

are produced in direct competition with oversea farmers. This competition is being met successfully: (a) by those who tend to conform to the practice of the farmers in the New World, by an extensification of methods, taking little more from the land than nature gives, and in no way seeking to force production; (b) by those who occupy land "good enough to eat," which can be relied upon under almost any conditions to give a full return on the capital and labor expended upon it. It is being met with less success by those on certain types of soil, who are seeking to carry on established systems of farming under economic conditions which to-day leave them no margin on their expenditure.

(3) Apart from commodities, and to a lesser extent, perhaps, of soil types and farming systems, farmers who are able to operate their holdings without recourse to hired labor on any considerable scale are meeting the conditions of the times without difficulty.

THE CHARLES LATHROP PACK FELLOWSHIPS IN FORESTRY

THE Charles Lathrop Pack Forest Education Board, founded by the Charles Lathrop Pack Forestry Trust of Washington, D. C., announces a number of fellowships in forestry for the year 1930-31. The purpose of the fellowships is to encourage men who have shown unusual intellectual and personal qualities to obtain training that will best equip them for future leadership either in the general practice of forestry, in the forest industries, in the teaching of forestry, in forest research or in the development of public forest policy.

The awards will be made to gifted men who demonstrate natural powers of intellectual and personal leadership, and who intend to make forestry their life work. The sum of \$10,000 is available the first year. The awards will range from \$500 to \$2,500, or more in exceptional cases, and will ordinarily be restricted to men of American or Canadian citizenship. No restrictions are made as to age, educational status or practical experience, but great emphasis will be placed on character, intellect, qualities of leadership and similar qualifications.

The administration of these fellowships has been placed in the hands of the Charles Lathrop Pack Forest Education Board, which is composed of the following: *Chairman*, Henry S. Graves, dean, School of Forestry, Yale University; *Secretary*, Ward Shepard, U. S. Forest Service, Washington, D. C.; Samuel T. Dana, dean, School of Forestry and Conservation, University of Michigan; John Foley, purchasing agent, Pennsylvania Railroad, Philadelphia; Arthur Newton Pack, Princeton, New Jersey, director, Charles Lathrop Pack Forestry Trust; E. O. Siecke, director, Texas Forest Service, College Station; Ellwood Wilson, chief forester, Laurentide Division, Canada Power and Paper Corporation, Grande Mere,

Quebec; Hugo Winkenwerder, dean, College of Forestry, University of Washington, Seattle; Raphael Zon, director, Lake States Forest Experiment Station, St. Paul, Minnesota.

Application forms and other information can be obtained from the secretary of the Charles Lathrop Pack Forest Education Board, 1214 Sixteenth Street, N. W., Washington, D. C. For the current year the completed applications must be in the hands of the secretary not later than April 15. The awards will be made at the next meeting of the board, which will be held in New York City on May 10.

APPROPRIATIONS FOR GRANTS-IN-AID BY THE NATIONAL RESEARCH COUNCIL

At meetings of the National Research Council's Committee on Grants-in-Aid, held in December and February, twenty-eight appropriations were made from the special fund recently placed in the hands of the Research Council for the aid of research, chiefly through allotments to individual investigators. This committee is composed of the chairmen of the seven divisions of science and technology of the council, together with the chairman of the council, the treasurer and the permanent secretary. The grants made were as follows:

Margaret Harwood, director, Maria Mitchell Observatory, for the measurement of light of variable stars and the computation of periods of variation; Leonard B. Loeb, associate professor of physics, University of California, for a study of the mechanism of the spark discharge; A. H. Pfund, professor of physics, Johns Hopkins University, for the measurement of radiant energy from Brownian movement; Frank Schlesinger, director, Yale University Observatory, for observation of parallaxes and proper motions of bright stars in the southern hemisphere; Arthur H. Warner, instructor in physics, University of California at Los Angeles, for studies of the photoelectric effect from clean tungsten surfaces.

John B. Whitehead, professor of electrical engineering, Johns Hopkins University, for investigations on the fundamental dielectric properties of insulating oils.

William Lester Gilliland, instructor in chemistry, University of Maine, for studies of the properties of carbon monoxide; Linus Pauling, associate professor of theoretical chemistry, California Institute of Technology, for the determination of the electron distribution in various crystals.

T. Addis, professor of medicine, Stanford University Medical School, for a study of hypertrophy and compensatory hypertrophy with respect to renal disease; C. Sidney Burwell, professor of medicine, and Glenn E. Cullen, professor of biochemistry, Vanderbilt University, for investigations on tissue changes in cardiac edema; L. R. Cerecedo, assistant professor of biochemistry, University of California, for investigations on the purine fraction of the nucleic acid molecule; E. A. Doisy, professor of biochemistry, St. Louis University School of