THE PUBLICATION OF SCIENTIFIC AND TECHNICAL MATERIAL BY THE UNITED STATES DEPARTMENT OF AGRICULTURE

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THE Department of Agriculture was created by act of Congress May 15, 1862. The act stated that the "general designs and duties" of the Department "shall be to acquire and to diffuse among the people of the United States useful information on subjects connected with agriculture in the most general and comprehensive sense of that word." During the 79 years of its life up to the present war the department issued 253 series of publications, including 43 periodicals, all of which are now defunct. The total number of separate publications (not copies) in the numbered series was 10,516. These were issued from 66 bureaus or units, some of which have, of course, passed into the realm of the deceased along with their publications. Most of those series had bureau or division designations and were typical of the bureaus' publication independence to a large degree in the early years. It was not until 1913 that the bureau series were largely consolidated into the department series.

At the outbreak of the second world war the department was issuing 98 series of publications, including 16 periodicals. These were exclusive of the publications prepared in the Bureau of Biological Survey, the Food and Drug Administration, the Bureau of Public Roads, and the Weather Bureau that had been transferred to other agencies.

Thus the passage of time has brought numerous changes in the administrative phases of the department's publication program. Though the form and structure of its technical publications have remained well stabilized through the years, their content has undergone extensive modification. First published in the era when a professor of agriculture was taking his place on college faculties and was a recognized authority in the broad fields of cultivated plants, domesticated animals, and soils, the early agricultural bulletins bore evidence of that generalization. And yet it is surprising what splendid scientific work was done in those days under the conditions prevailing and how well and carefully the results were authenticated so that they became monuments of established validity and finality built to endure a long time. We accordingly appreciate that work and honor the workers who labored as best they could without either knowledge or benefit of the modern methods and materials, technic, equipment, and statistical interpretations so commonplace in present-day publications.

Along with this development in the content of the scientific publications of the department has come the age of specialization when each scientist in his research work is concentrating on ever-narrowing fields of inquiry. Hence when he publishes the results of studies in his specialty it is natural to expect that the number of professionally interested readers will also become smaller and smaller as the specialty narrows down. One authority in the field of the social sciences recently remarked that the subject matter there has become so specialized that at the scientific meetings held by the general organization he as a specialist in one field has a hard time understanding the specialists in other fields if he happens to stroll into their meeting and listen to some of their papers. The physical, chemical, and biological scientists are also earnestly engaged in building this scientific Tower of Babel.

The series in which the major part of the research and technical material now published by the department is issued are the *Journal of Agricultural Research,* Technical Bulletins, Circulars, Miscellaneous Publications, Statistical Bulletins, and Soil Surveys. For our purpose here let us confine our consideration to only the first three (*Journal of Agricultural Research,* Technical Bulletins, and Circulars). The *Journal of Agricultural Research* publishes only articles carrying original research done in the department and at the State Agricultural Experiment Stations. Usually only one phase of an investigation is covered and each paper therefore may be regarded somewhat as a progress report. Even though the *Journal* does not ordinarily publish papers in economics, sociology, physics, or engineering, but only on subjects related to the botanical, chemical, mycological, cytological, genetic, nutritional, entomological, pathological, physiological, ecological, morphological, anatomical, and taxonomic phases underlying the production of plants and animals from the soil, the variety is wide, as you will appreciate, and each volume contains a mass of scientifically heterogeneous material. Naturally no one scientist is particularly interested in all of it but only in the articles published in his special field. To take account of that circumstance and provide for it, each article in the *Journal* is issued and distributed as a separate. Thus the *Journal* proper has its major usefulness in libraries, departments, or laboratories where several will see it. It is not sent free to individuals.

The Technical Bulletins contain the more compre-

hensive results of investigation. Each publication is accordingly a separate, independent entity with a more or less complete statement of the study and findings in the subject covered. Though the bulletin is in a numbered series its subject may be entirely unrelated to that of the one preceding and of the one following. The Circulars issued by the department are semi-technical in character, some leaning toward the popular and others toward the technical aspects.

It, of course, is one thing to prepare and issue printed matter, but what about its distribution? How many copies are published and where do they go? For a partial answer to these questions let us look into the distribution records for these series.

For free distribution we order nearly 2,000 copies of the *Journal*. In addition to that number the Superintendent of Documents provides as many as are needed for the approximately 546 depository libraries entitled to receive free all material issued by the government. Before this war the *Journal* was going to institutions in 84 foreign countries in exchange for their publications. Many years ago a study both in this country and in Europe by Dr. Karl F. Kellerman, the father of the *Journal*, led him to the conclusion that neither scientific reviewing journals nor libraries paid as much attention to bulletins as to the material published in journals because in the latter it is more accessible by virtue of the volume indexes, a convenience not ordinarily provided in individual bulletins.

The free mailing list for the *Journal* shows that it is being sent to the following:

98	copies	to	university libraries
179	"	"	college libraries
91	"	"	laboratories
198	"	"	experiment stations
90	"	"	department field offices
43	"	"	other government departments
39	"	"	societies and institutions
59	"	"	state government departments
76	"	"	department bureaus and divisions
58	"	"	public libraries
57	"	"	miscellaneous
777	"	"	countries outside of continental United States

During the war of course the sending of our published material to foreign countries is greatly restricted, but as it comes off the press that which can not be sent now is wrapped and held for mailing after the war.

In addition to the distribution indicated above the originating bureau or experiment station is given 250 copies of the separate of each article it submits.

During the fiscal year 1941 the Superintendent of Documents sold 672 subscriptions to the *Journal* and 18,825 copies of separates; in 1942, he sold 518 subscriptions and 15,876 copies of separates. This decrease was undoubtedly caused by the war. But these figures nevertheless indicate a fairly wide distribution of *Journal* material.

The editions of Technical Bulletins and Circulars for free distribution by the department normally range from 2,500 to 3,500 copies. To these are added the necessary copies for the depository libraries and the sale stock. The mailing list distribution is made to practically the same institutions as given above for the *Journal*. In the last fiscal year we distributed free 593,865 copies of Technical Bulletins and Circulars, and the Superintendent of Documents sold 53,448 copies.

Because of the pressure upon our printing funds from so many angles for the various types of material issued by the department, ranging all the way from the highly scientific and technical to that which is very popular and even of ephemeral interest, it has not been possible, and it is probably not desirable, for the department to publish all of the technical and research papers written by its staff. During the last fiscal year there went through my office 1,974 articles, nearly all of technical nature, for delivery outside the department or publication in outside journals. To provide for the further distribution of 265 of these, about 200 copies of reprints of each were purchased. In comparison with these 1,974 articles delivered or published outside the department, there were sent to the Printing Office for publication by the department only 237 manuscripts, or 12 per cent. as many, for the *Journal*, Technical Bulletin, Circular, Miscellaneous Publication, Statistical Bulletin, and Soil Survey series.

Now whether the publication program of the department is fully fulfilling the measure of its creation and adequately meeting the requirements of the scientists in this country and throughout the world who can make best use of the information is a question to which a great deal of thought has been given. Editorially we have tried to present the information as clearly, concisely, and effectively as possible, and to maintain high standards of publication in the interest of the readers. We have also tried to distribute this information wisely and get it into the hands of those who can use it to best advantage. But no doubt there is room for improvement all along the line and it is accordingly hoped that out of the discussion to-night will come some valuable suggestions for our guidance.