THE AMERICAN SYSTEM OF AGRICULTURAL EDUCATION

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649012947

The American System of Agricultural Education by A. C. True & Dick J. Crosby

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

www.triestepublishing.com

A. C. TRUE & DICK J. CROSBY

THE AMERICAN SYSTEM OF AGRICULTURAL EDUCATION

Trieste

U. S. DEPARTMENT OF AGRICULTURE,
OFFICE OF EXPERIMENT STATIONS,
A. C. TRUE, Director.

THE AMERICAN SYSTEM

OF

AGRICULTURAL EDUCATION.

BY

A. C. TRUE and DICK J. CROSBY,
Of the Office of Experiment Stations.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1904.

OFFICE OF EXPERIMENT STATIONS.

A. C. TRUE, Ph. D.—*Director.*
E. W. ALLEN, Ph. D.—*Assistant Director and Editor of Experiment Station Record.*
W. H. BEAL—*Chief of Editorial Division.*
JOHN HAMILTON—*Farmers' Institute Specialist.*
C. E. JOHNSTON—*Chief Clerk.*

EDITORIAL DEPARTMENTS.

E. W. ALLEN, Ph. D., and H. W. LAWSON—*Chemistry, Dairy Farming, and Dairying.*
W. H. BEAL—*Agricultural Physics and Engineering.*
WALTER H. EVANS, Ph. D.—*Botany and Diseases of Plants.*
C. F. LANGWORTHY, Ph. D.—*Foods and Animal Production.*
J. I. SCHULTE—*Field Crops.*
E. V. WILCOX, Ph. D.—*Entomology and Veterinary Science.*
C. B. SMITH—*Horticulture.*
D. J. CROSBY—*Agricultural Institutions.*

LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
OFFICE OF EXPERIMENT STATIONS,
Washington, D. C., May 20, 1904.

SIR: I have the honor to transmit herewith a brief general account of the American system of agricultural education, which contains descriptions of departments of original research and graduate study in agriculture, agricultural colleges and the various grades of instruction provided by them, secondary schools of agriculture, and the work along agricultural lines in primary schools. This account has been prepared primarily for distribution in connection with the exhibit of the colleges of agriculture and mechanic arts and experiment stations at the Louisiana Purchase Exposition. There is need of popular descriptive literature relating to these institutions and their exhibit for distribution among those attending the exposition. This is the first of a series of papers prepared to meet this need, and I recommend its publication as a document of this Office.

Respectfully,

A. C. TRUE,
Director.

HON. JAMES WILSON,
Secretary of Agriculture.

CONTENTS.

	Page.
Introduction	5
Departments of original research and graduate study in agriculture	6
Agricultural colleges	8
The four-year college courses	11
The short and special courses	13
Agronomy	14
Dairying	15
Animal husbandry	15
University extension in agriculture	16
Secondary agricultural schools	17
Primary schools	20

ILLUSTRATIONS.

		Page.
PLATE I.	Agricultural Building, Ohio State University	8
II.	Agricultural Building, University of Illinois	12
III.	Agricultural Hall, South Carolina Agricultural and Mechanical College	12
IV.	Agricultural Building, Wisconsin University	12
V.	California Polytechnic School—recitation and administration building on left, dormitory on right	16
VI.	Fig. 1.—Main building, Marathon County School of Agriculture and Domestic Economy. Fig. 2.—Main building, Dunn County School of Agriculture and Domestic Economy	20
VII.	Fig. 1.—A country school garden, District 58, Winnebago County, Ill. Fig. 2.—Potatoes raised by pupils in the Practice School of Vermont State Normal School	20
VIII.	Fig. 1.—George Putnam School Gardens, Boston. Fig. 2.—A school garden at Dewitt Clinton Park, in the heart of New York City	20

THE AMERICAN SYSTEM OF AGRICULTURAL EDUCATION.

By A. C. True and Dick J. Crosby,
Of the Office of Experiment Stations.

INTRODUCTION.

The American system of agricultural education includes a number of different classes of institutions which, taken together, provide all grades of instruction in agriculture from graduate courses leading to the doctor's degree to nature-study courses in the kindergarten and the primary school. These institutions may be considered under four general heads: (1) Departments of original research and graduate study in agriculture, (2) agricultural colleges, (3) secondary schools of agriculture, and (4) primary schools. The secondary and primary instruction in agriculture is of comparatively recent development, but is well worthy of consideration in this connection. The graduate and collegiate courses, on the other hand, are well established and take rank with the best agricultural courses in the much older universities and colleges of Europe.

The American institutions for instruction and research in agriculture are brought together to constitute a national system of higher education in the sciences and industries through the Association of American Agricultural Colleges and Experiment Stations, the Office of Experiment Stations of the Department of Agriculture, and the Bureau of Education of the Department of the Interior, each of these agencies being entitled to membership in the association. This association was organized in Washington October 18, 1887, and has since been very active and efficient in its efforts to promote agricultural education. At its convention in 1894 it appointed a committee on entrance requirements, courses of study, and degrees, whose final report, presented two years later, was adopted. This report recommended (1) physical geography; (2) United States history; (3) arithmetic, including the metric system; (4) algebra to quadratics; (5) English grammar and composition, together with the English requirements of the New England Association of Colleges and Preparatory Schools, and (6) ancient, general, or English history as a standard of entrance requirements for college courses, and suggested that all colleges unite in requiring the first five subjects as a minimum for admission to their

lowest collegiate classes. The committee also urged that the colleges require (1) mathematics through algebra, geometry, and trigonometry; (2) physics and chemistry, with laboratory work in each; (3) English language and literature; (4) other languages (at least one modern); (5) mental science and logic or moral science; (6) constitutional law, and (7) social, political, or economic science for four-year courses leading to a bachelor's degree.

In 1895 the association appointed a standing committee on methods of teaching agriculture, which has since presented eight reports of progress. The first report[a] was devoted to recommendations regarding agricultural nomenclature and a review of agricultural education in European countries. The second report[b] was devoted to suggestions regarding the subjects to be included in a four-year course in agriculture. In its third, fourth, and fifth reports[c] the committee suggested outlines for the courses in agronomy, zootechny, agrotechny, rural engineering, and rural economics. The sixth report was devoted to methods and facilities for teaching agronomy in the agricultural colleges, the seventh[d] to secondary courses in agriculture, and the eighth[e] to the relation of the natural sciences to agriculture in a four-year college course. These reports have been of great value to the colleges in developing their courses in agriculture and reducing them to pedagogic form, and while it has not been found feasible in any single institution to adopt all of the recommendations of the committee, yet many of its suggestions have been acted upon with benefit to the courses of study in agriculture, so that now these courses are coming to be recognized as coordinate with other university courses in both undergraduate and postgraduate work.

DEPARTMENTS OF ORIGINAL RESEARCH AND GRADUATE STUDY IN AGRICULTURE.

At the head of the system of agricultural education stand the United States Department of Agriculture and the agricultural experiment stations in the different States and Territories, organized chiefly as departments of the land-grant colleges. These constitute very largely the university or graduate branch of agricultural education in this country, having for their chief functions the discovery and dissemination of new truths regarding the theory and practice of agriculture. Organized primarily with reference to research, both the Department and the stations to a considerable extent directly promote agricultural

[a] Office of Experiment Stations Circular No. 32.
[b] Office of Experiment Stations Circular No. 37.
[c] Office of Experiment Stations Circulars Nos. 39, 41, and 45.
[d] Office of Experiment Stations Circular No. 49.
[e] Office of Experiment Stations Circular No. 55.

education, in the technical sense, by giving instruction to students. This is done by opening their laboratories to assistants who participate in research work while continuing their studies or by imparting new inspiration and knowledge to students who become acquainted with the research work by indirect contact through residence at the institutions where it is being conducted.

The work of the Department of Agriculture along educational lines is rapidly increasing. Not only does it continue to open its laboratories and libraries to officers of the agricultural colleges and experiment stations who come there to carry on special investigations or to enlarge their knowledge of scientific facts and principles in a special line, but it is doing more than ever before in training the graduates of the agricultural and other colleges who enter the Department as scientific aids. Concerning this feature of the educational work of the Department, the Secretary of Agriculture, in his annual report for 1903, says:

> The Department has thus become a postgraduate institution, where groups of sciences are taught and applied. Comparatively little time is devoted to the ascertainment of abstract scientific facts. Every worker is helping somebody, and while doing this he is contributing to what is known relating to the farm and to the education of his associates.
>
> Four hundred and ninety-six students have been admitted to the Department for instruction since 1897 as experts in our several lines of work. Two hundred and forty-nine of these still remain with us, not less than 132 having passed into the classified service, 185 having gone elsewhere to teach, experiment, or demonstrate in private enterprise what they have learned from their teachers, who are our best-equipped scientists in their several specialties.

The Weather Bureau, through its officials at the various stations throughout the country, is taking an active part in public education along meteorological lines. The Bureau of Plant Industry is doing much to aid the school-garden movement by distributing to a large number of schools throughout the country special packages of vegetable and flower seeds, together with circulars containing directions for the planting and care of school gardens, and by cooperating with other agencies in conducting experimental school gardens.

While the other bureaus of this Department are doing valuable educational work along the lines of research in which they are engaged, the Office of Experiment Stations is the general agency of the Department for the promotion of agricultural education throughout the United States and is constantly enlarging the scope and extent of this branch of its work. Special attention is being given to the better organization of the American system of agricultural education, so that it may include properly graded courses of instruction, reaching from the graduate school and the college to the common school, and may embrace all the branches of agriculture considered as both a science and an art. Part of this work is being done in cooperation with the Association of American Agricultural Colleges and Experiment Sta-