

machine for the conversion and storage of energy? The institute has a very good excuse. It is trying to establish the laws of plant development. The only way to establish such laws is by growing plants under controlled conditions. Artificial light makes accurate control possible. I would not imply that artificial illumination has no possibility of profitable use in the growth of plants commercially. I do mean to imply that with the present inefficiency of tungsten lights and the present price of electrical current, we cannot afford to grow the bulk of the plant (and bulk is a measure of the amount of energy stored) with artificial light even if the plant could be sold at a fancy price."

In the meeting of the Illuminating Engineers Society held at the Institute, Victor A. Tiedjens reported the results of his work on stimulating the growth of lettuce by electric light of varying intensity. A pair of lamps, ranging from 50 to 300 watts, was suspended about five feet over each plot of eight feet square and turned on for various periods after sunset. In general, it was found that the rate of growth increased with the intensity of the illumination.

"The length of the growing period, from seedling to head formation and seed production, was shortened by two and four weeks respectively for the higher intensities, but the growth was not always beneficial to good head formation. The seed stalk was started before a good marketable head was formed in the varieties commonly grown by market gardeners."

FERMENTED BLOOD STIMULATES GROWTH

A form of artificial aliment having a power of accelerating growth in a way that reminds one of Wells's "boom-food", has been reported to the French Society of Public Medicine and Sanitary Engineering by Dr. A. Gauducheau. He makes use of waste blood from the packing houses. This is acidified with vinegar and sugar is added. Then the mixture is sown with distillery yeast and set to ferment at the most favorable temperature. The yeast cells multiply with extra-ordinary rapidity; the culture becomes covered with a thick foam and exudes an agreeable aroma. The fermentation results in two products, one a wine of appetizing flavor, and the other a first class nutriment. Since no heat is used in the process, such sensitive and unstable substances as proteins, diastases and vitamins, are retained unchanged.

Feeding young rats on a ration that contains five per cent. of this fermented product, it is found that they grow two or three times as fast as those fed on ordinary food.

But there is another side to the shield. Dr. Gauducheau finds that his new-fangled food also stimulates the proliferation of the anarchic cancer cells as well as the normal cells of the body, so if the rats have cancer the disease will be increased.

At the session of the Society of Public Medicine at which this paper was read, Dr. Cavillon called attention to the resemblance between the new food and that which H. G. Wells tells about in his romance "The Food of the Gods" which causes the growth of giants among rats and the human race.
