food supply, then we are brought to chemical agency affecting their increase or decrease, and this agency in a limited sphere, but their lives may be regulated by other movements, some on the earth and some in the stars. The sun's direct rays must affect them as it does all things around us, and its indirect action, when it sends out magnetic currents that bring the earth in constant and varying sympathy, may also influence the lives of the minutest creatures, as they no doubt influence the still less observable chemical action.

There was once a considerable discussion as to the part played by organic life in fermentation and putrefaction; and Liebig took up the chemical idea and objected to the belief that microzymes were necessary for chemical work. He lost, apparently, the day; but under the life of the microzyme chemistry and physics are at work, and how they manage to produce the result is still a problem to us. We must not suppose that when chemical action is not violent, as it sometimes is, that it is entirely absent. If we take a liquid containing a strong solution of crystalisable salt, and add a minute crystal to it, how readily the whole mass takes the form of this crystal; and yet how weak, apparently, is the first, and how slight the connection between the two, whether chemical or physical, or both. This leads us to think that the various powers of creation are by no means inert in the production and the continuance of disease; and the lower we go in the scale of animal life the more likely we are to meet with causes acting in a manner different from those of higher organisms, and more allied to those of the inanimate world.

## ELECTRIC LIGHTING & VEGETATION.

When the question of electric lighting as a substitute for gas first attracted public attention some years ago, much interest was manifested in the probable effects able advances in the last two or three of it on vegetation. It was considered | years, and there are reasonable hopes feasible by many scientists and practical men, that it might be used to force plant to become an universal and household

periods of the season, delicacies of fruit and vegetables, which are at present forced under glass at considerable expense. The idea was that the lamps might be arranged to shed a sufficiently powerful light over a grape house, or forcing bed for early vegetables, to keep up the growth both day and night. And many market gardeners hailed the proposal with satisfaction, as they looked forward to being able to use it in the spring when fruit trees were in bloom, for the purposes of setting the buds. In the Old Country particularly, it is found that fruit trees on walls frequently fail entirely, from the effects of one night's frost, and the suggestions put forth were, that by means of the electric light, the fruit buds would have enough strength to set, and thereby overcome the effects of the frost. We can remember seeing this theory advocated in some of the leading daily journals in this country.

The drawback to this general use of the light has been its great cost, and no experiments have yet been made on a scale large enough to call it a commercial test.

The light has been used on several occasions for bringing on fruit, and it is on record that grapes have been forced and ripened under this light in a dull and sunless season; so far the results were satisfactory, but the fruit in some cases was found to lack the lustre and luscious flavor it possesses when ripened by the sun, this being due probably to the want of the. heat, or red rays which are the warm portion of the sun's light.

Electric lighting has made considerthat it will yet be reduced in price so as growth, and bring into the market at early light. We see it employed in street light-