raise pulses *viz*., blackgram or greengram grown on a small scale for their home consumption. This traditional practice of intercropping legumes along jasmine is practiced only in few places. Intercropping system involves growing two or more crops of contrasting habit with the assumption that they could exploit the total environment more efficiently than a monoculture and results in increased overall production (yield) per unit area. As vegetables come to harvest earlier than pulses, like blackgram (or) greengram, and in addition to the reports of the earlier workers who repeatedly suggested vegetable cowpea, cluster bean and dolichos bean were used as intercrops. Intercropping system with legumes not only helps in utilization of nitrogen being fixed in the current growing season, but also helps in residual build up of nutrients in the soil rather wholly depleting the soil nutrients (Prasad and Mohan, 1995).

With the above said facts in mind, the present study was undertaken to study the response of yield parameters and profitability of mullai under various intercropping systems.

MATERIALS AND METHODS

Field experiment was carried out at Orathur village of Cuddalore district in mullai during the year 2002-2003. Three year old bushes of uniform growth and vigor raised by layering were utilized for this study. The bushes were pruned on the last week of December. The experiment was laid out in a Randomized Block Design with ten treatments and replicated thrice. The treatments consist of growing of intercrops *viz*., Dolichos bean, Vegetable cowpea and Cluster bean grown in three different spacings (30 x 15 cm, 45 x 15 cm and 60 x 15 cm. Sole jasmine, without any inter crops was treated as a control. The required quantity of organic manure (FYM @ 25 t ha^{-1}) was given as a basal dose and the inorganic fertilizers (120: 240: 240g NPK $plant^{-1}$) were applied in four equal splits of monthly intervals from pruning. Vermiwash @ 1:5 dilution was sprayed at monthly intervals after pruning,