

ers' Association is, therefore, unique and of the highest economic importance. The United States produces annually about \$5,000,000,000 worth of animals and crops which may be improved by careful breeding. A conservative figure, based upon the experience of those who have actually improved specific crops and breeds, justifies an estimate of 10 per cent. increase in this total by breeding alone. The cost of this improvement need not be more than 10 per cent. of the increase or one per cent. of the whole. Thus, \$500,000,000 annually may be added to the wealth of the nation by breeding, representing a profit of \$450,000,000.

Under a wise system of patent laws, invention and manufacture have been stimulated to produce and bring into wide use highly efficient forms of machinery which have greatly increased the efficiency of the agricultural producer. Through the further impulse given to better tillage and better farm management by state boards of agriculture, state experiment stations and the United States Department of Agriculture production has been greatly increased. The possible increase in the value of our plant and animal products through breeding alone is nearly as great as that now being realized through all these agencies. It is this task to which the American Breeders' Association is directing its efforts.

This work must be done by and through the practical animal and plant breeders with the aid of the scientific investigators and in cooperation with public agencies. Results can not be expected immediately, as much preliminary work must be done and years of effort will be required before permanent results can be expected in any line. Improved breeds and varieties can not be protected by patents and their further improvement thus stimulated and the breeder assured rewards for his skill and effort. In the nature of things improved strains soon become common property. The state and the national governments, therefore, should and will aid in placing this work on a substantial footing as soon as feasible plans are formulated and given adequate support.

The American Breeders' Association is at present attacking the first two of the problems before it, viz., the study of the little understood laws of heredity in living things, and the determination of such practical methods as can be applied in the actual improvement of plant and animal forms. This work is being centered in committees of from three to seven members, who are leaders along the lines for which they are chosen. Such problems as the business side of animal breeding, breeding meat-producing animals, the business side of plant breeding, breeding sugar crops, fiber crops, forage crops, cereal crops; breeding swine, breeding carriage horses, running horses, trotting horses, draft horses; breeding insects and bees, breeding fruits, breeding ornamental plants; breeding for the dairy, breeding general purpose cattle; the scientific investigation of the theory of heredity are taken up by the committees adapted to each subject. These committees report to the association at its annual and other meetings on the progress of their work and will make such recommendations to the society as they find wise and expedient. In this way the energies of the association will be centered upon the specific problems before it, while each committee has the resources of the entire membership to aid in its work.

The American Breeders' Association built up a membership of about one thousand, one hundred of whom are life members. This membership includes the foremost animal and plant breeders and scientists of this continent and many abroad. It has published five annual reports, a neatly-bound 400-page volume, containing the papers and addresses presented at the annual meeting and the records of the meeting.

W. M. HAYS,  
*Secretary*

WASHINGTON, D. C.

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*THE INTERNATIONAL CONGRESS ON THE  
EDUCATION OF CHILDREN AT HOME*

THE Third International Congress will be held under the patronage of the Belgian government, in connection with Universal Exposition at Brussels in August, 1910.

The idea of bringing together competent persons to discuss the subject of home (or family) education in its various bearings, and to formulate methods for promoting the physical, intellectual and moral well-being of children, originated in Belgium, and the First International Congress with this object in view met at Liège in 1905.

Interest in the movement, meanwhile, became wide-spread among educational authorities in the different states of Europe, while its importance as a possible means of diminishing criminal tendencies and so preventing crime and other anti-social evils was recognized by the various governments. This growing interest was manifested in the Second International Congress, convened at Milan in 1906 under the patronage of the Italian government.

The Third Congress, which is now announced, will extend and define the work already so auspiciously begun. The character and scope of the movement in its present stage of development will be, perhaps, best understood by referring to the program issued by the organizing committee of the congress, which has been prepared in the light of the experience gained in the former meetings.

The congress will consist of five sections:

Section 1—The study of childhood.

Section 2—The education of children: (*a*) general questions; (*b*) the education of children by their parents in the home; (*c*) cooperation of the family with the school; (*d*) education in the home after school.

Section 3—Abnormal children.

Section 4—Various subjects relating to childhood.

Section 5—Documentation.

An American committee has been appointed at the request of the Belgian government by Hon. E. E. Brown, United States Commissioner of Education, to stimulate interest in the work of the congress. This committee has organized a number of subcommittees, each representing one of the sections of the congress. An effort will be made to secure a large American representation in the sessions at Brussels.

Membership in the congress entitles to a copy of the Proceedings. The membership fee is two dollars, and may be sent either to the general secretary, 44 rue Rubens, Brussels, or to the secretary of the American committee.

Administrations, educational bodies and philanthropic societies can take part in the congress and be represented by a delegate. A subscription must be paid for each delegate.

Those who subscribe not less than ten dollars become honorary members. Subscriptions of this type are needed to defray the general expenses of the propaganda.

Papers and discussions may be presented in any of the following languages: French, German, English, Dutch, Italian and Spanish.

Americans wishing to participate in the discussions of the congress, or to further its work by becoming members, should communicate with the secretary of the American committee, Professor W. C. Bagley, Urbana, Ill.

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#### *THE MINING EXPERIMENT STATION AT THE UNIVERSITY OF NORTH DAKOTA*

In order to promote the development of the mining and allied manufacturing interests of the state and especially to aid the utilization of the great deposits of lignite coal and the valuable clays, a Mining Experiment Station has been created as a part of the School of Mines at the University of North Dakota and a branch Mining Experiment Sub-station established at Hebron, North Dakota.

The work of these two stations will be carried on jointly. Certain lines of investigation which require much laboratory equipment and research will be taken up at the School of Mines. When conclusions have been reached here through experimental work in the laboratory, these conclusions will at once be put to a practical working trial at the testing-out plant of the sub-station. In other words, a large part of the work of the sub-station will be for the purpose of proving in a practical way and on a commercial basis, the conclusions reached in the laboratories.

In order to provide adequate facilities for carrying on these investigations at the university, as well as to provide room for the