

STUDYING THE VARIATION IN CHILLI (*Capsicum annum L.*)
POPULATION GROWN IN THETTATTIVU SOUTH-2 GN
DIVISION AND ANALYZING THE PRODUCTION AND
MARKET POTENTIAL IN THIS AREA



BY

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ABSTRACT

An experiment was carried out in three selected farmers' fields in Thettattivu South- 2 GN division in order to identify the variation in qualitative and quantitative characters of the chilli cultivar "PC" and study the production and marketing potential of this chilli in this area.

Thettattivu is one of the famous village for chilli cultivation in the Batticaloa district. Therefore Thettattivu South- 2 GN division was purposely selected for an in depth analysis of the aspects of chilli production using pre- structured questionnaires. Three chilli cultivated farmers' fields were selected to study the management environment through participatory observation from transplanting of chilli seedling up to last harvest. Ten chilli plants were randomly selected in each field and tagged to evaluate the quantitative and qualitative characters of locally cultivated chilli population popularly called by the name "PC". In addition traders' and consumers' expectations on improvement of the present chilli cultivar were gathered.

The data on canopy height and number of primary branches at different growth stages and length and width of leaves and length and width of fruits and fruit weight, number of fruits per plant and yield per plant were collected in this experiment and data were statistically analyzed.

The mean value and standard deviation indicated that the plant tested in this study showed differences among fields in growth parameters such as canopy height and number of primary branches at different stages length and width of leaves and in yield component such as length and width of fruits and fruit weight, number of fruits per plant and yield per plant. The range value indicated that the variation occurred in above characters within the field.

The correlation studies revealed that some characters were positively correlated. They were canopy height at 100% flowering and yield per plant ; canopy height at 100% flowering and number of fruits per plant ; canopy height at 100% flowering and number of primary branches at 100% flowering ; canopy height at 100% flowering and canopy height at last harvest ; canopy height at last harvest and number of primary branches at last harvest ; canopy height at last harvest and leaf width ; number of primary branches at 100% flowering and yield per plant ; leaf length and yield per plant ; leaf length and leaf width ; fruit length and fruit width ; fruit length and fruit weight ; fruit width and fruit weight ; number of fruits per plant and yield per plant. Negatively correlated characters were fruit width and number of fruits per plant ; fruit weight and number of fruits per plant. Rest of the characters did not show any significant differences.

Out of twenty five tested qualitative characters, the variation existed in sixteen qualitative traits of locally cultivated chilli. This study showed that the population of the "PC" crops in the fields deviated from the characters of original PC identity.

By and large, it is clearly seen that the farmers' adaptive management practices varied among fields and did not follow Department of Agriculture recommendations.

Traders' expectation is focused on the uniform colour, size and shape of matured green pods to satisfy the market quality mean while consumer preference is also on these traits and medium pungency level in addition.

An improvement of the "PC" cultivar currently cultivated by farmers is a need to encourage production and marketing of this cultivar. To achieve market quality and higher production, the selection of plants should be made with desirable characters for the chilli improvement programme. An export market may be created to this cultivar if the fruit quality is improved to satisfy the export quality.

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