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Yield and alkaloid content of *Clitoria ternatea* L. as influenced by shaded and open conditions

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Abstract : Six selected high yielding accessions of butterfly pea (*Clitoria ternatea* L.) were evaluated under shaded and open conditions for their comparative performance with respect to pod yield and alkaloid content. Production of pods was found to be more under open condition. Although seed yield was higher under open condition, the per cent seed alkaloid content did not vary significantly between the shaded and open conditions.

Key words : *Clitoria ternatea*, Butterfly pea, Seed alkaloid, Shade

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Clitoria ternatea L., commonly known as butterfly pea, is an evergreen leguminous creeper having ornamental as well as medicinal value. Almost all parts of this plant are reported to be medicinally valuable. Its root is regarded as a good brain tonic and is an ingredient of 'Medhyarasayana' (Ajith, 1993). According to Chopra *et al.* (1949), seeds in powdered form constitute a more useful and safer medicine than roots. Seeds possess anthelmintic, laxative and diuretic properties (Drury, 1873; Duke, 1986; Mesa, 1945). The present study was carried out to study the effect of shaded and open conditions on pod characteristics of *Clitoria ternatea* L. viz., number of pods, number of seeds per pod, pod length, fresh weight of pods and dry weight of pods.

RESEARCH METHODS

Six selected high yielding accessions of *C. ternatea* viz., MP-73 (Thiruvattar White), MP-74 (Vattiyoorkavu Blue), MP-76 (Vattiyoorkavu White), MP-81 (Vellayani Blue Double), MP-83 (Thirumala Blue) and MP-85 (Thirumala White) were chosen for a comparative performance evaluation with respect to pod yield, under shaded condition (in a nineteen year old coconut garden)

and under open condition. The experiment was conducted at the College of Agriculture, Vellayani during June-December 2000. The location is situated at an altitude of 29m above the mean sea level and enjoys a humid tropical climate. Soil of the experimental site was red loam belonging to Vellayani series.

The experiment was laid out in RBD with three replications separately for shaded and open conditions. Forty five plants of each accession were maintained in each plot of size 5.4 x 3.0 m at a spacing of 60 x 60 cm. The land was thoroughly prepared by digging and powdered cowdung was incorporated at the rate of 3 kg per square metre. Seeds were sown in polythene covers filled with sand and watered daily. Seedlings were transplanted three weeks after sowing. Staking was done using casuarina poles one month after transplanting. Three plants per plot per replication were taken as observation plants. Pods were harvested at seed formation (135 days after sowing) and seed maturation (180 days after sowing) stages from observation plants and number of pods per plant, number of seeds per pod, pod length, pod fresh weight and pod dry weight were recorded. The seed alkaloid content was estimated gravimetrically. Powdered