

the chilly waters of a mountain lake. The latest findings, made on normal persons, indicate the dangers even when there is no allergy or hypersensitiveness to cold, and explain the mechanism of the sudden deaths, linking it with the chemical, histamine.

When an enzyme that inactivates histamine is taken into the digestive system half an hour before immersion in cold water, the increase in stomach acidity is prevented. This shows that the sudden increase of histamine-like substances due to immersion in cold water is what causes the trouble. Histamine dilates the small blood vessels and lowers the blood pressure dangerously. The shock of this sudden lowering of blood pressure may prove fatal.

Science News Letter, March 23, 1940

Arthritis Problem

ATTACK on the arthritis problem by experiments with mice and a new, unusual type of germ which gives the mice symptoms typical of human arthritis has progressed to the development of a vaccine that protects the mice against this experimental arthritis. Results of the vaccination experiments were reported by Drs. Albert B. Sabin, now of the University of Cincinnati College of Medicine and formerly of the Rockefeller Institute, and Dr. Isabel M. Morgan, of the Rockefeller Institute.

"I can see no present or future application of these experiments to human arthritis," Dr. Sabin replied to a question on this point.

Because the germ, a pleuropneumonia organism, belongs neither to the bacteria group nor the virus group of disease-causing microorganisms, Dr. Sabin's studies of it are interesting to scientists who want to know all about the strange new germ which, even if it may never affect humans, causes disease in the laboratory mice used for many studies.

Science News Letter, March 23, 1940

Noises Hurt

HIGH-PITCHED noises have a greater depressing effect than lower-pitched ones of the same degree of loudness, Drs. Edward J. Van Liere, Paul E. Vaughan and Davis W. Northup, West Virginia University School of Medicine, announced.

At a high pitch, a noise about as loud as a riveter slows down secretion of digestive juices and acid in the stomach more than the same noise at a low pitch, it was learned from studying the effects of noise on dogs' digestion. The same studies showed that variation between individuals is important, some being able to stand noise better.

Science News Letter, March 23, 1940



Multiple Cropping

MULTIPLE cropping, or the growing of two or more kinds of vegetables or flowers in the same tank of water containing nutrient chemicals, is the newest development in hydroponics, or "dirtless farming" as it has been nicknamed. Possibilities of multiple cropping are explained by the originator of hydroponics, Dr. William F. Gericke, of Berkeley, Calif., in his new book, *Soilless Gardening*.

Dr. Gericke states that he has successfully grown such combinations as corn and potatoes; potatoes, tomatoes and celery; and daffodils, godetias, gladioli and chrysanthemums simultaneously in the same hydroponic basins. The different plants kept out of each other's way through differences in height, sequence in harvesting times, etc. Sometimes a little human aid was called in, as in pruning the tomato vines so that they would bear their fruit above the level of the potato leaves.

In one experimental planting of potatoes and corn, in a basin with a surface area of 1/220 of an acre, the harvest was 6.8 bushels of potatoes and 1.11 bushels of corn, which is equivalent to 1496 bushels of potatoes and 244.2 bushels of corn from the same acre.

The hydroponic technique, as developed by Dr. Gericke, is an adaptation to large-scale, commercial production of the solution-culture method used for a century or more in plant physiology laboratories for purely experimental purposes. In it, plants are held suspended in sawdust, excelsior or other non-soil material on wire netting, with their roots dangling in tanks or basins filled with water. In the water are dissolved the same mineral nutrients that plants get from common soil fertilizers, though the combi-

ENGINEERING

New Fluorescent Lamps Must Have "Aging" Test

See Front Cover

RACKS upon racks of luscious-colored fluorescent lamps are being constantly filled, tested and emptied at the General Electric Fluorescent Lamp Works at Nela Park. Twelve thousand lamps a day pass through this "aging" test, which is pictured on the front cover of this week's SCIENCE NEWS LETTER.

Girls run an induction coil, and sometimes their hands, up and down the lamps to light them as if by magic.

Foreign gasses in the lamps are thus cleaned up and the lamps leveled off so that when sold they will start normally.

Science News Letter, March 23, 1940

If an ostrich should bury its head in the sand, it would *suffocate*.

Teaching handicapped *shut-in* children via a telephone hookup from classroom to homes is being tried in Waterloo, Iowa.

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