

RADIANT HEAT - HOW DOES IT AFFECT PLANTS?

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Note slightly more realistic comments on this method of heating versus what has been found in American trade literature. *The Grower* is the principle English European journal, and we find that their articles usually have better information on new ideas.

Reported a few years ago that use of radiant heaters reduced a grower's fuel bills by 60%. On the other hand, research in the 1960s did not reveal any major benefit. More recent information shows energy savings of 10 to 30% to be more realistic. Our findings are that the air temperature is usually less than 2°F lower than the leaf temperature (1 C). This contrasts with the air temperature in a conventionally heated house where the air temperature is usually higher than the leaf temperature. Most important feature is reduction of radiant intensity with distance from the radiant energy source. For a tall crop, one might expect

lower leaves to be shaded and cold. For a pot mum crop, this problem would be much less important.

From the outset of our experiments, we were pleased with the results. Radiation varied $\pm 20\%$ throughout the house, but plant heights varied only $\pm 6\%$ from the average. This data was obtained on tomatoes and pot mums. Growth of tomatoes and chrysanthemums in all three radiant heat configurations was good and uniform. The variability we feared did not occur.