

THE VALUE OF ELECTRICITY.

ELECTRIC PLANT CULTURE.

A GERMAN process, the patent of Mr. Mies, of electric culture for plants and electric impetus to seed germination was the subject of an interesting demonstration at the Royal Botanic Gardens, Regent's Park. So effective was the display of seed germination that it was possible for the audience to discern the essential action in some seed of old wheat after it had been subject to the electrical treatment for only fifteen minutes.

The demonstrator took a handful of old wheat, from which in the ordinary way only 30 per cent. of germination could be expected, and showed some pots of wheat seedlings in which 76 per cent. of germination had been obtained by the Mies treatment. He then placed his handful of seed on some moist earth on a copper-plate, placed some more moist earth over the seed, covered it with a zinc plate, and then passed through the wheat first a current of twenty volts, and afterwards, for a shorter period, an alternating current of 20,000 volts.

A quarter of an hour later the current was switched off and the wheat taken out. It was then seen that the germ in the wheat berry had moved and the epidermi of the berry had cracked owing to the action which had been going on within. It is claimed that by this treatment wheat can be brought to maturity three weeks earlier than under normal conditions, and cotton eight days earlier.

It was explained that it is possible by means of the apparatus to invigorate trees or plants and to pump food into them. The result in the case of a tree which had been electrically treated was seen when two young indiarubber trees, one treated and the other untreated, were tapped by the demonstrator. The former gave a much larger quantity of sap than the latter.

Internal as well as external parasitic attacks, it was claimed, can be combated by the Mies process, and it is believed that it will be possible to kill fungi also by internal treatment.

DR. QUINTON'S THEORY.

AFTER establishing the fact that the first occurrence of animal life was in the sea and not on land, Quinton showed that the primordial oceans contained 8 per cent. of dissolved inorganic matter. That is, the fluid medium in which the earliest organisms lived and moved and had their being, which provided nutriment and environment for them, was of this degree of concentration.

Elementary physiology teaches that the cells of which all bodies are composed are bathed in a fluid medium which is derived from the blood vessels. This fluid medium, which nourishes all the cells of the body, has also a saline concentration of 8 per cent. That is, the concentration of the fluid in which primordial organisms flourished, is identical with that which bathes the cellular structures of nineteenth century organisms.

So much for concentration ; now for composition. We investigate the other end of the chain of life—the chemical composition of present-day living beings, and of present-day marine fluid as we find it in uncontaminated sea-water. The parallel continues to work out for the same chemical elements, in character and number, which constitute the structure of animals, are also those which, item for item, are found in sea-water as we know it. The difference between old-time and present-day sea-water is in its concentration, and this will be referred to later.

Such generalizations as these could not fail to have important therapeutic deductions. If the complex solution of a certain saline concentration known as the sea-water of primordial times exercised a favourable influence upon cell-life then, why not similar fluid of a similar saline concentration now ? The question was put to the test ; the results came out exactly as expected. Uncontaminated sea-water, made 'isotonic' with the circulating fluid in man, *has* a potent, far-reaching and highly beneficial influence on the human body in many forms of disease.

Nothing makes the soul so pure, so religious, as the endeavour to create something perfect.—MICHAEL ANGELO.

Do not act as if you had ten thousand years to throw away. Death stands at your elbow. Be good for something while you live, and it is in your power.—MARCUS AURELIUS.

Happiness is not our final aim in this world. It is the complete development of our faculties—the increase in capacity as sentient and thinking creatures, that constitutes the first want ; and as mental excellence—to think well and feel nobly is doubtless the highest of all attainments, so the mental nourishment which literature affords as richly as any object of human activity should stand among the foremost of our desires.—CARLYLE.