

Thesis Title      Evaporative Cooling in the Experimental  
Greenhouse

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M.S.             Physics

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### Abstract

The purpose of this research is to study decreasing temperature in the  $1.5 \times 3.0 \times 1.6 \text{ m}^3$  experimental greenhouse having iron construction and plastic covering. The decrease of temperature inside the greenhouse is controlled by using inside and outside sprayer, and ventilation for duration. These are controlled by computer. To measure the temperature, IC LM335 is used to be the sensor interfacing to computer and 16 positions are simultaneously observed. Wet bulb depression technique is performed to measure the relative humidity. Data display on screen in numeric and graph form, then are accumulated in diskette. Found that in the uncontrolling day, internal temperature is  $5^\circ\text{C}$  higher than the outside while the maximum outside temperature is  $40^\circ\text{C}$ . But in the controlling day, it is  $2^\circ\text{C}$  lower than the outside while the maximum outside temperature is  $34^\circ\text{C}$ .