

CHLOROFORMING CARROTS

STRANGE METHODS EMPLOYED BY GARDENERS.
Electricity Exercises a Great Effect Upon the Growth of All Plants.

Plants of all kinds need nitrogen, the most vital element of plant food, and so far as the soil is concerned, one of the scarcest. And yet, the atmosphere over each acre of land contains the enormous store of 38,000 tons of nitrogen gas.

For years past scientists have been experimenting, trying to find an economical and practical method of adding on this store of nitrogen for the benefit of the crops.

It has been found that there exist certain species of bacteria which are capable of gathering this nitrogen. Ten million of these tiny organisms can be contained in a lady's thimble, yet fifteen million are enough to fertilize an acre.

Experts have lately succeeded in producing cultures of these bacteria, and they are already being put on the market for the benefit of farmers. They come by post thoroughly dried and packed in absorbent cotton wool. They are revived by immersing them in tepid water, and then, after being placed in a suitable preparation, they multiply enormously, and are ready for the farmer to scatter over his fields.

To date farmers all the world over have given up their old rule of thumb methods, and are employing the resources of modern science. In every chamber of a well-known agricultural journal particular mention is made of a number of experiments to ascertain the effects of various chemicals on plants. Both

CHLORINE AND CHLOROFORM

were used, and the plants were pushed forward and blossomed earlier than under ordinary conditions.

The beginning of winter the plants were confined in closed spaces submitted to the vapors of ether or chloroform. They were found to bear their leaves within forty-eight hours. They were then exposed to open air for two days, after which they received a second anaesthetic bath, which lasted for a period of two days. After this they were placed in a forcing-house, and the blossoms which would otherwise have been delayed until May were fully out in February.

A French experimenter, M. Léon Talmage, formed some anomalies for eight hours. Seventy days they were in full bloom. Other which had been grown under ordinary conditions, but not exposed to chloroform vapor, did not go until a fortnight later. Cultivated by the same process equally good results.

The Bureau of the Washington Agricultural Department, has been trying to put carrots on rigid diet. His subjects have chiefly leguminous seeds, beans and the like, as

LEAVES AND VETCHES.

Artificially sterilizing the earth the seeds were sown he fed plants on distilled water, calcium, and nitrogen, which were remarkably good, while the seeds eaten, while the

plants exercised a great press the growth of all plants was certain. If wire nets covered over beds of growing plants to cut off atmospheric moisture, it is found that the crops raised and the yield decreased. Plants uncovered were fifty per cent. larger, and bore more fruit.

It has been found that with most plants to increase artificially the supply of electricity, using alternate plates of copper and zinc, the plants were greatly benefited.

Crops, for instance, are increased by fifty-five per cent, and beans and strawberries not only bear heavily but ripen more rapidly. Tobacco, too, was found greatly benefited, but root crops such as turnips and carrots, on the other hand.

INDIRECTLY AFFECTED.

All plants electrically treated need a large amount of water, and electricity should be supplied at

night, when unshaded, although it does harm to grow plants or trees, but when a powerful lamp was used and shaded orange colored globe, flowers began to bloom more quickly, especially under its influence.

Plants, if electrically treated before sowing, invariably give more sturdy plants than those planted without such treatment.

Seeds of foreign plants, such as those which rarely germinate in our climate like our own, are treated with electrical currents for two hours daily for eight days, and then planted at once while the seedlings are found to sprout more readily than those planted from the ground.

Electricity is not within the scope of every amateur gardener; but all who cultivate their flowers in hot sun will be greatly aided by underground wires.

Mr. John Grant, a recent advocate of divorce, declared that it is foolish to live water on the surface of sunken soil. He advocates sharp lengths of hollow bamboo. The joints are twisted into the ground and the water poured through them, so the hard surface is penetrated and the moisture beneath reinforced.

CHINESE SOLDIERS.

Soldiers are despised in China, they belong chiefly to the coolie classes. The German officers engaged some time ago by the Chinese government found that their most important task was to overcome the soldiers' own feelings that they were lower order of being than other

chinese.

I was taught the obligations which a true husband owes to a true wife some years ago by an eastern minister whose I consider one of the

INTEGRITY OF THE HOME

Advice Which May Help to Dispel the Clouds Which Overhang Some Households.

(Extracts according to Act of the Parliament of Canada, One Hundred and Four Years, B. C., Toronto, at the Office of Agriculture, Ottawa)

A speech from Los Angeles, Calif., Frank D. W. Talmage, from the following text—

"Husbands, love your wives very much."

Starting facts about Paul's personality have always vividly impressed me. The one estimate of his personal character formed by the Corinthians church was set aside in his ministry and replaced by him well. Paul himself said that they said, "his presence is weak and his speech contemptible." Chrysostom, according to Albert Barnes, described the statue was low, his nose crooked, and his head bald.

According to Nicophorus, Paul was a man with curvature of the spine and a pale countenance, long and gaunt, and with a head like John Caesar, noted for its scarcity of hair. Whether these descriptions are true we know not; but it is likely that the Corinthians would have seen him as they did, and others so near his own time as Chrysostom and Nicophorus would have described him, if this intellectual and spiritual giant had possessed an imposing personality. And we all through the Pauline writings, of speech brimming with the sounds of the athlete's arm. The young fighter, the gladiator, the soldier, the basis of Ephesus, in their inspirations and goings.

The second fact, which stands side by side with the first, about the personality of Paul is this: Paul was a man.

It has been contended that he was a member of the synagogue and if so must have been married.

"Oh," some husband says, "do my wife and I have any children?"

"Yes, I have a son, and he is a

young man, and he is a