The station, which has been in receipt of government grants since 1911, has been organized so as to bring it into touch with modern conditions of agriculture, on the one side, and with scientific advance, on the other. Its activities range from oil cultivation to fertilizer investigations, the effect of manures on crops, and plant diseases. As the fundamental basis of agriculture is the production of crops, the work at Rothamsted is mainly concerned with this, and the natural subdivisions of the investigation are soil cultivation, the feeding of crops, and the maintenance of healthy conditions of plant growth. Cultivation has been reduced almost to a fine art, but as costs are the dominating factor in practical farming experiments are continually carried out with the object of discovering means of reducing expense. For instance, the power needed for ploughing can be reduced by suitable treatment of the land. Chalking heavy soil may effect a saving of as much as 15 per cent. in the power used, while farmyard manure, coarse ashes and even artificial manure can all effect similar economies.

As more than thirty artificial manures are now available to the farmer, and as their effect varies on different farms and with the weather, there is an obvious need for some general rules by which farmers may be guided. The report, having stated that a risk must always attach to crop yields, adds that it is hoped that they may eventually become calculable and therefore insurable. The difficulties of the work are great, but they are being steadily overcome, though at present the effect of differences in soil type and climatic conditions are not known with certitude for various parts of the country.

The complete report may be obtained from the Secretary of the Rothamsted Experimental Station, Harpenden.

SYMPOSIUM ON HEAT TRANSFER

A SYMPOSIUM on heat transfer will be held at the spring meeting of the American Chemical Society, under the auspices of the Division of Industrial and Engineering Chemistry.

While the final program is not available, a number of papers are in preparation by writers well versed in various applications of heat transference. These papers may be classified as follows:

Heat Losses by Radiation plus Convection, through Bare and Insulated Surfaces.
- a. From Pipes.
- b. From Furnace Walls.
- c. From Miscellaneous Shapes.

Heating or Cooling of Non-Condensable Cases.
- a. The Warming of Air in Hot-blast Heaters.

Heating or Cooling of Liquids Flowing Inside Pipes.
- a. Water.
- b. Oils.

Condensation.
- a. In Surface Condensers and Water-heaters.

Evaporation.
- a. The Analysis of Certain Comparative Tests on Evaporators.
- b. Heat Transfer in Enameled Apparatus.

Miscellaneous Topics.
- a. "A Heat Meter."
- b. The Determination of Air in Steam, and the Importance of this Factor in Heat Transmission.

In order that those interested may have ample time prior to the meeting to prepare discussion of these papers, it has been decided to issue advance copies, or preprints, bound under one cover. To this end it is necessary that the complete manuscript be in the hands of the chairman not later than January 15, 1924.

Professor W. H. McAdams, of the Massachusetts Institute of Technology, is chairman of this symposium. It is of such an important nature that two half days will be devoted to the presentation and discussion of papers.

Should preprints be issued, a copy will be sent to each paid member of the division.

ERLE M. BILLINGS,
Secretary

THE SEISMOLOGICAL SOCIETY OF AMERICA

AT a meeting of the board of directors of the Seismological Society of America held in San Francisco on October 19 the following officers were elected for the year 1923–24: Bailey Willis, of Stanford University, *president;* W. W. Campbell, University of California, *first vice-president;* R. W. Sayles, Harvard University, *second vice-president;* H. O. Wood, Carnegie Institution, *third vice-president;* S. D. Townley, Stanford University, *secretary-treasurer.*

During the past year the Seismological Society published a large Fault Map of California on the scale of eight miles to the inch. This has been distributed to the members of the society and subscribers to the quarterly *Bulletin* published by the society, and the remaining copies are now on sale. The sale of the maps is in charge of the secretary of the society, Stanford University, California. When mounted the map is 6 x 7 feet in size. The base of the map was prepared by the U. S. Geological Survey and all known active and dead faults have been drawn on it from the best information available. The map also contains the offshore contour lines from San Diego to San Francisco. These were determined by the Hydrographic Office of the U. S. Navy Department, in the fall of 1922, by the use of the Sonic method. The data of the fault lines were compiled by Bailey Willis and H. O. Wood and the publication of the map has