was not a new discovery. The juniper midge has been reported from Missouri (Haseman and McLane 1940) and Ohio (Neiswander 1951). Ohio experienced the same confusion with juniper blight that we did in Pennsylvania and unfortunately this situation has not been brought to the attention of the growers. There are growers in Pennsylavania who are now spraying with fungicides to control the damage caused by the juniper midge.

Another midge tentatively identified as juniper tip midge (*Oligitrophus betheli*) was found on junipers. The tip midge does not cause as much damage as the juniper midge because it attacks only the extreme tips of the branches. The larva bores into the bud-like branch tip and hollows it out while completing its development. The branch tip will turn brown after the adult emerges. The tip midge has about four or five generations per year with considerable overlap of the generations. A heavy infestation of tip midge is noticeable only upon close examination. The major damage is probably a reduction in growth of nursery plants.

More work is planned on the biology and control of the midges and a more detailed report will follow. A miticide screening laboratory has been set up and procedures established for evaluation of miticide. Several chemicals have been tested and we plan to test many more with the ultimate goal of gaining registration for the more promising miticides.

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ABSTRACT

Cathey, H. M., and L. E. Campbell. 1974. **Lamps and lighting—a horticultural view.** Lighting Design and Application, November. 12 p.

One of the major determinants of plant growth is light, both outdoors and under artificial culture. We are now finding that, through the proper use of light, many plants can be timed or regulated to flower or fruit at any period of the year. To adjust these growth characteristics, we need to understand the changes that are caused in plants by the natural day length and how we can supplement, override, or substitute for the light regimes controlling these changes by using light from artificial lamps.

The first cultural step in the growing of many plants is to select the proper amount and duration of light. Only a minimum of regulation can be exerted on plants that are grown outdoors. Daily and seasonal fluctuations in light, temperature, or other environmental factors may nullify the manipulations made by the grower. Yet the grower who decides to propagate plants must seek ways to control growth. This article describes progress during the last 50 years in regulating lighting systems for economic plants. It includes research on light for photosynthesis, light to extend the photoperiod, and light to regulate specific growth responses of plants.