SCIENCE NEWS

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BOTANY AND AGRICULTURE IN THE USSR

PLANT scientists in the USSR are hard at work at the double task of reestablishing agriculture, forestry and botanical research in areas newly liberated from German occupation and preparing for future working programs for the postwar period. Information about their efforts has been gathered and summarized by the Soviet Scientists Anti-Fascist Committee.

Restoration of the Leningrad Institute of Plant Culture, one of the world's great centers for the breeding and propagation of new varieties, is being vigorously pushed under the leadership of Academician Johann Eichfeld by workers who had been evacuated during the siege of the city. The Germans systematically looted and destroyed buildings, greenhouses and valuable collections of seeds. People from the neighborhood and former service men are laboring in the reconstruction of the buildings.

The most important task in the reestablishment of the institute, of course, is getting the plant collections themselves to growing again. Seed has been prepared for sowings this fall and next spring. The institute will provide farm nurseries next spring with 100,000 strawberry plants, 50,000 young fruit trees, 60,000 currant bushes and other fruit-bearing shrubs. Plans for the 1945 propagation season call for 3,000,000 new fruit trees and bushes.

At the Moscow Botanic Gardens, conducted under the auspices of the Academy of Sciences of the USSR, botanical research and education are carried on side by side with practical applications. Reorganization and expansion are under the direction of Academician Boris Keller. At present the gardens comprise about 250 acres, but when the present program is completed the area will be 750 acres.

The natural laws governing plant life are illustrated by six distinct sections: plant evolution, experimental ecology, cultivated plants, dendrology, horticulture and floriculture. Russian botanists are especially interested in North American plants and hope to exchange seeds and cuttings, as well as botanical information, with their colleagues in the United States and Canada.

Far to the northeast, in the wild country of Asiatic Russia, the Academy of Sciences has established an experiment station known as the Mountain Taiga Station. (Taiga is a descriptive word for the cold-climate forest that covers a large part of northern Siberia.) The station, directed by Docent S. Rudnikh, is in the Nkrivoi Kliuch Valley, near the city of Voroshilovussurisky. Here are pursued breeding and selection programs looking toward the development of better crops for cold, short-season regions.

New methods developed at the station have brought about potato production of about twelve tons to the acre in large-scale fields. Much attention is being paid to the production of hardy fruit trees and bushes, and to the adaptation of local wild species to food and medicinal purposes.

ITEMS

THE next period of sunspot maximum will probably come early, the number of sunspots for the present cycle being greatest sometime before May, 1948. Dr. W. Gleissberg, of Istanbul University Observatory, reports in the *Astrophysical Journal* that on the average 11.1 years elapse between two successive periods of sunspot maximum. One can expect, with ninety-five chances of being right, out of a hundred times, that the interval from the last maximum to the next one will be shorter than usual. After the last sunspot maximum, which occurred in April, 1937, the number of spots on the sun decreased very gradually. Because of the slow decline of this cycle, it might easily be supposed that the interval between the last sunspot maximum and the next one would be relatively long. The laws of probability, however, indicate that this interval will be shorter than average.

CUTTINGS from cork-oak trees have been induced to strike root, in successful experiments conducted at the Fruitland Nurseries, under the direction of James G. Bailie. This development is expected greatly to speed up the establishment of American sources of cork, need for which was very acutely felt before the liberation of North Africa and the lessening of the U-boat menace removed some of the war-forced restrictions on cork imports from the Mediterranean area. Rooted cuttings thus far planted have been relatively few, for the work is still on an experimental basis. Present plans call for a greatly increased number during the coming autumn and winter, with larger-scale tests under a variety of soil and climatic conditions.

A NEW high-speed film, believed to be the fastest film ever made for news photographers, is now in use for photography under extremely adverse light conditions at high shutter speeds. The new film has extremely high sensitivity to colors, and is recommended for good exposure latitude. Extreme speeds can be obtained by prolonged development. Over-development, however, will increase the graininess, which is caused by the clumping of minute silver particles in the exposed emulsion. The new sports film is developed in the same way as other press type films are developed. The new film, a product of the Eastman Kodak Company, is marketed in standard sizes under the trade name Super Panchro Press Sports Type Film. It was placed on sale only two months after the original idea for the film, which is a modification of Super Panchro Press Type B, was conceived in Eastman laboratories, and developmental work started on the film. The Weston rating (used in setting exposure meters) of the new film is 200 daylight, 160 tungsten. This is more than twice as fast as the fastest films previously in use which have Weston ratings of 80 daylight and 50 tungsten. The manufacturers state that the ratings for the new film may be doubled with little danger of underexposure.