

**TWENTY-FIRST BIENNIAL REPORT OF THE
IOWA STATE COLLEGE OF
AGRICULTURE AND MECHANIC
ARTS. MADE TO THE GOVERNOR OF
IOWA. FOR THE BIENNIAL PERIOD, JULY
1, 1903 TO JUNE 30, 1905**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649475414

Twenty-First Biennial Report of the Iowa State College of Agriculture and Mechanic Arts.
Made to the Governor of Iowa. For the Biennial Period, July 1, 1903 to June 30, 1905 by E. W.
Stanton

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

E. W. STANTON

**TWENTY-FIRST BIENNIAL REPORT OF THE
IOWA STATE COLLEGE OF
AGRICULTURE AND MECHANIC
ARTS. MADE TO THE GOVERNOR OF
IOWA. FOR THE BIENNIAL PERIOD, JULY
1, 1903 TO JUNE 30, 1905**

TWENTY-FIRST BIENNIAL REPORT

OF THE

Iowa State College of Agriculture
and Mechanic Arts

MADE TO

THE GOVERNOR OF IOWA

For the Biennial Period

July 1, 1903 to June 30, 1905

UNIVERSITY OF
CALIFORNIA

DES MOINES, IOWA
B. MURPHY, STATE PRINTER
1905

9537

1871

v. 21

AGRIC.
LIBRARY

8

UNIV. OF
CALIFORNIA

LETTER OF TRANSMITTAL

IOWA STATE COLLEGE OF AGRICULTURE
AND THE MECHANIC ARTS.
AMES, IOWA, December 1, 1905.

To His Excellency, A. B. CUMMINS:

In accordance with the statute defining the duties of the Secretary of the Board of Trustees of the Iowa College of Agriculture and the Mechanic Arts, I have the honor to transmit herewith the twenty-first biennial report of the Board.

E. W. STANTON,
Secretary

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to support informed decision-making.

3. The third part of the document focuses on the role of technology in data management and analysis. It discusses how modern software solutions can streamline data collection, storage, and reporting, thereby improving efficiency and accuracy.

4. The fourth part of the document addresses the challenges associated with data management, such as data quality, security, and privacy. It provides strategies to mitigate these risks and ensure that data is used responsibly and ethically.

5. The fifth part of the document concludes by summarizing the key findings and recommendations. It stresses the importance of ongoing monitoring and evaluation to ensure that data management practices remain effective and up-to-date.

UNIV. OF CALIFORNIA

PRESIDENT'S REPORT.

To the Board of Trustees of the Iowa State College of Agriculture and Mechanic Arts:

GENTLEMEN: It becomes my duty to make to you for his excellency, Albert B. Cummins, Governor of Iowa, and for the people of Iowa, the following biennial report.

While this is the second biennial report which I have had the honor to prepare, it is the first covering any portion of my official administration of the affairs of the College. For the first two months of the biennial period included in this report, Acting President E. W. Stanton, was in charge, my own active incumbency in office beginning with the opening of the school year of 1903-4.

THE ORGANIZATION OF THE COLLEGE.

For the greater efficiency of administration, it has appeared desirable that the College should be organized under deans. Accordingly, the Trustees approved the classification of the college students into Junior and Senior Colleges, all students below the junior year being included in the Junior College and all above the sophomore year in the Senior College.

Professor E. W. Stanton was made Dean of the Junior College, and has charge of the classification of all Junior College students. To his thorough and careful oversight and systematizing of this work is due the greatest credit. Professor A. Marston was made Dean of the School of Engineering, Professor G. W. Bissell, Vice-Dean, their duties in these respective offices beginning with the fiscal year 1904-5. Professor C. F. Curtiss was already in charge of the School of Agriculture and Dr. J. H. McNeil of the Veterinary School. The President has been made Dean of the Division of Science.

From this organization have come very gratifying results. Dean Marston and Vice-Dean Bissell are rendering most valuable assistance in the development and administration of the entire School of

Engineering. The courses of study are being carefully revised and coordinated; instructors and assistant and associate professors are being chosen with the greatest care. The results in the improved character of our work, the improved personnel of the teaching force, and the general increased efficiency of the School of Engineering, have abundantly justified the wisdom of this change in organization.

DIVISION OF AGRICULTURE.

DEPARTMENT OF AGRONOMY.

Professor P. G. Holden, Vice-Dean of the Division of Agriculture and head of the Agronomy Department, has general supervision of the work in the sub-departments of Soils, Farm Crops and Agricultural Engineering, giving special attention himself, to the lecture and laboratory work in grains.

FARM CROPS.

No work is of more far-reaching importance than that which is undertaken in the sub-department of Farm Crops, yet this work has been quite inadequately provided for thus far. It is Professor Holden's intention to strengthen this sub-department in all of its varied lines of instruction and investigation.

SOILS.

The equipment of a soils laboratory in Agricultural Hall for student work and also the equipment of a similar laboratory for experimental work, and the organization of the courses for the study of soil physics and soil fertility, have proven very attractive to students. A considerable number of graduate students and a large number of undergraduate students are paying especial attention to these subjects. Under the competent administration of Professor W. H. Stevenson and his thoroughly qualified assistants, this promises to become, in the near future, one of the most important branches of our educational and experimental work.

An arrangement has been made with the Department of Agriculture, for the services here at the College of two or three scientific experts in the subdepartment of Soils.

These men are salaried by the Government, the College furnishing them with laboratory conveniences for the prosecution of their work.

The importance and value of such scientific research can scarcely be overestimated in its relation to the industrial advance and the industrial supremacy of our country. The time is already ripe for such scientific treatment and handling of the soil of the middle west as shall conserve their fertility and save this granary of the world from the blight of exhaustion, which has fallen upon much of the older, eastern lands that are now, in whole or in part abandoned.

In the election of Mr. Ira Obed Schaub, B. S., of the University of Illinois, as Assistant Professor of Soils, the subdepartment of Soils has been strongly reinforced.

AGRICULTURAL ENGINEERING.

The subdepartment known as Farm Mechanics, has been changed in name to that of Agricultural Engineering. Upon the resignation of Professor C. J. Zintheo, Mr. Jay B. Davidson, of the University of Nebraska, was elected Assistant Professor and placed in charge of this work for the year 1905-6.

In this subdepartment, which was newly housed in the Hall of Agricultural Engineering during the year of 1903-4, are taken up general courses in drawing and drafting with special reference to field engineering for the farm, drainage, road construction, carpentry, blacksmithing, and farm implement laboratory work. In connection with this subdepartment, research work in irrigation, drainage experiments, windmill experiments, traction tests, the testing of corn planters, grain drills, binders, and so forth, are offered; also special work in rural architecture and farm implement design.

It is the purpose of the College that the courses offered and the work done in the subdepartment of Agricultural Engineering, shall be thoroughly scientific, basing the work upon a knowledge of engineering principles, and that the application of these principles shall be carried out to the problems of agriculture. There is, obviously, a very large field for educational and experimental work in agricultural engineering, but the Iowa State College is, we believe, the first institution to take up this work in an extensive manner and with an independent equipment. The great demand for this course among our students of agricultural science, shows the keen appreciation of this special department of applied engineering.

DEPARTMENT OF DAIRYING.

During the year 1904-5, the Dairy Department has been at a standstill owing to the wreck of the old and the construction of the new dairy building. Students writing to the College or contemplating