

**A COMPARATIVE ANALYSIS OF MOISTURE STRESS EFFECTS AT SELECTED GROWTH STAGES ON PHYSIOLOGICAL PARAMETERS OF GREEN HOUSE AND FIELD GROWN CHILLI (*Capsicum annum* L.)**

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**ABSTRACT**

Studies were conducted to evaluate the effects of moisture stress on physiological parameters viz. Net photosynthetic Rate (Ps) and Stomatal Resistance (Rs) at selected growth stages of chilli cv. 'Aranalu' in green house and under field conditions and also to determine to what extent the results obtained from the green house moisture stress studies can be extended to field situation. Two moisture stress cycles each of 15 days duration were imposed as the treatments at various growth stages. Re-watering at every 5<sup>th</sup> day for a period of 15 days in between the stress cycles was practiced. The first stress cycle was imposed during the vegetative, flowering and podding stages belonging to different treatments of the crop. There were variations in the values of Ps and Rs at different stages of the green house grown crop and similar trend has been observed in the field as well.

Estimated Ps was lower and Rs was higher in the green house than in the field. The values obtained for the partial and complete recovery of Ps in the green house were apparently equivalent in magnitude to those of the field experiment. The recovery of Rs. Of chilli plants in the green house was faster than that of the field. Moisture stress at the vegetative stage showed the highest yield reduction compared to the rest of the growth stages. This was observed both in the green house and under field conditions; however, the reduction was greater in green house.

**Key words** : moisture stress, partial recovery, photosynthetic rate, stomatal resistance.