SCIENTIFIC EVENTS

THE SOIL CONSERVATION SERVICE

THE annual report to the Secretary of Agriculture of H. H. Bennett, chief of the Soil Conservation Service, has been made public. He points out that the effectiveness of soil and water conservation at flood sources in minimizing floods is substantiated by several established facts:

1. Flood loads are due in large part to rapid surface run-off of rainfall or melting snow and the quick concentration of this water in stream channels.
2. The upland soils of a watershed constitute a storage reservoir capable of absorbing or retaining enough water to prevent, or at least greatly reduce, critical flood crests in the lower drainageways.
3. Proved and adaptable procedures to hold water in the soil are now available.

Mr. Bennett states that at the close of the year there was a wide-spread and growing conviction that the solution of the nation's flood problem lies in a coordinated watershed program of prevention and control in which the upstream farmer will reinforce with soil and water-saving practices the downstream fortifications of the engineer at critical areas of great danger. The former would prevent floods as far as possible and the latter would control critical flood crests when they do arise. To show the effectiveness of soil- and water-conserving practices in the alleviation of flood and drought conditions, Dr. Bennett cites data obtained by the Soil Conservation Service at its erosion experiment stations throughout the Great Plains.

The field activities of the service were considerably enlarged in the fiscal year. The number of demonstration projects was increased from 47 to 143 and the area of privately-owned land under cooperative agreement increased from approximately 4,000,000 to 7,000,000 acres. By July 1, 1936, nearly 18,000 farmers had signed voluntary agreements to cooperate with the service.

From a technical standpoint, the demonstration program remained unchanged during the year. It continued the introduction of such beneficial farming practises as strip cropping, contour tillage and contour furrowing; the construction of terraces, check dams and water-spreading dikes; woodland and gully plantings, and the retirement of steep slopes and badly eroded areas from cultivation.

More than 430,000 acres in the soil conservation demonstration projects, including the CCC camp areas, have been strip-cropped. Almost 200,000 acres have been contour-furrowed, and more than 900,000 acres have been tilled on the contour. Almost 38,000 miles of terraces, together with more than 200,000 terrace outlet structures, have been completed. Approximately 900,000 small dams have been built to check the run-off of rainfall and the spread of gullies.

In addition to these demonstration activities on private land areas, the service is conducting erosion control work on four large areas of federal and public land. These projects are the Navajo Indian Reservation of 17,000,000 acres in New Mexico and Arizona; the upper Gila River watershed, including the San Pedro and Santa Cruz tributaries, comprising 13,900,000 acres in New Mexico and Arizona; the Rio Grande watershed above Elephant Butte Reservoir, embracing 14,300,000 acres in New Mexico, and the entire Shoshone Indian Reservation of 2,400,000 acres in Wyoming.

RESEARCH PROGRAM OF THE FOOD AND DRUG ADMINISTRATION

AT the request of Secretary of Agriculture Wallace, the National Academy of Sciences, through its president, Dr. Frank R. Lillie, has appointed a committee for the purpose of reviewing the research program on the toxicity of lead and arsenic now under way in the Food and Drug Administration. The committee appointed by Dr. Lillie, that recently held its first meeting in Washington, consists of Professor A. J. Carlson, of the University of Chicago, *chairman;* Professor C. K. Drinker, of Harvard University; Dr. Ludvig Hektoen, McCormick Institute for Infectious Diseases and chairman of the National Research Council; Professor H. C. Sherman, of Columbia University, and Professor Torald Sollmann, of Western Reserve University School of Medicine.

The problem of the degree of toxicity of lead and arsenic occurring in the form of spray residues on fruits and vegetables has long been a troublesome one. Fruit and vegetable growers are obliged to use lead arsenate sprays to guard their crops against insect pests. Such sprays are useless unless they are sufficiently poisonous to destroy the insects. The residues remaining, if in sufficient quantity, are also dangerous to consumers. There is no difference of opinion among scientific men as to the poisonous character of both lead and arsenic. Authorities differ only upon the amounts of these poisons which may be consumed without damage to health.

The Food and Drug Administration of the Department of Agriculture has for years been carrying on a campaign under the Food and Drugs Act to remove from the market consignments of fruits and vegetables bearing what are considered dangerous amounts of poisonous residues. Other bureaus of the department have developed washing methods and appliances for