The frequently observed production of flower stalks in the case of certain biennial vegetables when exposed to low temperature after planting in early spring, suggests the question as to the time in the growth of the plant when temperature is able to upset the normal type of growth. Is it during germination or later after the seedling is above ground?

Gutzeit (4), working with beet and kohlrabi exposed during germination and early seedling growth, found that temperatures below zero had no effect, but 3°C. caused 30% of the beets to develop flower stems and seeds early the first year. He believed that only those predisposed to early shoot formation could be thus forced. Appel and Gassner (2) found that barley started at 5–7°C. would be just appearing above ground when that started at 20–25°C. was 15 centimeters high; yet in three weeks the plants started at 5–7°C would pass those started at the higher temperature. Gassner (3),

1Contribution from the Laboratory of Plant Physiology, Cornell University, Ithaca, N. Y. Received for publication November 7, 1924.
2Instructor in Plant Physiology.
3Reference by number is to “Literature Cited,” p. 57.