SCIENCE NEWS

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THE CONTROL OF AIR TRAFFIC

EXTENSIVE planning is now under way by officials concerned with LaGuardia Field on Long Island, New York City's great airport, for controlling sky traffic because of the enormously increased use of the field expected in postwar days. This means particularly radio communication with approaching planes, instructing them relative to weather conditions, what air levels to use, and when and where to land.

LaGuardia field is now one of the largest and busiest traffic control centers in the world, according to the U. S. Civil Aeronautics Administration. But, it says, a tremendous increase in business after the war may be expected, and preparations for it must be made now.

"New York's problem is complicated," the Administration states. "Here, at LaGuardia Field, is a mixture of foreign traffic entering the streams of domestic traffic coming from every part of the continent centering at the country's greatest metropolis. New York is now, and will be increasingly, the terminus for intercontinental traffic."

Controlling sky traffic becomes increasingly important in bad flying weather. When instruments were developed to enable pilots to fly through storms and cloudy weather conditions, traffic control along the airways became necessary. Now, with many planes in the air in all kinds of weather, and scores converging on a spot like New York and other great American fields, the pilot must be helped to the ground.

The pilot must be given information by radio relative to weather conditions and landing conditions, and must be instructed at which thousand-foot level to approach, when to drop a thousand feet to a lower level, and when and on which strip to land. Three kinds of government workers perform these services, air traffic controllers, meteorologists and aircraft communicators.

These men rarely see the planes whose progress they chart and direct along the airways of the world. They sit before inclined posting boards with movable cards on which are recorded radio reports of planes received from pilots when miles away. As the planes approach the cards are moved downward on the board, and off the board when the plane lands.

New York's station handles both overseas-foreign and interstate-domestic communications, distinguishing it from others of the 400 stations operated by the Civil Aeronautics Administration. The big gun of the station is the intercontinental transmitter WSY at Sayville, Long Island. All overseas communication is handled by the administration.

ITEMS

THE amount of ascorbic acid, or vitamin C, in tomatoes —the most important vitamin of this fruit—varies directly with the light intensity in the growing areas, is indicated by studies in the U. S. Plant, Soil and Nutrition Laboratory of Cornell University. Of this discovery, Dr. L. A. Maynard, director of the laboratory and head of Cornell's School of Nutrition, said, "investigators believe that it will be worth while to chart areas where commercial production will yield the highest vitamin content in this important food." In the tomato research, studies by Dr. W. L. Nelson showed first of all that tomatoes as marketed vary widely in their content of ascorbic acid. Dr. Karl C. Hamner and Dr. G. F. Somers then found that most variations resulted from differences in light intensity prior to harvest. In a recently completed study, the tomatoes grown in one area had one third more ascorbic acid than the same variety grown in another nearby area. A light-measuring device showed that those grown in the first section were subject to one third greater light intensity.

INCREASING the family's vitamin A consumption is good for young and old, it appears from studies of rats reported by Dr. H. C. Sherman and Dr. H. L. Campbell, of Columbia University, to the National Academy of Sciences. Liberal intakes of this vitamin, found in such foods as butter, liver, egg yolk, carrots and green leafy vegetables, tends to postpone aging and increase length of life, Dr. Sherman and colleagues have previously reported. Now they find that the offspring in rat families on the liberal vitamin A intake grow somewhat more rapidly and with less individual variability. This indicates that liberal vitamin A has both a favorable and a stabilizing influence on growth. This favorable, stabilizing effect on rat growth was observed with vitamin A intakes two and four times higher than the intake considered fully enough to meet the rat's nutritional needs.

USE as a water softener of New Jersey marl or greensand, formerly important as a fertilizer, has inspired a program of rehabilitation and expansion for New Jersey's mineral industry which has dwindled in output, income and employment in recent years. A new bureau of mineral research at Rutgers University, headed by Dr. Alfred K. Snelgrove, formerly of the Michigan College of Mining and Technology, will conduct the study.

GROWING plants in glass flowerpots will feed on the walls of the pots themselves if they are made of a new nutrient glass fertilizer. The glass will supply all the necessary food elements except nitrogen, organic matter and water. This use is suggested by A. E. Badger and R. H. Bray, of the department of ceramics engineering of the University of Illinois, as one of the results of work carried on on the solubility of fused mixtures of rock phosphate, potassium carbonate and silica. Should proper solubilities be obtainable with the more complex mixtures, these scientists state, and costs be competitive with present fertilizers, glass fertilizers may offer interesting advantages. The ease with which glass can be manipulated, the scientists say, suggests many commercial adaptations for soilless growth experiments as well as ordinary applications for soil enrichment.