

tions. Let us recall the great havoc amongst cucumbers grown in hot houses, by the "cucumber spot disease," a fungus called *Corynespora Maczi* (see "Journal Royal Agricultural Society," 1904, p. 270-272.) This fungus is only observed on cucumbers grown in hot houses. Considering the atmosphere prevailing in these houses and the wholly unnatural conditions under which the plants are cultivated, one can easily understand the rapidity with which the disease spreads. If given a heavy supply of manure large hypertrophic leaves develop, with a thin epidermis, succulent and flaccid from the beginning. It is therefore no wonder that the fungus readily attacks and speedily kills the whole of the plants. But considering the fact that the fungus has never been observed on cucumber plants grown outdoors, must not one hold the conditions prevailing in the hot houses responsible? The plants are less resistant, the growth of the fungus is encouraged by the excessive heat and moisture present and want of ventilation. My experiments in infecting healthy cucumber plants outdoors have never succeeded, whilst a simple coating on the leaves indoors with the spores of *Corynespora*, at once produced the characteristic spots on the leaves.

Another example illustrating the pronounced susceptibility of plants forced in houses or frames, is afforded by *Peronospora Lactuce*, which attacks the lettuce plants grown under glass, whilst those growing out of doors never suffer from the fungus.

Sudden changes of temperature often have as a consequence immediate outbreaks of diseases. The practical gardeners assure us that on opening the doors and windows of a rose house for a short time only, mildew will at once appear. The plants become more susceptible owing to the chill, and the fungus spores, undoubtedly present in the house before, germinate, and grow on the leaves.

I undertook some years ago a simple experiment, which plainly shows the influence of cultural conditions on the development of plants. Two small boxes, filled with the same soil, were sown with cress. Box "1" received a very strong sowing, whilst box "2" a light one. The boxes were exposed to the same conditions, and the seeds came up at the same time. The plants received the equal quantity of water, but I noticed that the water took longer to evaporate in the box with the heavier sowing, being held by the closeness of the plants. One morning, six days after sowing, I detected a small patch of dying plants in the box which received the heavy sowing, and I at once removed the other box to another place in the same house.