

thing of the human heart all classes owe her allegiance. In her the rarest individualist and the broadest communist find common ground. Individuals have freed the many, which, would they remain so, must nourish the fields from which their liberty has sprung. When democracies forget, the individual may rise to do what the many should. A Vilas, a Carnegie, a Rockefeller puts governments to shame. To discover among us the pioneers of thought and to set them at the world's work is university business, and he who does this, be he philanthropist, trustee, president, or faculty member, is a university man.

However uneven the progress of the university, however in innocence or by intent those momentarily in command may chasten her spirit, the need for her will keep her alive. The ever-new problems of an ever-changing universe guarantee this. In the history of our world that religion has always been best which has been newest, because the newest takes greatest cognizance of and tries best to meet the problems of the age in which it is born. Religion invites defeat because it attempts to do more than this by prescribing for all the future which no age and no spokesman for an age can foresee. For the same reason political constitutions ultimately meet amendment or pass out entirely. Our forefathers could hardly draft laws to meet the problems of steam transportation, of telegraphic monopoly, of meat trusts and the thousand other things that our own age has discovered. Only science, which on new evidence will change all her laws over night, is as secure to-morrow as she is to-day. Her spirit is the spirit of the university to which alone the strong will and the weak must forever bow.

MARTIN H. FISCHER

APPROPRIATIONS FOR THE DEPARTMENT OF AGRICULTURE¹

WITH the continued enlargement and extension of the functions of the United States Department of Agriculture, the annual appropriation act providing for its support has become more and more a measure of much public interest. The latest of these acts, signed by President Wilson June 30, 1914, and carrying appropriations for the fiscal year commencing with the following day, is no exception in this respect, again establishing as it does the principle of federal aid to agriculture in the broadest use of the term, providing for the maintenance and development of its manifold activities to a larger extent than ever before, and opening the way to an increased efficiency through a reorganization of its work.

The total amount carried by the act is \$19,865,832. This is an increase of \$1,878,887, or over 11 per cent. over the previous year, and of \$804,500 over the estimates submitted by the department. The increased allotments are distributed throughout the entire department, and while many are designed to provide more adequately for its administrative and regulatory functions, which now absorb nearly two thirds of the total appropriations, opportunity is also afforded for the extension of most of its lines of research, and especially for the development of its various forms of demonstration work.

In its general make-up, the law conforms closely to its immediate predecessor, and in fact is somewhat more rigidly confined to the routine work of the department. There are, however, a number of items of new legislation. Thus, the Secretary of Agriculture is directed to prepare a plan for "reorganizing, redirecting and systematizing the work of the Department of Agriculture as the interests of economical and efficient administration may require." This plan is to be submitted to Congress with the estimates of expenditures for the fiscal year 1915-16, these estimates being arranged on the basis of its provisions. A special object of the proposed reorganization is the elimination of the possibility of duplication, and the securing

¹ From the *Experiment Station Record*.

of close coordination of related lines of work.

Another provision increases the maximum salary which may be paid to investigators or others engaged in scientific work from \$4,000 to \$4,500. Under the previous limit, a number of the more experienced investigators have been drawn away from the department.

By a clause inserted in the section dealing with the Office of Experiment Stations, funds are given the Secretary of Agriculture to carry out the provisions of the Smith-Lever Extension Act. An extension of the franking privilege is also included under which all correspondence, bulletins and reports for the furtherance of the purposes of that act may be transmitted in the mails free of postage by the college officer or other person connected with the extension department of the college designated by the Secretary of Agriculture, under regulations to be prescribed by the Postmaster General.

Great interest was again manifested in the demonstration and extension activities conducted by the department itself, and some of the largest increases carried in the act are those for their further development. The sum of \$400,000 is definitely allotted to farmers' cooperative demonstration work outside the cotton belt, and \$673,240 for similar demonstrations in the areas threatened by the boll weevil. In the case of the latter work, a proviso is inserted restricting the expenditures to the funds provided and such cooperative funds as may be voluntarily contributed by state, county and municipal agencies, associations of farmers and individual farmers, universities, colleges, boards of trade, chambers of commerce, other local associations of business men, business organizations, and individuals within the state. The allotment for the campaign against the cattle tick is increased from \$325,000 to \$400,000, of which \$50,000 may be used for live stock demonstration work in areas freed of ticks. There is also an appropriation of \$60,000 for experiments and demonstrations in cooperation with states or individuals in live stock production in the cane sugar and cotton districts, and one of \$40,000 to aid in the agricultural development

of the government reclamation projects by assisting settlers through demonstrations, advice and in other ways.

Most of the various regulatory or police functions assigned to the department receive increased support. The permanent appropriation of \$3,000,000 for meat inspection is supplemented by a grant of \$375,000, an increase of \$175,000 over the previous year. This increase is mainly because of additional work through the inspection of imported meats, in accordance with the Tariff Act of 1913. The meat inspection is also extended to reindeer. The allotment for the enforcement of the Food and Drugs Act is increased by \$25,641, largely to meet the additional duties imposed by the recent extension of the act to include meat and meat food products and the amendment requiring the declaration of the net weight in package and similar goods. An increase from \$10,000 to \$50,000 is provided for the protection of migratory game and insectivorous birds, and one from \$75,000 to \$100,000 for the cooperative fire protection of the forested watersheds of navigable streams. The appropriation for the enforcement of the plant quarantine act is increased from \$40,000 to \$50,000, with \$50,000 additional to enable cooperation with states quarantined against the interstate movement of Irish potatoes.

As usual there is considerable new legislation relating to forestry matters. The Appalachian Forest Reserve Act of 1911 is amended by increasing the proportion of the gross receipts from the National Forests acquired under its provisions which is returned to the respective states and counties, for the benefit of their public schools and roads, from five to twenty-five per cent. Provision is also made for the handling through the Treasury Department of funds contributed for cooperative work in the protection and improvement of the national forests, as well as for forest investigations, and a requirement is inserted whereby all such contributions must annually be reported to Congress.

The appropriation for studies of the marketing and distribution of farm products is increased from \$50,000 to \$200,000. Authority

is also given the department for studies of cooperation among farmers in the United States in rural credits and other lines and to disseminate information on the subject, with an appropriation of \$40,000 for the purpose.

Other new projects for which definite appropriations are made include \$10,000 for the importation of Corriedale and other sheep for breeding purposes; \$5,000 for studying the grading, weighing, and handling of naval stores; \$7,000 for the publication of reports and maps dealing with the location, extent, etc., of the kelp beds on the Pacific Coast; \$10,000 for furnishing official cotton grades and samples to certain associations; \$5,000 for the improvement of an additional game preserve; and \$5,000 for agricultural extension work in Hawaii. Authority is also given for studies of seismology, a number of new insects and plant diseases, the handling of fish, oysters, and other foods and food products, and the utilization of agricultural products for clothing and other uses in the home. An exhibit by the department, illustrative of farming in the subhumid regions, is provided for the International Dry Farming Congress to be held at Wichita, Kansas, October 7 to 17, 1914, with an appropriation of \$20,000 for the purpose.

Considering the appropriations definitely allotted to the several bureaus, that of the Weather Bureau aggregates \$1,667,270. This is an apparent decrease of \$40,340, but this is mainly because no new observatories are provided except a building at Neah Bay, Washington, to cost \$3,000. The allotments of the bureau have been classified on a new basis, \$327,270 being available for statutory salaries; \$122,000 for carrying on investigations in meteorology, climatology, seismology, evaporation and aerology, and the dissemination of meteorological, climatological and marine information in the city of Washington; \$1,189,000 for similar expenses outside of Washington, and \$26,000 for the maintenance of a bureau printing office in Washington. The Secretary is also directed to report to Congress relative to the future disposition of the plant at Mount Weather, Virginia, from

which the extensive research work formerly carried on is being largely withdrawn.

An increase of \$288,830 is accorded the Bureau of Animal Industry, making its total \$2,320,026. This is in addition to the permanent annual appropriation of \$3,000,000 for meat inspection previously referred to and also to a special appropriation of \$600,000, approved February 23, 1914, of which \$50,000 was allotted to the inspection of virus, serums, etc., used in the treatment of animal diseases, \$100,000 for the investigation, treatment and eradication of dourine, and the remainder for similar work with hog cholera. Among the largest items of increase in the bureau's appropriation are those supplementing the meat inspection funds and for the tick eradication campaign already mentioned, and for work in dairying which receives \$256,490, an increase of \$78,590. The various items pertaining to animal husbandry are combined into a single group aggregating \$182,840, of which \$30,000 may be used for the horse breeding project, \$24,500 for the poultry studies, including the ostrich industry, and \$10,000 for sheep importation. The appropriation for inspection and quarantine work is \$625,520, and that for pathological investigations of animal diseases \$77,360.

The Bureau of Plant Industry receives \$3,616,045. This is an increase of \$948,050, about two thirds of which is accounted for by the large additions to the funds for demonstration purposes previously mentioned, and the remainder chiefly by smaller increases apportioned among a large number of projects. The congressional seed distribution is continued on the usual basis and with an appropriation of \$257,000, as for the previous year. The bureau also receives \$166,500 for the testing and distribution in quantities sufficient for practical field tests of new and rare seeds which from previous trials seem especially promising, and for the improvement of alfalfa, clover and other forage crops, \$100,000 of this amount being available for the purchase and distribution of these new and rare seeds. The amount of \$74,600 is appropriated for the foreign seed and plant introduction.

Large appropriations are again made for the

prosecution of studies with specific crops. Thus, for cotton \$91,000 is provided for an inquiry into ginning, grading, baling, and wrapping practises. This work is extended to include gin compressing and the distribution of the official grades of cotton samples, and the appropriation for testing the waste, tensile strength, and bleaching qualities of the various standard grades of cotton is increased from \$10,000 to \$60,000. For other fiber plant studies, especially with flax, \$20,850 is again allotted, as well as \$38,000 for acclimatization and adaptation work with cotton, corn and other crops introduced from tropical regions. The tobacco studies receive \$25,000; the cereal investigations \$135,405, of which \$40,000 is for corn; the studies of grain handling and grading \$76,320; those of drug plants \$55,380; and those of sugar beets and the production of table sirup and the means of utilizing cane by-products \$41,495. For studies in fruit growing, handling and marketing \$107,500 is available, together with \$56,320 for other horticultural work, and \$26,690 for the maintenance of the various departmental greenhouses and the Arlington Experimental Farm.

Another large division of the work has to do with plant diseases, \$37,000 being available for the maintenance of the general pathological laboratory and the herbarium of plant diseases, \$52,675 for fruit diseases, \$69,510 for those of forest trees and ornamentals, and \$46,000 for cotton and truck crops. For plant physiology and plant breeding there is allotted \$44,540, together with \$22,280 for the breeding and physiological study of alkali and drought resistant crops. There is also \$35,000 for soil bacteriology and plant nutrition studies, \$25,000 for biophysics, \$24,000 for economic and systematic botany, \$28,700 for studying and testing commercial seed, \$5,000 for studies of methods of utilizing logged-off lands, and \$230,380 for studies of crop production and land utilization under arid and semi-arid conditions.

The Forest Service receives as usual the largest allotment of any bureau, its aggregate being \$5,548,256 as compared with \$5,399,679 for the previous year. There are also avail-

able the various appropriations under the Appalachian Forest Reserve Act already referred to, certain unexpended balances from the previous year, and an appropriation of \$100,000 for fighting and preventing forest fires in cases of extraordinary emergency, this being a reduction from \$200,000. The bulk of the appropriation is, of course, to be devoted to the protection and maintenance of the individual national forests, with \$400,000 for the construction and maintenance of improvements, \$165,640 for reforestation, \$140,000 for studies of wood utilization and preservation, \$150,000 for forest fire protection, \$25,000 for range studies, \$83,728 for silvicultural and dendrological experiments, and \$40,160 for miscellaneous forest studies and the dissemination of results. The selection and segregation of lands within national forests that may be opened to entry under the homestead laws is to be continued under an appropriation of \$100,000, with an additional allotment of \$85,000 for the survey and listing of those lands chiefly valuable for agriculture.

The appropriations of the Bureau of Chemistry are increased from \$1,058,140 to \$1,077,581. The allotment for the enforcement of the Food and Drugs Act is \$634,301, with \$4,280 additional for the study and inspection of American food exports, \$50,000 for studies of the handling and marketing of poultry and eggs, \$20,000 for similar work with fish, oysters, etc., \$10,000 for biological investigations of food and drug products and their constituents, and \$52,400 for general investigations. Because of a transfer to the Bureau of Standards of the work of testing miscellaneous supplies purchased on contract for the various departments of the government, the appropriation for this purpose is reduced from \$40,000 to \$14,000.

The various lines of work of the Bureau of Soils, and the Bureau of Entomology are continued much as at present, with small increases in a number of items. The Bureau of Soils receives \$360,635, an increase of \$26,615, of which \$11,500 is to extend the inquiry as to possible sources of natural fertilizers, particularly nitrogenous materials. The soil

survey work of the bureau is granted \$169,800, with \$20,000 additional for the examination and classification of agricultural lands in forest reserves in cooperation with the Forest Service, 15,265 for studies in soil physics, \$22,350 for chemical investigations, and \$32,700 for soil fertility work. The increase of \$87,210 accorded the Bureau of Entomology is divided among its studies of several groups of insects, the largest single item of expenditure being as usual that for the gipsy and brown-tail moth campaign, for which \$310,000 is available. The total appropriation of the bureau is \$829,420.

The Bureau of Biological Survey is granted \$281,290, an increase of \$110,300. This appropriation is to be used principally for administrative and police purposes, \$66,000 being allotted for the enforcement of the Lacey and McLean laws for the regulation of imports and interstate movement of game, birds, etc., \$21,000 for the maintenance of the various game preserves and transfer of game, and \$5,000 for the improvement of an additional preserve in Sullys Hill Park, North Dakota. The appropriations for studies of the food habits of birds and mammals and for other biological investigations, however, are nearly doubled, \$15,000 being granted for the destruction of ground squirrels on national forests, \$5,000 for the study of a serious disease of wild ducks in Utah, \$95,000 for the destruction of wolves, prairie dogs and other injurious animals, the rearing of fur-bearing animals, and similar work, and \$26,500 for field studies of the distribution and migrations of water fowl and other birds and of the bird and mammal life of the public domain.

The Bureau of Statistics is rechristened the Bureau of Crop Estimates, the new designation representing more accurately, it is believed, the nature of its work and obviating confusion with results based on actual enumerations such as are made by the Bureau of the Census. Several changes are also made in the language prescribing the work of the bureau, and the appropriation at its disposal is increased from \$243,680 to \$275,580. It is expected that these changes will permit of enlarging the

scope and completeness of the data collected, notably as regards special crops and industries.

The various activities of the Office of Experiment Stations are continued and several of its functions are considerably extended. The total appropriation is \$1,930,780, of which \$1,440,000 is paid to the state experiment stations under the Hatch and Adams acts, and \$50,500 (a net increase of \$10,720) is for general expenses in connection with the enforcement of these acts and the Smith-Lever Act. The work of the Agricultural Education Service and of the Irrigation and Drainage Investigations is continued on the present basis with allotments of \$23,000, \$106,400, and \$96,280, respectively, and \$68,840 is granted for statutory salaries.

The total allotment for the insular experiment stations is \$120,000, of which the Alaska stations receive \$40,000 and those in Hawaii, Porto Rico and Guam, \$35,000, \$30,000 and \$15,000, respectively. The act provides that of the allotment for the Hawaii Station \$5,000 may be used in agricultural extension work, the territory receiving no funds under the Smith-Lever Act. The annual leave privileges of employees of the department permanently assigned to Alaska, Hawaii, Porto Rico and Guam are extended to correspond to those now applying to employees in Washington.

The appropriation for the nutrition investigations of the office is increased from \$16,000 to \$25,760 and the authority hitherto granted to study means of utilizing agricultural products for food is broadened to include clothing and household equipment. With the enlarged appropriation it is proposed to continue and extend the studies of food with reference to nutritive value and economical use in the home, studying both popular and technical problems, the latter including, among other things, the calorimetric study of changes which take place in fruits and vegetables during ripening and storage. In the case of clothing and household equipment, such questions, considered from the standpoint of the expenditure of human energy, will be studied as the relative durability, economy, and effi-

ciency of comparable materials and articles for specific purposes, the protective power of clothing of different kinds, the relative value and efficiency of different materials and methods with reference to household labor, the relation of the diet to body efficiency, and similar questions. It is believed that the results of such investigations will be of much interest not only to the housekeeper but also to the general public since they will furnish definite information along lines hitherto very inadequately studied but of great importance in the consideration of questions of rational and economical living. They should also be of direct benefit to the farmer since agricultural production is influenced to a very great extent by the demands of the home.

The salary of the director of the Office of Public Roads is increased from \$4,000 to \$4,500, and the appropriations as a whole from \$279,400 to \$352,560. The principal increase is one of \$40,000 for studies of road building and maintenance, making \$145,000 available for the purpose, special emphasis to be directed to the ordinary sand-clay and dirt roads. Increases of \$4,800 are also granted for road management studies, \$6,260 for tests of road materials, and \$15,000 for field trials of various materials, types of construction, and road equipment.

The work of the remaining branches of the department is continued substantially as at present. The increasing administrative work is evidenced in the enlarged allotments for the office of the secretary, rent, and miscellaneous expenses for which \$339,880, \$108,329, and \$110,000, respectively, are available. As a result of recent legislation whereby the administrative auditing of accounts is now carried on in the several bureaus, the appropriation for the Division of Accounts and Disbursements is reduced from \$104,370 to \$46,320. The Division of Publications receives \$189,500 and the Library \$45,360.

In connection with the appropriations included in the act itself, reference should also be made to the funds derived in other ways. For the fiscal year under discussion, permanent appropriations under the department

aggregate, exclusive of those recently provided by the Smith-Lever Act, \$5,999,200, the largest items being those of \$3,000,000 for meat inspection and \$2,000,000 for the acquisition of lands for the protection of watersheds of navigable streams, and the remainder being almost wholly for forestry purposes. The appropriation act for sundry civil expenses carries an appropriation for the department printing and binding of \$500,000, an increase of \$10,000, of which \$137,500 is for farmers' bulletins and \$47,000 for the Weather Bureau.

When it is recalled that large appropriations will also be available for agricultural education in the land-grant colleges under the Morrill and Nelson acts, for the rural education work of the Bureau of Education, demonstration work in agriculture among the Indians, and the payment of the country's quota toward the support of the International Institute of Agriculture, the wide extent to which the principle of federal assistance to agriculture is being carried into practise becomes apparent, and the aggregate expenditure from the federal funds appears increasingly impressive. As was pointed out by Chairman Lever of the House Committee on Agriculture, however, the entire agricultural appropriation is still inconsequential as compared with the total federal appropriations, the magnitude of the agricultural interests of the country, or even of the annual losses to farm products sustained through insect pests and plant diseases.

Moreover, the conviction is deepening that these appropriations are largely in the nature of a permanent investment for the benefit of the nation as a whole. In the words of Hon. C. G. Edwards of Georgia,

In extending these various benefits and advantages to the farmers we are but doing a simple justice to the sinew and backbone of our great citizenship. In helping the farmers we are helping the whole country, for every class is dependent upon the farmer. . . . We can do nothing that will make for the future welfare of our country more than to aid in this work, which means the establishing of farms and homes. . . . In making appropriations to improve agricultural conditions we are "casting bread upon the waters," that will return not only to feed

the people of this country, but will mean a tremendous increase in our annual farm productions, and will add to the country's wealth, prosperity, happiness and greatness.

THE PANAMA EXPOSITION

PRESIDENT CHARLES C. MOORE, of the Panama-Pacific International Exposition, to open in San Francisco on February 20, 1915, has issued the following statement:

One month ago the decision of the Panama-Pacific International Exposition management not to postpone was first published. The development of events since then, in their relation to the exposition, all tend to confirm the wisdom of that original decision.

At the time the decision was made no word had been received from any foreign nation as to the effect on its plans caused by the European war, but it was hoped that at least those nations not fighting would go on with their plans. Later developments have proven that hope well founded; in addition, we have definite assurances from France, from Italy, from Turkey and from Japan that their intentions are unchanged. Holland has added \$300,000 to her original appropriation. Italy has ordered work on her building and exhibits rushed. Japan has asked for and received an increase of space. The Argentine Republic has increased its appropriation from \$1,250,000 to \$1,750,000.

We shall undoubtedly lose some of the promised exhibits from Europe, but not by any means all of them and not by any means the most important of them. Both Germany and Great Britain will be represented by individual exhibitors or by associations thereof. We shall undoubtedly lose some of the promised entries by European champions in the athletic events, but the international character of those events will not be lost. We may lose some of the art treasures promised us for the Fine Arts Building, but we shall gain others because of the war.

Of compensating gains we have many. There is a very sharp demand for space from the manufactures of this country, of South America and of the European nations not at war. The Exposition suddenly becomes an important factor in an extraordinary economic situation. It is seen to be the one, great, easy, efficient way by which American-made goods can be brought to the direct attention of the distributors and consumers of South America and the Orient. The latter are coming here in

force in 1915 to make new individual and commercial connections forced by the war.

As regards attendance, every transportation expert confirms the opinion that a continued European war is likely rather to increase travel to California in 1915 than to reduce it.

The Exposition is 92 per cent. ready to-day. It will open February 20, as planned—and it will be, as planned, the most beautiful and most interesting exposition ever seen. There is no reason to believe that the success of the exposition, in any phase, will be any less than that which was so certain before the European war broke out and it is certain to be even more important commercially than was ever dreamed.

THE FRANKLIN MEDAL

SAMUEL INSULL, Esq., of Chicago, Illinois, writing under date of December 23, 1913, to the board of managers of the Franklin Institute, Philadelphia, stated that he had been informed it would be a source of gratification to them if the institute had available, in addition to such medals already in its gift, a medal to be known as the Franklin Medal, and to be awarded from time to time in recognition of the total contributions of individuals to science or to the applications of physical science to industry, rather than in recognition of any single invention or discovery, however important. He agreed to provide for the founding of this medal under the following general conditions:

1. That an amount not exceeding one thousand dollars should be furnished by him for procuring appropriate designs and dies for the medal and diploma.
2. That the medal should possess distinct artistic merit, and have on one side a medallion of Benjamin Franklin done from the Thomas Sully portrait in the possession of the institute.
3. That the medal should be of gold and have an intrinsic value of about seventy-five dollars.
4. That the sum of five thousand dollars should be provided by him to be held in trust in perpetuity to be a foundation for this medal, and to be known as the Franklin Medal Fund (founded January 1, 1914, by Samuel Insull, Esq.).