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# EVALUATION OF THE PERFORMANCE OF IMPROVED CHILLI VARIETIES *Capsicum annum* L. ON SANDY REGOSOLS

BY

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A RESEARCH REPORT  
SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE ADVANCED COURSE

IN



AGRICULTURAL BIOLOGY

FOR

THE DEGREE OF THE BACHELOR OF SCIENCE IN AGRICULTURE

FACULTY OF AGRICULTURE  
EASTERN UNIVERSITY, SRI LANKA  
CHENKALADY

1993



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Date: 30 / 11 / 93

Date: 20 / 11 / 93

19307

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## Abstract

An experiment was carried out at the Agricultural farm of the Eastern University, Chenkalady, in order to identify the most suitable hot pepper (chilli) varieties to grow on sandy regosols under the conditions prevailing in the Eastern region of Sri Lanka.

Twenty one hot pepper (chilli) varieties namely Pant C-1, Szechwan, Jawahir, Ludhaiana long selection, Extra long selection, Punjab lal, IAC ubatuba cabbuci, Hauruar, KKU cluster, Huay sithon, LV. 2323, LV.2319, Keriting, Cipanas, Yangjioa, LV. 1583, KA-11, KA-2, Long fruit, P.sakaraho, were evaluated along with the check variety MI-2. All the varieties were planted in a Randomized Complete Block Design (RCBD) with three replications and were managed under the recommended cultural practices.

The data on Canopy height at 100% flowering, Canopy height at last harvest, Canopy width at 100% flowering, Canopy width at last harvest, Days to 100% flowering, Days to first ripening, Fruit length, Fruit girth, Fruit weight, Number of fruits per plant, Fruit weight per plant and Total fruit yield were collected in this investigation.

Analysis of variance (ANOVA) indicated that the varieties tested in this study showed significant differences in growth parameters such as Canopy height at 100% flowering and at last harvest, Canopy width at 100% flowering and at last harvest, Days to 100% flowering, Days to first ripening and in yield components such as Fruit length, Fruit girth, Fruit Weight, Number of fruits

per plant, Fruit weight per plant and also in Total fresh yield.

The correlation studies revealed that some characters studied were positively correlated: Fruit weight per plant and yield; Days to first ripening and Days to 100% flowering; Fruit weight and fruit girth; Fruit weight and Fruit length; Canopy width at last harvest and Canopy height at last harvest; Canopy width at 100% flowering and height at 100% flowering; canopy height at last harvest and at 100% flowering. Some other characters were negatively correlated: Fruit weight per plant and Fruit girth; Fruit weight per plant and Days to 100% flowering; Number of fruits per plant and Fruit length; Number of fruits per plant and Fruit girth; Number of fruits per plant and Fruit weight; Days to first ripening and yield; Days to 100% flowering and yield; Fruit girth and yield.

By and large, it is clearly seen that among the varieties tested a wider variation does exist in several traits of agronomic importance and hence, selection may be positively approached for particular characters of specific measures in order to use in chilli improvement programme, although yield and adaptability are the first and foremost criteria.

Considering the results in general, it can be suggested that varieties KA-2, Jawahir, Punjab lal perhaps, are the most suitable ones identified to grow on light sandy regosols under the conditions prevailing in the Eastern region of Sri Lanka, primarily during the dry season under irrigation.



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