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Effects of Air Temperature in the Greenhouse on Thermal Environment, Work Load, Growth and Fruit Yield of Forced Culture

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In order to reduce labor load in a greenhouse growing forced cucumber (L.) cultivated under high air temperature and high humidity, effects of thermal environment, work load, branch length, fruit yields, quality and cucumber diseases were investigated. The air temperature in the greenhouse was controlled by ventilation through a roof window. The Wet Bulb Globe Temperature of laborers at an air temperature of 25°C between 9:30 and 11:30 v

29°C as a conventional control. The labor load in the greenhouse at 25°C was reduced compared with that at 29°C. When cucumber p air temperature of 38°C between 11:30 and 13:30, the marketable bent fruit increased and fruit skin color became light. However, the branch length, fruit yields, quality and skin color between time-depe management of 33°C and conventional control of 29°C from 11:30 of powdery mildew and downy mildew under a time-dependent ten of 33°C was reduced compared with that at 29°C. It was suggested fungicide application and production cost of cucumber could be redi dependent temperature management method.

Key Words: [disease incidence](#), [fruit quality](#), [heart rate](#), [time-depe](#)
[management](#), [WGBT](#)

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