1-1-1941

The educational activities of P.G. Holden in Iowa ...

Everett Gerhard Ritland
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THE EDUCATIONAL ACTIVITIES OF P. G. HOLDEN IN IOWA

by

Everett G. Ritland

A Thesis Submitted to the Graduate Faculty for the Degree of

MASTER OF SCIENCE

Major Subject Vocational Education

Iowa State College
1941
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTRODUCTION</strong></td>
<td></td>
</tr>
<tr>
<td>Establishment of Agricultural Colleges</td>
<td>4</td>
</tr>
<tr>
<td>Holden's Background and Training</td>
<td>6</td>
</tr>
<tr>
<td><strong>THE PERIOD OF HOLDEN'S PROFESSORSHIP OF AGRONOMY</strong> (1902-1906)</td>
<td>11</td>
</tr>
<tr>
<td>Introduction of Illinois Seed Corn</td>
<td>11</td>
</tr>
<tr>
<td>The Corn Trains</td>
<td>13</td>
</tr>
<tr>
<td>The Local Short Courses</td>
<td>19</td>
</tr>
<tr>
<td>Events Leading up to the Extension Act</td>
<td>20</td>
</tr>
<tr>
<td>The Agricultural Extension Act</td>
<td>22</td>
</tr>
<tr>
<td><strong>THE PERIOD OF HOLDEN'S SUPERINTENDENCY OF THE EXTENSION DEPARTMENT</strong> (1906-1912)</td>
<td>26</td>
</tr>
<tr>
<td>Organization of the Department</td>
<td>26</td>
</tr>
<tr>
<td>Personnel of the Extension Department (1906-1907)</td>
<td>28</td>
</tr>
<tr>
<td>Achievements of the New Department in its First Year</td>
<td>29</td>
</tr>
<tr>
<td>Various Branches of the Extension Service</td>
<td>31</td>
</tr>
<tr>
<td>The local short course</td>
<td>33</td>
</tr>
<tr>
<td>The county farm demonstration plots</td>
<td>45</td>
</tr>
<tr>
<td>The Grange</td>
<td>48</td>
</tr>
<tr>
<td>Boys' and Girls' activities</td>
<td>49</td>
</tr>
<tr>
<td>Bulletins and the press</td>
<td>51</td>
</tr>
<tr>
<td>Growth of the Extension Department</td>
<td>52</td>
</tr>
</tbody>
</table>
3.

Holden in Politics  56
HOLDEN, THE EDUCATOR  58
Analysis of Holden’s Ability  58
SUMMARY  62
BIBLIOGRAPHY  64
INTRODUCTION

Establishment of Agricultural Colleges

The establishment of agricultural colleges in the United States in the latter half of the Nineteenth Century marked the beginning of systematic agricultural education in the Midwest. As the scope of these colleges grew, they came to have three well-defined functions:

1. To provide instruction.
2. To foster research.
3. To provide means for the diffusion of new scientific discoveries.

Extension, as the third of these functions came to be called, was the last to be recognized and is the one with which this paper is primarily concerned. The creation of experiment stations in connection with the colleges led to many scientific discoveries. The need for extension became acute. Because there was no provision for the dissemination of the results of experiments, the colleges undertook the task of diffusion.

The Hatch Act passed by Congress in 1887, gave impetus to Extension work although the act provided specifically for the establishment of experiment stations. The purpose of this act was "to aid in acquiring and diffusing among the
people of the United States, useful and practical information on subjects connected with agriculture, and to provide scientific investigation and experiment respecting the principles and applications of agricultural science."

The clause "diffusing among the people" implied extension activity but no provision was made for it at that time.

Extension work up to the end of the century was lacking in organization and continuity. The turn of the century marked the beginning of a new era in this work. This new era in Iowa was ushered in with the appointment of Perry Greeley Holden to the position of Professor of Agronomy in 1902. His avowed purpose in coming was "to bring the college to the people."

Holden spent ten years at Iowa State College. In this decade, the people of Iowa witnessed a transition in extension work from unorganized, piecemeal effort to a very well organized program of the college. The phenomenal growth enjoyed by the extension service under Holden's leadership, and the great progress made in agricultural education during the period, reflect the dynamic personality and the outstanding educative and organizing ability of

Holden's Background and Training

Perry Greeley Holden was born October 14, 1865 in Dodge County, Minnesota. When he was six years old, the Holden family moved to backwoods Benzie County, Michigan. Here the lad attended rural school and at various times was taught by his mother, father, and grandfather.

In the rural school, Perry Holden acquired the motto that he has observed throughout his life: "This day I will beat my own record".  

Perry Holden did not attend high school but was required to pass an entrance examination before being admitted to the Michigan Agricultural College. College attendance by Holden had been discouraged by the family physician who predicted that serious eye-trouble would result from much reading. When Holden insisted on going to college regardless of the possibility of injury to his eyes, the doctor urged that he form the habit of reading for fifteen minutes and then resting his eyes for five. Holden formed this habit but he turned this seeming disadvantage into an advantage by using the five minute periods for assimilation of the material read. This ability on the part of Holden,

to orient himself to conditions apparently unfavorable and
to work them out to his own advantage, was one which
certainly contributed much to his success.\(^1\)

Holden was graduated from the Michigan Agricultural
College with a Bachelor of Science Degree in 1889. He
remained as a fellow instructor at his Alma Mater from 1889
to 1893. Having become interested in the teaching pro-
fession, Holden transferred to the Michigan State Normal
School at Ypsilanti the following year and was graduated
with the Bachelor of Pedagogy Degree. He returned to the
Agricultural College for graduate work and completed the
requirements for a Master of Science Degree in 1895. This
completed his formal education. An Honorary Degree, Master
of Pedagogy was conferred upon him in 1912, many years after
he had launched his career.\(^2\)

After serving a brief term as Professor of Science at
Benzonia College in Michigan during a part of 1895, Holden
came back to his home county to become County Superintendent
of Schools. He resigned this position in 1896 to accept a
position as Professor of Agronomy at the University of
Illinois.

It was here that Holden became intensely interested in

\(^{1}\) Starrak, J. A. Personal Interview with the writer. Ames,
Iowa. 1941.

\(^{2}\) Ivins and Winship. Fifty Famous Farmers. The Macmillan
corn culture. It is said that during the vacation months he would ride about the Illinois countryside hiring out to farmers for short periods. When he had had an opportunity to study one man's technique, he would ride on looking for a new job. In this manner he broadened his knowledge of actual farm practices. A common fault he observed was the lack of care exercised in selecting and storing seed corn. It became his goal, in connection with his work at the University of Illinois, to improve upon the accepted methods of corn culture.

Holden did his first extension work at the University of Illinois. This was in corn-breeding, chemical analysis of soils, and the effect of different treatment of soil in corn-breeding.¹

In 1900, Holden left the University and became superintendent in charge of field work for the Illinois Sugar Refining Company. This in a sense was extension work inasmuch as he was responsible for improving beet-growing practices. As head field man for the refining company, he often addressed short courses. The attendance at these was disappointing and Holden undertook to improve them. His activities in that direction widened his acquaintance and brought about a meeting with the Funk Brothers.

These brothers had recently inherited a large farm.

¹ Ibid, p. 86.
They wanted to put it to good use. They asked Holden what they might do. He suggested they make their farm a corn-breeding laboratory. The idea appealed to the men. They offered Holden the managership of the farm. He resigned from his position with the refining company and accepted the offer of the Funk Brothers. He set about organizing the Funk Brothers Seed Company which has become one of the most prominent companies of its kind in the Midwest.

While Holden was manager of the seed company, he came over into Iowa to take part in a short course. W. M. Beardshear, then President of Iowa State College, was present and was so impressed by Holden's ability that he immediately invited him to accept a position on the faculty. Holden was willing to come but the salary he asked was more than the college could pay in the light of existing appropriations. Several interested parties including Wallace's Farmer and the Iowa Grain Dealers Association, cooperated in raising enough money to pay the difference in salary for two years. After the second year, the state appropriated enough money to pay Holden's entire salary.

Concerning his coming to Iowa State College, Holden wrote: "When I was approached by Dr. Beardshear and by Dean Curtiss, to interest me in accepting the position of Professor of Agronomy at Ames, I made it clear that my work would be of a different nature from that which the
authorities might possibly expect, that I had a strong feeling that every person that lives in the state is in reality a pupil or a student of the college and that the college must see to it that every one receives some direct help from the college and if this is true, that there was only one way by which this could be done and that was by taking the college to the people. Go to the people, and help them where they are, as they are, under their own conditions with their own problems. My contention was that at that time they had only two-thirds of a college, that the other third, which in my estimation was a very important part of the work of the college, was to see that knowledge was translated into actual life, and living, by the people of the state.  

THE PERIOD OF HOLDEN'S PROFESSORSHIP OF AGRONOMY
(1902-1906)

Introduction of Illinois Seed Corn

Holden's work at Iowa State College may be divided into two periods: (1) the period 1902 to 1906 during which he was Professor of Agronomy and Vice Dean of Agriculture; and (2) the period 1906 to 1912 during which he was Superintendent of the Extension Department.

As Professor of Agronomy, Holden taught classes in farm crops, specializing in corn. The confinement of the classroom, however, did not appeal to him. He was in demand as a speaker and frequently left the campus to address agricultural meetings. On one of these excursions, early in 1903, Holden attended a meeting in Orange City, Sioux County. He strongly advocated the adoption of seeds and practices that had been successful at the Ames experiment station. The farmers of Sioux County were skeptical. They maintained that the results of the Ames station were not applicable to Northwest Iowa. They felt that the solution to their problem lay in the setting up of an experiment station within their own county. From this discussion came the establishment of a county farm demonstration station located on the Sioux County Farm. The experiment proved
successful and the number of these County Demonstration Farms increased yearly.

In Illinois Holden had deplored the poor practices in selection and care of seed corn. He found practices equally bad in Iowa. He was desirous of improving the situation by teaching sound methods of selection of seed corn and by introducing better strains of corn. In this respect his experience with the Funk Brothers Company stood him in good stead. He brought 600 bushels of Reid's Yellow Dent to Iowa, the best corn developed by the Funk Brothers, and distributed it in quart-sized samples about the state. 1 Accompanying the sample was an urgent request to prepare a very good seed bed for the sample on rich ground, to cultivate it carefully; and when fall came, to select seed for the next year exclusively from this plot. Reid's Yellow Dent was advocated for all of Iowa except the two northern tiers of counties in which an earlier maturing corn had to be used. 2

The introduction of good seed corn in Iowa was the first step taken by Holden in attempting to increase the then current average Iowa yield of approximately twenty-five bushels per acre. "Uncle Henry Wallace of Wallace's Farmer backed Holden in this enterprise and gave it much publicity.

1. Burnett, L. C. Personal interview with writer, Ames, Iowa. 2. Ibid.
The project was effective but it served to alienate Iowa Seed Companies and seed producing areas from Iowa State College and Holden because these Iowans resented the importation and widespread distribution of Illinois seed corn in competition with their own. ¹

Another of Holden's activities in his first year at Iowa State indicates that he was an opportunist. The "unprecedented rains" of the spring of 1903 prevented the farmers from getting in all their corn. Holden immediately issued a "Press Bulletin on Late Crops and Forage Crops". In the bulletin he urged farmers either to plant early maturing corn or some type of late forage crop. The following crops were listed and described: corn, sweetcorn fodder, sorghum, millet, kaffir corn, soybeans, and buckwheat. The bulletin closed with the announcement that another bulletin would be issued in time to instruct farmers how these crops should be harvested.

The Corn Trains

The spring of 1904 produced an innovation in extension education, the "Seed Corn Gospel Trains". As early as 1897 railroads had cooperated to the extent of furnishing free transportation for "Dairy Trains" in Minnesota and northern

Iowa. The purpose of the trains had been to promote a line of creameries, which should result in more freight for the railroads to haul.

Several officials of the Rock Island Line were guests on the dairy train. They immediately saw the possibilities of this type of extension education. Why not promote a corn train? The more corn Iowa raised, the more hauling for the railroads.

Finally, through the efforts of W. H. Cibkins, Branch Superintendent of the Rock Island, M. McFarlin, President of Central Iowa Grain Company, George Wells, Secretary of the Iowa Grain Dealers Association and "Uncle Henry" Wallace, the corn train idea took form. Holden, who had previously spoken in Des Moines and had made a fine impression, was selected by the group to accompany the train and to supplement the exhibits with lectures. The train had three coaches and a baggage car. Each coach was equipped with a speakers platform at one end and was well provided with lecture charts.

On Monday morning, April 18, 1904, the first seed corn train ever operated was run over the Rock Island in Iowa. Stops were made at Gowrie, Calendar, Mooreland, Tara, Clare, Pioneer, Gilmore City, Rolfe, Plover, Mallard, Curlew, Ayrshire, Ruthven. From Ruthven the train ran over the C. M. and St. P. to Emmetsburg and to Estherville where a night meeting was held.
In the three day tour of Northwestern Iowa, the train made fifty stops. At all stations crowds awaited their coming. The cars were full for the lectures and at some stations, windows had to be opened for those who could not get in. A conservative estimate indicated that more than three thousand farmers had been reached in an area where help was needed the most.\(^1\)

On the first trip the advice was briefly this: choose the finest ears of any strong home-grown seed; test it carefully; grade it so that the planter may be set to function properly; and then experiment with the planter until three kernels are dropped in ninety five of every one hundred hills. A demonstration of seed corn testing was given at each stop. Exact dimensions and a description of materials needed in making testers were furnished.

On subsequent trips, as the scope of the trains broadened, other phases of agriculture received some attention, particularly the growing of alfalfa.

Holden did not always have an easy task in preaching the "gospel" of good seed corn. The fact that he introduced Reid's Yellow Dent, an Illinois Corn, and did much to spread it over the state, alienated him with Iowa seed men, especially those in Page County. Page County was proud of its corn and

of its seed men which included Henry Field and Carl Armstrong.

When Ed Hunter planned an itinerary for the seed corn special over the Burlington and Quincy Railroad he included several Page County towns, one of which was Shenandoah. Iowa newspapers took this opportunity to publicize the rift. The publicity widened the breach.

An excerpt from the Shenandoah Sentinel, May 2, 1904 tells the story very well:1 "When Professor Holden's special corn train pulled in 15 minutes behind scheduled time Friday, it met with a not very flattering reception. A pretty good crowd gathered hastily but it was made up of boys and men about town, such as were within easy reach and could spare a few minutes time. A very few farmers were present and they were the class for whose benefit the whole spectacular expedition was planned. There are two explanations for this. In the first place it was a mighty fine day for field work and the corn planters preferred to follow the plow rather than the college professor. It was dollars and sense to them to keep at work. But the chief reason for the cool reception tendered to Professor Holden was that the people hereabouts were mad. They had reason to be mad. Shenandoah could have brought out a thousand people to greet

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the train, and would have done so but for the impression that prevailed here that the Ames Professor was using his position as head of one of the chief departments of the state institution to injure one of the great industries of Shenandoah. The people of this region feel a natural and justifiable pride in the magnificent corn produced here. We claim that we are especially favored by nature for the production of corn and that our farmers are at the front in their methods of growing it. But Professor Holden has steadily ignored us and our corn and advised farmers to go to Illinois for their seed corn and warned them not to go to Shenandoah. All this hurt. And on top of this the Des Moines papers for a week previous to his coming contained reports ostensibly from him that he was coming to Shenandoah to beard the lion in his den, that he was armed and prepared for trouble, as though he expected to be mobbed when his train reached here. This added fuel to the fire and made us hot, we acknowledge it. But lo, he came as a friend not as an enemy. The trouble arose in a large part in misapprehension. These reports in the Des Moines papers were false, written by reporters for a sensation, he had not been interviewed and had not said a word against Shenandoah and Shenandoah interests—never thought of such a thing, and didn't know of such reports until he arrived here....

He seemed a courteous gentleman, friendly, familiar and
modest, and so absorbed in the corn question that he had no time to quarrel. In his public address he made no allusion to the trouble but he had a real message of interest and importance to every corn grower and it is to be regretted that more people from the farms were not present to hear it."

Although the corn train idea originated with other men, it was Holden who put it over. He was at his best in a crusade of this type. He taught the simple things and taught them convincingly. He met the farmer in his own community; he often resorted to the farmer's vernacular to be effective.

In three years the Seed Corn Special Trains combed the state. A record of their achievements follows:

1. Covered 97 of 99 counties in Iowa.
2. Traveled 11,000 miles.
4. One thousand, two hundred and sixty-five lectures were given.
5. One hundred and forty-five thousand, seven hundred people were reached.
6. Sixty-seven days were spent on the road.
7. Twenty-seven thousand bulletins were distributed.

The corn trains cannot be dismissed without commenting on the splendid cooperation and the unstinted support of the

railroads. Their cooperation may be attributed in part to the selfish motive of increasing their freight; in part to a benevolent attitude toward the state. The willingness on the part of the railroads to back any Holden venture led many Iowans to believe that Holden could "wheedle anything out of the railroads".  

The Local Short Courses

Nearly a year after the corn trains began to traverse the state, another branch of the extension service made its debut, i.e., the local short course. Morgan states, "the idea for the local short course seems to have originated with a group of farmers from Red Oak who had attended a short course conducted by the College at Ames." Consequently, the first local short course in Iowa was held in Red Oak, Iowa in January, 1905. Holden cooperated by making available to the sponsors the facilities and the men of the college. The project was successful. During the winter of 1906-1907, short courses were held in Red Oak, Mt. Pleasant, Lenox, and Liscomb. The next year the number increased to ten. The sites and number in attendance follow:

1. Spencer - 309. 
2. Storm Lake - 188. 

The short courses developed into one of the major functions of the extension service. The greatest development however, came after the passage of the Iowa extension act in 1906 and therefore will be discussed in more detail later.

Events Leading Up to the Extension Act

Three events of 1903 were significant in the movement toward the enactment of a state law establishing extension service as a department of the college. They were:

1. The annual meeting of the Iowa Grain Dealers association in Des Moines, also attended by the Iowa Corn Growers Association at which Holden gave three lectures on corn.

2. The establishment of an experiment station at Orange City, Sioux County in charge of the county farm steward, H. H. McKee.

3. The purchase of 600 bushels of Reid's Yellow Dent for distribution in Iowa.

The introduction of "corn trains" in 1904 and "short

courses" in 1905 added weight to the growing demand for a separate department at the college to administer extension education. It was further accentuated by the fact that during the year 1906-1907, 37,000 letters of inquiry had reached Iowa State College. The demands made upon the college were far greater than it could handle under the existing organization.

The climax of the 1903 meeting of the Iowa Grain Dealers Association was the adoption by them of resolutions strongly advocating the establishment of an extension service in connection with Iowa State College and the appropriation of a sum sufficient to carry out the "good work already begun."

The resolutions of the Iowa Grain Dealers Association were:

First. That this kind of work is needed; that it is fundamentally correct, based upon the greatest fact in modern education, viz: that education is for everyone, and therefore must be carried to everyone,—and that is Extension work.

Second. That the people are ready and anxious for it, as shown by the remarkable attendance at the meetings and interest taken in the work.

Third. That it should include two lines of work; first and most important, a force of men who should devote their entire time to discovering the really important agricultural questions and through such means as Short Courses, County Experiment Stations, Farmers' Institutes, Special Trains, etc. help to improve those conditions and better the methods, not of the occasional person who is able to attend college, but of every citizen who farms directly or indirectly. It is also argued that out of all this would come greater interest in this greatest of all occupations, Agriculture, and a greater interest in and love for,
the best of all homes, the Farm Home. All this means greater efficiency for the individual, that is, the laborer, the real producer of wealth. It means a greater and better citizenship for Iowa, and, after all, the greatness of a state is measured by the average efficiency of its citizens. Second, that it should include a Correspondence school of Agriculture, to the end that thousands of men and women on the farms could have some of the benefits of Agricultural Education. During the Winter months there is considerable time at home each day for study. It is practically impossible to go away to attend even a two week Short Course, owing to the chores which demand attention each day. The importance of this was all the more apparent, too, from the fact that no agriculture whatever is taught in our rural or city schools.  

The Agricultural Extension Act

In the spring of 1904, a group of men enroute from Mason City to Des Moines on a corn train were discussing the future of extension education. Sitting in on this conference were George Wells, Secretary of the Iowa Grain Dealers Association, Joe Trigg, Editor of the Des Moines Register and Leader, Henry Wallace, Editor of Wallace's Farmer, J. R. Sage, Director of Weather and Crop Service of Iowa, W. H. Manus, Industrial Commissioner for the C. B. and Q. Railroad, P. C. Holden, and others.

The conclusions reached by the group were:

"1. That this type of work was needed.

2. That it was fundamentally correct.

3. That it was based upon the greatest fact in

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education, viz, that education is for everyone and therefore must be carried to everyone—and that is extension work."

They further concluded that it should include two types of work:

"1. A force of men who should devote their entire time to discovering the really important agricultural questions and through the means of short courses, county experiment stations, farmers institutes, special trains, etc., help to inaugurate better methods and improve conditions....

2. A correspondence school of agriculture so that thousands of men and women on the farm could have some of the benefits of agricultural education."²

To this group of men, two things seemed apparent:

(1) that a direct appropriation was necessary to organize and maintain the work; and (2) that it should have its headquarters at Iowa State College.

At "Uncle Henry" Wallace's suggestion, Holden drafted a bill which incorporated his ideas on extension education and

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2. Ibid, p. 28 and 29.
the sum necessary to administer it. This bill, pared down considerably, passed the Thirty-First General Assembly and became a law on April 10, 1906 in the following form:

"Be it enacted by the General Assembly of the State of Iowa:

"Section 1. Agricultural Extension Work.--The Iowa State College of Agriculture and Mechanic Arts is hereby authorized to undertake and maintain a system of Agricultural Extension Work. Under this system the said college shall be authorized to conduct experiments in the various portions of the state and give instruction wherever, in the judgment of the college authorities, it shall be advisable, in reference to the various lines of agricultural work maintained upon the college grounds at Ames, Iowa. The college authorities are authorized to give instruction in corn and stock judging at agricultural fairs, institutes and clubs, and to aid in conducting short courses of instruction at suitable places throughout the state; to give lectures and demonstrations on the growing of crops and fruits, on stock raising, dairying, land drainage, and kindred subjects, including domestic science. This work shall be so planned as, in the judgment of the college authorities, is best calculated to carry to the communities remote from the college the benefits of the skilled instruction given by the teachers of said school and the results reached in the work of the experiment station.

"Section 2. Experimental Work.--Especially shall this
work include an analysis of soils and experiments in reference to the growing of crops upon the same, investigations relating to the improvement of corn, small grains and forage plants; the breeding, the feeding and management of live stock; investigations relating to animal diseases; the origination, introduction and management of fruits; the production and marketing of dairy and other farm products.

"Section 3. Appropriation.--For the purpose of carrying out the provisions of this act there is hereby appropriated out of the funds in the state treasury, not otherwise appropriated, the sum of fifteen thousand (15,000) dollars. Said appropriation to be available on and after the first day of July, Nineteen Hundred and six; provided that the funds appropriated by this act shall be expended according to the plans agreed upon by the President, the Dean of Agriculture and the board of trustees of the Iowa State College of Agriculture and Mechanic Arts."
Organization of the Department

As soon as the Extension Law was passed, President Storms of the College, Dean C. F. Curtiss and Professor Holden began to set up the new organization. Two plans of organization were discussed. The first plan proposed to have the extension work divided among the various departments of the college, each receiving a portion of the appropriation and each responsible for work in its own field.

The second plan proposed to set up a new department with the same status as the other departments. This department would be held responsible for the appropriation and for the accomplishment of results.

Holden favored the first plan because it had been employed successfully in Illinois. President Storms and Dean Curtiss favored the second, which was finally adopted. It probably was a wise choice. Holden in his first annual report says of the second proposal: "I can say for this policy that it has worked splendidly during the first year of its trial. There has been no more friction than must naturally be expected in setting in motion any new piece of machinery. In fact, I hardly see how there could have been any less of real trouble."
Holden was placed in charge of the new department with the title of "Superintendent of Extension". There seems to have been no other candidate for the position. The superintendent, like the head of a department, would be responsible to the Dean of Agriculture.

At this time the trustees of the College, fearing the misuse of funds adopted the following resolutions:

"1. The local expenses of all lectures, demonstrations, short courses, and other forms of agricultural education shall be borne by the communities in which they are held, and so far as is possible the traveling expenses of lecturers and workers in attending to such work shall be met by the communities or organizations served.

"2. The Agricultural Extension funds shall not be used for supporting any feature of education or experimental work that is carried on at Ames, except such assistance as may be rendered in connection with the special two weeks short courses and a Summer School."\(^1\)

In his original bill Holden had asked for more than the fifteen thousand (15,000) dollar appropriation that had been granted. The program therefore in its first year had to be

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limited to the fields of greatest need. It was decided that Soil, Farm Crops, Animal Husbandry, and Home Work were fundamental and therefore had to have a place in the program. Later it was decided to add Horticulture and Dairying.

Personnel of the Extension Department (1906-1907)

Of great importance was the matter of choosing specialists for the various fields of endeavor. Holden had definite ideas about the qualifications and personality that one should possess for effective teaching, for he wrote: "To find help at available salaries fitted for this work was very difficult. There were plenty of men who were competent in the laboratory, or in the class room; but the person who is to instruct people at home and in their own business, must have not only these qualifications, but must know from actual experience what they really need, and have the personality which will make his work effective."¹

The department personnel chosen for the year was as follows:

Superintendent: P. G. Holden
Horticulture: J. W. Jones
Soils: A. H. Snyder
Animal Husbandry: R. K. Bliss
Farm Crops: M. L. Mosher
Household Economics: Mary F. Rausch
Dairy: J. C. Guthrie

The Achievements of the New Department in its First Year

The great amount of work necessary in the organization of the Extension Department may be gathered from Holden's statement in the first annual report (1906-1907): "It is almost impossible to convey any adequate idea of the tremendous amount of time and labor required during the year to organize the work of the new department along so many different lines, and to carry it out in detail. No other state has extension work organized on so extensive a plan, and hence there were no precedents to follow; however, the following is a brief statement of the work done by the
members of the department. . . "1

"Number of engagements filled . . . 638

"Number of meetings attended . . . 292

"Number of requests declined . . . 1750."

In its first year, the Extension Department conducted regular short courses in Red Oak, Lenox, Liscomb, and Mt. Pleasant; a two week short course at Ames; and domestic science short courses in Spencer and Dows.

County Farm experiments were conducted in Montgomery, Story, Marshall, Greene, Kossuth, Sioux, Taylor, Page, Chickasaw, and Polk counties. Seven hundred samples of seed corn were used in experiments on 400 plots. In the course of the year, 7,100 people visited the farms to study the results.

A campaign to introduce agricultural education into country schools was started. County superintendents in Page, Cherokee, and Floyd counties, were given special assistance in this project. An agricultural exhibit was held at the state fair.

During the year, Holden delivered 172 lectures and conducted 72 corn judging contests. Miss Mary Rausch gave 40 lectures, 41 demonstrations, and conducted 17 judging contests. M. L. Mosher gave 55 lectures and conducted 34 corn judging contests. R. K. Bliss delivered 49 lectures

and conducted 14 stock judging contests. A. H. Snyder gave 25 lectures and conducted demonstrations at the state fair and at several county fairs. In addition, staff members were in attendance at all short courses, institutes and other meetings conducted under the extension banner.

Five bulletins were issued by department members in the first year. They were:

1. "Rotation of Crops" by A. H. Snyder.
2. "Manures" by A. H. Snyder.
3. "Healthy Homes" by Mary F. Rausch.
5. "Raising Pigs" by R. K. Bliss.

Sixty-six thousand five hundred miles were traveled by extension workers in the first year.

Various Branches of the Extension Service

In 1910, the Extension Department was in its fifth year of existence. The growth had been steady; the scope had become increasingly larger. Each year far more requests for help were made than could possibly be filled under the existing appropriations. At this time the Extension Service helped the people of Iowa through many various channels. The most important of these were:

1. Short Course Schools
   A. General: Covering Live Stock, Field Crops, and Domestic Science.
   B. Special: Covering Dairying, Horticulture, Corn, Domestic Science, Live Stock, etc.
2. Farmers' Institutes and other meetings such as street fairs, carnivals, picnics, special dairy and corn meetings.

3. Special Trains—Corn, Dairy, Domestic Science, etc.

4. Press of the state—Agricultural, daily and local.

5. Schools, County Superintendents, Teachers, Pupils, Teachers' Institutes, etc.

6. Demonstrations and Experimental work on county farms and with individuals.


8. Fairs—State, County, School.

9. Stock and grain judging contests; corn contest for men, boys, and girls.

10. Bulletins, Circulars, leaflets, score cards, etc.

11. Dairy Test Associations.

12. Marsh Dairy Prize Contest.

13. Letters—Answers to questions for information, etc. Letters sent out asking for information relative to drainage, alfalfa, rotation of crops, shade trees, livestock management, etc.


15. Lists of books of various subjects for distribution.

16. Leaving materials for schools and aiding them in securing bulletins, charts, etc.

17. Distributing seed corn, oats, alfalfa, etc. 

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The local short course

Of the activities sponsored by the extension service under Holden's administration, several stand out because of their far-reaching influence and because they show the far-sightedness, the originality and the initiative of Holden. They furnish evidence of the realization of Holden's dream of "bringing the college to the people" of Iowa. The first one to be discussed is the local short course.

The premise upon which the local short course was promoted was that the people of a given community wanted it, and were willing to back it wholeheartedly. If the desire to stage one were great enough and the local facilities were adequate, the Extension Service of the College was willing to cooperate. The responsibility for the success of the venture lay with the community itself.

Short courses were held almost exclusively in the three winter months: December, January, and February, but plans had to be completed for them by the middle of the preceding April. Because requests for short courses each year greatly exceeded the actual number that could be staged, it was necessary for a community wishing to conduct one to make application for it early and to meet the following five conditions:

"1. The people must be deeply in earnest in desiring it; that is, willing to put in much time and energy to secure it and make it a success.

"2. It will be necessary to secure the signatures to a guarantee pledge of at least two hundred persons who are willing to guarantee any deficiency which may result from running the Short Course. Half of these signers should be farmers and half businessmen.

"3. Suitable rooms must be available for the Stock judging, Corn judging, Domestic Science work, Corn and Bread exhibits and Evening lectures.

"4. The most essential thing is that the farmers, the businessmen or Commercial Clubs, the women, the county and City Superintendents, in fact everyone, should get 'into the game and push and push hard. There must be no pulling or hauling.'

"5. There must be provided a premium list of at least six hundred dollars in cash, farm produce, live stock, merchandise, scholarships, etc. for the best exhibits of corn, small grain, cookies, sewing, etc.; also for the best class work by students during the week in Domestic Science and in Stock and Grain judging. The premium list should be out two months in advance of the Short Course.
"All requests, guarantee pledges, etc., should be in
not later than April 15. The next year's list of Short
Courses will be made up at that time."

If and when these conditions were met, the local
executive board was created, which consisted of a president,
a secretary and general manager, treasurer, chairman of
advertising and membership committee, chairman of the
domestic science committee, chairman of the stock judging
committee, chairman of corn judging committee, chairman of
contests and exhibits committee, and the chairman of the
entertainment committee.

This committee was the power behind the short course.
All matters pertaining to local policy were decided by it.
They were expected to meet once a week for several months
preceding the date of the school and to cooperate with the
Extension Staff during the week of the school.

Of great importance was the selection of rooms and
buildings for the various meetings. Schoolhouses, church
basements, opera houses, vacant stores and rooms were all
used. Attention was paid to the heating facilities, venti-
lation, light and other matters affecting the comfort of the
enrollees. The ideal situation was to have a sufficient
amount of room in adjacent buildings so that a minimum of
time would be taken up in moving from class to class.

Exclusive of the premium list, the expenses to be borne
by the local community in sponsoring a short course was from $1200 to $1600.

The extension staff composed of Superintendent Holden, and Specialists M. L. Mosher, A. H. Snyder, R. K. Bliss, R. E. Drennan, A. V. Storms, Edith Charlton and Neale S. Knowles made no charge for their services but the local community was expected to pay their traveling, board and lodging expenses for the week. Student assistants, usually six to nine in number, were paid at the rate of two dollars a day and expenses.

The staff expenses obviously varied with the distance they had to travel. Itineraries were planned in such a way that a minimum of travel would be necessary from one short course to another. Staff expenses of the typical short course were as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railroad fare for fourteen people</td>
<td>$62.00</td>
</tr>
<tr>
<td>Hotel while traveling</td>
<td>16.00</td>
</tr>
<tr>
<td>Transfers, baggage, freight, etc.</td>
<td>10.00</td>
</tr>
<tr>
<td>Six helpers (1 for Domestic Science, 1 for Animal Husbandry, and 4 for Corn judging)</td>
<td>72.00</td>
</tr>
<tr>
<td></td>
<td>$160.00</td>
</tr>
<tr>
<td>The hotel and other expenses for the week</td>
<td>$120.00</td>
</tr>
</tbody>
</table>

Receipts from the various sources nearly always were adequate to cover the expenditures. Of the first seventeen short courses only two found it necessary to make assessments on the guarantee pledges. Several showed a nice
Receipts of the typical short courses were as follows:

- 220 men's tickets at $3.00...$660.00
- 40 men's day tickets at $0.75...30.00
- 105 women's tickets at $2.00...210.00
- 30 women's day tickets at $0.50...15.00
- Sale of show corn...300.00
- Butter, cakes, small grain, etc...50.00
- Spelling bee and declamatory...100.00
- Town and County Schools entertainment...40.00

$1,405.00

Short courses ran from Monday morning through Saturday noon. On the Sunday evening preceding the opening, Holden was accustomed to meet with the staff. At this time he made general announcements and gave out assignments for the week. One announcement always pertained to dress, "Wear neat-appearing clothes of the same style that you expect your audience to wear" was his repeated request. He demanded exemplary behavior from the staff at all times. On one occasion, in Red Oak, he sent a student assistant back to Ames on the first train for staying out until one o'clock a.m. with a young lady who worked in the calendar factory there.

The weekly meeting was the opportunity for any member of the staff to air his views concerning matters of policy and procedure. Invariably it developed into a discussion.

and many of the improvements made in short courses were born of discussions in the weekly Sunday night meetings.

Peculiar local situations were discussed also, which might affect the program. Holden was ever alert in attempting to satisfy the particular needs of the individual community.

In 1907, Holden issued a pamphlet "General Outline for Short Courses in Agriculture and Domestic Science". In it were general and specific outlines of the work to be covered. They are herewith presented:

"General Outline of Work

"The Domestic Science work will run from 9:00 to 11:30 a.m. and from 1:30 to 5:30 p.m. each day except Saturday, when it will close at 11:30 a.m.

"The Grain and Stock Judging work will run from 9:00 a.m. to 12:00 m. and from 1:00 to 4:00 p.m. each day. The examination will be given Saturday forenoon and the corn sale will begin at 1:30 p.m. Saturday.

"The Grain and Stock Judging students will be numbered consecutively. The odd numbers with yellow badges will go to the Grain Judging class from 9:00 to 10:30 a.m. and to the Stock Judging class from 10:30 a.m. to 12:00 m.

"The even numbers, with red badges¹, will go to Stock Judging class from 9:00 to 10:30 a.m. and to Grain Judging class from 10:30 to 12:00 m. In the afternoon the classes will run in a similar manner from 1:00 to 2:30 and from 2:30 to 4:00. Thus all students will devote one-half time to Grain judging and one half to Stock judging. In the afternoon both sections will meet together from 4:00 to 5:30 for special lectures as follows:

"Monday 4:00 to 5:00--Professor Snyder will lecture on Soil Fertility, Rotation of Crops or Care in Handling of Farm Manure. Professor Snyder has

¹. When students enrolled for the Short Course, each was numbered consecutively. Even-numbered enrollees were given red ribbons and odd-numbered enrollees were given yellow ribbons.
made a very thorough study of soil problems and is thoroughly acquainted with his subject, both from a practical and scientific standpoint.

"Monday 5:00 to 5:30--Demonstration of methods of testing milk with a Babcock tester. Samples of milk brought in by Short Course students will be tested.

"Tuesday 4:00 to 5:00--Professor R. K. Bliss will lecture on Feeds and Feeding, Profitable Production of Pork, or other Animal Husbandry topics.

"Tuesday 5:00 to 5:30--Practical use of the Babcock Tester. The object will be to give those desiring it as thorough a knowledge as possible of how to operate one at home.

"Wednesday 4:00 to 5:00--Professor Holden will speak on Drainage, giving a practical demonstration of the most improved method of laying tile to grade.

"Thursday 4:00 to 5:00--Professor M. L. Mosher will present the County Experiment Station work. This lecture will be of great interest and importance to everyone.

"Friday 4:00 to 5:00--Alfalfa and the Silo in Iowa.

"There will be a milking machine demonstration and a lecture by the expert in charge Wednesday, Thursday and Friday 5:30 to 6:00 p.m. and those wishing to assist in its operation and learn its use will be given an opportunity to do so. The lecture on Friday will be a more general one on the principles involved and information on the use and advantages of the machine.

"Many of the following topics will be treated during the regular classes if no opportunity is found for them at the afternoon joint sessions:

- 'Injurious Insects and Remedies'
- 'Diseases of Farm Animals and Remedies'
- 'Agricultural Clubs'
- 'Silos'
- 'Care and Management of Live Stock'
- 'Alfalfa in Iowa'
- 'Oats'
'Weeds and Weed Seeds'
'Methods of Cultivation'
'Getting Rid of the Unprofitable Dairy Cow'

"Corn Judging"

"Monday  9:00 a.m. to 12:00 m.
Both classes in Corn and Stock judging will meet together. Outline of week's work. Lecture on 'Feeds and Feeding'.

"Monday  1:00 to 2:30 p.m.
Discussion on 'How to Judge Corn'. Judging corn, placing the ears 1, 2, 3, etc. from the standpoint of yielding power.

"Monday  2:30 to 4:00 p.m. Second section same as above.

"Tuesday  9:00 to 10:30 a.m.
'What is the best Corn for the County?'
Judging Corn—1st. Placing the ears in regard to maturity. 2nd. Placing the ears with reference to their richness and feeding value.

"Tuesday  1:00 to 2:30 p.m.
Placing the samples with reference to improvement or trueness to type. Discussion on Harvesting and Storing Seed Corn. Composition of the kernel of corn.

"Tuesday  2:30 to 4:00 p.m. Second section same as above.

"Wednesday  9:00 to 10:30 a.m.
Fifteen minutes review of the work of Tuesday. Dangers of importing seed corn. Judging and placing of ears with reference to vitality and growing power. Best number of kernels to plant per hill.

"Wednesday  10:30 a.m. to 12:00 m. Second section same as above."
Wednesday 1:00 to 2:30 p.m.
Placing samples of corn and giving reasons. Study of the germination boxes. Discussion on testing of seed corn.

Wednesday 2:30 to 4:00 p.m. Second section same as above.

Thursday 9:00 to 10:30 a.m.
Review of past work. Placing samples and picking out the best ears at sight and giving reasons. Discussion on the cultivation of corn.

Thursday 10:30 a.m. to 12:00 m. Second section same as above.

Friday 9:00 to 10:30.
Insect enemies of corn and how to prevent them. Preparation of the seed bed. Weeds and their eradication.

Friday 10:30 a.m. to 12:00 m. Second section same as above.

Friday 1:00 to 2:30 p.m.
General review of week's work. Rotation of crops. Maintaining the fertility of the soil. Study of the prize-winning corn.

Friday 2:30 to 4:00 p.m. Second section same as above.

Saturday 9:00 to 10:00 a.m.
Importance of having a definite plan of work for the year.

Saturday 10:00 a.m. to 12:00 m.
Examination covering the week's work.

Saturday p.m. Auction sale of corn.
Monday 10:00 a.m. All students meet together for a general statement of the week's work.

11:00 a.m. Feeds and Feeding. This will be one of the most important features of the week's work and students should be urged to be on hand Monday morning early.

1:00 p.m. Class of four aged Percheron stallions.
2:30 p.m. Same as at 1 p.m.

Tuesday 9:00 a.m. Class of five aged Percheron stallions.
10:30 a.m. Same as at 9:00 a.m.

1:00 p.m. Class of four Shire or Belgian Stallions.
2:30 p.m. Same as at 1 p.m.

Wednesday 9:00 a.m. Class of four Angus or Hereford bulls. Should have at least one black animal on which to mark off meat cuts with black chalk.

10:30 a.m. Same as at 9:00 a.m.

1:00 p.m. Class of four or five aged Shorthorn bulls.
2:30 p.m. Same as at 1 p.m.

Thursday 9:00 a.m. Class of five Shorthorn cows.
10:30 a.m. Same as at 9 p.m.

1:00 p.m. Class of five Poland China Sows or gilts.
2:30 p.m. Same as at 1 p.m.

Friday 9:00 a.m. Class of five Duroc Jersey sows. (Part of the time will be given to discussion of sheep, with three sheep to illustrate.)

10:30 a.m. Same as at 9 p.m.

1:00 p.m. Class of five dairy cows.
2:30 p.m. Same as at 1 p.m.
"Saturday  9:00 a.m.  All students will meet at the High School Building, where important subjects will be discussed.
10:00 a.m.  Examination covering the week’s work.

"Domestic Science

"Monday  9:00 a.m.  Talk on Food: Its use in the body. Digestion—The daily bill of fare.  (Illustrated by Charts and Experiments.)
1:30 p.m.  Demonstration: Eggs and Milk.
3:30 p.m.  Talk on sewing methods: Demonstration of Corset Cover.

"Tuesday  9:00 a.m.  Talk on Personal Hygiene.
10:00-11:30 a.m.  Demonstration: Cooking of Vegetables.
1:30 to 3:30 p.m.  Talk on Home Decorations (illustrated).
3:30-4:30 p.m.  Cereals and Breakfast Foods Demonstration.

"Wednesday  9:00 a.m.  Talk on Meat: Best and Cheapest Cuts.  (Illustrated by Charts, etc.)
10:30-11:30 a.m.  Finish Demonstration of Corset Cover.  (Buttonholes and Sewing on trimming).  Begin Kitchen Apron.
1:30-3:00 p.m.  Talk—Care and Feeding of Little Children.  Exhibition and Demonstration of Baby’s outfit.
3:00-4:30 p.m.  Demonstration: Invalid Cookery.

7:30 p.m.  Evening Lecture.  Talk on some subject relating to Household Economics by prominent speaker.

"Thursday  9:00 a.m.  Talk on Home Nursing.  Demonstration.  Making patient’s bed, bathing patient in bed, giving alcoholic rub, etc.
10:30-12:00 m. Demonstration: Simple Desserts.

1:30-3:00 p.m. Talk on Dress: Art of Simple Clothing; Quiet Colors in Dress; Good Material.

3:00-4:30 p.m. Finish Demonstration of Kitchen Apron. Cutting and Fitting Shirtwaist.

"Friday"

9:00-10:00 a.m. Demonstration: Bread and Rolls. (Charts showing Yeast Plant, Cross Section Grain of Wheat). Gluten Test, Test for Baking Powders.

10:00-11:30 a.m. Finish Demonstration of Shirtwaist.

1:30-3:00 p.m. Talk on Travel. Hints on correct things to do when traveling alone. Conduct in hotels and in sleeping cars. How to pack.

"Saturday"

9:00-10:00 a.m. Laundry Work. Removing stains from Linen. Washing Table Linen. Washing Woolens and Silk.

10:00-11:30 a.m. Written Examination will be given covering the week's work."

As one studies the program of the short course, it becomes evident that the scope was broad and that the study was as thorough as the time permitted. The days were crowded with lectures and demonstrations. Only one or two of the week's programs could be classed as entertainment and they were also educational. It is doubtful that people today would be tolerant of such sustained concentration. But the people of that time were eager and in their eagerness they absorbed whatever instruction they could get.

The weakness of the short course as an educational device was its failure to provide for follow-up. Men and
women, inspired by the week's instruction, could easily fall back into their old practices. In some cases the seed did take root. However, it was evidence of the failure of the instruction in some localities to accomplish its purpose that led Holden to the conclusion that hope for permanent success in establishing good farming practices lay in an educated and enlightened rural youth. Thus it was that Holden emphasized more and more the organization of and education for rural youth.

The county farm demonstration plots

Of almost equal importance with the Short Course was the County Farm Demonstration work. The demonstrations dealt primarily with corn but there was some work done with small grain and legume crops. The need for experiment stations in various parts of the state has been discussed previously. County Farms were chosen because they were public property and they usually had good, representative soil.

Procedure in the various counties was standardized. At planting time Extension Department representative traveled about the county collecting seed corn from planter boxes or from the sacks of seed that the farmer took with him to the field. From forty to a hundred samples were thus procured from each county.
These samples were carefully kept separate and tagged with the farmer's name, then assigned a number. Each sample was planted in four widely separated plots in the experiment area. Each plot was eight hills square; that is, sixty-four hills. Three kernels were dropped in each hill, in rows three and one-half feet apart. Planting and covering was done by hand to assure accuracy. A blueprint was then made of the entire field so that the plots could be found quickly.

Throughout the summer the plots were well cultivated. Plots were frequently checked for stand and for outside influences that might affect the yield. Data were accumulated.

Late in September, careful surveys were made. The following data were summarized: per cent of worthless ears, per cent of nubbins, per cent of market ears, per cent of seed ears, per cent of barren stalks, per cent of suckers,\(^1\) per cent stand (Oct. 1), and bushels per acre. Regarding germination, the per cent of strong, weak or dead kernels was determined.

These data, together with the number of the plot and the name of the farmer from whom the seed was taken, were put on a placard and placed at the head of the plot.

A County Picnic was then widely advertised. People came from all over the county to see the results of the

\(^1\) Bliss, R. K. Personal Interview. Ames, Iowa.
experiments. A crowd of three or four thousand people was not unusual. The forenoon was spent in comparing the various plots. Some farmers were greatly embarrassed to see how poorly their corn compared with other samples.

Holden often told a story of a certain farmer who came to the County Picnic to see the results of the experiments. When he saw the weak stalks and poor stand of the first plot, he blamed the squirrels for his plot was on the outside. When the second plot was reached and the difference in vitality and stand was no less apparent, he remarked that this plot was on low ground and no doubt had been too wet. The third plot revealed a similar difference between his and other samples. Here, the farmer said, the cut worm had been working on his plot. When the fourth plot was reached, the farmer could think of no alibi for the poor showing of his sample. He finally recalled that he had gone out to the crib one night after dark and with the aid of a lantern had selected his seed corn.¹

At noon the farmers and their families ate a picnic dinner. Soon after dinner the program began. Lectures and demonstrations were given by Extension Staff members and by prominent local citizens. Experiment results as well as other phases of agriculture were discussed. Sometimes entertainment of a special nature was provided.

In counties where experiments were conducted with small grain and alfalfa, the procedure was necessarily different but none the less effective. A common method of experimenting with alfalfa was to have a plot four rods square. Half of this plot had been limed previously. Another half of the plot had been fertilized. The limed and fertilized portions overlapped in such a way that one quarter of the plot had both lime and fertilizer; another quarter had only lime; a third quarter had only fertilizer; and the fourth quarter had neither lime nor fertilizer. Comparisons could be noted in the stand, quality, and productivity of the various portions of the plot.

Experiments with small grain dealt with yield, quality, rust-resistance and its ability to keep from lodging.

The County Farm Experiments were a very effective means of teaching the ideals that Holden upheld. These experimental farms reflect Holden's philosophy of education more than any of his other activities. It gave him an opportunity to teach by the direct method. He believed in studying problems where they exist, under the same conditions in which they exist. The County Farm gave him this opportunity.

The Grange

Holden was a strong advocate of farmers' organizations.

He believed that the next great movement in Iowa would be toward organization of the agricultural population. He urged a revival of the Grange for he considered it the best of the current organizations. The reasons he gave for organization were:

1. To improve the economic status of farmers through united, cooperative effort.
2. To increase the number of social contacts of farmers.
3. To increase the political influence of agriculture.

In order that he might set an example and at the same time indoctrinate the young staff with which he worked, Holden organized a local Grange which functioned for several years. Mr. George Stayner, Secretary of the Extension Service at that time and a member of the local Grange, was appointed to the office of General Deputy for the State of Iowa of the National Grange.

Holden's premonition in regard to rural organization has been vindicated but the Grange was doomed to practical obscurity. After Holden left Iowa, the Farm Bureau made its debut and has dwarfed any other farm organization since.

Boys' and Girls' Activities

Holden's disappointment in the failure of farmers

generally to permanently adopt good farming practices led him to the conclusion that permanent adoption could only be achieved through the education of youth.

The first action in this direction was the joint sponsorship in 1909 of a corn raising project by the Extension and Agronomy Departments. Five hundred boys took part. The climax of the project was the junior state contest, the first ever held, in Ames during the regular annual short course in January 1910. An organization was started at that time which adopted a constitution and elected officers.

In 1910 the Extension Department assumed full control of boys' and girls' activities. That year seven courses were offered to boys and girls between 10 and 16 years of age. The courses offered were: general corn growing, ear to row corn growing, growing better oats, gardening and potato growing, cooking, sewing, and home management.

Where several young people in the same community were enrolled in one or more courses, they were urged to form a club. This was the forerunner of 4-H Club work in Iowa.

Closely allied with the work with boys and girls was the attempt to introduce agriculture courses into the public schools, particularly rural schools. A. V. Storm was in charge of this arm of the department. The three major problems in this phase of the work were: the development of favorable public sentiment; the preparation of material to
be taught; and the preparation of teachers. The latter problem was a difficult one in view of the short tenure of teachers and the lack of agriculture courses in our Iowa schools.

Some progress was made, particularly in Wright County under County Superintendent C. H. Benson's direction, in Page County under Miss Jessie Field's direction, and in Keokuk County under Cap Miller's direction.

**Bulletins and the Press**

Holden was a prolific producer of bulletins. Not all of the bulletins issued by the Extension Department were prepared by him but the encouragement he gave to this phase of the service no doubt had much to do with the voluminous production. Thousands of bulletins were issued annually on every phase of farming and home economics.

Some of Holden's bulletins were translated into foreign languages and used in foreign lands, especially in Spain, Russia, and Mexico. The following letter was received from Porfirio Diaz, then President of Mexico, upon receipt of a copy of Holden's bulletin, "The A B C of Corn Culture":

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"Mexico, January 21, 1907

Mr. P. G. Holden,
Ames, Iowa.

Dear Sir:

Lic. Gorospe kindly handed to me your book entitled "The A B C of Corn Cultivation (Culture)" which you kindly sent me through him and I hasten to give sincere thanks for this delicate expression, which I will carefully preserve in the prominent place to which it has a right in my library, amongst the most interesting books I have.

I remain,

Yours very sincerely,

Signed, Porfirio Diaz."

Holden also made good use of the press of the state. Generally, his work was popular with the newspapers; as a consequence, he was given much favorable publicity. The publicity not only helped to extend his influence but aided materially in fostering the entire extension program. He never failed to give due credit to the press in his annual reports.

Growth of the Extension Department

The Extension Department grew steadily in proportion to the funds appropriated by the state.

Inasmuch as communities benefitting from extension activities paid all local expenses, the greater share of the state appropriations was spent for salaries. The following table illustrates how funds were spent in the first four
years of the department's existence: 1

<table>
<thead>
<tr>
<th>Item</th>
<th>1906-07</th>
<th>1907-08</th>
<th>1908-09</th>
<th>1909-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>$10,065.38</td>
<td>$13,668.86</td>
<td>$15,549.10</td>
<td>$21,348.14</td>
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<tr>
<td>Stenographic help</td>
<td>1,576.88</td>
<td>2,000.00</td>
<td>2,040.00</td>
<td>2,200.00</td>
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<tr>
<td>Traveling expenses</td>
<td>535.78</td>
<td>1,038.18</td>
<td>1,300.00</td>
<td>1,400.00</td>
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<td>Stationery and postage</td>
<td>473.29</td>
<td>1,328.20</td>
<td>1,200.00</td>
<td>1,300.00</td>
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<tr>
<td>Charts, Maps, Express, etc.</td>
<td>506.78</td>
<td>1,118.22</td>
<td>1,300.00</td>
<td>1,400.00</td>
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<tr>
<td>Printing, Bulletins, etc.</td>
<td>590.93</td>
<td>1,654.37</td>
<td>1,000.00</td>
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<td>Additional office help</td>
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<td>1,500.00</td>
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<tr>
<td>Additional outside help</td>
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<td>200.00</td>
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<td>Books</td>
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<td><strong>Total</strong></td>
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<td><strong>$27,000.00</strong></td>
<td><strong>$27,000.00</strong></td>
<td><strong>$32,000.00</strong></td>
</tr>
</tbody>
</table>

In the following table, which indicates the expansion of the Department in the period 1906 to 1911, one may observe how the amount of activity was in direct proportion to the sum appropriated. 2

<table>
<thead>
<tr>
<th></th>
<th>1906-07</th>
<th>1907-08</th>
<th>1908-09</th>
<th>1909-10</th>
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<tbody>
<tr>
<td>Appropriation</td>
<td>$15,000</td>
<td>$27,000</td>
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<tr>
<td>Letters, circulars,</td>
<td>52,000</td>
<td>75,000</td>
<td>140,000</td>
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<td>185,000</td>
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<tr>
<td>etc., rec'd &amp; for'd.</td>
<td></td>
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<td>Publications, leaf-</td>
<td>85,000</td>
<td>150,000</td>
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<td>lets, etc. printed</td>
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<td>Regular Short</td>
<td>4</td>
<td>11</td>
<td>16</td>
<td>21</td>
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<tr>
<td>Courses</td>
<td></td>
<td></td>
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<td>Domestic Science</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>Short Courses</td>
<td></td>
<td></td>
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<tr>
<td>County Experiment</td>
<td>7</td>
<td>12</td>
<td>14</td>
<td>13</td>
<td>16</td>
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<tr>
<td>Stations</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Junior Enrollment</td>
<td>500</td>
<td>6,420</td>
<td>15,454</td>
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<tr>
<td>Miles traveled</td>
<td>78,000</td>
<td>135,500</td>
<td>198,000</td>
<td>255,000</td>
<td>270,000</td>
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<tr>
<td>People reached</td>
<td>10,050</td>
<td>19,250</td>
<td>50,500</td>
<td>79,700</td>
<td>167,000</td>
</tr>
<tr>
<td>through Short</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Courses, Farmers'</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Institutes, County</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Station Picnics,</td>
<td></td>
<td></td>
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<tr>
<td>Corn Shows, Fairs,</td>
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<tr>
<td>Carnivals, exhibit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>cars, Special trains.</td>
<td></td>
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<td></td>
<td></td>
</tr>
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<td>(sic)</td>
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</tbody>
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As the Department itself expanded into new fields, the personnel increased in number. Where in 1906 there were six major divisions, there were in 1912, nine. The number of specialists had increased from six to twelve. Two part time specialists also were employed in 1912. The amount of work to be done in certain divisions demanded the addition of specialists. The staff personnel for the year 1911-12, Holden's last with the Iowa State
College Extension Department, was:

Regular--

Superintendent--P. G. Holden
Schools--A. V. Storm
Soils--A. H. Snyder
Animal Husbandry--R. K. Bliss, A. A. Burger
Domestic Science--Neale S. Knowles, Louise Campbell
Farm Crops--M. L. Mosher, M. McDonald
Horticulture--G. R. Bliss
Dairy--Theodore Macklin
Dairy Test--R. A. Cave
Agricultural Engineering--E. Y. Cable
Secretary--C. E. Stayner

Special Help--

Domestic Science--Mrs. Salesbury (sic)
Farm Crops--M. A. Hauser

Much of Holden's success in his administration of the extension program must be attributed to the fine work of his staff. The foresight and ingenuity that he exhibited in selecting staff members has been borne out in succeeding decades through the work of those whom he chose to work with him. The current Director R. K. Bliss, Assistant Directors Murl McDonald and Paul Taft, Extension Animal Husbandman E. L. Quaife, and District Extension Agent H. L. Eichling, all worked with Holden and were appointed to a place on the staff upon his recommendation.

These men, with those appointed subsequently, have carried on the work of the department. According to most recent figures available, the Iowa State College Extension Service in 1939 reached 165,000 families or approximately
one-fourth of the families in the state while the national average for all states indicated that only one-sixth of the families were reached in that year. The trend has been, and still is, toward greater expansion.

Holden in Politics

Holden, influenced by Iowa agricultural interests, notably Wallace's Farmer, resigned from his position as Superintendent of the Extension Department and entered the political field. He ran for the governorship of Iowa on the Progressive-Republican ticket. His opponent was George W. Clarke, incumbent Lieutenant Governor. Clarke defeated him in the June Primaries by about 18,000 votes. The political machine behind Clarke who had served four terms in the state legislature previously was more than the Holden supporters could overcome. Nevertheless, it was a spirited campaign.

Holden's defeat in the race for the governorship signalled his departure from the state that he had served for a decade. The International Harvester Company interviewed him and immediately placed him in charge of their newly formed Extension Department. The scope of this new
project was nation-wide. This again placed him in the field of his greatest interest and obviously in the field of his greatest ability, extension education.
HOLDEN, THE EDUCATOR

Analysis of Holden's Ability

In Holden's departure, Iowa lost a truly great educator. Fundamentally, he was a teacher. His other outstanding abilities, i.e., platform lecturing, organizing, experimenting, were secondary to teaching.

Of great significance in an analysis of his ability were his teaching methods and his philosophy of education. Both show him to have been far ahead of his time. Effective modern methods he used were:

1. Teaching without a textbook. Holden deplored the existing practice of following a textbook scrupulously. To him it indicated a lack of understanding of the subject matter on the part of the teacher.

2. Teaching by charts, photographs, and tables. Holden used these teaching techniques very effectively. Results of experiments were interpreted simply by means of charts and graphs. Unusually striking examples were photographed. A photographer was ever present with Holden in the field.¹

3. Teaching by the laboratory method. Holden never passed up an opportunity to have the student "learn to do by

¹ Eichling, H. L. Personal interview with the writer.
Ames, Iowa.
doing". Hence, much of his instruction was based upon this theory.

Holden's ability to understand the group with which he worked did much to accentuate the soundness of his teaching methods. A young man once described Holden to his father thus: "He was a man who could stand in front of his audience and tell immediately whether he should say ten, a hundred, a thousand, or a million to make it sound like a hell of a lot."

Holden's philosophy of education indicated that he was practical and that his ideas conformed to accepted theories of modern educators today. His philosophy is briefly but well stated in the following quotation:

"It is now conceded that education is for everyone and that its object is to fit (one) for life's work. If this is true, then it is certain that Agriculture and Home Making must have an important place in the public school work of the future.

"There are three principal results to be gained: first, to develop respect and love for the common duties of life. Too often the sentiment developed in our schools and entertained by many parents has been that the purpose of education is to enable one to get along without work. This is the wrong attitude toward labor. The great purpose of education is to enable one to do more and to do it better. Our schools should help to develop this fundamental principle: that doing the common things of life, and doing them better every day is the real measure of success in life.

"Second, these things should be taught in our schools because of what they will do directly for agriculture; that is, because they will mean more and better corn, better stock and more wealth for the state.

"Third, but especially are they needed in our schools because of what they will do for the boy and the girl and for the school itself—for citizenship. The child will make the better progress intellectually, morally and physically, when he is studying these things which most intensely interest him, his parents, and those about him."

Holden's interest broadened as he continued extension work. By the end of his active career as an educator, he had written dozens of bulletins on many phases of agriculture and the home. Topics about which he wrote were: the house-fly, alfalfa, the silo, diversified farming, sweet clover, cattle diseases, weed-eradication, poultry, hog cholera, sheep, seed corn, potatoes, disinfection of farm animals, the pit silo, and others of a kindred nature.

The wide range of Holden's interests remind one of that eminent American, Benjamin Franklin, who did so much to improve living conditions through thoughtful experimenting and writing in many fields. The wide scope of Holden's interest is expressed in this excerpt, taken from the columns of the Shenandoah Evening Sentinel, October 21, 1926:

"Professor Holden believes in anything that means better farming, better homes and better communities. He believes in better country schools. He believes that a country boy or girl should have the same opportunity for an education as have the city boy or girl. He is a man of vision, a man of action. Whatever he starts, he
Holden organized the International Harvester Company Extension Service and served as its Director from 1912 to 1932. His work with that company was national in scope. Especially noteworthy in this period was his campaign to alleviate the serious economic conditions in the South brought about by the partial loss of the cotton market following the World War. The campaign conducted with the aid of a corps of sixty trained agriculturists was to discourage the one-crop system of farming and to encourage diversification. An example of how well the campaign succeeded is furnished by Arkansas which, according to Ivins and Winship, increased its corn production by 2,000,000 bushels; its wheat production by 500,000 bushels; its oat production by 2,250,000 bushels; and its potato production by 2,250,000 bushels. This gain in production was worth $30,000,000 to the state.1

Holden carried into this new field the same enthusiasm and action that had characterized his work previously. But the strain of more than forty years of strenuous work began to take its toll. In 1932, twenty years after he had joined the Harvester Company, Holden, who had never been robust, resigned the position in the interest of his health. He went into retirement at Whitehall, Michigan where, at this writing, he is still residing.

SUMMARY

Agricultural colleges, established in the latter half of the Nineteenth Century, came to have three functions. These were:

1. To provide instruction.
2. To foster research.
3. To provide means for the diffusion of new, scientific discoveries.

P. G. Holden became identified with the third of these functions, that is, extension. His coming to Iowa was the turning point in Iowa Agricultural Extension History. His tenure at Iowa may be divided into two periods. The first period was from 1902 to 1906 in which Holden popularized extension education in the state through corn trains, local short courses, farmers' institutes, bulletins and the like. The increasing demand by the state for these activities culminated in the passage of the Extension Act, April 10, 1906 by the Thirty-First General Assembly of Iowa.

The passage of this act introduced the second period of Holden's work in Iowa, the period in which he helped organize and became the first Superintendent of the Iowa State College Extension Department. In this period an effective program was set in motion almost entirely without
precedent. Holden's vision, initiative, and organizing ability were qualities that made it possible for him to render to the people of Iowa a great service.

The name of Holden became a household word in Iowa. The name became synonymous with good farming practices, healthy homes, and rural education.

Holden was a great teacher, an effective lecturer, an inspiring leader and organizer. Hungerford, a man who knew him personally, wrote of Holden: "His work showed him to be a live wire, a man of pep and upstanding qualities in everything he undertook. More of the lecturer than the scientist, he had the faculty of imparting enthusiasm to his hearers and enlisted their interest like a true crusader..."1

Holden left the Iowa State College Extension Department in 1912 to become the Extension Director for the International Harvester Company. Iowa lost a great educator but the impetus that he gave to extension education in Iowa had its effect. Under the leadership, in the main, of men that worked under Holden the Iowa State College Extension Service has made great progress and today enjoys a position that compares favorably with that of any state in the union.

BIBLIOGRAPHY


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