RESEARCH PAPER International Journal of Agricultural Sciences, Vol. 7 Issue 1 (January, 2011) : 156-158

Effect of intercropping on growth in mullai (*Jasminum auriculatum*)

A. ANBURANI* AND H. VIDHYA PRIYADHARSHINI
Department of Horticulture, Faculty of Agriculture, Annamalai University, ANNAMALAI NAGAR (T.N.) INDIA

ABSTRACT

An investigation was conducted to study the influence of intercropping on growth parameters in mullai. The experiment was carried out in RBD consisted of 10 treatments with three replications. The treatments consisted 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 intercrop was treated as a control. The various growth parameters were recorded and statistically analyzed. Among the growth parameters recorded the highest number of secondary shoots, number of leaves, productive shoots and plant spread were recorded the highest in the vegetable cowpea intercropped at a spacing of 45 × 15 cm. The plant height showed a non significant effect, however, the highest plant height and number of primary shoots were recorded in control.

Anburani, A. and Vidhya Priyadharshini, H. (2011). Effect of intercropping on growth in mullai (*Jasminum auriculatum*). *Internat. J. agric. Sci.*, **7**(1): 156-158.

Key words : Mullai, Intercropping, Growth parameter

INTRODUCTION

Mullai (*Jasminum auriculatum*) is an important flower crop of commercial importance. In most places after pruning of jasmine to regulate flowering for longer duration, the field is left over without raising any intercrops. In some places, farmers raise some legumes like black gram or green gram 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 Okigbo and Greenland (1976). To achieve maximum productivity from intercropping systems, ideal crops need to be chosen for better compatibility *i.e.*, the growth rhythm, duration and capacity of photosynthesis at low light intensities are some of the important considerations in the relation of a companion crop. 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. 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 in this present study. Hence, having this idea as background, the present investigation was conducted to study the influence of intercropping on growth parameters in mullai.

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 vigour raised by layering were utilized for this study. The bushes were pruned during the last week of December. The experiment was laid out in a Randomized Block Design with ten treatments and replicated thrice. The treatments consisted 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 inter crop was treated as a control. The required quantity of organic manure (FYM @ 25 t ha^{-1}) was given as a basal dose and the recommended dose of inorganic fertilizers (120: 240: 240g NPK $plant^{-1}$) was applied in four equal splits from pruning at 30 days intervals. Vermiwash @ 1:5 dilution was sprayed at monthly intervals after pruning, during the entire period of crop growth. The seeds of vegetable cowpea (var. CO.2), cluster bean (Pusa Sadabahar) and dolichos bean (Arka Vijay) were sown as per treatment (or) schedule. To sow one hectare, the seed requirement was 30-40 kg for cluster bean, 15 kg for vegetable cowpea and 25-30 kg for dolichos bean. Two-three seeds were sown in each hill. After the germination of seeds, the seedlings were thinned out and maintained as one seedling per hill. Crop management practices were followed as per the recommendation.Observations were recorded in five plants tagged at random in each replication at different stages on the following characters in all the intercrops *viz.*, vegetable cowpea, cluster bean and dolichos bean.

* Author for correspondence.