or demonstrations have been given by the Department of Animal Husbandry. The department has conducted in stock-judging work at county fairs and elsewhere 214 exercises.

Agricultural-extension Service.—This is a feature in connection with agricultural propaganda work which in recent years has been widely expanded through the different States. When an important method has been devised or a discovery made by the agricultural-experiment station the work is then only half-done. To render the results effective and of use it must be applied, and to do this effectively the final stages of experimentation require testing under diverse field conditions to prove or disprove the applicability of the discovery or method to common practice. Only after it has stood the test of these conditions is it ready to be used or applied by the farmer in his regular operations. The most effective means of inducing a farmer to take action is by practical demonstration methods conducted under the supervision of the staff of the department on his own farm. At the present time a growing percentage of the energy, time, and resources of the college staffs throughout the States is being turned into these practical channels, carrying the results of research to the man on the farm who is to apply directly the results of science.

Through the passage of the Smith-Lever Extension Bill by Congress it is made possible to organize this service on an adequate basis. This law came into operation on the 1st July, 1914. Its scope is as follows: The Bill provides each State with a basal appropriation of £2,000 annually. Supplementary funds are then to be made available, which amounts are to be increased annually for a period of eight years, provided the State appropriates for specific agricultural-extension purposes an amount which is equal to that furnished from federal sources for all sums in excess of the initial £2,000. This supplementary federal appropriation for the year 1915 consists of £120,000, which sum is to be divided among the several States in the proportion which the rural population of each State bears to the total rural population of all the States. This additional sum for Wisconsin will amount in 1915 to £3,220. This sum is to be increased by additional federal appropriations amounting to £100,000 each year thereafter for a period of seven years, to be divided on the same basis. This makes in all a federal appropriation for use in all the States amounting in nine years to £916,000 annually. On the basis of the last federal census, at the end of nine years from the 1st July, 1914, Wisconsin's share will be £21,940 annually, provided the State meets the federal appropriation pound for pound after the first £2,000. These funds can only be used for definite extension projects in agriculture and home economics, which must first be approved by the Secretary of Agriculture. It is anticipated that the provision incorporated of making this appropriation available only upon the specific appropriation by the State will doubtless result in much more cautious expenditure than would be the case if federal grants were made without restriction.

The agricultural-extension service at the University of Wisconsin is organized under three main groups—(1) Departmental extension, which is largely demonstration work carried out mainly under field conditions; (2) the county agricultural representative system, in which resident instructors are located in the several counties for educational work, mainly along demonstration lines; (3) the combined or collective activities of two or more departments, presented mainly through the medium of extension courses, schools, educational trains, exhibits, &c.

Instruction by Extension Teaching and Demonstration.—The extension activities of the various representatives cover the widest possible range. The county agricultural representative is expected to study the local needs of his community so as to enable him to take up those problems that are of the most value to his special section. While the demonstration-work that is directly associated with the departmental activities is carried on during the growing season, when it is possible to do this work in the field, the winter work in the main consists of the collective activities in which several of the departments join forces in the presentation of work through meetings. These collective extension activities take the form of courses, schools, conferences, educational trains, exhibits, &c. Arrangements with reference to these activities are made through the Director of the Agricultural Extension Service.

Barley-culture.—Wisconsin produces 25,000,000 bushels annually, or one-eighth of all the barley grown in the United States. The growing of this crop is confined to a comparatively small area.

In the United States and Canada barley is used for military purposes and as feed for farm animals. A limited amount is used in the preparation of breakfast foods and for pearl-barley.

Farmers are learning the value of barley as a part ration for dairy cattle and young stock, and much more, it is stated, will be used as animal-food in the future. In the Pacific Coast States barley is quite generally grown as a hay and feed for horses. When used as a hay it is cut in the milk stage shortly after heading and cured like ordinary grass hay. When the grain is used as a feed it is either fed whole or the kernels crushed by passing between rollers. If finely ground the gluten therein makes a sticky mass as soon as it is brought in contact with moisture, and it is not then readily masticated or digested. Professor Moore informed me that as far back as 1899 experiments were started at the experimental station which had for their ultimate purpose the improvement of Wisconsin barley. Twelve years of barley-improvement by selection and breeding have been completed, the result being the production of the new Wisconsin six-rowed bearded pedigreed varieties, which have demonstrated their superior value by returning higher average yields than any of the two-, four-, or six-rowed common varieties of barley grown in the State of Wisconsin. I was credibly informed that Professor Moore has developed a strain of barley which gives a yield almost double that of ordinary barley. Investigations show that the majority of maltsters in America prefer the six-rowed bearded barley.

Arlington Experimental Farm.

The Arlington Experimental Farm is situated in Virginia, two miles out from Washington, D.C., the capital of the United States. The area of the farm is 500 acres, largely given over to