

without harm for as long as a full year.

Another important development has been the increase in the number of chromosomes in plant hybrids through the use of chemicals and irradiation. In this manner, tetraploids have been produced and today are the basis for the new lily hybrids.

If fashions change in plant tastes, the methods of plant research also change. The Beltsville Easter lily experimenters are currently working with atomic radiation and the newer growth regulators in their continuing attempt to produce better Easter lilies.

Easter lilies are tough plants. A potted lily can be kept fresh by watering it moderately so the soil is always moist. It needs as much light as possible, but this does not necessarily mean it must be kept in the south window.

The plant should stay in bloom for from ten days to two weeks and then can easily be transplanted to the garden.

When the plant has finished blossoming, set it out in the ground. It might bloom again in the fall. If it does not, it can be re-potted and brought into a greenhouse at Christmas time or left in the ground where it will come up again the following year—in the South by Easter time, and in the North by July or August.

Cut Easter lilies do not last very long. To keep them looking their best, the following is recommended:

As the flower opens, pinch off the part of the flower where the pollen is produced. This keeps the yellow pollen from sprinkling on the white flower. This can be done with thumb and forefinger or with a pincers.

It is not necessary to water the cut flowers or change the water. To keep their appearance good, remove the petals as they age. Easter lilies blossom from the lowest flower upwards.

One fact about Easter lilies that should remain unchanged is their color, which Dr. Emsweller says will stay white. There are from 80 to 90 varieties of lilies, including garden plants, Dr. Emsweller says, and they come in every color except blue.

Science News Letter, April 13, 1957

PEDIATRICS

Offer Oral Medicine For Diaper Rash

➤ A MEDICINE BABIES can take in their orange juice to cure diaper rash was shown doctors attending the American Academy of Pediatrics meeting in Washington.

The drug is called Pedameth and is marketed in measured amounts in a pink and blue capsule. The contents of the capsule are emptied into the baby's formula or juice to treat cases of diaper rash resulting from ammonia contained in the urine.

Pedameth, which contains dl-methionine, is 99% effective, claims its developer, S. F. Durst & Co., Inc., of Philadelphia, who report that it restores the body's nitrogen balance so the urine becomes ammonia-free.

Science News Letter, April 13, 1957

CHEMISTRY

Chemistry of Epilepsy

➤ EPILEPSY, a disease that affects 1,500,000 Americans, was linked to faulty chemistry in the brain by Dr. Donald B. Tower of the National Institute of Neurological Diseases and Blindness, National Institutes of Health in Bethesda, Md. He reported on its importance to an international group of epilepsy specialists meeting at the National Institutes of Health.

Since there is nothing consistent about the appearance of brain tissue giving rise to epileptic seizures, a biochemical basis for the disease is indicated, he said.

In the brain tissue of many epileptics, there is no observable difference between normal areas and those that give rise to seizures. In fact, in a great many cases, no pathological or diseased brain tissue can be found by observation, he added.

But changes have been found in the chemistry of the nerve cells in the suspected areas. The problem is whether these changes are a cause or an effect, he reported.

Three normal chemicals that are inter-

ferred with in some way are glutamic acid, acetylcholine and potassium.

Glutamic acid is an amino acid found in the body that makes possible many other chemical reactions in the brain. Acetylcholine is a chemical transmitter of nerve impulses, and the element potassium helps nerve cells conduct impulses along their fibers, he explained.

All of these substances are altered in epileptic brain tissue.

Partial proof of the biochemical basis of epilepsy has been given by the results of treatment with asparagine, a chemical that steps up the body's production of glutamic acid. In a small trial on patients at the National Institutes of Health the drug proved beneficial in reducing seizures although it did produce some bad side effects.

This type of treatment is far from being the final cure for epilepsy, but it does point to the fact that we are looking in the right direction, Dr. Tower said.

Science News Letter, April 13, 1957

ENGINEERING

Electronic Device to Help Polio Victims Breathe

➤ AN ELECTRONIC DEVICE that lets iron lung victims breathe for themselves instead of having their respiration forced by machinery was reported by Dr. L. H. Montgomery, Vanderbilt University School of Medicine, to the Institute of Radio Engineers meeting in New York.

The system, although still in the experimental stage, makes use of the few active chest muscles which continue to contract when the patient tries to breathe, Dr. Montgomery said. Even in the severest cases of paralysis, there are always a few of these active muscles left, he added.

When they do contract they are not strong enough to accomplish the breathing job, but they generate minute voltages which can be detected by sensitive electrodes placed on the skin. These voltages are fed to an electronic system which amplifies them and then uses them to control the flow of air to and from the iron lung or other respiratory device as the patient needs, Dr. Montgomery reported.

Aside from the greater comfort the system is a tremendous boost to patient morale. In presently used respirators the patient is compelled to eat, drink and even talk in rhythm with the monotonous push and pull of a motor driven air pump.

The electronic control now enables the patient to control his own breathing to suit himself.

The equipment is still in the experimental stage, Dr. Montgomery emphasized.

Science News Letter, April 13, 1957



WINS WRITING SUCCESS AT 56

"I enrolled in N.I.A. because I wanted to convince myself whether at 56 an old dog could learn new tricks. At my first try, I sent a manuscript to the New York Times and I was amazed when it was accepted. Another story was also sold to the Times."—Michael I. Passarelli, 25 Spring St., Millburn, N. J.

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