

Agricultural & Mechanical College

OF MISSISSIPPI

CHEMICAL LABORATORY.

JOHN A. MYERS,
State Chemist.

AGRICULTURAL COLLEGE,

Dec 10

188 2

Post. J. K. Patterson
Lexington, Ky.

Dear Sir:

It has come to our ears that a Mr. Townsend from this place, who lately moved from here to Lexington, is trying to make some Capital of the disturbances in the College here. He is on the side of the Professors who resigned and I understand is somewhat of an "alarmist," though I believe a friend of mine.

I enclose some extracts - the most important so far as I can secure them, that have appeared in the papers. There is considerable feuding throughout the State in regard to the resignation of one of the Professors - Dr. Sullivan. The others are only mentioned and do not attract much attention. The effort is being made to drag into the fight the 60000 Methodists of whom Dr. Sullivan boasted that he had them at his back. It is difficult to tell what the outcome of the fight will be, but so far, the Preachers have been terribly beaten. So much so, indeed, that they are not likely to

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appear in print, either in their own defense or in an attack upon the college. They may however do a terrible amount of mischief without that.

Sen. Lee in his report marched straight into their camp, and I never saw men get a worse lashing than he gave them, stating very clearly his charges against each, and offering to prove the charges if the Board wished it. The charge against Dr. Roubenush was virtually that he was using all possible means in his power to break down the college. (He has been trying for three years to be president of it) Last spring he tried to prevent the Legislature from giving us an appropriation. Dr. Sullivan evidently thought that in order to quiet the row that would be raised by Roubenush with Sen. Lee, that the Board would probably cut off both of their heads, then he would run in as president. But he was incompetent to teach the simple mathematics, and last year Sen. Lee had to get a tutor to teach surveying as Sullivan could not do so, and so stated to the President and to two members of the Board. Their plan was to use up Sen. Lee inch by inch. The storm has

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here gathering for two years, and it burst sooner than the preachers had expected, and with more violence.

The Board met, and the professors were cited to appear. Mr. Lee read his Report which was a powerful document, and which came down upon them like your speech at Frankfort, so that when it was through with, they sat almost stupefied for a moment, as if wondering "what next!"

In finishing his Report he rolled the whole responsibility over onto the shoulders of the Board, and closed with "Gentlemen of the Board I close my Report with the addition of one single document to which I call your special attention. It is the Address of Pres. Patterson to the Legislature of Ky, in his efforts to sustain the claims of that A. & M. College before that body, against the united efforts of the preachers and Sectarian Colleges of that State. By their united and persistent efforts they have paralyzed that splendid institution, just as these two preachers are trying to do with this one.

It now remains with you to apply the remedy.

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which must be the surgical knife, the cut must be a clear one, or the old sore will again break out, worse than now. This is the critical moment in the history of this Institution and with you, gentlemen, rests its success or failure.

For a week afterwards "resignations" were the order of the day, but it was so skillfully managed that as fast as one stepped down, some one took his place, so that the students did not miss a single recitation, and if it were not for the fuss in the News papers we would now never know that anything had happened. Everything in the college is moving along nicely - over 250 students and new ones almost every day.

I was not in the fight, and was quite largely the confidant of both sides. It does not disturb me in the least, and will, after the shock is over, benefit the college, I think.

The Board meets Jan. 1st to fill vacancies. Applicants must be successful to your Institution. They all have to make a big fight at first.

Respectfully

John A. Myers

Agricultural & Mechanical College

OF MISSISSIPPI

CHEMICAL LABORATORY.

JOHN A. MYERS,
State Chemist.

AGRICULTURAL COLLEGE,

Dec 13

1882

Pres. Geo. K. Patterson,
A. & M. College of Ky

Dear Sir:

We wish to make a few private inquiries of you with regard to a gentleman from Ky. who is making application for the Professorship of English in this institution.

It is Col. Geo. M. Edgar, princ. of Bowling Green Female College.

Did he have anything to do with that violent opposition to the A. & M. College of Ky. at Frankfort last winter? If so can you tell us what it was? Did he not have something to do with a Petition sent in from Bowling Green, asking that the Legislature do not make appropriations to the A. & M. College, or something to that effect?

My impression is that he took a very active part in that business, but my recollection does not serve me well enough to be positive about it.

An early answer will greatly oblige us here, as the election will take place Jan 1st.

Respectfully

John A. Myers.

The Ohio Agricultural Experiment Station.

ESTABLISHED 1882.

BOARD OF CONTROL.
Gov. GEORGE HOADLY, Ex-Officio.
EMMETT MIX, President.
W. N. COWDEN, Secretary.
J. C. STEVENS, Treasurer.
WILLIAM R. LAZENBY, Ex-Officio.

Experiment Grounds and Offices at

THE OHIO STATE UNIVERSITY.

OFFICERS.

WILLIAM R. LAZENBY, Director.
H. A. WEBER, Chemist.
WM. B. ALWOOD, Sup't Field Experiments.
W. S. DEVOL, Botanist.
W. J. GREEN, Horticulturist.

Columbus, O., Oct. 19 1885

Hon. Jas. K. Patterson Ph. D.

State College

Dear Sir,

Lexington Ky.

Am just in receipt of your favor of 17th. There must have been some accident to Prof. Sewell's reply to you. Perhaps the letter was lost. I heard from him some time ago, when he told me that the position had been offered him.

I will write him at once and inform him of the delay and the inconvenience under which you are laboring on that account.

Very respectfully

H. A. Weber

Hope you will be a little patient a little longer, as my letter may not reach him at once.

Bagdad May 4"/88-

J. R. Patterson, Pres-
Dear Sir.

I learned to day That
L. H. Blanton of Richmond was down in our
Co. on last Saturday consulting with certain parties
in regard to applying to the Gen Gov - to get it to
establish an Experimental Station, also a Signal Service
Station at Richmond. Now I think that is all wrong
on this part. I believe it is done or trying to be done
to defeat the aims of the A & M. Co. I understand that
Blanton ~~said~~ said, Col. Bruckneridge was for
him in this matter. I had thought something about
this matter & intended to speak of it. I want
his thinking perhaps you were not aware of
Blanton's movements, & if there is any merit -
in the matter you ought to be moving. I think
both stations ought to be established in connection
with the State College. If you think proper you
might consult with some of the resident mem-
bers of the Board & if decide it is worth fighting
for, write to Popper Black & Blackburn - &

try & get them interested in behalf of the College
 I would lay the matter before Col. Buckenridge
 also. I feel satisfied Blanton will continue to throw
 obstacles in the way of the College as long as he can -
 or at least until the 1/2 ct. tax has been repealed -
 He has Honor by the more & conceal his when
 he pleases. But that is @ small matter as Honor
 doesn't wield @ very great influence anyway -
 Does it not seem @ little inconsistent on the part
 of the Chancellor of @ Theological Seminary to be
 petitioning the Gov. - to establish an experimental
 Station. also signal Station in connection with such
 an institution especially when said Chancellor had so
 short @ time previous, did all in his power to prevent -
 the only A & M College in his state from raising the
 standard of Education for such institutions - on the plea -
 - say pretext - that it was receiving state aid. & thereby increasing
 educational expense - would like to know what you
 think of this. No. seems to be making @ success of the
 Station. is it not even in connection with the A & M - Col-
 lege. I expect to be in Tex. on next Monday &
 Tuesday & would like to talk with you awhile -

Yours. Resp
 Phil. Bird

Committee of Board of Regents
in charge of the Station:

HON. HIRAM SMITH,
SHEBOYGAN FALLS.

HON. H. D. HITT,
OAKFIELD.

HON. C. H. WILLIAMS,
BARABOO.

UNIVERSITY OF WISCONSIN.

AGRICULTURAL EXPERIMENT STATION.

Officers of the Station:

W. A. HENRY,
PROF. OF AGRICULTURE.

WM. TRELEASE,
PROF. OF BOTANY AND HORTICULTURE.

H. P. ARMSBY,
PROF. OF AGRICULTURAL CHEMISTRY.

Madison, Wis., May, 1885

Dear Sir:

This Station proposes in future, in exchanging publications with other Stations, Agricultural Colleges, etc., to send to each a sufficient number of copies to supply its library and also such of its officers and assistants as may desire it. If you are willing to exchange, will you please inform us how many copies we shall send your institution and how we shall address them.

We should be glad to receive your publications on the same plan, if agreeable to you. We would like five (5) copies of all reports containing any accounts of experiments of any sort, and one (1) copy of your annual catalogue.

Please address such exchanges, not to individual officers, but to Agricultural Experiment Station, Madison, Wis.

Very truly yours.

H. P. Armsby.
for the Station.

The Ohio Agricultural Experiment Station.

ESTABLISHED 1882.

BOARD OF CONTROL.
Gov. GEORGE HOADLY, Ex-Officio.
EMMETT MIX, President.
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W. S. DEVOL, Botanist.
W. J. GREEN, Horticulturist.

Columbus, O., Sep. 7 1885

James B. Patterson Ph. D.
Pres. State College
Lexington Ky.

Dear Sir.

Many thanks for your
kind favor of the 3^d Inst. In reply to the
same I can only say, that I am thorough-
ly convinced, that Prof Scovell is the man
whom you want. His present address is:
Prof. M. A. Scovell
Ottawa Kansas.

If you will be kind enough to drop him
a line, he can send you testimonials
as to character and ability from prominent
men, with whom you will no doubt be
acquainted.

Agreeing fully with you in your desire to
make the work done of a high order and
thanking you once more for your kind favor
I am

Very respectfully H. A. Steben

Agricultural and Mechanical College,

OF MISSISSIPPI.

EXECUTIVE DEPARTMENT,

GENERAL S. D. LEE, PRESIDENT.

Agricultural College, Miss. Mch 24 1886

Dear Sir:

The Bill (No. 2938) for the establishment of Agricultural Experiment Stations, in the interest of Agriculture, at the several Agricultural and Mechanical Colleges in the different States, is now before Congress, having been favorably reported by Committee. As a member of the Committee, appointed by the Convention of Agricultural Colleges, which assembled at Washington last summer to forward the interests of this Bill when introduced. I ask that you at once individually and through your Board of Trustees and Faculty, bring such influences, as you deem best to secure the favorable action of your members of Congress, in the interest of this important measure, and secure its becoming a law. It is unnecessary for me to mention the great benefits to be derived by our respective Colleges,

Agricultural and Mechanical College, OF MISSISSIPPI.

EXECUTIVE DEPARTMENT,
GENERAL S. D. LEE, PRESIDENT.

Agricultural College, Miss. 188

and through us, the great benefits
conferred on our Agriculture, in
having such stations liberally sup-
ported by the General Government. I ask
your prompt and cordial cooperation in
this matter.

Yours truly
S. D. Lee
Member of Committee

Burnside La.
Oct. 14th. 1885.

Dr. James K. Patterson,
President State College
Lexington Ky.

My dear Sir:

I am in receipt of your letter informing me of my appointment as Director of the Experiment Station which you are about to establish.

I accept the position and will endeavor to be with you by the middle of November or first of December.

I was delayed in reaching this place and found your letter had been here some time upon my arrival. I immediately wrote the Commissioner of Agriculture, and delayed answering your letter until I could give you information as to the time I could be with you. I regret that I could not intelligently answer sooner.

I expect to leave here in about two weeks and will try and make it convenient to stop at Lexington and look over the ground, and consult with you in regard to the

Establishment of the Station. I deem it quite essential that the Station should be established and well organized by the time the Legislature meets, and therefore will endeavor to take charge as soon as possible. Should I find it impossible to be with you soon, I will write you again giving you my views as to the organization &c.

Yours very truly

M. A. Scovell

Ottawa Kansas
Sept. 21. 1885.

Hon. James K. Patterson Ph. D.
President State College,
Lexington Ky.

Dear Sir:-

Your letter in reference to the Directorship of your proposed Experiment Station was duly received.

The intervening time has been taken up in considering the matter. I am favorably inclined towards accepting should the position be offered me.

I would be pleased to know how soon it would be necessary to have the Director take charge of the Station; also the probable amount of increase of salary after the first year should the Director give entire satisfaction. I am at present with the U.S. Department of Agriculture as superintendent of Experiments in the application of diffusion to sorghum and sugar cane. I am receiving a salary of \$200 per month and expenses. My object in considering a change is to secure a permanent position.

I believe with you that Kentucky offers a good field for the work you propose, and that much good may accrue from it.

Having carefully considered your letter and believing I could give you satisfaction I send herewith a letter from Dr. H. W. Wiley Chief Chemist U.S. Department of Agriculture, and Pres't. U.S. Ag'l Chemists Association, also return Prof. Weber's letter as requested.

As to my character and ability I can further refer you to:

Dr. S. H. Peabody, Pres't University Ills. Champaign Ills.
Dr. J. M. Gregory - Ex- " " " Washington D. C.
Prof. Geo. E. Morrow, Prof. Ag'l Un. Ills. Champaign Ills.
Prof. E. Snyder, Sec. Board Trustees Un. Ills. " "
Prof. J. C. Pickard, Prof. Eng. Literature Un. Ills. " "
Rev. W. G. Pierce, { Pastor 1. Cong. Church, Champaign Ills.
Judge J. W. Langley { Judge " "
Prof. S. W. Robinson, State University Ohio. Columbus.
Prof. A. P. S. Stuart Lincoln Neb.
Prof. E. B. Corogill, State Ag'l College Manhattan Kas.
Norman J. Colman, U. S. Com. Ag'l, Washington D. C.

I go to take charge of the Louisiana Diffusion Plant. Wednesday. My address will be Burnside P. O. Ascension Parish La.

Very Respectfully M. A. Scovell

State College, Centre County, Pa.

February 25, 1886.

DEAR SIR :

I am trying to make as complete a record as possible of the AGRICULTURAL EXPERIMENT WORK done and being done by the colleges that received the land-grant of 1862. I cannot do this without the co operation of the gentlemen interested, and I shall accordingly consider myself greatly obliged, if you can promptly return answers to the following questions. I should also esteem it a favor to receive A FULL SET of your publications, except such as you have already sent me. Please answer, as far as possible, on this blank.

Yours very respectfully,

GEO. W. ATHERTON.

1. Date of organization of the institution.
2. Has the institution conducted agricultural investigations, or experiments (systematic and *continuous*, or otherwise) and to what extent?
3. Has such work (if done) been carried on mainly or wholly as a means of instruction to students, or for the direct benefit of farmers?
4. Date of beginning that work.
5. Do you call that department by the technical name, "Experiment Station?"
6. If so, when did you first adopt the name?
7. Is the "Experiment Station," if so called, established by law, or by the Board of Trustees without a specific law, or by the Faculty or the professor in charge merely as a convenient designation?
8. Date of adopting, name, whether by law or otherwise. Please send a copy of the law—if any.
9. What have been the main lines of your experiment work, either as a college, or a station?
10. How is the work regarded by practical farmers?
11. How great is the demand among farmers in your State for the education of their youth in agriculture, specifically?
12. How does it compare with their demand for practical information, for their own immediate use?
13. In what form, and how frequently, do you publish results?
14. How much do you expend annually in agricultural experiments, and from what source are the funds derived?

Association of American Agricultural Colleges and Experiment Stations.

OFFICE OF THE EXECUTIVE COMMITTEE,

CIRCULAR.

AGRICULTURAL COLLEGE, MD., *June 23, 1890.*

The Senate passed the new Morrill Bill today, by a practically unanimous vote. The bill has been considerably amended, and your Committee believe it to be improved. On Wednesday next, 25th, the Committee on Education of the House will act upon the bill and a favorable report is expected. We are now ready for work in the House of Representatives, and wish to prepare for this systematically.

The next step is to organize for a thorough canvass of the House. We ask you to ascertain what member of Congress from your State can be relied upon, not only to act for himself but to work among his colleagues and make a canvass of your State delegation. We want at least one member from every State, named to our Committee as the person to consult in Washington, on all points connected with this matter, so far as his State delegation is concerned. In a delegation divided politically, it may be well to carefully select two members as active workers and name them to us. Address our Committee at the Ebbitt House, Washington, D. C., until further notice.

Then we ask you to begin, from home, a general appeal from influential persons, to every Congressman from your State. Lose no time. Reach every member in every proper way, and as effectively as you can. Use the Alliance and the Grange where it can be safely done. The Washington representatives of these National organizations are heartily with us and helping.

We have lately mailed to you a fair supply of Senator Blair's Report on the Bill, and of a little leaflet on the subject, prepared for the Committee by Dr. Atherton of Pennsylvania. The former were in franked envelopes ready for re-mailing. As soon as possible we will send a copy of the bill as passed by the Senate.

Work vigorously from this date till something is accomplished. And be prepared to come yourself, or send a good representative from your institution, for a week's work in Washington, on short notice, when called upon.

Yours, respectfully,

FOR THE EXECUTIVE COMMITTEE,

Henry E. Alvord.

Chairman

OF THE

UNIVERSITY OF ILLINOIS,

Upon the recommendation of the Section on College Work, the Convention adopted the following declarations regarding The New Morrill Act, for "the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts":

1st. That every college should keep a separate and distinct account with the income to be derived under the Act of Congress approved August 30, 1890.

2d. That in the expenditure of the new college income, the institutions here represented should conform to a strict interpretation of the language of the law as to the application of these funds.

3d. That in view of the history of the New Morrill Act and the decisions of the First Comptroller of the Treasury that under it the two annual payments are now due and payable to the States, and the fact that instruction during the academic year of 1889-1890 is a thing of the past, the annual payment of \$15,000 for the year ending June 30, 1890, should be regarded as far as practicable as an equipment fund, and that the annual payment now past due for the year ending June 30th, 1891, should be applied to the expenses of the current academic year.

4th. That the officers of this Association be requested to respectfully urge upon the Secretary of the Interior the early payment to every State and Territory having one or more institutions organized under the Act of July 2d, 1862, of both payments now due under the supplementary act of 1890, in accordance with the evident intention of Congress to apply these benefits equally to all the States and Territories, and in order to avoid impeding the progress and development of industrial education which would result from withholding payments and reporting the same to Congress.

5th. That the first reports to the Secretary of the Interior, by college presidents and treasurers, should be made in the year 1891, before the first day of September, and should cover the operations of the year ending June 30th, 1891, and the disbursements of the income for that year, together with the use made of the first payment of \$15,000.

6th. That this Association desires to acknowledge its appreciation of the courtesy and liberal spirit shown by the Secretary of the Interior in his action regarding the New Morrill Act, and is gratified by the assignment of the business arising under this Act to the Bureau of Education with which the institutions concerned have official relations already existing, and it is respectfully suggested that the future transactions between the Department of the Interior and the colleges may be simplified and all interests conserved by making the Bureau of Education the depository of all records and reports and the medium for direct intercourse with the colleges, on all matters requiring final action by the Secretary of the Interior.

7th. That the College Officers should endeavor to bring to the attention of the legislatures of the respective States, at the earliest possible date, the necessary legislative action under the provisions of the New Morrill Act, and the representatives of the colleges present at this convention pledged their action and influence to ensure an equitable division or impartial application of all moneys received under this act, in full accord with the spirit of the law.

Correctly transcribed from the records of the Convention, and distributed by order of the Executive Committee.

M. A. SCOVELL, *Secretary.*

HENRY H. GOODELL, *President.*

Henry E. Alvord.
Chairman, Ex. Com.

Pres. Patterson,

Ky. A. & M. College:-

10 additional copies of this circular have been mailed to you in a large pamphlet envelope.

H. E. A.

OFFICERS, 1891-92.

PRESIDENT,

WM. LeROY BROUN, LL.D.,
President Agr'l and Mech'l College of Alabama,
Auburn, Alabama.

VICE-PRESIDENTS,

CHAS. W. DABNEY, Jr., Ph. D.,
President, University of Tennessee,
Knoxville, Tenn.

FRANK E. EMERY, B. S.,
Agriculturist, No. Ca. Agr'l Experiment Station,
Raleigh, North Carolina.

WHITMAN H. JORDAN, M. S.,
Director, Me. State College Agr'l Exp't Station,
Orono, Maine.

J. W. NICHOLSON, A. M.,
President, Agr'l and Mech'l College of La.,
Baton Rouge, Louisiana.

HORACE E. STOCKBRIDGE, Ph. D.,
President, North Dakota Agricultural College,
Director, No. Dak. Agr'l Exp't Station,
 Fargo, North Dakota.

SECRETARY AND TREASURER.

M. A. SCOVELL, M. S.,
Director, Kentucky Agricultural Exp't Station,
Lexington, Kentucky.

ASSOCIATION

OF

American * Agricultural * Colleges

AND

Experiment Stations.

OFFICE OF SECRETARY-TREASURER.

EXECUTIVE COMMITTEE,
1891-92.

Maj. HENRY E. ALVORD, CHAIRMAN,
President, Maryland Agricultural College,
Director, Md. Agr'l Exp't Station,
College Park, Maryland.

WM. LeROY BROUN, LL.D.,
President, Alabama Polytechnic Institute,
Auburn, Alabama.

WILLIAM FREAR, Ph. D.,
Vice-Director, Penn. Agr'l Experiment Station,
State College, Penn'a.

HENRY H. GOODELL, LL.D.,
President, Massachusetts Agricultural College,
Director, Hatch Experiment Station,
Amherst, Mass.

JOHN A. MYERS, Ph. D.,
Director, West Va. Agr'l Exp't Station,
Morgantown, West Virginia.

ARTHUR T. NEALE, Ph. D.,
Director, Delaware Agr'l Experiment Station,
Newark, Delaware.

M. A. SCOVELL, M. S., SECRETARY,
Director, Ky. Agricultural Exp't Station,
Lexington, Kentucky.

Lexington, Ky., April 21st, 1892

Prest. J. K. Patterson,

A. & M. College of Kentucky,

Lexington, Kentucky.

Dear Sir:-

For the purpose of defraying the necessary expenses of this Association during 1892, the Association at its Washington meeting in August last, adopted the following:

"That in accordance with the recommendation of the Executive Committee, each Institution eligible to membership be invited to contribute \$10.00 to the treasury of the Association during 1892, the same to be paid as early in that year practicable".

In pursuance of the above resolution, I inclose bill to your Institution, with the request that you recommend payment of the same at an early date.

Very truly yours.

M. A. Scovell Treasurer.

MASSACHUSETTS STATE
AGRICULTURAL EXPERIMENT STATION.

Department of Vegetable Physiology.

SPECIAL CIRCULAR.

It is the desire of this department to arrange within the State a thorough system for the prompt report of all serious diseases of cultivated plants which may appear during the present and following years. To this end, the Department earnestly invites the coöperation of all persons who may receive this circular. It is believed that a well organized system of this sort, thoroughly covering the state, will lead to important results in increasing our knowledge of the origin and spread of fungous diseases, and in pointing to rational and well-founded methods for avoiding and checking them.

The work requested of those who are willing to coöperate in this plan is as follows. Each observer shall keep himself informed as thoroughly as possible, during the growing season, concerning the prevalence of plant diseases in his vicinity; and shall promptly notify this Department of the appearance of any such trouble, sending with the notice a specimen from an infested plant, to show the nature and effect of the disease. Directions for sending such specimens will be found on page 4. The notice of the occurrence of any disease shall also contain all obtainable information upon the various points covered by such of the questions concerning grain-rust, printed on page 3, as are applicable to the special case.

In addition to this outlook for plant diseases in general, it is proposed to pay special attention to the particular disease or group of diseases chosen for the work of the year by the *International Phytopathological Commission*. This Commission is an organization which includes more than forty Vegetable Pathologists scattered over the entire globe and representing most civilized countries. Its object is the study of plant diseases in every aspect, but especially with reference to those features whose better understanding requires coöperative observations over wide regions. The subject for the present year is discussed on pages 2 and 3.

In the study of the International subject for the year, the Department also especially invites the coöperation of the agriculturists, horticulturists, and mycologists connected with the Experiment Stations in other states. Their reports will be carefully collated and arranged, and the results forwarded, with due credit to each, to the Secretary of the Commission, Dr. Paul Sorauer, of Proskau, Germany.

All persons who are willing to coöperate with this Department, as here requested, are urged to communicate at once with the undersigned. And everyone who receives this circular is especially requested to send to the Station the addresses of any other persons who may perhaps be willing and interested to join in the work. No such organized system of observation as is proposed for this state has, it is believed, ever been attempted anywhere. But it is perfectly practicable if progressive farmers, gardeners, and fruit-growers will recognize their own interests and unite to further them. This Department is anxious to avail itself of every means of assistance in the study of the diseases of our cultivated plants. It remains with the practical men to carry the plan here proposed to success. We confidently expect their hearty coöperation.

THE INTERNATIONAL SUBJECT FOR 1892.

The International Commission will undertake, during the present year, the investigation of the *Rust* of grain (wheat, oats, rye, barley), and all persons who will coöperate with the writer in observations on this subject are requested to give especial attention to the points covered by the questions printed below.

A brief review of our present knowledge of the *rust-fungi* which attack the small grains and related grasses may serve to help persons not already familiar with the facts to answer more intelligently the appended inquiries. The rusting of these grains may be due to one or more of three species of fungi, *Puccinia graminis*, *P. rubigo-vera*, and *P. coronata*, which agree very closely in their life-history. Each species appears in three chief forms at different stages in its development. On the leaves and stems of the grain are formed in early summer the masses of reddish-brown spores which give the name *Rusts* to these fungi; these are followed later in the season by black or very dark-brown spore-pustules, the black-rust stages; and the black-rust spores when they germinate, commonly in the following spring, produce the third or cluster-cup stages, not on grain, but on another plant. The spores from the cluster-cup in their turn repro-

duce the fungus on grain, giving rise to the red-rust form, thus completing the cycle. The plants on which the cluster-cup form is produced are different for each of the species named. Thus *P. graminis* develops its cluster-cups on the barberry (*Berberis*); *P. coronata*, on the blackthorn (*Rhamnus*); and *P. rubigo-vera*, on various plants of the Borage family, the houndstongue (*Cynoglossum*), blue-weed (*Echium*), and others. But it is probable that all these species can in some way omit the development of the cluster-cup stage and propagate themselves by their rust-forms from year to year. Information as to how this is accomplished is much needed. Some varieties of grains are evidently much less attacked by rust than others; and a given variety rusts less under some systems of cultivation than under others. Information which will lead to further knowledge on these points is of the greatest practical value. The different species of rust-fungi above named do not appear to produce just the same sort of injury to grain, or to be most injurious in just the same stage; and there is much to be learned concerning their differences in these respects.

Replies are desired, then, to the following questions from as many different sources as possible:

1. When and where have you first observed the disease?
2. When was the crop planted and how has it been fertilized and cultivated?
3. What varieties have been attacked; which worst and which least.
4. To what extent has the disease spread from the place where it first appeared?
5. What proportion of the crop has been lost, or what part of its value does the damage by the disease represent?
6. What part of the plant has been chiefly damaged, and what is the nature of the injury?
7. In case of winter grain, have you seen any evidence that the fungus wintered over in the plants?
8. Please send specimens of the attacked parts, to enable determination to be made as to which species of rust is the cause of the trouble described.

JAS. ELLIS HUMPHREY,
Vegetable Physiologist.

C. A. GOESSMAN, *Director*.
Amherst Mass. May 5th, 1892.

DIRECTIONS FOR SENDING SPECIMENS SHOWING PLANT DISEASES.

Herbaceous or succulent parts of plants may be sent either fresh or dried. If it is desired to send them in the latter form they should be placed as soon as possible after being gathered, and before wilting, between several layers of absorbent paper (blotting-paper is best, but newspapers may answer). They are now dried as quickly as possible in the sun or near the kitchen stove, under light pressure, sufficient to keep them flat, but not to crush them, while the papers, except the single layers in immediate contact with the specimens, are replaced twice a day by dry ones. This is continued until the specimens are quite dry. They may then be laid between sheets of paper and then wrapped in a larger sheet, with a piece of stiff paste-board to protect them from injury.

Fresh specimens should be carefully wrapped separately in waxed or tissue paper, and packed in a tight tin box, such as a baking-powder or spice box, preferably with a bit of moist—not wet—cotton or peat-moss (*Sphagnum*) to keep them fresh. If several leaves or fruits are sent they must be separated from each other by at least one thickness of paper, to prevent molding and decay from the excess of moisture.

Woody parts of plants may usually be sent fresh and require only to be wrapped in paper. Sometimes, when quite young and green, they are better packed as above recommended for fresh succulent parts.

Postage on any of these specimens is at present one cent for each ounce or fraction thereof.

In selecting specimens to be sent, care should be taken to choose, as far as possible, such as show different stages of the disease; since the cause of a trouble is often most apparent at some particular stage of its development, and because a series showing successive stages often furnishes valuable information concerning the development and progress of a disease.

M. A. SCOVELL, DIRECTOR.

CLARENCE W. MATHEWS, HORTICULTURIST.

Estimates for 1892-93 - Sep. 1892
Kentucky Agricultural Experiment Station.

DIVISION OF HORTICULTURE.

\$12 00

Lexington, Ky., 189

	Minimum	Maximum
(1) Books	\$ 100.	\$ 250.
(2) 2 Students ^{has 6 now} Microscopes ^{depending upon} number in class	90. to 5	225.
(3) 2 Microscope Objectives ^{1/8 and 1/2} ^{one of these was asked for this term} ^{but postponed on acc of lack of funds.}	80.	80.
(4) Laboratory Equipment including revolvers for present compound microscopes, simple microscopes &c.	50.	100.
(5) Plants for greenhouse including material for class study	50.	60.
(6) Alcohol, Stains and Chemicals.	20.	20
(7) Glassware in Microscopy including 2 or 3 Bell- jars	10.	15.
(8) Small quantity of Nursery Stock with implements for grafting, Budding &c. for class in Hort.	25.	40.
(9) Stationery	10.	10
(10) For beginning of the account of Dr. Peter Herbarium	20. + continuing same.	60.
	\$ 450.	860.
(11) Botanical Garden not including work of direct ornamentation of College Grounds. under H. Harlins plans, which still remains under Prof. Scovell's direction	250. 705.	500. 1360.

These estimates do not include any labor acc. nor
the expense of an assistant which I hope the college and
Exp Station, ^{jointly or otherwise} will grant me on or before Jan, 1st, 1893.

47-M-64

Association of American Agricultural Colleges and Experiment Stations.

OFFICE OF EXECUTIVE COMMITTEE.

No. 932 New York Avenue,

Washington, D. C., October 1st, 1892.

Hon. John Young Brown
President, Board of Trustees
State College of Kentucky

DEAR SIR: Your personal attention is invited to the enclosed notice of the Sixth Annual Convention of the Association named and to a few points in connection therewith. These conventions are annually growing in interest, and yet, it is felt that their value is not fully appreciated by all the institutions entitled to participate in the meetings, and it is particularly desired to make the Association and its work better known to members of the Governing Boards of the several Colleges and Stations. To that end it is desired to have such members attend the conventions, as delegates or otherwise, and thus become personally acquainted with the character and objects of these gatherings and able to judge of their usefulness to all College and Station workers who participate and to the institutions by them represented. We believe that the value of this Association has already been well demonstrated, and that your Institution has shared fully in the benefits resulting from its work. The influences which led to the liberal Federal grant for Experiment Stations, so soon followed by the enactment of the long-pending supplementary endowment of the "Land-Grant" Colleges, constitute a strong claim for recognition, encouragement and support of our Association, by your Institution.

The New Orleans Convention, next month, will be one of exceptional interest. The great sugar-houses of Louisiana will be in full operation, and a number of them will be accessible and open to the Convention delegates, showing the various methods of sugar-making. It will be a pleasant season at which to visit this interesting city, and the

occasion will afford an unusually good opportunity for seeing various branches of agriculture peculiar to this section of our country. It is believed that these facts, together with special railroad rates soon to be announced, will cause a large attendance and a successful and enjoyable Convention. The presentation of the College and Station work to the people of this and other countries, at Chicago next year, will be one of the important subjects considered. The Standing Committees of the Association, at a recent joint meeting in Washington, unanimously adopted the following resolution:

"That in the opinion of the Committees on the Collective Exhibit of the Agricultural Colleges and Experiment Stations at the Columbian Exposition, it is important that the Annual Convention of the Association, at New Orleans, in November next, should be attended by members of the Boards of Trustees and of Control from the several States, in order that their counsel and advice may be obtained in regard to the preparation, installation, care and disposition, of the College and Station Exhibits at Chicago."

On behalf of the Executive Committee of the Association this letter is addressed to you with the special request that you will give this matter immediate attention and earnest consideration. We shall hope to soon hear from you that you will personally attend the New Orleans Convention, or, at any rate, be there represented by one or more members of your Board.

You are also earnestly requested, both before and after the Convention and independent of it, to take an active and favorable interest in having your Institution participate in preparing the Co-operative Exhibit for Chicago, that an illustration of its work may be properly included therein. This is a matter which we feel justified in pressing upon the attention of the several Colleges and Stations. All these institutions are now receiving large annual grants of money from the Treasury of the United States. On the one hand, it is right and proper that these various institutions should make a considerable expenditure of time and money to show, collectively, how they are executing the trust committed to them. On the other hand, the people of the several States, who will visit the Exposition in such numbers, have a right to expect an interesting and comprehensive exhibit of the work of the Agricultural Colleges and Stations; and we should be proud to show to the visitors from other lands the progress recently made in this line in America. As a mere matter of expediency, it is a grand opportunity, which should be made the most of. The Exposition has assumed a national character and is largely patronized and controlled by acts of Congress. Its managers have requested this special co-operative exhibit of the Colleges and Stations, and have set apart a large and admirably located space for it in the Agricultural Building. This Association has undertaken to plan, collect, arrange, and supervise the exhibit, and the United States Department of Agriculture has promised generous assistance in the work. Previous communications, explaining details, have been addressed to College presidents, Station directors, and special workers, and much has been already done; but it is found that Governing Boards have not yet taken the active interest in the subject which seems desirable, if not necessary; and some do not seem to regard favorably the expenditure of College and Station funds for this object.

Numerous officials who have been consulted, agree that it is eminently appropriate that reasonable expenditures should be made for this exhibit from the funds received by the several institutions from the General Government; that such application will be as truly for instruction, and as effective educationally, as if expended within college walls; and that useful agricultural information cannot be more generally or more effectively diffused among the people, by the Stations, in any other way. A number of the institutions always actively participating in the work of this Association, have already made generous appropriations from their current funds for this particular purpose. It is hoped that all the rest will do likewise, so that every College which is a beneficiary under "The New Morrill Act," and every Station aided by "The Hatch Act," will be able to contribute some sample of its work or progress to this collective exhibit.

We believe that by this exhibit at Chicago, thousands of the citizens of your own State can be shown more of the work of Agricultural Colleges and Experiment Stations, including yours, and be given a more favorable impression of them, than will be possible in any other way for some years to come. The United States Department of Agriculture will do its full share toward meeting the general expenses, but a good deal will remain, necessarily, to be borne by the institutions severally and this should be cheerfully done. Our Committees will correspond with your officers as to what is desired in matters of detail.

You are again earnestly solicited to give this matter personal attention and encouragement. We hope you will sustain the officers of your Institution in what they are willing to undertake, and use your influence with your Board to properly provide for the work.

Your Institution cannot afford to be missing from "the goodly company" upon this important occasion. We shall be pleased to respond to all inquiries.

Very respectfully yours,

Henry C. Alvord.

Chairman Executive Committee.

OFFICERS, 1891-92.

PRESIDENT.

WM. LEROY BROWN, LL. D.,
President Agr'l and Mech'l College of Alabama,
Auburn, Alabama.

VICE-PRESIDENTS.

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Agriculturist, No. Ca. Agr'l Experiment Station,
Raleigh, North Carolina.

WHITMAN H. JORDAN, M. S.,
Director, Me. State College, Agr'l Exp't Station,
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President, Agr'l and Mech'l College of La.,
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HORACE E. STOCKBRIDGE, Ph. D.,
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Director, No. Dak. Agr'l Exp't Station,
Fargo, North Dakota.

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Washington, D. C.,

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1891-92.

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Special Agent, U. S. Dep't of Agriculture,
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Director, West Va. Agr'l Exp't Station,
Morgantown, West Virginia.

ARTHUR T. NEALE, Ph. D.,
Director, Delaware Agr'l Experiment Station,
Newark, Delaware.

M. A. SCOVELL, M. S., SECRETARY,
Director, Ky. Agricultural Exp't Station,
Lexington, Kentucky.

SIXTH ANNUAL CONVENTION—1892.

By authority of the executive committee, a delegate convention of this Association is hereby called to meet in the city of New Orleans, La., on Tuesday, November 15th, 1892, at noon.

The headquarters of the Association, during this convention, will be at the Saint Charles Hotel.

The program for the sessions and other particulars will be announced later.

"At any regularly called meeting of the Association each College established under the Act of Congress approved July 2, 1862, and each Experiment Station established under State or Congressional authority, and the Department of Agriculture, shall be entitled to one delegate, but no delegate shall cast more than one vote. Other institutions engaged in experimental work in the interest of agriculture may be admitted to representation in this Association by a majority vote at any regular meeting of the Association." (Extract from Constitution.)

In accordance with the requirements of the Constitution, the Sections on Botany and on College Work are hereby designated to present a portion of the subjects coming before them, in the general sessions of the convention.

The Chairmen of the several Sections will each be called upon for a report of progress, not to exceed fifteen minutes in the reading, during the first day of general sessions.

Conforming to the action of the Washington convention of 1891 (see "Proceedings," p. 61), there will be submitted, in connection with the program for the convention of 1892, such amendments to the Constitution of the Association as are deemed desirable by the executive committee, and the consideration of this subject will be assigned a place in the program.

FOR THE EXECUTIVE COMMITTEE:

Henry E. Alvord.

Chairman.

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M. A. SCOVELL, M. S., SECRETARY,
Director, Ky. Agricultural Exp't Station,
Lexington, Kentucky.

Washington, D. C., October 3rd, 1892.

Hon. John Young Brown,
President, Board of Trustees,
State College of Kentucky.

My dear Sir:-

Permit me to ask your early personal attention to the accompanying printed circulars. Although they will require a little time, you will find they relate to matters which directly concern the interests of the Institution governed by the Board of which you are an officer.

I sincerely hope that the subjects presented will enlist your interest and that I may receive a reply, showing favorable consideration and helpful action on your part. A free-mailing addressed envelope is enclosed.

Very respectfully yours,

Henry E. Alvord

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BIBLIOGRAPHER.

SAMUEL W. JOHNSON, M. A.,
Director, Conn. Agr'l Experiment Station,
New Haven, Conn.

MAY 1ST, 1894.

CIRCULAR.

COLLEGE MATTERS—MILITARY.

On Saturday, 28th instant, the Army Appropriation Bill came before the House of Representatives for action, and the friends of the Colleges appeared so numerous and earnest, that without a vote the Military Committee consented (in Committee of the Whole) to drop from the bill all the new legislation proposed regarding the commutation of quarters for officers detailed as military instructors, and quoted in the Circular from this office dated 24th of March. This action was confirmed by the House yesterday, when the bill passed.

The prompt action of College officers and the cordial response of their representatives in Congress, accomplished the desired result. While many members deserve our thanks, it is not unfair to mention as conspicuous champions of the college interests Messrs. McCreary of Kentucky, Pickler of South Dakota, Bretz of Indiana, Powers of Vermont, Talbert of South Carolina, Warner of New York, and Marsh of Illinois.

The co-operation in this matter of institutions other than the Land-Grant Colleges, has been active and efficient. Yet this temporary alliance has been in some respects embarrassing and it is respectfully suggested that it is not likely to prove advantageous to the institutions represented by this Association, to join in the organization contemplated by the call for a meeting at Cincinnati, Ohio, on the 19th of June next. That meeting and its action, from the nature of the conditions, is likely to be dominated by those schools, academies and colleges which voluntarily and from self-interest, make military work their leading feature.

Our own Association amply covers the military interests of the institutions involved. Close alliance with the merely military academies would be unfortunate.

Very respectfully,

FOR THE EXECUTIVE COMMITTEE:

Henry E. Alvord.

Chairman.

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President, Miss. Agr'l and Mech'l College,
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Director, Conn. Agr'l Experiment Station,
New Haven, Conn.

MAY 2D, 1894.

CIRCULAR.

STATION MATTERS.

The annual Agricultural Appropriation Bill has been reported from the House Committee and printed as H. R. 6937.

This bill contains the usual paragraph providing for the Experiment Stations, the language being the same as last year (see circular from this office dated March 17th, 1893), with an additional clause as follows:—

“and the Secretary of Agriculture shall prescribe the form of the annual financial statement required by section three of the said Act of March second, eighteen hundred and eighty-seven, shall ascertain whether the expenditures under the appropriation hereby made are in accordance with the provisions of the said Act, and shall make report thereon to Congress.”

These words are exactly as proposed on behalf of this Association, in accordance with its action at the Chicago Convention of 1893, and on a line with suggestions of previous years, except that the original form was permissive and was changed to mandatory at the request of the Department.

Upon this basis, the Secretary of Agriculture withdraws all previous objections to having the usual appropriation made for the Stations in the regular bill and “charged to the Department.” There is every reason to expect the passage of the bill without change in this paragraph.

This seems to be a simple, proper, and generally satisfactory adjustment.

Very respectfully,

FOR THE EXECUTIVE COMMITTEE:

Henry E. Alvord.

Chairman.

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Director, Conn. Agr'l Experiment Station,
New Haven, Conn.

May 2nd 1894.

President Patterson

My dear sir: Judge McCreary, acting upon yr.
suggestion and request, did important service.

I trust you will send him special thanks.

With personal esteem -

Yours truly -

Henry E. Alvord.

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Director, Conn. Agr'l Experiment Station,
New Haven, Conn.

My dear President Patterson,

May 24th 1894.

Your very kind note of the 22nd with its enclosure from Mr. Hunt of Stillwater, Oklahoma has come to hand today.

Please accept my appreciative thanks for your courtesy and good will, in nominating me to the Oklahoma people.

When an opportunity presents itself, I want to get back into harness, in the line of A + M. College and Station work. Naturally I would prefer to stay within reach of the Atlantic shores but "openings" in this section are comparatively rare, and I am ready to go wherever a good field of usefulness presents itself. — Oddly enough, I have recently had overtures from three Territories; of these I decidedly prefer Oklahoma, for several reasons. — If it is my fortune to labor at the formative period, in building up, — or regenerating, — weak institutions, — so be it! Perhaps, before final retirement, I may be given the pleasant task of conducting the growth and development of a College with age, a record and alumni.

I shall take the liberty of writing to Mr. Hunt and Trustee Clark.

Very truly yours,

Henry E. Alvord.

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AND

Experiment Stations.

OFFICE OF EXECUTIVE COMMITTEE,

WASHINGTON, D. C.

EXECUTIVE COMMITTEE, 1893-94.

Maj. HENRY E. ALVORD, CHAIRMAN,
Lewinsville, Fairfax Co., Virginia,
or, Washington, D. C.

HENRY H. GOODELL, LL.D.,
President, Massachusetts Agricultural College,
Director, Hatch Experiment Station,
Amherst, Mass.

A. W. HARRIS, M. A.,
President, Maine State College,
Orono, Me.

WM. A. HENRY, B. Ag.,
Dean, College of Agr., Univ. of Wis.,
Director of Agricultural Exp't Station,
Madison, Wis.

HENRY C. WHITE, Ph. D.,
Pres., Ga. State College Agr. and Mech. Arts,
Athens, Ga.

The President and the Secretary
of the Association, ex-officio.

BIBLIOGRAPHER.

SAM'L W. JOHNSON, M. A.,
Director, Conn. Agr'l Experiment Station,
New Haven, Conn.

NOVEMBER 1st, 1894.

CIRCULAR.

COLLEGE MATTER—BUST OF SENATOR MORRILL.

In accordance with the order of the Association at its New Orleans convention, the Executive Committee reported to the Chicago convention, last year, arrangements which were then possible for obtaining plaster casts of a bust of Hon. Justin S. Morrill, and this report appears at page 21 of the Proceedings of the Seventh Annual Convention (1893).

The Association took no action except to refer back the subject to the Executive Committee. Only three colleges positively ordered casts and that was insufficient to justify further procedure.

The only opportunity of obtaining satisfactory casts is from Mr. Preston Powers, sculptor, who has at his studio in Florence, Italy, the original mold of the only bust of Mr. Morrill ever made, this being about the time of the passage of the College Land-Grant Act of 1862. Further correspondence with the sculptor has secured a renewed offer, the terms not quite as favorable as a year ago.

In order to obtain plaster casts, Mr. Powers must first make a new marble. This he will do and will then personally supervise the making and finishing of casts, each to be packed by itself and delivered in New York City, upon these terms:

For ten (10) plaster casts ordered at same time, \$70.00 each; for twenty (20) casts, \$50.00 each; for twenty-five (25) casts, \$45.00 each, and for thirty (30) casts, \$40.00 each.

It seems probable that this Association is the best agency for procuring these plaster busts for the institutions wanting them and that it is desirable for the Association to own the marble, so as to control the making of additional casts.

It is therefore recommended that the subject be again referred to the Executive Committee, with authority to receive subscriptions and order casts, and ~~in its discretion to expend not to exceed \$250 of the Association funds~~, to obtain the marble bust proposed and keep it in a suitable place in Washington, for subsequent use. It is proposed to present this subject for action at the Washington convention, the present month.

Respectfully submitted,

FOR THE EXECUTIVE COMMITTEE:

Henry E. Alvord.

Chairman.

OFFICERS, 1893-94.

PRESIDENT.

Gen. STEPHEN D. LEE,
President, Miss. Agr'l and Mech'l College,
Agricultural College (P. O.),
Mississippi.

VICE-PRESIDENTS.

JAMES H. CANFIELD, M. A.,
Chancellor, University of Nebraska,
Lincoln, Neb.

WILLIAM FREAR, Ph. D.,
Vice Director, Agricultural Exp't Station,
State College, Penn.

HIRAM HADLEY, M. A.,
Pres., N. M. College of Agr. and Mech. Arts,
Director, Agricultural Exp't Station,
Las Cruces, New Mexico.

GEORGE E. MORROW, M. A.,
Prof. of Agriculture, Univ. of Illinois,
Champaign, Ill.

JAMES S. NEWMAN,
Director, So. Car. Agricultural Exp't Station,
Fort Hill, South Carolina.

SECRETARY AND TREASURER.

M. A. SCOVELL, M. S.,
Director, Kentucky Agricultural Exp't Station,
Lexington, Ky.

ASSOCIATION

OF

American * Agricultural * Colleges

AND

Experiment Stations.

OFFICE OF EXECUTIVE COMMITTEE,
WASHINGTON, D. C.

EXECUTIVE COMMITTEE, 1893-94.

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The PRESIDENT and the SECRETARY
of the Association, ex-officio.

BIBLIOGRAPHER.

SAUL W. JOHNSON, M. A.,
Director, Conn. Agr'l Experiment Station,
New Haven, Conn.

NOVEMBER 14TH, 1894.

BUST OF SENATOR MORRILL.

CIRCULAR No. 2.

The annual convention of this Association, in session at Washington, has today confirmed, in substance, the recommendations made by the Executive Committee in circular herewith, dated November 1st, 1894, and ordered that subscriptions be immediately solicited, upon the terms stated in that circular, for plaster casts of the bust of Senator Morrill.

Subscriptions have already been made by or for 24 Colleges, so that the cost, delivered in New York, will not exceed \$45 each. If a few more subscriptions are made, this cost will be reduced to \$40, and perhaps less.

All Colleges, or college officers desiring to obtain the cast, will please give this matter immediate attention and subscribe promptly, addressing the undersigned. It is proposed to "close the books" and forward the order for all at once, and as early in December as practicable.

It should be understood that these casts will be, artistically, far superior to the plaster work common to museums and libraries, every piece receiving the personal attention of the sculptor who made the original model. Every one of this first lot will be virtually an "artist's proof" of the marble bust, by Powers. The casts thus ordered will be delivered during the summer of 1895.

This order being filled, the marble will be brought to this country and remain in the custody of the Executive Committee of the Association. Colleges which do not order now will be able to obtain casts from this marble hereafter, made in this country, but they are certain to be inferior to those from Italy.

It is necessary to raise \$200 cash, to forward with the order. The Executive Committee are not willing to use the funds of the Association for this purpose; hence the second question below.

Please answer specifically the following:—

1. Will you or your institution subscribe now for one of these plaster busts, to cost not over \$45 in New York? (As much less as number ordered allows.)

NOTE:—If you subscribed verbally in Washington, please to confirm the same by reply to this circular.

2. Will you or your institution be one of five or six to pay in advance, within 30 days, to provide the guarantee payment to the sculptor?

BY ORDER OF THE ASSOCIATION:

Henry F. Alvord.

Chairman of Executive Committee.

(P. O., Stillwater, Oklahoma.)

OFFICERS, 1894-95.

PRESIDENT.

Maj. HENRY E. ALVORD,
President, Okla., Agr'l and Mech'l College,
Stillwater, Oklahoma.

VICE-PRESIDENTS.

A. A. JOHNSON, D.D.,
President, University of Wyoming,
Director, Agricultural Expt. Station,
Laramie, Wyoming.

ALEXANDER Q. ROLLADAY,
President, N. C. College of Agr. and Mech. Arts,
Raleigh, North Carolina.

T. B. COMSTOCK, D. Sc.,
President, University of Arizona,
Director, Agricultural Expt. Station,
Tucson, Arizona.

E. B. CRAIGHEAD,
President, Clemson Agr'l College,
Director, Agricultural Expt. Station,
Clemson College, So. Carolina.

O. CLUTE, LL.D.,
Pres., Fla. State Agr'l and Mech'l College,
Director, Agricultural Expt. Station,
Lake City, Florida.

SECRETARY AND TREASURER,
JOHN H. WASHBURN, Ph.D.,
President, R. I. College of Agr. and Mech. Arts,
Kingston, Rhode Island.

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Director, Ky. Agricultural Expt. Station,
Lexington, Kentucky.

H. P. ARMSEY, Ph. D.,
Director, Pa. Agricultural Expt. Station,
State College, Penn.

Gen. STEPHEN D. LEE,
President, Miss. Agr'l and Mech'l College,
Agricultural College, Miss.

The President and the Secretary
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SAM'L W. JOHNSON, M. A.,
Director, Conn. Agr'l Experiment Station,
New Haven, Conn.

State College, Pa., Jan. 22, 1895.

Dear Sir:-

The resolution for printing the results of the dairy tests is now in the hands of the Committee on Printing. That Committee will not recommend the passage of the resolution in its present form on account of the expense involved, and it seems doubtful whether they can be induced to recommend an appropriation sufficient to print even a small edition of the full report.

In order to secure the passage of the resolution even in a modified form, it will be necessary to use every possible means to impress upon the Committee, and especially upon its Chairman, Hon. Jas. D. Richardson, of Tennessee, the importance of these tests and the value of their results to the farmers and dairymen of the country. Were this fully comprehended by the Committee, there is no reason to suppose that there would be any more difficulty in securing an appropriation than there was in securing the appropriation of \$40,000, recently recommended by this same Committee, for a new edition of the "Horse Book." If you can induce representative farmers and dairymen of your State to write directly to Mr. Richardson, urging upon him the importance of this matter, it will be of great service. Official representatives of farmers' associations, agricultural societies and the like, would have much weight. Furthermore, can you not make an effort to have the representatives from your State take a personal interest in this matter and urge its importance upon Mr. Richardson.

Trusting to receive your co-operation,
I remain, yours very truly,

H. P. Armsby

WEST VIRGINIA
AGRICULTURAL EXPERIMENT STATION.

JOHN A. MYERS, PH. D., DIRECTOR.

A. D. HOPKINS, ENTOMOLOGIST.
B. H. HITE, CHEMIST.
G. WM. GRAY, 1ST ASST. CHEM.
T. F. WATSON, 2ND " "
W. E. RUMSEY, ASST. ENT.
F. WM. RANE, HORTICULTURIST.

Morgantown, W. Va., Sept. 14th, 1895.

Presdt. Jas. K. Patterson,

Lexington, Ky.

My Dear Sir:-

I am officially informed that Dr. Collier, Director of the New York Agr. Expt. Station, will be unable to remain much longer in the position of Director at that institution, and I have been asked by some of my friends to submit testimonials for the consideration of the Board of Control, with a view to pressing my name for the place. As I take it you are fairly familiar with my work as Director of the W. Va. Agr. Expt. Station from its organization to the present time, and also with my work in Mississippi, I shall esteem it a favor if you can send me a strong testimonial to be submitted for the consideration of the Board of Control of the New York Agr. Expt. Station, at Geneva, N. Y. I am particularly anxious to cover the subjects of organization and management. I will appreciate any help you can render me in this matter, and if you feel disposed to help me I would ask that you forward your testimonial to me at this place, so that I may forward it to the Board..

Yours truly,

John A. Myers

Director W. Va. Agr. Expt. Sta.

West Virginia University,

MORGANTOWN.

Office of President,
J. L. GOODKNIGHT, D. D.

March 5, 1896. 189

Dr. J. K. Patterson,
Pres. Agr. and Mech. College of Kentucky,
Lexington, Ky.

Dear Sir:-

We recently mailed you a copy of the proposed bill for establishing Engineering Experiment Stations. Copies of the Senate Bill, as introduced by Mr. Hale, are now mailed you. This is the most perfected one and the House Bill will conform to it. Both Bills were referred to the respective Naval Committees, lists of which are enclosed.

You will see at once the strategic importance of your State. Please urge Congressman Blackburn, of Kentucky, to do all in his power to interest his associates, - to give it active support, to push this Bill along in Committee, to vote for it, to talk for it, to make a speech for it if needs be! Without such repeated efforts by each of our Land Grant institutions the Bill will be snowed under in Committee.

There is no time to be lost. It will probably come before the House Sub-Committee next week. Can you not send some one to or delegate some one in Washington to look after its interests? The Bill is now in the hands of the following Sub-Committee: Hulick, Ohio; Robinson, Pa.; Wilson, N.Y.; Foss, Ill.; Money, Miss.; Meyer, La.; Hall, Mo.

It would certainly help the cause along very much if the Agr. and Mech. College of Kentucky would at once forward a memorial or statement to Mr. Blackburn, of the Senate Naval Committee, setting forth the educational and industrial value of such Stations; that they would bear to Engineering science the relations now borne by the Hatch Stations to Agriculture; what they would do for your institution and the industrial development of Kentucky; why they should be connected with the Bureau of Engineering of the Navy; and the reciprocal benefits of this new endowment to the Government.

Trusting that you will give these matters immediate consideration, I remain,

Very sincerely and truly yours,

J. L. GoodKnight.

President of W. V. U.

DEPARTMENT OF AGRICULTURE.

Harrisburg, Pa., November 25, 1896.

DEAR SIR :

The substance of the accompanying address was delivered before the Association of American Agricultural Colleges and Experiment Stations at a meeting held in Washington, D. C., November 11th-12th, 1896.

After being considered by their Executive Committee, it was reported back to the Convention with the recommendation that a special committee of three be appointed to consider the proposition, and report their recommendation to the next Convention.

The Chairman appointed, on that committee, the following gentlemen :

DR. CHARLES W. DABNEY, JR., (Chairman),
Assistant Secretary of Agriculture, Washington, D. C.

DR. W. H. JORDAN,
Director of the Geneva Experiment Station, Geneva, N. Y.

DR. W. A. HENRY,
Director of the Wisconsin Experiment Station, Madison, Wis.

Will you not take the trouble to read the statements made in this paper, and write to one or all of these gentlemen, stating your views as to the desirability and feasibility of the proposition? I will be obliged to you, if you will also write to me, giving me the benefit of your criticism.

Very truly yours,

JOHN HAMILTON.

47-M-64

Is it its duty to organize a force competent and sufficient to carry the plan into operation? or is there another and better method of securing the desired result?

At present there is not in this country, outside of the Department of Agriculture, any authority or central Board of Editors authorized or competent to undertake this work. If there were, they would be unwilling to undertake it under the conditions, which contemplate no royalty or copyright, but provide that the publications shall be had at cost. *Cheapness is an essential feature of the plan*, and to secure this the cost of preparation of the copy would have to be borne by the Department, making the series of books available at the price of paper, press work, binding and postage.

If, therefore, this work is to be accomplished in the near future, it will be necessary for the Department of Agriculture to organize a corps of men to outline its scope, and it would also need to secure the assistance of experts in the preparation and compilation of the text.

What would be the effect if such a system were inaugurated?

It might be objected that the publication of such a series of books by the Department, would be an infringement upon the rights of private publishing houses, appropriating work that these publishers have a right to expect would be committed to them.

As has been shown, no private publisher can do the work under the conditions prescribed. There is no profit in it. The books are to be furnished at cost. But it does not follow, because this work is done by the Department of Agriculture, and at cost, that private publishers will thereby suffer loss. The introduction of a popular course of reading in agriculture will create a desire for agricultural literature, and perhaps no better method for advertising the class of books that publishers issue on agricultural subjects can be devised than this.

Each of these elementary books ought to contain references to larger works treating of similar subjects, giving the publishers' name and address, together with the price of the book. Farmers, therefore, who are making a specialty of some particular branch of agriculture will have at hand a convenient means of discovering where full information can be had in regard to that subject, and would purchase books that they otherwise might not know were in existence. Instead, therefore, of being a disadvantage to the publisher of agricultural books, this course of instruction would prove the best possible advertisement for their trade.

There would also be created a demand for new books upon agricultural topics. This would give remunerative employment to many scientific men who now are deterred from entering this field of labor because of the limited demand. Professors in the Colleges and Experiment Stations would be put in position to thereby greatly enlarge their field of usefulness, and at the same time supplement their usually quite meagre salaries.

In addition to what has been stated, the farmers of the country, through the influence of this course of reading, would be brought to appreciate more fully the work of the higher institutions of learning and of the Experiment Stations, and be more likely to send their sons and daughters to these Colleges, to secure the training and knowledge which the parents had found to be beneficial to themselves.

Its influence would also be felt by the primary schools in the country. An awakened and informed community would insist that so much of science as could be taught, should be introduced into the public schools, and being themselves in control, they would be able to see that their wishes were carried into effect.

Therefore, on every account it would seem to be the duty of the Department of Agriculture to undertake this work, and thus aid the great body of agricultural people in what is now their most pressing need.

Address Delivered Before the Association of American Agricultural Colleges and Experiment Stations, in the City of Washington, November 11, 1896.

BY PROF. JOHN HAMILTON,

Deputy Secretary of Agriculture for Pennsylvania and Director of Farmers' Institutes.

MR. PRESIDENT AND GENTLEMEN OF THE ASSOCIATION:

I have asked for the privilege of the floor this morning, that I may have the opportunity of calling your attention to a feature of the work of education, in the direction of practical and scientific agriculture in the United States, which needs immediate attention, and which in my judgment promises more for the increased usefulness of the institutions which you represent, than any other single line of work that these Land Grant Colleges and Experiment Stations have heretofore performed.

In order that I may make clear the thought that I wish to convey, permit me to remind you of two or three facts in the history of the new education, which are preliminary, and in some degree explanatory of the situation in which we find ourselves to-day.

The Agricultural Colleges came into existence, in response to a demand upon the part of a large number of our citizens, who were deeply interested in the future of the agriculture of this country, and who hoped, by the establishment of these institutions, to provide a population for the rural districts, which would not only be highly developed as educated men, but which would also have that special training and knowledge which would fit them more completely for the scientific and rational pursuit of agriculture, than was possible under the old methods of education provided in the classical schools.

It was believed that large numbers of young men would avail themselves of the education in agriculture which these new colleges undertook to give, and that in the near future the country districts would be well supplied with scientific farmers, who would make agriculture a life pursuit, and be an example and stimulus to others not so fortunate in educational advantages as themselves. The disappointment that followed, when it was found, that instead of appreciation, a strong prejudice against this new education, was developed on the part of those whom these colleges were intended to benefit, was not the only painful experience that these public spirited citizens had to endure. They found, as well, that there was comparatively little desire, on the part of young men for the education that had been provided, and that the courses of study which had been prepared with so much care, were despised by the great body of students themselves.

It was very soon seen that the work of education in this new direction would be of slow progress, and that many years must elapse before the hopes of the founders of these colleges could be realized.

Although there was this indifference on the part of young men toward this branch of learning, there was, on the other hand, a strong desire on the part of those who were engaged in the business of farming, for agricultural information. To supply this demand, the Experiment Station was brought into operation, and through investigation and experimentation it endeavored to assist agricultural people, by solving questions that they had been unable to determine for themselves through the aid of Bulletins published from time to time, and embodying the substance of truths that had been ascertained. Much valuable information was soon collected and distributed throughout the country. It was then found that many of the country people, by reason of their lack of scientific training, were unable to understand the full force and application of the teachings of these scientific investigators, and there arose the necessity for some persons, familiar with science and its relation to practice, to go out through the country districts and explain the meaning of these experiments, and show the farmers how they could use the facts collected, and apply them in the conduct of their calling.

Out of this grew the Farmers' Institute, and now, in almost all of the States, this form of instruction is doing much to spread a knowledge of science and her methods, and to familiarize farmers with scientific facts and terms, and to secure the respect of agricultural people for the truths thus presented.

The result of all these agencies, is, that a great advance has been made, and scientific training and scientific truth have been rapidly gaining in favor among rural people; until it is now quite common, to find

men conducting their business as farmers, upon the best and latest teachings of science, as made known by Colleges of Agriculture, Experiment Stations, and Institute Lecturers, that are at work all over the land. Whatever measure of success has been secured in the improvement of agriculture during these late years, has been chiefly due to the information and education in science as it applies to rural pursuits that these institutions which I have enumerated, have brought to the farming people of this country; and it is now perfectly clear to all thoughtful men, that the future prosperity and advancement of agriculture in America, must come through the still more general spread of scientific knowledge of their art, among rural people, and through new discoveries of science as it affects agricultural methods and practice, brought into use by those engaged in the actual business of farming.

Owing to the influences of which I have spoken, and to the low prices of farm products and the consequent small profits of agriculture, there has never been a time in the history of this country when agricultural people were in greater need of knowledge, or were more anxious for information in regard to their calling, than they are to-day. How shall this urgent and increased demand most speedily and effectively be met? This brings me to the particular point to which I wish to direct your attention this morning.

If improvement of condition has been effected during past years through increased knowledge of better methods in agricultural practice, and its dissemination among the farming people, may not this indicate to us, the method which ought to be pursued to bring about improved conditions in the future? If these people are suffering from lack of knowledge, is not the remedy very clear and our duty plain?

In Pennsylvania we are trying to supply this necessity in a way that promises success. A single difficulty, however, bars our progress, and it is to the removal of this obstacle that your assistance is invoked.

The State College and Experiment Station have undertaken to carry the latest and best information in regard to the various branches of modern agriculture, into every country home in the State. They have several sets of men out over the State to-day, endeavoring to establish reading circles among the farmers, and are offering books at wholesale prices, on the various subjects in which these people are most interested, and are endeavoring to aid each reader by such assistance as a corps of more than forty expert Professors can render; answering questions, explaining difficulties that arise, and giving all of this free of charge. For more than two years this work has been going on, and now we find, that the great obstacle in the way of its complete success, is in the unsuitable character of the books that it is possible to obtain, and in the great expense that a set, sufficiently complete, involves.

The remedy for this serious difficulty which confronts us, and provision for supplying this, the essential part of the Agricultural Chautauqua plan; a plan capable of the widest application and which promises to be highly beneficial to millions of agricultural people in the United States and other lands, are suggested in a statement that I shall presently submit for your judgment and action.

The great need just now, is, for suitable books upon agriculture. Until these are provided, the work of the Colleges and Stations, the Institutes and the Chautauqua Course, must be seriously retarded, valuable time be wasted, and a great opportunity be endangered, if not entirely lost. The introduction of the study of agriculture into the public schools is also sure to be demanded inside of the next twenty-five years, and will be the next phase in the development of the new education, begun forty years ago. We need to get ready for these new features of the agricultural educational work, and we need to get ready *now*. Books costing from \$1.00 to \$2.00 or \$3.00 each, ought to be had for from 15 to 30 cents apiece, and discussions of subjects that occupy 100 pages, ought to be condensed, and can be condensed, into ten. Station Bulletins, containing much valuable information, and costing many thousands of dollars and years of careful and patient labor to secure, are lying all around in fragmentary form, of little value to the great mass of men, solely because of the lack of some central and competent authority to collect the truths which they have secured, and arrange their teachings in some logical and readable form, for use by those who so much need the information which they contain.

To ask you to constitute such an authority, and set to work at once, a corps of competent scientific men arranging this and like information, and providing for its distribution among the agricultural people of this country, is the request that I have come to present, and the method for the accomplishment of this extremely desirable end, is suggested in the following statements which I shall now read, and in the resolution which follows:

Recognizing that the future development and success of agriculture in the United States is directly dependent upon a more complete knowledge by rural people of improved methods of farming:

And realizing that the discovery of these improved methods, and the showing of the adaptability of practical and scientific truth to agricultural operations, is the specific duty of the Colleges of Agriculture and of the Experiment Stations of the United States:

And appreciating the fact that their work is comparatively futile, unless the information thus obtained is disseminated among the agricultural people, and is put in useful form:

And realizing, also, that the Bulletins published by the Stations and Departments of Agriculture of the several States and of the Nation, although containing much of the latest and best information, do not form a complete and systematic course of instruction in agriculture, but on the contrary are quite fragmentary and disconnected:

And believing that a systematic and complete course of instruction adapted to the use of farmers, and embracing the latest and best information known with regard to their occupation is highly desirable, if not an immediate necessity:

And that in order to secure attention and study on the part of the farming people as a class, the books containing the information should be of attractive form, well illustrated, printed in clear type on good paper, and be furnished free from copyright and royalty, and that each volume should treat of but one or two subjects, and not be larger than from 75 to 100 pages; so as to enable the purchaser to get what he wants as cheaply as possible, and without having to pay for other matter not desirable:

And being of the conviction that the chief obstacle now in the way of establishing an Agricultural Chautauqua Course of reading and study for farmers, is in the lack of suitable literature, and in the expense involved in the purchasing of books:

And feeling that the need for such a course of reading and instruction is National, and not confined to sectional or State boundaries:

Therefore, we respectfully request the Honorable Secretary of Agriculture of the United States to consider the advisability and propriety of arranging for the editing, under the direction of the National Department of Agriculture, of such a series of books as the necessities of our farming interest, seem to require; engaging in their preparation the best scientific assistance that the country affords; purchasing the copyright, and having the books published for distribution at cost of paper, press work, binding and postage; making up a series of works that shall include all of the topics relating to practical agriculture.

Resolved, That a committee of three be appointed to present these suggestions to the Honorable Secretary of Agriculture of the United States, and also to render such assistance as may be necessary, in securing for the Department of Agriculture, such appropriations, as will be sufficient to carry out the purpose herein expressed.

In considering this proposition several important questions naturally arise:

- 1st. Has the Department of Agriculture the legal right to undertake the work?
- 2nd. If it has, is it its duty to organize a force necessary to carry the proposition into effect; or is there another and better method of securing the desired result?
- 3rd. What, in all probability, would be the effect if such a system were inaugurated?

With regard to the first question raised, permit me to call your attention to some of the declarations of the Secretaries who have defined the scope and powers of this Department.

Secretary Rusk, in his report for the year ending June 30, 1890, pages 46 and 47, makes the following statements:

"The measure of the efficiency of the Department of Agriculture, is largely its ability to supply practical, useful information to the public." * * * "We have found it desirable to cause the publication from time to time of short practical tracts, inexpensive in form, devoted to some special feature of agricultural work calling for clear, concise instruction, within the comprehension of any person able to read them." * * *

In his report for 1892, page 20, the same Secretary states that

"In order to fulfill its mission this Department must be prepared to do with reference to agriculture all that our individual farmers are unable to do for themselves." * * * "The Commission of this Department, as I may call the law under which it was originally established, is broad enough to cover any work, which in the judgment of its Chief, may have a bearing upon agriculture in this country."

A Division of Records and Editing has been in operation in the Department for several years, and during the year ending June 30, 1894, out of 205 different publications issued by the Department, 149 were by this Division, and the total number of copies of all publications for that year amounted to 3,169,310. The present Secretary in commenting upon the "Year Book" for 1894, page 30, states:

"It ought to contain the results of researches made in the various bureaus and laboratories during the year, and should be so plainly written and popular in its character as to adapt itself to the practical farmer and be held in esteem by him as a work of reference on agricultural science, practice and statistics."

During that year 254 different publications were issued by the Department, aggregating over 4,000,000 copies, or 420,000,000 printed pages, and these were distributed free.

It has been the uniform practice of all of the Secretaries to issue such publication of facts relating to agriculture as they deem advisable, and no one can call in question their right so to do. If any doubt should arise, it would be set at rest by the Act of Congress approved May 15, 1862. The Act creates

"A Department of Agriculture, the general design and duties of which shall be to acquire and diffuse among the people of the United States, useful information on subjects connected with agriculture in the most general and comprehensive sense of that word."

It being, therefore, clearly within the powers of the Department to collect and publish such information as is proposed in the statement and request submitted in this paper, the way is clear for the consideration of the second question

Office of Experiment Stations.
Please correct, and return at once

Dec. 1, 1896

KENTUCKY.

Agricultural and Mechanical College of Kentucky, Lexington.

COURSES OF STUDY.

The regular courses of study are six, each requiring four years for completion: The agricultural course, leading to the degree of B. S.; the scientific course, leading to the same degree; the classical course, leading to the degree of B. A.; the mechanical engineering course, leading to the degree of M. E.; the civil engineering course, leading to the degree of C. E., and the normal course, leading to the degree of B. Ped. Certificates of proficiency are given to those who do not complete a course undertaken.

BOARD OF INSTRUCTION.

J. K. Patterson, Ph. D., <i>Pres.; Metaphysics and Civil Hist.</i>	M. L. Pence, M. S., <i>Phys.</i>
J. Shackelford, M. A., <i>V. Pres.; English Language and Lit.</i>	F. Paul Anderson, B. M. E., <i>Mech. Engin.</i>
J. G. White, M. A., <i>Math. and Astron.</i>	S. M. Swigert, Capt., U. S. A., <i>Mil. Sci.</i>
Paul Wernicke, <i>French and German Languages and Lit.</i>	J. W. Pryor, M. D., <i>Anat. and Physiol.</i>
J. H. Neville, M. A., <i>Latin and Greek Languages and Lit.</i>	W. K. Patterson, <i>Prin. Academy.</i>
J. H. Kastle, Ph. D., <i>Chem.</i>	J. L. Logan, B. A., <i>Asst. in Academy.</i>
R. N. Roark, B. A., <i>Prin. Normal Dept.</i>	J. W. Newman, B. S., <i>Asst. in Normal Dept.</i>
Arthur M. Miller, <i>Zool. and Geol.</i>	R. L. Blanton, M. Lit., <i>Asst. in Greek and Latin.</i>
C. W. Mathews, B. S., <i>Agr., Hort., and Bot.</i>	J. M. Davis, B. A., B. S., <i>Asst. in Academy.</i>
J. P. Nelson, M. A., <i>Civil Engin. and Phys.</i>	V. E. Muncey, B. S., <i>Asst. in Academy.</i>
	J. H. Wells, B. M. E., <i>Asst. in Mech. Engin.</i>
	J. R. Johnson, B. M. E., <i>Asst. in Mech. Engin.</i>

James Murray, *Practical Hort.*

Correct courses of study: and names degrees, and official designations of all members of board of instruction up to date. Write legibly and spell names correctly.

Lexington, Ky.

Office of Experiment Stations.

Immediate attention requested.

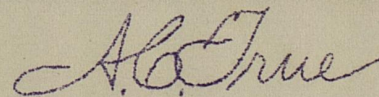
STATISTICS OF LAND-GRANT COLLEGES, 1896.

December 1, 1896.

Dear Sir:-

At request of the Association of American Agricultural Colleges and Experiment Stations, blanks for statistics of your institution for the year ended June 30, 1896, are sent herewith. These statistics are intended to be supplementary to those reported to the Secretary of Agriculture through the Bureau of Education, but some items thus reported are included in this circular. Accurate and thorough corrections and additions of statistics of your institution and prompt return of this circular are earnestly requested on behalf of the mutual interests of all the land-grant colleges.

Respectfully,



Director.

N.B. Statistics should be for entire institution, including experiment station, unless otherwise specified for particular items.

1. GENERAL STATISTICS (to be added to those reported through
Bureau of Education):

a. Number of students in each of the college classes.

Freshmen

Sophomores

Juniors

Seniors

b. Average age of graduates in 1896.

c. Total number of graduates since organization of institution.

d. Designation and length of courses leading to degrees,
and also of regularly organized short courses.

2. PERMANENT PLANT.

- a. Amount of land-grant fund of 1862-----\$
- b. Amount of other land-grant funds-----
- c. Amount of other permanent funds-----
- d. Rate of interest on land-grant fund
of 1862-----
- e. Number of acres allotted to State under
act of 1862-----
- f. Number of acres of land-grant of 1862
still unsold ; value-----
- g. Farm and grounds owned by the institu-
tion--number of acres ; value---
- h. Value of buildings-----
- i. Value of apparatus-----
- j. Value of machinery-----
- k. Value of library-----
- l. Value of miscellaneous equipment-----

3. INCOME FOR YEAR ENDED JUNE 30, 1896:

a. Interest on land-grant of 1862-----	\$ 2,190.00
b. Interest on other funds-----	
c. From Hatch act of 1887 (for experiment station)-----	15,000.00
d. From Morrill act of 1890-----	17,955.00
e. State appropriation,* annual or regular---	
f. Station appropriation--occasional-----	
g. Tuition fees of students-----	
h. Incidental fees-----	
i. Miscellaneous-----	

* State method and terms of appropriation, e.g., whether it is a mill tax or lump sum appropriation, and whether it is subject to decision of each legislature or is required by general statute.

4. ADDITIONS TO EQUIPMENT DURING YEAR ENDED JUNE 30, 1896:

- a. Permanent endowment-----\$
- b. Buildings-----
- c. Library-----
- d. Apparatus-----
- e. Machinery-----
- f. Miscellaneous-----

5. Send catalogue later than that of 1894-95-----

Lexington, Ky., Dec 1 1896

Pres. Jas. K. Patterson

TO KENTUCKY AGRICULTURAL EXPERIMENT STATION, Dr.

M. A. SCOVELL, Director.

mch

To 10 bu oats @ 29 c 2 90
Paid Dec 3-1896.
M. A. Scovell Director

47-M-64

United States Department of Agriculture,
OFFICE OF ROAD INQUIRY.

To all Presidents of Agricultural Colleges and Directors of Experiment Stations.

GENTLEMEN: Congress in making successive appropriations for inquiries relating to public roads has in each case authorized the Secretary of Agriculture to "assist the agricultural colleges and experiment stations in disseminating information upon the best methods of road-making," but no practical progress has been made in this branch of the work.

The Secretary, in his annual report for 1895, says:

It is proposed during the coming year to secure the cooperation of agricultural colleges and experiment stations in the object-lesson method of disseminating this information. They will be taught to construct model roads on the farms of their experiment stations or on their college grounds, where they can be regularly used, and thus become a lesson to all the farmers who visit them.

My own report for 1896, referring to the same subject, says:

It is to be regretted that no definite progress has been made in this direction, although a strong interest has been manifested in the proposal by the officers and directors of the colleges and experiment stations. Object-lesson roads should be made with great care, not merely to serve as samples of the best that is practicable, but to be so adapted to the several locations as to show the best uses of the local materials. For this purpose a careful inspection and study of each locality must be made by a competent engineer of more than ordinary experience and judgment in road building. This has been impracticable under the present appropriation, but it may be profitably combined in the future with the proposed duties of the itinerant representatives of the office. A beginning can be made in this direction under the present appropriation, and a full development in the following year if the appropriation is sufficient. It is believed that for the expense of the actual road building a cooperation can be established that will distribute the cost so that it may fall very lightly upon all concerned. The State, county, township, and neighborhood in which the experiment station is located will all have an interest in the work, and the college and station will doubtless render assistance, so that a very moderate contribution on the part of the Government, together with the necessary supervision of construction, will be all that is necessary on its part.

Before formulating any definite plans to be presented to the Secretary for the purpose, I would be very glad to have the views and suggestions of as many of the presidents of the colleges and directors of stations as are disposed to join in this undertaking. My own idea at present is to organize an outfit of one or two car loads of the most approved road-building machinery, including rock-crusher and screens, road rollers, etc., and to send it from college to college where preparations have been made for actual road construction, accompanied by one or two skilled operators and a competent road engineer to direct the work.

It is more than probable that the use of the machinery will be contributed by the various road-machine builders, and that transportation could be procured, by proper effort, for the mere cost of haulage. The expense to the Government in that case would be only that of the engineer, one or two machine operators, and some incidentals, local contributions furnishing the road materials, common labor, fuel, etc., including, of course, the grading down of hills, if that should be required.

This plan would establish a very wide cooperation, comprising the Department, the railroads, the machine builders, the various local road authorities, the colleges, stations, and interested individuals. It would thus make the expense of building a sufficient section of road very easy to be borne, and would enable a small expenditure by the Government to accomplish much practical benefit.

In many and perhaps most cases it would be better to rebuild a section of the public highway near the college or station than to build on their grounds. In that case the length to be built should be sufficient to be of actual use and value to the public as well as to the institution.

During the construction, lectures could be delivered by the engineer in charge, with practical illustration of the various progressive details by means of the work in progress.

The time occupied in making a section of half a mile to a mile of road would be from two to three weeks. The winter season would be used for work in the Southern States and the summer in the Northern.

I would be glad to have a general reply to this letter without waiting for details. If a sufficient number favor the plan, I will send a supplemental inquiry covering the detailed information needed from the various localities.

Very respectfully,

ROY STONE,
Special Agent and Engineer.

WASHINGTON, D. C., December 1, 1896.

OFFICERS, 1895-96.

PRESIDENT.

SAM'L W. JOHNSON, M. A.,
Director, Conn. Agr'l Experiment Station,
New Haven, Conn.

VICE-PRESIDENTS.

CYRUS NORTROP, LL. D.,
President, University of Minnesota,
and College of Agriculture,
Minneapolis, Minn.

J. H. CONNELL, M. S.,
Professor of Agr., State Agr. and Mech. College,
Director, Agricultural Expt. Station,
College Station, Texas.

S. W. ROBINSON, C. E.,
Prof'r of Mech'l Engin., Ohio State University,
Columbus, Ohio.

E. A. BRYAN, M. A.,
Pres. Agr'l College and School of Science,
Director, Agricultural Expt. Station,
Pullman, Washington.

R. H. JESSE, LL. D.,
President, University of Missouri,
and College of Agr. and Mech. Arts,
Columbia, Mo.

SECRETARY AND TREASURER.

JOHN H. WASHBURN, Ph. D.,
President, R. I. College of Agr. and Mech. Arts,
Kingston, Rhode Island.

ASSOCIATION

OF

American * Agricultural * Colleges

AND

Experiment Stations.

AMHERST, MASS., DEC. 21, 1896.

EXECUTIVE COMMITTEE, 1895-96.

HENRY H. GOODELL, LL. D., CHAIRMAN,
President, Massachusetts Agricultural College,
Director, Agr'l Experiment Station,
Amherst, Mass.

HENRY C. WHITE, Ph. D.,
Pres., Ga. State College Agr. and Mech. Arts,
Athens, Georgia.

ALSTON ELLIS, Ph. D., LL. D.,
Pres., State Agricultural College of Col.,
Director, Agr'l Experiment Station,
Fort Collins, Colorado.

EDWARD B. VOORHEES, M. A.,
Director, N. J. State Agr'l Experiment Station,
New Brunswick, New Jersey.

HENRY E. ALTORD, C. E.,
Chief of the Dairy Division,
U. S. Dept of Agriculture,
Washington, D. C.

The President and the Secretary
of the Association, ex-officio.

BIBLIOGRAPHER.

A. C. TRUE, Ph. D.,
Director, Office of Experiment Stations,
U. S. Dept of Agriculture,
Washington, D. C.

PRESIDENT.

DEAR SIR:

At the annual convention of the Association of American Agricultural Colleges and Experiment Stations held at Washington, November 10-13, 1896, the following resolution was passed:—"That a committee of four be appointed by the executive committee, of whom the chairman of the executive committee shall be one, to wait upon President-elect McKinley and present to him the importance of such an organization and administration of the Department of Agriculture as will give unity and permanence to all its scientific work and keep that work free from political influence."

In accordance with instructions, the committee—consisting of President Atherton of Pennsylvania, Captain Cope of Ohio, Mr. Wing of Ohio and President Goodell of Massachusetts (Presidents Smart of Indiana and Stubbs of Nevada being unable to be present)—waited upon the President-elect and explained in detail the purpose of the resolution.

In the judgment of the committee the time has now come for vigorous individual action by the members of the Association in every State, and it recommends the following plan:—That copies of Senate Report 933 (procurable at office of Assistant Secretary of Agriculture, Washington, D. C.) accompanying Senate Bill 3131, be sent to the executive committees of State granges, agricultural and horticultural societies and all scientific and other organizations likely to be interested in the movement, with the request that resolutions favoring the passage of the measure be sent to their representatives in congress, as soon as possible after January 1st, prox.

Briefly, the arguments in favor of the policy stated in the resolution adopted by the Association are that it would secure,

- A single head, supervising and coordinating all work in the Department;
- Permanent direction and organization of all scientific investigations;
- Prosecution of work under the favorable condition of absolute freedom from political interference;
- Assurance of carrying on scientific investigations for a term of years long enough to insure trustworthy results;
- Elimination of all danger of duplicating work in the several divisions of the Department;
- Unification of work and increased efficiency;
- Economy of time, labor and expenditure.

While not presuming to suggest any special form, your committee would recommend that resolutions be adopted, embodying any or all of these points and such others as the different organizations may deem advisable.

Will you not undertake to see that your delegation in Congress becomes enlisted in behalf of this measure (the appointment of a permanent Director-in-chief of the scientific work of the Department) and keep us informed from time to time?

In behalf of the Committee,

GEORGE W. ATHERTON, Chairman.

HENRY H. GOODELL, Chairman of Executive Committee.

PROGRAM OF SECTION ON MECHANIC ARTS
OF THE ASSOCIATION OF
American Agricultural Colleges and Experiment Stations.
Convention of 1896.

Chairman, J. W. LAWRENCE, of Colorado. Vice-Chairman, S. FORTIER, of Utah.

Requirements for the Proper Government of an Educational
Institution.

Professor EDGAR KIDWELL, Houghton, Mich.

Some Lecture Room Experiments in Lubrication.

Professor ALBERT KINGSBURY, Durham, N. H.

Some Road Tests with a Bicycle Dynamometer.

Professor CHAS. A. PERKINS, Knoxville, Tenn.

The Engineering Laboratory in its Relation to the Public.

Professor W. F. M. GOSS, Lafayette, Ind.

The Mechanic Arts in the Schools of the South.

Professor H. C. POWERS, Lake City, Florida.

Shop Training in its Relation to Engineering Courses.

Professor L. S. RANDOLPH, Blacksburg, Va.

Engineering Experiment Stations.

Professor Wm. S. ALDRICH, Morgantown, W. Va.

Modeling as an Aid to the Teaching of Machine Design.

Professor G. W. BISSELL, Ames, Iowa.

Education in Mechanical Engineering and the Mechanic Arts.

Professor R. H. THURSTON, Ithaca, N. Y.

F. PAUL ANDERSON, of Kentucky, *Secretary.*

OFFICERS, 1898-99.

PRESIDENT,

HENRY P. ARMSBY, PH. D.,
Director of Experiment Station, and Dean of
College of Agriculture,
State College, Pa.

VICE PRESIDENTS,

JOSEPH E. STUBBS, M. A., D. D., LL. D.,
President of School of Agriculture,
State University,
Reno, Nev.

CHAS. S. MURKLAND, M. A., PH. D.,
President Coll. of Agr. and Mechanic Arts,
Durham, New Hampshire.

JONATHAN L. SNYDER, M. A., PH. D.,
President Agricultural College,
Agricultural College, Mich.

P. H. MELL, M. E., PH. D.,
Director Agricultural Experiment Station,
Auburn, Alabama.

F. PAUL ANDERSON, B. M. E.,
Professor Mechanical Engineering,
Lexington, Kentucky.

SECRETARY AND TREASURER,

EDWARD B. VOORHEES, M. A.,
Director Agricultural Experiment Stations,
New Brunswick, New Jersey.

ASSOCIATION

OF

American Agricultural Colleges

AND

Experiment Stations.

Feb. 7, 1899
EXECUTIVE COMMITTEE,
1898-99

HENRY H. GOODELL, LL. D., CHAIRMAN;
President Massachusetts Agricultural College,
Director Agricultural Experiment Station,
Amherst, Mass.

H. C. WHITE, PH. D.,
President State College of Agriculture
and Mechanic Arts,
Athens, Ga.

ALEXIS COPE,
Secretary Ohio State University,
Columbus, Ohio

JOHN H. WASHBURN, PH. D.,
President Rhode Island College of Agriculture
and Mechanic Arts,
Kingston, Rhode Island.

WM. M. LIGGETT,
Dean College of Agriculture, University of
Minnesota,
Minneapolis, Minn.

BIBLIOGRAPHER,

A. C. TRUE, PH. D.,
Director Office of Experiment Stations,
U. S. Department of Agriculture,
Washington, D. C.

47-M-64

I. In article on "Membership," from Section 2, strike out the words "in general session" and the whole of the sentence next following.

II. Strike out the whole of the article on "Sections," now consisting of two parts.

III. In article on "Meetings," strike out Section 2, and renumber the sections.

IV. In article on "Duties of Officers," strike out Section 3, and renumber the last section. Also, from Section 4, strike out the sentence, "It shall designate," etc., etc.

While concurring in the main with the conclusions of the majority, as already set forth, the minority of your committee believes that no other suitable organization exists, to bring together for beneficial conference the teachers of agriculture and horticulture and the sciences as applied thereto, with the station investigators in those lines. Therefore it is proposed, as an alternative to the plans and recommendations of the majority, to so revise the constitution of the Association as to provide for three (3) Sections. 1. On College and Station work and administration. 2. On Agriculture and the sciences applied thereto. 3. On Horticulture and the sciences applied thereto.

For the purpose of effecting these changes, the minority proposes and recommends certain amendments to the constitution, as follows:

I. Strike out the first section of the article on "Sections," and substitute the following:

(1). The Association shall be organized into sections upon (a) Administration of Colleges and Stations; (b) Agriculture; (c) Horticulture.

II. Strike out from the second section of the article on "Meetings," the last sentence, beginning "The section meetings may be," and substitute the following:—Not more than two sections shall meet or remain in session at the same time and no section shall meet or remain in session during the general sessions of the convention.

III. In article on "Duties of Officers," strike out Section 3, and renumber the last section. Also, from Section 4, strike out the sentence, "It shall designate," etc.

The committee unanimously recommends that no other revision or changes be made in the constitution as it now exists.

And it further recommends that the two propositions for revision above presented, be given in full in the call for the next convention of the Association and that time be assigned in the program for that convention, for discussion and action upon these proposed constitutional amendments.

HENRY H. GOODELL,

Chairman Executive Committee.

MEMORANDA OF PROCEEDINGS OF CONVENTION

OF

Association of American Agricultural Colleges and Experiment Stations

HELD AT MINNEAPOLIS, MINN., JULY 13-15, 1897.

OFFICERS OF THE ASSOCIATION.

President, HENRY C. WHITE of Ga.

1st Vice-President, ALSTON ELLIS of Col., *2d Vice-President*, WILLIAM M. LIGGETT of Minn.,
3d Vice-President, S. M. EMERY of Mont., *4th Vice-President*, CHARLES S. PLUMB of Ind.

5th Vice-President, EUGENE W. HILGARD of Cal.
Secretary and Treasurer, EDWARD B. VOORHEES of N. J.

EXECUTIVE COMMITTEE.

HENRY H. GOODELL of Mass., *Chairman*;

JOHN H. WASHEURN of R. I., ALEXIS COPE of Ohio, RICHARD H. JESSE of Mo.
Bibliographer, A. C. TRUE of Washington, D. C.

OFFICERS OF SECTIONS.

AGRICULTURE AND CHEMISTRY.

R. J. REDDING of Ga., *Chairman*; R. P. HARPER of Minn., *Secretary*.

BOTANY AND HORTICULTURE.

SAMUEL T. MAYNARD of Mass., *Chairman*; H. L. RUSSELL of Wis., *Secretary*.

COLLEGE WORK.

ALSTON ELLIS of Col., *Chairman*; E. A. BRYAN of Wash., *Secretary*.

ENTOMOLOGY.

JOHN B. SMITH of N. J., *Chairman*; CLARENCE M. WEED of N. H., *Secretary*.

MECHANIC ARTS.

WILLIAM S. ALDRICH of W. Va., *Chairman*; A. J. WIECHARDT of Mo., *Secretary*.

COMMITTEES.

METHODS OF TEACHING AGRICULTURE.

J. H. CONNELL of Texas, *Chairman*;
T. F. HUNT of Ohio, A. C. TRUE of Washington, D. C., H. T. FRENCH of Oregon,
H. H. WING of N. Y.

NOMENCLATURE.

H. P. ARMSBY of Penn., *Chairman*;
E. H. JENKINS of Conn., C. M. WEED of N. H., E. S. GOFF of Wis.,
A. C. TRUE of Washington, D. C.

UNIFORM FERTILIZER LAWS.

H. J. WHEELER of R. I., *Chairman*;
C. D. WOODS of Me., H. P. ARMSBY of Penn., E. H. JENKINS of Conn., M. A. SCOVELL of Ky.

ENGINEERING EXPERIMENT STATIONS.

C. S. MURKLAND of N. H., *Chairman*;
M. H. BUCKHAM of Vt., F. P. ANDERSON of Ky., A. W. HARRIS of Me., J. E. STUEBS of Nev.

COLLECTIVE STATION EXHIBIT.

H. P. ARMSBY of Penn., *Chairman*;
W. H. JORDAN of N. Y., A. W. HARRIS of Me., M. A. SCOVELL of Ky., A. C. TRUE of Washinton, D. C.

GRADUATE STUDY AT WASHINGTON.

CYRUS NORTHRUP of Minn., *Chairman*;
ALSTON ELLIS of Col., M. H. BUCKHAM of Vt., G. E. MACLEAN of Nev., ALEXIS COPE of Ohio,
J. H. WASHBURN of R. I.

RECOMMENDATIONS.

- That the publications of each station for the year be paged consecutively, and that there be appended to the annual report or final publication for the year a title page and an alphabetical index of subjects similar to that in the Experiment Station Record.
- That a short practical course in seed testing be offered at each of our agricultural colleges and that the experiment stations equip themselves for investigations in seed testing, following the rules and methods published in circular 34 (O. E. S.).
- That one or more lectures on agricultural seeds and the best means for ascertaining the real value of the same be given at Farmers' Institutes.
- That a collective experiment station exhibit be made at the Paris Exposition in 1900.

ITEMS OF BUSINESS.

- Committee appointed to formulate a bill for the establishment of engineering experiment stations.
- Committee appointed to devise plan, if practicable, whereby graduate students may have access to and use of the Congressional Library and collections of scientific bureaus at Washington for purposes of study; said plan to include suggestions as to the manner in which such work may be organized and directed, and the composition of such staff as may be necessary to coordinate and direct such work.
- Committee appointed to try and secure the issuing of uniforms to college cadets, or in lieu thereof, permission to purchase at government rates.
- Committee appointed to take such steps as will create each of the land grant colleges a depository of all government publications.
- Report of special committee on revising constitution.

The members of the committee have discussed this important matter among themselves and have obtained the opinions of a number of gentlemen heretofore active in the work of the Association, whom it has been convenient to consult. A considerable diversity of opinion has been developed as to the most useful form for the Association to take, to accomplish its future work, and it seems expedient to present two different propositions.

A majority of the committee and of those whom it has been practicable to confer with, favor a radical change in the constitution, and this is the first submitted for consideration and action.

This plan proposes the abolition of all Sections so that, if adopted, the annual convention of the Association would thereafter be a meeting of the executive officers of Colleges and Stations, with such other and special delegates as the institutions respectively saw fit to send to these conferences.

It is believed by those favoring this plan, that it will effectively bring the Association back to its original purpose, namely, the consideration in annual conference of the problem of College and Station administration as affecting (a) internal working; (b) relations to the Government of the United States; (c) relations to the State Government respectively; (d) relations to other institutions, and (e) attitude towards new legislation proposed from time to time.

The delegates who are able to assemble annually as representatives of the institutions forming the Association, need the entire time at their disposal to enable them to give undivided attention to these subjects of paramount importance.

If the Sections are continued, the natural tendency will be to increase the number, because if it is good policy to have any departments of Colleges and Stations represented by specialists, it is expedient and right that all departments should have equal opportunities. Following this logical course, it will become more and more difficult than it now is, to select and limit the attendance at these conventions.

There are, however, other organizations of chemists, engineers, botanists, etc., which professors and investigators desire to attend, at which they have ample opportunities for the work they now seek to do at the conventions of this Association, and where for many reasons it is better for them to go. At these other meetings, delegates from the various Land Grant Colleges and Experiment Stations come in contact not only with men from institutions of like character, but also with men from all the other colleges and universities and technical schools. Many believe that, forced on economical grounds to make choice, the institutions concerned and their workers, will decide that their time and money can be more profitably used by attendance at these larger and more general gatherings than at the special meetings of this body.

To accomplish the objects indicated, the majority of your committee proposes and recommends that the constitution of this Association be amended and revised by striking out certain portions of the existing instrument, as follows:

UNIVERSITY OF MINNESOTA

MINNEAPOLIS.

At a meeting of the Section on the Mechanic Arts of the Association of American Agricultural Colleges and Experiment Stations, held on July 13th, 1897, President C. S. Murkland(N.H.) in the Chair, it was moved by President Canfield (Ohio) seconded and passed that a committee of this Section be appointed to report to the Association in general convention the feeling of this Section respecting any needed federal endowment for the establishment of Engineering Experiment Stations.

The committee appointed respectfully submit the following:

1st.- That the necessity of more extended federal aid for the existing similarly endowed institutions is fully recognized and urged upon the attention of this convention.

2nd.- That such new endowment should be: "To establish engineering experiment Stations in connection with the Colleges established in the several States under the provisions of an act approved July 2nd, 1862, and acts supplementary thereto."

3rd.- That these Stations should bear the same relation to the instruction given in these Institutions in engineering and the Mechanic Arts as that now borne by the Agricultural Experiment Stations to the Agricultural interests.

4th.- That such a proposed measure should be brought before this convention and fully considered by it.

5th.- This committee recommend that a special Committee of five (5) be appointed to formulate the necessary provisions of such a measure to be submitted to this convention.

(Signed) Prof. Wm. S. Aldrich, W.Va.
 Pres. Oscar Clute, Fla.
 Prof. C. W. Hall, Minn.

UNIVERSITY OF MINNESOTA
MINNEAPOLIS.

To The Association of Am. Agr. Colleges
and Experiment Stations,

The Committee appointed by President Fairchild, in Chair,
at the morning session of the Association, July 14th, 1897, pur-
suant to an adopted report from the Section on Mechanic Arts
respecting the provisions of an Engineering Experiment Station Bill,
submit the following report:

1st.- Your Committee recommend the adoption of the fol-
lowing attached memorandum of " A Bill to establish Engineering
Experiment Stations in connection with the Colleges established in
the several States and Territories under the provisions of an Act
approved July 2nd, 1862, and Acts supplementary thereto."

2nd.- Your Committee further recommend that the Executive
Committee of this Association appoint an Auxiliary Committee of
five (5) to co-operate in the further elaboration of this Bill
and the prosecution of its interests.

Respectfully submitted.

(Signed)

President C. S. Murkland, N. H.

President J. C. Stubbs, Nevada.

President R. H. Jesse, Mo.

Prof. C. W. Hall, Minn.

Prof. Wm. S. Aldrich, West Va.

A B I L L

To establish Engineering Experiment Stations in connection with the Colleges established in the several States and Territories under the provisions of an Act approved July 2nd, 1862, and Acts supplementary thereto.

1 Be it enacted by the Senate and House of Representatives
2 of the United States of America, in Congress assembled -

3 That in order to promote investigation and research in
4 Engineering and Physical Science, with special reference to
5 their applications in the industries of the several States
6 and Territories; and to extend the benefits of such investi-
7 gations and research as widely as possible, an Engineering
8 Experiment Station shall be established in each State and
9 Territory complying with the requirements hereinafter stated.

1 Sec. 2.- That these Engineering Experiment Stations
2 shall be established only in connection with the Colleges in
3 organic relation with the several States and maintained wholly
4 or in part, by endowment from the General Government under
5 act of July 2nd, 1862, and other acts supplementary thereto;
6 Provided, that no such Engineering Experiment Station shall
7 be established in connection with any institution which shall
8 not have provided full collegiate courses in Engineering and
9 the Physical Sciences.

1 Sec. 3.- That nothing in this act shall be construed to
2 impair or modify the legal relations existing between any of
3 the said colleges, and the Government of the States or
4 Territory in which it is located.

1 Sec. 4.- That in order to secure the greatest benefit
2 from this act, the Government shall advise and co-operate with
3 each of said Stations through the Department of the Interior.

1 Sec. 5.- That said Engineering Experiment Station shall
2 publish annual reports and may from time to time issue bulle-
3 tins or reports of progress, and send copies of these to such
4 individuals as may request the same; and copies of all publi-
5 cations and at least one copy of the annual report of each
6 Station shall be forwarded to the Secretary of the Interior,
7 and the Secretary of the Treasury of the United States. Such
8 bulletins or reports, and the annual reports of said Stations
9 as hereinafter provided for, shall be transmitted through the
10 mails of the United States free of postage under such regula-
11 tions as the Postmaster General may from time to time
12 prescribe.

1 Sec. 6.- That the grants of money hereinafter provided
2 shall not be applied to pay salaries for teaching but shall be
3 applied to research in Engineering and Scientific investiga-
4 tion and for facilities for the same; and that machinery and
5 other facilities for experiment shall not be applied to con-
6 structive or manufacturing use otherwise than as required by
7 said Stations for the promotion of their work as herein set
8 forth, but may be used for such purposes of instruction as
9 shall not limit the proper efficiency of these Experiment
10 Stations as institutions for investigation and research.

1 Sec. 7.- That a Director for each Engineering Experiment
2 Station organize under this act shall be appointed and his
3 duties shall be prescribed by the governing board of the
4 college with which such Station shall be established.

1 Sec. 8.- That for the purpose of paying the necessary
2 expenses of conducting the Engineering Experiments and Scien-
3 tific investigations for the Government, and the industrial
4 development of the several States and Territories and printing

5 and distributing the results as hereinbefore prescribed, there
6 is hereby appropriated to each State and Territory, to be
7 especially provided for by Congress in the appropriation from
8 year to year, out of any money in the Treasury not otherwise
9 appropriated, to be paid as hereinafter provided, for the
10 endowment and support of an Engineering Experiment Station in
11 each State and Territory, under the provisions of this act,
12 the sum of Five Thousand Dollars for the year ending June
13 Thirtieth, Eighteen Hundred and Ninety-nine, and an annual
14 increase of the amount of such appropriation thereafter for
15 five years by an additional sum of Two Thousand Dollars over
16 the preceding year, and the annual amount to be paid there-
17 after to be Fifteen Thousand Dollars.

1 Sec. 9. - That the sums hereby appropriated to the States
2 and the Territories for the endowment and support of said En-
3 gineering Experiment Stations, as herein set forth, shall be
4 paid in equal quarterly payments on the first day of January,
5 April, July and October of each year to the Treasurers or other
6 officers duly appointed by the governing boards of said col-
7 leges to receive the same, the payment to be made on the first
8 day of July, Eighteen Hundred and Ninety-eight; Provided,
9 however, that out of the first annual appropriation so received
10 by any Station an amount not exceeding one-fifth may be ex-
11 pended in the erection, enlargement, or repair of a building
12 or buildings necessary for carrying on the work of such
13 Stations, and thereafter an amount not exceeding five per
14 centum of such annual appropriation may be so expended.

1 Sec. 10.- That whenever it shall appear to the Secretary
2 of the Treasury from the annual statements of the receipts
3 and expenditures of any of said Stations that a portion of the
4 preceding annual appropriation remains unexpended, such amounts
5 to be deducted from the next succeeding annual appropriation

6 to such Station, in order that the amount of money appropri-
7 ated to any Station shall not exceed that amount actually and
8 necessarily required for its maintenance and support.

1 Sec. 11.- That if any portion of the moneys received by
2 the designated officer of the State or the Territory for the
3 endowment, support, and maintenance of said Engineering Ex-
4 periment Station, as provided in this act, shall by any acts
5 or contingency be diminished or lost or misapplied, it shall
6 be replaced by the State or the Territory to which it belongs,
7 and until replaced no subsequent appropriation shall be ap-
8 portioned or paid to such State or Territory, and no portion
9 of said moneys shall be applied, directly or indirectly, under
10 any pretext whatever, to any other purpose than that herein
11 set forth and specified.

1 Sec. 12.- That it shall be the duty of each of said Sta-
2 tions on or before the first day of September of each year to
3 make to the Secretary of the Interior a full and detailed re-
4 port of its operations, including a statement of the receipts
5 and expenditures according to the forms prescribed by the
6 Secretary of the Interior, its library, the number of its
7 staff, and information as to any improvements or experiments
8 made under the direction of said Station, with their costs and
9 results, and such other scientific, engineering, industrial,
10 and economic statistics and information as may be regarded
11 as useful, which shall be transmitted by mail free, as hereto-
12 fore set forth; Provided, that any one of said Stations which
13 shall fail to render said report of the expenditure of the
14 funds herein provided for may have its appropriations with-
15 held, on the recommendation of the Secretary of the Interior,
16 until said report is properly rendered.

1 Sec. 13.- That the grants of money authorized by this
2 act are made subject to the Legislative assent of the several
3 States and Territories to the purpose of said grants; Provided,
4 that the payment of such installments of the appropriation
5 herein made as shall become due to any State before the ad-
6 journment of the regular session of its Legislature meeting
7 next after this act shall go into effect shall be made upon
8 the assent of the Governor thereof, duly certified to the
9 Secretary of the Treasury.

1 Sec. 14.- That nothing in this act shall be held or con-
2 strued as binding the United States to continue any payments
3 from the Treasury to any or all of the States or the Territo-
4 ries mentioned in this act, but Congress may at any time amend,
5 suspend or repeal any or all the provisions of this act.

West Virginia University,

MORGANTOWN, W. VA.

July 30, 1897.

President J. K. Patterson,
State College of Kentucky,
Lexington, Ky.

My dear Sir,

Enclosed you will find copy of Reports of Committees and provisional outline of the next Engineering Experiment Station Bill,-- all of which were carefully considered, debated and passed at late Minneapolis Convention of the Assoc. of Am. Agr. Col. and Exp. Stations.

All of us who have been hard at it in connection with this new phase of work of the Mechanic Arts Section felt your absence from Minneapolis where most needed to uphold the cause and the work of this Section,-- a Section that may truly be said to be the work of your hands. But, it is coming, and we shall look forward with pleasure to your continued hearty co-operation, both in the work of this Section and in advancing the interests of the Engineering Experiment Station project.

With very kind regards to Dr. Scovell and Prof. Anderson whom I had great pleasure in meeting at the late Convention, ever believe me,

Very truly and respectfully yours,

Wm. S. Aldrich.
W.

West Virginia University,
MORGANTOWN, W. VA.

July 30, 1897.

TO WHOM IT MAY CONCERN:

Mr. Thos. M. Lavelle graduated from the West Virginia University, June, 1895, with the degree of Bachelor of Science in Civil Engineering. During his four-year's course of study leading to this degree, he showed himself a most careful, conscientious and diligent student. His work in all branches was markedly faithful and thorough.

Since graduation he has been engaged in several important capacities in the practical work of his profession, in railroad and supervision work, and recently with the Pencoyd Iron Works. Here he has shown marked ability in handling the ever new problems arising in the responsible work assigned to him. His resourcefulness and capacity of adapting himself to meet the emergencies of new engineering problems mark the beginning of a successful career. He is heartily commended to those requiring his services.

Respectfully submitted,

Wm. S. Aldrich

Professor Mechanical Engineering.

West Virginia University,

MORGANTOWN, W. VA.

July 30, 1897.

President J. K. Patterson,
State College of Kentucky,
Lexington, Ky.

My dear Sir,

I have learned that the Chair of Civil Engineering in your Institution is to be filled by a new appointment. Permit me to name you Mr. T. M. Lavelle, B. S. C. E. from the West Virginia University, Class of 1895.

Mr. Lavelle wrote his graduating thesis on "Transmission of Power by Compressed Air", under my supervision. I recently visited the plant of the Aurora Mines, at Ironwood, Michigan, en route homeward from Minneapolis Convention,- and the discussion and working up of the air-compressor tests of their plant formed quite a portion of Mr. Lavelle's thesis.

Since graduating he has been engaged in the practice of his profession,- railroad work, supervision,- and is now holding a very important and responsible position with the Pencoyd Iron Works, Pencoyd, Pa. His work here consists very largely, I believe, in locating and arranging all the internal works and improvements now being so largely made at these works.

At the Pencoyd Iron Works Mr. Lavelle had been brought into very frequent touch with the Superintendent and Engineer, Mr. Christy, and with the President, Mr. Roberts. These gentlemen have only words of praise and commendation for Mr. Lavelle.

Mr. Lavelle is withal a thorough gentlemen and a scholar,- a Christian young man and recently married.

President. J. K. Patterson....2.....

Not knowing in what official manner to commend Mr. Lavelle to your Board of Regents, I address the above to you personally, believing that you will know how to dispose of it to best advantage to all concerned.

Believe me,

Very truly and respectfully yours,

Wm. S. Aldrich
W.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 2, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., August 2, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. G. W. Knadler at Valley Station Jefferson County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Knadler.

H. Garman,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 3, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., August 2, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. Christian
Abersold at Rockhaven,
Meade County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Abersold.

H. Gammann,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 4, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., August 2, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. Virgil Popham at New Fruit, Hardin County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Popham.

H. Gammann,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 5, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., August 2, 1897

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. J. L. A. Rahn at Litchfield, Grayson County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Rahn.

H. Gorman,
State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 6, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., August 2, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. John R. Childres at South Carrollton, Muhlenberg County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Childres.

H. Gorman,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 7, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., August 2, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. E. M.

Samuels at Clinton,
Hickman County, Kentucky, and believe the same

to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Samuels.

H. G. Gorman,
State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 8, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., August 2, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Messrs. Downer and Brother at Fairview & Luthie Todd County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Messrs. Downer & Bro.

H. Gammann,
State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 9, Duplicate

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

~~—————~~ OFFICE OF THE STATE ENTOMOLOGIST. ~~—————~~

Lexington, Ky., August 2, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. B. G. Ellis at Auburn, Logan County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Ellis.

H. G. Gorman,
State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 10, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., August 2, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. James
Childres at Auburn,
Logan County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Childres.

H. Gorman,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 11, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

 OFFICE OF THE STATE ENTOMOLOGIST. 

Lexington, Ky., August 2, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. A. J. McGinness at Bowling Green, Warren County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. McGinness.

H. Garrison,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 12, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., August 2, 1897

I hereby certify that I have personally inspected the nursery stock growing on the place of Messrs. Downer and Briggs at Bowling Green, Warren County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Messrs. Downer and Briggs.

H. G. Gammell,
State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 13, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

OFFICE OF THE STATE ENTOMOLOGIST.

Lexington, Ky., August 2, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Messrs. F. Walter & Co. at New Albany, Indiana ~~County, Kentucky~~, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Messrs. Walter & Co.

H. Garman,
State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 15, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., August 14, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mrs. J. A.
McKee & Co. at Kingsville,
Lincoln County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mrs. McKee & Co.

H. Gammann,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 14, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., August 14, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. M. J. Van Meter at Meeting Creek, Hardin County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Van Meter.

H. Gammann,

State Entomologist.

AGRICULTURAL EXPERIMENT STATION
OF THE
State College of Kentucky,

OFFICE OF THE STATE ENTOMOLOGIST.

H. GARMAN,
State Entomologist.

Dr. James K. Patterson,
Dear Sir:

Lexington, Ky., Aug. 28, 1897.

Enclosed herewith please find
additional duplicate nursery inspection certificates.

Yours Respectfully,
H. Garman.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 16, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

~~OFFICE OF THE STATE ENTOMOLOGIST.~~

Lexington, Ky., August 27, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Messrs. B. C. Bingham & Sons at Russell, Franklin County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Messrs. Bingham.

H. Gorman,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 17, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., August 27, 1897.

I hereby certify that I have personally inspected the
nursery stock growing on the place of Messrs. C. P.
Dietrich & Bro. at Maysville,
Mason County, Kentucky, and believe the same
to be free from San Jose scale and other destructively injuri-
ous pests.

This certificate terminates six months from date and
does not apply to stock not now growing in the nurseries of
Messrs. Dietrich.

H. Garman,
State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 18, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., August 27, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Messrs. E. K.

Taliaferro & Bro. at Newport,

Campbell County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Messrs. Taliaferro.

H. Garman,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 19, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

 **OFFICE OF THE STATE ENTOMOLOGIST.** 

Lexington, Ky., August 27, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. W. A. Huggins at Cave City, Barren County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Huggins.

H. Garman,
State Entomologist.

FIFTY-FOURTH CONGRESS.

WARREN B. HOOKER, Chairman.
 Binger Hermann.
 Samuel M. Stephenson.
 John E. Reyburn.
 Henry Allen Cooper.
 Theodore E. Burton.
 William E. Barrett.
 Walter Reeves.
 Charles A. Towne.
 Blackburn B. Dovaner.
 Charles N. Clark.
 James A. Walker.
 Thomas C. Catchings.
 Rufus E. Lester.
 Richard H. Clarke.
 Philip D. McCulloch.
 Albert S. Berry.

Henry G. Rask, Clerk.

Committee on Rivers and Harbors,

House of Representatives U. S.,

Washington, D. C., *Apr 5* 1896

*Hon James K Patterson.
 Livingston, Ky.*

*My dear Sir. Your letter in regard
 to. Engineer Experiment Stations
 recd. I will gladly do what I can
 in favor of the bill introduced
 by Senator Hale.*

*Very sincerely yours
 A S Berry*

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 20, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., September 1, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mrs. Nauz and Neuner at St. Matthews, Jefferson County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mrs. Nauz and Neuner.

H. Gammann,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 21, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., September 2, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Messrs. O. and M. Combs at Shepherdsville, Bullitt County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Messrs. Combs.

H. G. Gannan,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 22, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., September 3, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Messrs. Gardiner Brothers at Deatsville, Nelson County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Messrs. Gardiner.

H. G. Gannan,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 23, Duplicate

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., September 3, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. J. A. Allen and Son at Blountfield, Nelson County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Allen.

H. G. Gorman

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 24, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., September 6, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. R. H. Parker at Cave City, Barren County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Parker.

H. G. Gammann,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 25, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., September 8, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. W. S. Ashby at Cloverport, Breckinridge County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Ashby.

H. G. Gorman,
State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 26, Duplicate,

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

~~OFFICE OF THE STATE ENTOMOLOGIST.~~

Lexington, Ky., September 13, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. Horace Klinglesmith at Cecilian, Hardin County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Klinglesmith.

H. G. Gorman,
State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 27, Duplicate,

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., September 13, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Messrs. J. G. Hanson and Son at Winchester,
Clark County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Messrs. Hanson.

H. G. Gannan,
State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 28, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., September 13, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Messrs. J. A. E. S. Sarah J. & P. W. Reame (The Ream Co.) near Hustonville,
Casey County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Messrs. Reame.

H. Gammann,

State Entomologist.

Note. The post office address of this firm is Hustonville, Lincoln Co., but the nursery is 10 miles from Hustonville, in Casey County. H. G.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 29, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., September 25, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mrs. A. J. Hancock at Casky, Christian County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mrs. Hancock.

H. G. Gorman,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 30, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., September 27, 1897

I hereby certify that I have personally inspected the nursery stock growing on the place of Messrs. P. F. Adams and Son at Waco, Madison County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Messrs. Adams.

H. Gammann,
State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 32, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

~~—————~~ OFFICE OF THE STATE ENTOMOLOGIST. ~~—————~~

Lexington, Ky., Oct. 14, 1897

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. W. A. Sandefur at Robards, Henderson County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Sandefur.

H. G. Garrison,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 31, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

OFFICE OF THE STATE ENTOMOLOGIST.

Lexington, Ky., Oct. 14, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mrs. Baldwin and Summers at Cairo, Henderson County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mrs. Baldwin & Summers.

H. Gammell,

State Entomologist.

CERTIFICATE OF INSPECTION OF NURSERY STOCK.

No. 33, Duplicate.

AGRICULTURAL EXPERIMENT STATION

—OF THE—

STATE COLLEGE OF KENTUCKY.

—OFFICE OF THE STATE ENTOMOLOGIST.—

Lexington, Ky., Oct. 25, 1897.

I hereby certify that I have personally inspected the nursery stock growing on the place of Mr. M. E. Edens at Cabottsburg, Boyd County, Kentucky, and believe the same to be free from San Jose scale and other destructively injurious pests.

This certificate terminates six months from date and does not apply to stock not now growing in the nurseries of Mr. Edens.

H. Garman,
State Entomologist.

OFFICERS, 1898-99.

PRESIDENT.

HENRY P. ARMSBY, PH. D.,
Director of Experiment Station, and Dean of
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State College, Pa.

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SECRETARY AND TREASURER.

EDWARD B. VOORHEES, M. A.,
Director Agricultural Experiment Stations,
New Brunswick, New Jersey.

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U. S. Department of Agriculture,
Washington, D. C.

AMHERST, MASS., APRIL 10, 1899.

THIRTEENTH ANNUAL CONVENTION—1899.

By authority of the Executive Committee, a delegate Convention of this Association is hereby called to meet in the city of San Francisco, Cal., on Wednesday, July 5th, 1899, at 10 o'clock, A. M.

Attention is called to the following extracts from the constitution of the Association :

Membership:—1. Every college established under the act of Congress approved July 2, 1862, or receiving the benefits of the act of Congress approved August 30, 1890, and every agricultural experiment station established under State or Congressional authority, the Bureau of Education of the Department of the Interior, the Department of Agriculture, and the office of Experiment Stations of the last-named Department, shall be eligible to membership in this Association.

2. Any institution, a member of the Association in full standing, may send any number of delegates to the meetings of the Association: but one shall be designated to the Association as the regular representative and voting delegate. The same delegate may represent both a college and a station, but shall cast only one vote in general sessions. Other delegates may be designated by any institution to represent it in specified sections of the Association, but such delegates shall vote only in such sections, and no institution shall be allowed more than one vote in any sectional meeting.

3. Delegates from other institutions engaged in educational or experimental work in the interest of agriculture or mechanic arts may, by a majority vote, be admitted to conventions of the Associations, with all privileges except the right to vote.

4. In like manner, any person engaged or directly interested in agriculture or mechanic arts who shall attend any convention of this Association, may be admitted to similar privileges.

* * * * *

Finances:— * * * * * No institution shall be entitled to representation or participation in the benefits of the Association, unless such institution shall have made the designated contribution for the year previous to that in and for which such question of privilege shall arise, or shall have had said payment remitted by the unanimous vote of the Executive Committee.

In accordance with the provisions of the constitution, the Section on College work and the Section on Botany and Horticulture have been designated to present in general session a portion of the subjects coming before them.

By vote of the last convention a special place will be assigned on the programme for discussing the report of methods in teaching agriculture.

The general program, and programs for the Sections will be duly issued, together with a circular of information as to fares, hotel rates, places of the meetings and headquarters of the Association.

For the Executive Committee,

HENRY H. GOODELL,

Chairman.

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Director Office of Experiment Stations,
U. S. Department of Agriculture,
Washington, D. C.

New Brunswick, N.J.

Apl. 10th., 1899.

Pres. J.K. Patterson,

Lexington, Ky.

Dear Sir:-

The annual convention of the A.A.A.C. & E.S. will be held in San Francisco, Cal., July 11th., 12th. and 13th., 1899. Special rates from Chicago and return for \$62.50 have been made, or about one-half the usual first-class figure.

It has occurred to the committee, that it would be very desirable if the Eastern and Southern delegates could arrange to have a special car from Chicago, and I write to inquire whether you would be a party in this arrangement, and whether any other members of your staff would be included. I desire to learn whether it will be possible to do this, in order to make arrangements in ample time. Kindly let me know at once, and greatly oblige,

Very truly yours,

E. B. Voorhees

Secretary-Treasurer.

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U. S. Department of Agriculture,
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New Brunswick, N.J.

Apr. 15th., 1899.

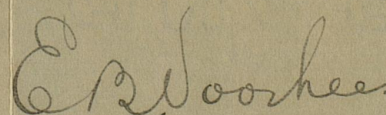
Pres. Jas. K. Patterson,

Lexington, Ky.

My dear Sir:-

I have your letter of recent date in reference to my inquiry of the 10th. as to whether you would join a party at Chicago for the meeting in California. I have to say that full particulars concerning routes, time, rates, etc., will be sent you just as soon as it is possible for me to get official data from the railroad authorities. I would say at this time, however, that the rates will be in force from June 25th., and that the rates permit of stop-overs on the way, and choice of routes.

Very truly yours,



Secretary-Treasurer.

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Director Office of Experiment Stations,
U. S. Department of Agriculture,
Washington, D. C.

Amherst, Mass., April 19th, 1899.

President James K. Patterson,

Lexington,

Kentucky.

Dear Sir,

Your letter of the 17th April is at hand. The National Educational Association holds its meeting from the 11th to the 14th. Professor Jaffa wrote me from California that their meeting commenced on the 14th. I had therefore decided that our best time would be to hold from the 11th to the 13th, and that would give one day for delegates to reach Los Angeles. Of course, when I found out the true state of the case, I was compelled to make the change. I could not place the date after the meeting of the National Educational Association, because our tickets require us to be in California by the 11th.

I was very much afraid it might hit some of us, but, on the whole, it seemed to be the best thing to be done.

I am

Yours very truly,

Dictated.

W. H. Goodell

S.

Sweet milk and Buttermilk, 39
 Butter, Report of 71
 Vinegar, 22
 To The Director of the Experiment Station
 Syrup, honey, sugar, etc., 24
 Jellies, preserves, etc., 23
 Baking Powders, 22
 Mince The President of the College
 Canned goods, 2
 Canned goods, 2
 Flour, 1
 James K. Patterson, Ph. D., 378

Of these President of the State College, are made in Louisville

Dear Sir:-- Mr. Palmer, of the Manual Training High School, and 68

I have the honor to submit herewith the report of the Experiment Station for the year ending May 1st, 1900.

OUR WORK.

CHEMICAL DIVISION. In the Chemical Division 1056 samples have been analyzed, and may be classified as follows:

Commercial fertilizers and chemicals, official	475
Samples of food taken under the pure food law,	378
Grasses, forage plants and cattle foods,	37
Sorghum juice, in selecting seed,	49
Butter made in Station churn tests of cows, though, to	50
Minerals and potable waters,	27
Coal, mostly for Mech. Eng. Department,	16
Ores, clays, rocks and minerals,	17
Tobacco stems and stalks,	5
Per algretta,	1
Petroleum,	1
Total samples,	1056

In addition to these analyses, various minerals, ores, rocks, waters, etc. have been inspected for citizens of the State where a regular analysis was not required.

Bulletin 85 contains many of the analyses of fertilizers made, and the food report now in press will contain the analyses of nearly all food samples. The food samples are classified as follows: ly did the fertilizers work increase that we found it necessary to give first place to it in our laboratory work during the year.

Sweet milk and buttermilk,	99
Butter,	74
Vinegar,	52
Tomato catsups, etc.,	49
Syrup, honey, sugar, etc.,	34
Jellies, preserves, etc.,	23
Baking Powders,	22
Mince Meat,	14
Canned goods,	6
Oleomargarine,	2
Essences,	2
Flour,	1
Total food samples,	378

Of these analyses of food samples 120 were made in Louisville by Dr. Chase Palmer, of the Manual Training High School, and 68 were made in whole or in part by Dr. J. H. Kastle. The analyses of commercial fertilizers were made by Mr. Curtis with the assistance of Messrs. Scherffius and Beatty, who have rendered valuable and efficient service. Mr. J. C. W. Frazer was engaged during the vacation in the analysis of grasses and forage plants already mentioned, and Mr. J. V. Reed was employed for about two months in food and miscellaneous work.

Although it was anticipated a year ago that the work of the Chemical Division would rapidly increase, and although, to provide for this, two additional chemists were employed, besides an extra chemist during the summer, nevertheless, the work has increased beyond expectations and beyond the capacity of the present force. During the year the work required under the fertilizer law has occupied the entire time of Mr. Curtis, and most of the time of Messrs. Scherffius and Beatty, two capable assistants. This work is steadily increasing, and likely to increase more rapidly as the farmers of the State become aware of the fact that they can have their fertilizers analyzed here free of cost. So unexpectedly did the fertilizer work increase that we found it necessary to give first place to it in our laboratory work during the year.

considered in future work. When we consider that under the operations of the new food law, which is to go into effect June 15th,

It was thought, when I made my recommendations last year, that either Mr. Beatty or Mr. Scherffius would be able to give a large part of his time to general work in the laboratory, but experience has shown that both have had to work almost continuously on fertilizers to keep up with the analyses. And yet, while the number of fertilizers analyzed was large, I feel that the work has not been commensurate with the requirements of the inspection consistent with the magnitude of the fertilizer business in the State. We are amply paid for thorough and skillful work, and a force adequate should be provided.

Pure Food Law. At the last session of the Legislature the pure food law was amended, and among other changes, it provides for additional funds for its proper execution. The work required under the old law, which limited the analyses to 500 samples, was enough to give constant employment to at least one chemist. In order to relieve our laboratory as much as possible, as stated before, much of the work in Louisville was done by Dr. Chase Palmer, and some of the work here was turned over to Prof. Kastle.

The correspondence pertaining ~~the~~ to the pure food law and the clerical work added considerably to our office work, notwithstanding that a large part of the clerical work has been done by Prof. Peter at night, and it has been necessary also for him to forego his customary vacation in order to keep up the pure food work in a satisfactory condition, and for such work he has had no extra compensation.

Had the courts not been occupied with the constitutionality of the law, undoubtedly many cases under the law would have been before them, and in such case Prof. Peter would have spent a considerable time as a witness in the courts. This should be considered in future work. When we consider that under the operations of the new food law, which is to go into effect June 15th,

more than double the number of analyses will be made, and that the law is more strict, it can readily ~~xxxx~~ be seen that the amount of work required is much more than doubled, both in chemical analyses, clerical work, and in attendance on courts. The State provides for \$7,500 for paying for such work.

When I was called before the Senate and House Committees last winter, I stated that if the work was to be done by the Station, ample funds should be provided for employing competent chemists; for thorough inspection; for clerk hire, and for attorneys fees; and on my recommendation, the appropriation was increased from \$2,500 to \$7,500, in order that such recommendations could be carried out.

ENTOMOLOGICAL and BOTANICAL DIVISION. Prof. Garman has continued the work on the smut of wheat, both with reference to preventing the disease and learning the effect of the treatment on the germination of the seed. Experiments have been made with reference to destroying the wheat weevil in the stored grain, and also in the study of bisulphide of carbon used in such experiments. Some experiments on the blight of sugar beets have been made. Experiments with hydrocyanic acid gas, bisulphide of carbon, nicotine, and sulphur have been made, with a view to learning their effect on various insects, and at the same time, their effect on different plants. Studies of fruit insects, tobacco worms and insects injurious to garden stuff have been made during the year, and considerable illustrative material has been accumulated for instruction in economic entomology. Experiments with potato scab were continued, but the season not being favorable to scab, the tests will be repeated. Experiments

legislature the law covering inspection of fruits, etc. be some-

with the different grasses have been continued, and new grass plots have been planted on the recently acquired farm. During the winter considerable work was done on the bacteriology of several butter cultures, and it is proposed soon to publish a bulletin on the subject.

Under a law of the State recently passed, Prof. Garman, as State Entomologist, is required to inspect nurseries of the State each year. For this purpose he is paid his necessary traveling expenses. With reference to inspection, Prof. Garman reports as follows:

"From the middle of April, 1899, until July 7th of the same year the Entomologist and Botanist was occupied pretty steadily with the work of inspecting nurseries, of which there were forty-two doing business in the State. With four exceptions they were found in satisfactory condition. One of these did not receive a certificate. The trees were dwarfed in growth from neglect, the ground choked with weeds, and at the time of my visit stock was grazing over the ground. Another of the four received a certificate, excepting strawberry plants, which were found infested with the crown borer. A third was required to treat all strawberry plants sold. The fourth, after certain trees infested with a scale insect were destroyed by the owner, was inspected a second time before a certificate was issued.

I am pleased to be again able to say that the San Jose scale has not been found in any Kentucky nursery, and since this was the third annual inspection, the chances are that we have escaped the worst danger, so far as dissemination from our own nurseries is concerned."

Prof. Garman recommends that at the next meeting of the Legislature the law covering inspection of fruits, etc. be some-

what amended, so as to be more thorough and provide funds for an assistant in the inspection work, as the inspection now occupies too much of his time from the Station work. I think the law could be easily amended, and I believe that the next Legislature should be asked to make such amendments.

Bulletin 84 on the elm diseases was issued from this division during the year. An extended bulletin on forage plants, together with the analyses of samples made in the Chemical Division is in press.

Prof. Garman has taught a small class in Entomology during a portion of the year. As to this he states:

"During the current school year I have had a small class in Entomology composed of pupils from the Agricultural and Scientific courses in the College, and one of the seniors is now doing his thesis work in my Division. I do not feel satisfied with the condition of entomological work in the Institution. I know it can be put in as good condition as in any institution in the West, and trust I may yet be allowed to develop it to the point that is expected of the College by the friends of agriculture in Kentucky and of me by personal friends among scientific men elsewhere in the United States."

HORTICULTURAL DIVISION. As to the work in the Horticultural Division, Prof. Mathews reports as follows:

"As for years past, the time given by the writer to Experiment Station work has been only a portion of the whole, the major part of both time and energy being required in the several lines of College teaching included under Botany, Horticulture and Agriculture. There has, therefore, been but little room for more than the direction of routine work and the correspondence connected with the Department.

In view of the proposed change of the fruit plantations, but few additions have been made to the ~~varieties~~ varieties of grapes or other small fruits during the past year.

A considerable number of the varieties of grapes in our experiment vineyard ~~during~~ suffered during the severe conditions of the winter of 1898-1899, so that the fruit production of last summer was somewhat curtailed, although the injuries inflicted were themselves of interest as indicating the hardiness of the different varieties. Much attention will be given to grapes again this season.

As soon as a suitable allotment of land can be made for the purpose, it is proposed to undertake a series of experiments in orchard management, with a variety of other studies. I consider it very desirable that the Station should possess a good collection of the varieties of the different orchard fruits, not mainly for mere variety testing, but because so many questions are constantly arising which require opportunities for a close and intimate acquaintance with a good collection of varieties. No available collection now exists in this vicinity where such desired studies can be carried on. I hope, therefore, that a tract of land may soon be available for this purpose of eight or ten acres at first, so situated that the area can be extended as future needs require."

FIELD EXPERIMENTS. Under the direction of Mr. Harper experiments have been continued in testing fertilizers on wheat, hemp, tobacco, corn, oats, potatoes and meadow, and varietal tests of wheat and oats have been continued also.

A great portion of Mr. Harper's time has been taken up in superintending the work in preparing the "Land Place", which was purchased last year, for our future work.

The dairy work has been continued, and many interesting

results are ready for publication.

OFFICE WORK. With the increased work under the fertilizer control and the pure food inspection the office work is growing to such an extent that increased assistance is essential.

PUBLICATIONS. We have published during the year the following bulletins:

No. 82- Commercial Fertilizers.

" 83- Wheat.

1. Experiments with fertilizers,
2. Variety tests.
3. Notes and descriptions.

" 84- The Elms and Their Diseases.

" 85- Commercial Fertilizers.

Report on Adulterated Foods is in press.

OUR GROWTH AND NEEDS.

With the increased funds accruing under the operations of the new fertilizer law, the Station will be able to extend its line of work. Under the old fertilizer law the funds accruing each year amounted to about \$4,000. Last year the fees under the new law were \$19,802.50. Up to May first this year the fees have amounted to over \$8,000. At the same time last year the amount was \$7,040. This would indicate that the fees this year under the fertilizer law will equal and probably exceed those of last year. I think that we may safely say that we will receive \$20,000 during this year. I believe that the fertilizer trade will increase from year to year, and probably increase to such an extent that the fee of 50 cents a ton for the inspection and analysis now given to the Station will be cut in two by the Legislature, but I think if the work is undertaken by the Station the fee should be such that at least \$15,000 a year will accrue from this source. Such a fund will give us an opportunity to expand.

But it seems to me a wise policy to look into the future and determine what lines of work shall be done and work to such an end.

As stated heretofore, it is absolutely necessary to increase the working force of the chemical laboratory and to provide amply for the pure food work.

One of the new lines of work which could be undertaken without any great outlay of expense is a study of the curing of tobacco. It is a well known fact that the value of burley tobacco, for instance, depends largely upon the flavors, etc. produced in the curing process. A tobacco barn arranged in sections so that in one section hot air, in another cold air, in another dry air and in another moist and dry air alternately, could be tried in such manner that such a study would probably go a long way towards solving the method by which to get the best flavor.

Another line of experiments might be the retting of hemp. It is a well know fact that the present method of retting hemp is injurious to the strength of the fiber, and consequently, our hemp brings only four or five cents a pound; whereas, it would bring, so I am informed, a much higher price if the original strength of the fiber could be preserved by some other method of retting. A chemical study of the hemp plant, and especially the study of the resins and gums which cause the fiber to adhere to the stalk, would probably suggest the use of some solvent, which in connection with extracting machines would readily separate the fiber from the hemp. Such experiments, however, especially when tried on a commercial scale, would be expensive, but I believe such experiments might result in much good. I have been in correspondence with the Honorable Secretary of Agriculture, James Wilson, and he was so much impressed with the idea that he had inserted in the Department of Agriculture bill an item to appro-

appropriate \$10,000 for such work, to be under the direction of this Station. When the bill was considered in the House this item was stricken out. The Senate, however, inserted \$5,000 for this purpose, and the bill is now in conference. I believe therefore that this line of work can be taken up in connection with the Government without material expense to the Station.

The study of fattening cattle and pigs is one that we should undertake in the near future. This work, if scientifically

RECOMMENDATIONS.
First, I would recommend the appropriation, as heretofore, carried on would entail a considerable expense. We would need of the \$15,000 from the Hatch Act and the income from the fertilizers constructed so that the animals could be scientifically controlled, from the pure food law, and from the farm, and the handled; the feed weighed out carefully; the unused feed weighed interest accruing from these accounts, for the use of the Station. back; all excrements carefully ~~examined~~ preserved for analysis, to

Second, In order to carry out the purpose and intent of show, not only how much of the food had been eaten, but how much the pure food law in a manner as stated before the Committee had been digested. Such work would require the personal supervision of the Legislature, I recommend that a separate division of the vision of an expert with several attendants. This man should be Station be organized, to be known as the Food Division, and that thoroughly versed in animal husbandry and thoroughly educated, a thoroughly competent chemist be selected as chief of the Division, and he should have had much experience in scientific investigations. In the ~~summertime~~ shall be commensurate with the expert work to In the ~~winter~~, when such experiments are not being carried on be done and the dignity of the position to be filled; the head we should have ample land to graze the stock.

of such division to have general supervision of the pure food law I am of the opinion, therefore, that while we should have in so far as the law can relieve the Director and the Board of these feeding experiments in view for the future, we should not control of such work and responsibilities. The responsibilities undertake them until we have provided land and funds enough for of those in charge of the food inspection of a state and the buildings as a foundation for such work. If we were compelled to work to be done in order to successfully carry out the provisions pay the salaries of such an additional force now, the funds would of a just pure food law are simply enormous, and can hardly be not accumulate to build the necessary buildings and buy the necessary land. comprehended without a thorough study of the duties involved. The

decisions of those in charge often come in direct conflict with

The first important step, in my opinion, is to purchase more large business enterprises; especially is this true when just land, if we can purchase it to advantage, especially if we can decisions and correct analyses threaten such enterprises. Their purchase a tract of land which will connect the two places which paid chemists are ever endeavoring to persuade that some mistake we now have. The object of the purchase is not to make money has been made in the analysis of their goods, or that the chemist on the crops grown, but to give us ample land for future experiment in charge is incompetent, etc., and their attorneys often threaten

ments in the line of animal husbandry and field experiments. We need more office and laboratory room, and this I believe to be our second most urgent need. In my former report, I suggested that the Station might purchase the College's share in the Station building. I believe, however, that the purchase of land should take precedence of all other of our wants.

RECOMMENDATIONS.

First, I would recommend the appropriation, as heretofore, of the \$15,000 from the Hatch Act and the income from the fertilizer control, from the pure food law, and from the farm, and the interest accruing from these accounts, for the use of the Station.

Second, In order to carry out the purpose and intent of the pure food law in a manner as stated before the Committees of the Legislature, I recommend that a separate division of the Station be organized, to be known as the Food Division, and that a thoroughly competent chemist be selected as chief of the Division, whose salary shall be commensurate with the expert work to be done and the dignity of the position to be filled; the head of such division to have general supervision of the pure food law in so far as the law can relieve the Director and the Board of Control of such work and responsibilities. The responsibilities of those in charge of the food inspection of a state and the work to be done in order to successfully carry out the provisions of a just pure food law are simply enormous, and can hardly be comprehended without a thorough study of the duties involved. The decisions of those in charge often come in direct conflict with large business enterprises; especially is this true when just decisions and correct analyses threaten such enterprises. Their paid chemists are ever endeavoring to persuade that some mistake has been made in the analysis of their goods, or that the chemist in charge is incompetent, etc., and their attorneys often threaten

a change unless his salary could be materially increased. His prosecution if decisions are not changed, or if the matter comes before the courts. The work involved is so great that in some states, and notably Massachusetts, New York, Ohio, Michigan,

Wisconsin, and lately in Illinois, separate departments ~~of~~ have been organized for the inspection and analysis of food products. State out of the \$7,500 appropriation.

At the head of such department a commissioner presides, whose whole duty is devoted to the execution of the pure food laws, and position, to make all the analyses under the pure food law. I whose salary ranges, I understand, from \$3,000 to \$4,500 per year. Besides the chief, there are from one to two chief's assistants, clerks, stenographers, attorneys, a chief chemist, and chemists located in the larger cities. The work in Kentucky may not be so great, but the duties involved are the same, and for the purpose of carrying out our work thoroughly, I ask a thoroughly equipped division.

The clerical work involved will need the employment of at least one clerk, whose duties should be assigned by the Director. If his time is not all occupied in clerical work, he can be sent to gather samples in the various parts of the State. Inspectors will have to be employed, but I am of the opinion that these should be employed from time to time in the different places and not permanently employed. I would ask, therefore, that the employment of inspectors be referred to the Board of Control.

For the chief of the Food Division I would recommend the promotion of Mr. A. M. Peter, who now has charge of the Chemical Division of the Station. He is thoroughly competent as a chemist, and the accuracy of his work is beyond question. If he is given this position and undertakes the work, his work will be of a technical nature, and it will deprive him of original research, and this matter should be considered in the amount of salary he receives. On this account, I do not think that he would desire

a change unless his salary could be materially increased. His entire salary to be paid out of the pure food fund.

I recommend Mr. R. M. Allen as clerk in the Food Division. He graduates this spring with us, and is a young man competent in every way for the position. His salary to be paid by the State out of the \$7,500 appropriation.

It will be impossible for Dr. Peter, should he accept the position, to make all the analyses under the pure food law. I believe it best to have some of the chemical work done in Louisville, as heretofore, under Dr. Chase Palmer, for the reason that Dr. Palmer could be at the Louisville courts without much additional expense, and because I think it would help the Station and College to distribute the work somewhat. If, however, the work becomes too great, I ask to be authorized to appoint temporarily an assistant chemist to assist in the pure food work.

Third, The fertilizer control work should be a little more thoroughly organized. I would recommend that Mr. Curtis be promoted to Prof. Peter's position with the salary appertaining thereto, if Prof. Peter is given and accepts the chief of the Division of Foods. As stated before, the funds from the inspection of fertilizers are rapidly increasing, and I think the Legislature will ask a reduction, but before that time, maximum salaries should be paid, so that the entire expenses necessary for future work could be laid before the Legislature.

There will need to be two assistant chemists to assist Mr. Curtis in the fertilizer work. Mr. W. H. Scherffius and Mr. W. A. Beatty have proven themselves competent and worthy of promotion, and therefore, I would respectfully recommend them for the positions named, with such an increase of salary as might be determined. The salaries of Mr. Curtis and the assistants in the fertilizer

control work to be paid out of the fertilizer fund.

This arrangement will leave no one to do the chemical work of the Station proper. Some competent chemist is required for such position, and I would recommend, if he can be procured, Mr. J. C. W. Frazer, who is a graduate of our College, and, I understand, graduates at Johns Hopkins University this year.

Fourth, Mr. J. N. Happer was promoted last year to the position of Agriculturist of the Station at a salary of \$900. He has proven himself a competent man, and his work entitles him to an increased salary. I recommend therefore that his salary be increased. The position should pay ultimately \$1,500 a year.

Fifth, Prof. Garman's work is increasing rapidly. He virtually has charge now of two departments of the Station, namely, Botany and Entomology. His work has been of the highest order, and it has not only been recognized in this State, but throughout the country. I shall need Prof. Garman's services from time to time in the pure food work, when such work requires microscopical investigations. To keep up with the growth of the work in this department Prof. Garman needs a competent assistant, and such assistant might be paid in part from the funds from the inspection of foods, depending, of course, upon the amount of microscopical work to be done in the department.

Mr. G. N. Keller, a student of this College, has been with Prof. Garman the past year, and Prof. Garman is satisfied with his work, and would be pleased to have him remain longer, but he informs me that Mr. Keller will probably desire to resume his studies in College another year. In such case, arrangements should be made whereby Prof. Garman may secure somebody thoroughly competent as an assistant.

I append herewith ledgerized financial statement of the Experiment Station for the year.

Respectfully submitted,

*In some of the foregoing recommendations
I do not concur. J. H. Patterson*

M. A. Sewell
Director

47-M-64

THE GLOBE LEGAL WRAPPER. Patented Feb. 11, 1890. First Quality

DIRECTIONS.—Elevate the metal points—attach the manuscript—then bend the points down flat—dampen the gummed flap and stick it down—this fastens the papers and hides the metal.

Report of
Director, Expt. Station

to the

President of the College

May 1-1900.

AGRICULTURAL EXPERIMENT STATION
OF THE
State College of Kentucky.

Mail for the Station should be addressed to
M. A. SCOVELL, DIRECTOR.

Officers of the Station.

M. A. SCOVELL, Director and Chemist.
A. M. PETER, Chemist.
H. E. CURTIS, Chemist.
H. GARMAN, Entomologist and Botanist.
C. W. MATHEWS, Horticulturist.
J. N. HARPER, Agriculturist.
ED. RHORER, Secretary to Director.
W. H. SCHERFFIUS, Ass't Chemist.
W. A. BEATTY, Ass't Chemist.

Lexington, Ky., May 16, 1900.

President J. K. Patterson,

Dear Sir:-

I could use the services of Mr. J. A. Akin
to advantage in the inspection of fertilizers if he could be
released from College duties at once.

Yours very truly,

M. A. Scovell Director.

REQUESTS for information concerning insects and plants should be accompanied by specimens, if possible. Living insects may be sent by mail in tight wooden or tin boxes, preferably the latter, and should have with them a supply of food sufficient to last during the journey. If specimens have been preserved in alcohol, they may be wrapped in soft paper and should then be placed in boxes for mailing. The postage required is one cent per ounce.

AGRICULTURAL EXPERIMENT STATION
OF THE
State College of Kentucky,

DIVISION OF ENTOMOLOGY AND BOTANY.

OFFICERS OF THE STATION:
M. A. SCOVELL, Director and Chemist.
A. M. PETER, Chemist.
H. E. CURTIS, Chemist.
H. GARMAN, Entomologist and Botanist.
C. W. MATHEWS, Horticulturist.
J. N. HARPER, Agriculturist.
V. E. MUNCY, Weather Observer.
EDWARD RHORER, Secretary to Director.

Lexington, Ky., Aug. 1, 1900 189

Pres. Jas. N. Patterson,

My dear Sir:

This morning, I was notified by Prof. Muncy that you did not approve the payment of my salary, as Secy. for the time worked in July, - because I had not officially accepted the position.

I was formally notified by the Secy. of the Board, Prof. Scovell and accepted through him. Soon after, I received your official appointment. It was and is my intention, not only to accept but express my thanks to you, but being informed that you were out of town, and not being aware of your return, consequently the delay.

I hereby notify you that I have accepted your appointment and desire to express my appreciation for it.

Yours very truly,
J. D. Turney



AGRICULTURAL EXPERIMENT STATION,
OF THE
State College of Kentucky,

OFFICE OF THE STATE ENTOMOLOGIST.

H. GARMAN,
State Entomologist.

Lexington, Ky., August 3, 1900.

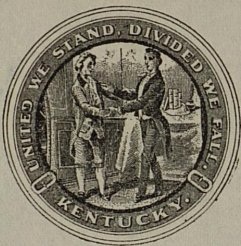
President J. K. Patterson,

Dear Sir:

Enclosed you will
find duplicates of the inspection certificates
issued thus far to nurserymen for
the season of 1900 - 1901.

Yours Respectfully,

H. Garman.



Certificate of Inspection of Nursery Stock.

Agricultural Experiment Station

OF THE

State College of Kentucky.

OFFICE OF THE STATE ENTOMOLOGIST.

No. 5

Duplicate

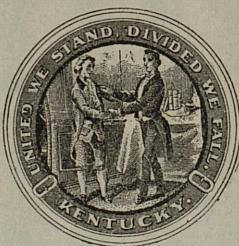
Lexington, August 3, 1900.

I hereby certify that the Nursery Stock growing on the place
of Baldwin and Summers at Cairo,
Henderson County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

H. Gammann,

STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

No. 6
Duplicate
Agricultural Experiment Station
OF THE
State College of Kentucky.

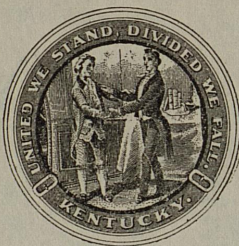
OFFICE OF THE STATE ENTOMOLOGIST.

Berlington, August 3, 1900.

I hereby certify that the Nursery Stock growing on the place
of R. N. Brown at Cungleton,
McLean County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

H. Gammann,
STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

Agricultural Experiment Station

OF THE

State College of Kentucky.

OFFICE OF THE STATE ENTOMOLOGIST.

No. 7
Duplicate.

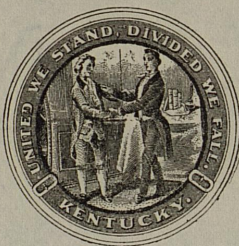
Lexington, August 3, 1900.

I hereby certify that the Nursery Stock growing on the place
of *John R. Childress* at *South Carrollton*,
Muhlenberg County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

A. G. Garrison

STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

Agricultural Experiment Station

OF THE

State College of Kentucky.

OFFICE OF THE STATE ENTOMOLOGIST.

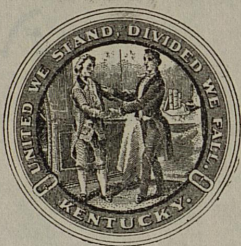
No. 8,
Duplicate.

Berlington, August 3, 1900.

I hereby certify that the Nursery Stock growing on the place
of G. P. Dietrich at Maysville,
Maxon County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

H. Garman,
STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

Agricultural Experiment Station

OF THE

State College of Kentucky.

OFFICE OF THE STATE ENTOMOLOGIST.

No. 9
Duplicate.

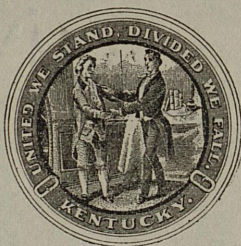
Lexington, August 3, 1900.

I hereby certify that the Nursery Stock growing on the place
of Donaldson & Gibson at Warsaw,
Gallatin County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

H. G. Garrison,

STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

Agricultural Experiment Station

OF THE

State College of Kentucky.

OFFICE OF THE STATE ENTOMOLOGIST.

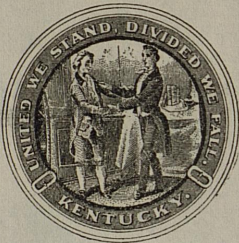
No. 101
Duplicate.

Lexington, August 3, 1900.

I hereby certify that the Nursery Stock growing on the place
of *Norae Klinglesmith* at *Cecilian*,
Hardin County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

H. Gammon
STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

Agricultural Experiment Station
OF THE
State College of Kentucky.

OFFICE OF THE STATE ENTOMOLOGIST.

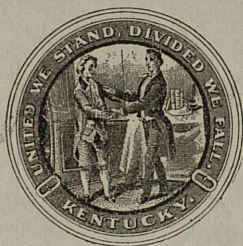
No. 11
Duplicate.

Berlington, August 3, 1900.

I hereby certify that the Nursery Stock growing on the place
of *Nauz & Neuner* at *St. Matthews,*
Jefferson County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

H. Garrison
STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

Agricultural Experiment Station ^{No. 12,}
OF THE Duplicate.
State College of Kentucky.

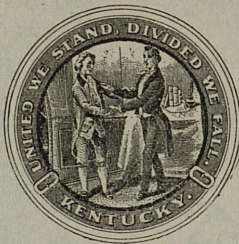
OFFICE OF THE STATE ENTOMOLOGIST.

Berlington, August 3, 1900.

I hereby certify that the Nursery Stock growing on the place
of *J. L. A. Rohue* at *Leitchfield*,
Grayson County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

H. Garrison
STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

Agricultural Experiment Station

OF THE

State College of Kentucky.

OFFICE OF THE STATE ENTOMOLOGIST.

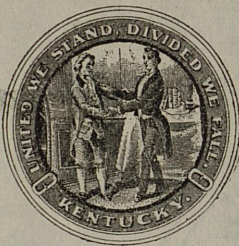
No. 14
Duplicate.

Berlington, August 3, 1900.

I hereby certify that the Nursery Stock growing on the place
of Edwin Stovall at Vine Grove,
Hardin County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

H. G. Garrison,
STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

Agricultural Experiment Station
OF THE
State College of Kentucky.

OFFICE OF THE STATE ENTOMOLOGIST.

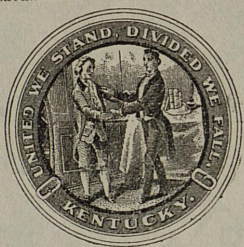
No. 15
Duplicate.

Lexington, August 3, 1900.

I hereby certify that the Nursery Stock growing on the place
of Mark Tudor at Cottontown,
Madison County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

N. G. Garrison,
STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

Agricultural Experiment Station
OF THE
State College of Kentucky.

OFFICE OF THE STATE ENTOMOLOGIST.

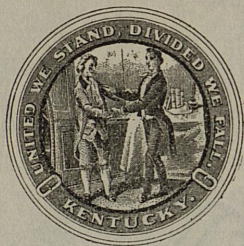
No. 16,
Duplicate.

Berlington, August 3, 1900.

I hereby certify that the Nursery Stock growing on the place
of W. W. Clark & Company at Owingsville,
Boat County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

H. Garrison,
STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

Agricultural Experiment Station

OF THE

State College of Kentucky.

OFFICE OF THE STATE ENTOMOLOGIST.

No. 17,
Duplicate.

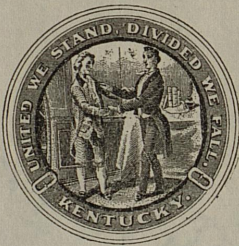
Lexington, August 3, 1900.

I hereby certify that the Nursery Stock growing on the place
of Elvis J. Whitner at Bremen,
Muhlenberg County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

A. Garman,

STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

No. 18,
Duplicate.

Agricultural Experiment Station
OF THE
State College of Kentucky.

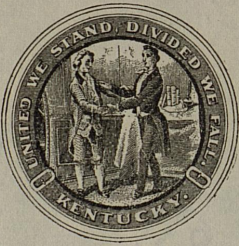
OFFICE OF THE STATE ENTOMOLOGIST.

Berlington, August 3, 1900.

I hereby certify that the Nursery Stock growing on the place
of M. B. Lovell at Outon,
Webster County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

H. G. Garrison,
STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

No. 31
Agricultural Experiment Station Duplicate
OF THE
State College of Kentucky.

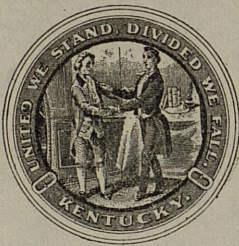
OFFICE OF THE STATE ENTOMOLOGIST.

Berlington, August 3, 1901

I hereby certify that the Nursery Stock growing on the place
of P. F. Adams & Son at Waco,
Madison County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

H. Garman,
STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

Agricultural Experiment Station
OF THE
State College of Kentucky.

OFFICE OF THE STATE ENTOMOLOGIST.

No. 14
Duplicate

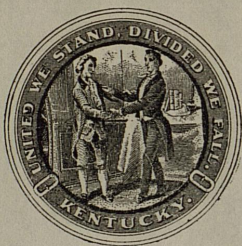
Lexington, August 3, 1900.

I hereby certify that the Nursery Stock growing on the place
of Christian Auberold at Rockhaven,
Meade County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901.

H. Garman,

STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

No. 2.

Agricultural Experiment Station

Duplicate.

OF THE

State College of Kentucky.

OFFICE OF THE STATE ENTOMOLOGIST.

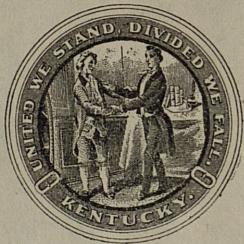
Lexington, June 22, 1900.

I hereby certify that the Nursery Stock growing on the place
of *Mr. H. F. Hillenmeyer* at *Lexington*,
Fayette County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1901

H. G. Garrison

STATE ENTOMOLOGIST.



Certificate of Inspection of Nursery Stock.

No. 33,

Agricultural Experiment Station Duplicate.

OF THE

State College of Kentucky.

OFFICE OF THE STATE ENTOMOLOGIST.

Lexington, September 6, 1906

I hereby certify that the Nursery Stock growing on the place
of W. M. Cones at Shepherdsville
Bullitt County, Kentucky, has been inspected by me as
required by law, and I believe the same to be free from San Jose
Scale and other destructive pests.

This certificate is invalid after June 15, 1907.

H. Gammann

STATE ENTOMOLOGIST.

OFFICERS, 1899-1900.

PRESIDENT.

JOSEPH E. STUBBS, M. A., D. D., LL. D.,
President of School of Agriculture,
State University,
Reno, Nev.

VICE PRESIDENTS.

E. W. HILGARD, Ph. D., LL. D.,
Director of Agricultural Experiment Station,
Berkeley, California.

JOHN M. STONE,
President of Agr'l and Mechanical College,
Agricultural College, Mississippi.

ELMER SMILEY, B. A., B. D.,
President of College of Agriculture,
University of Wyoming,
Laramie, Wyoming.

M. H. BUCKHAM, D. D.,
President University of Vt., and State
Agricultural College,
Burlington, Vt.

M. A. SCOVELL, M. S.,
Director Kentucky Agr'l Experiment Station,
Lexington, Ky.

SECRETARY AND TREASURER.

EDWARD B. VOORHEES,
Director Agricultural Experiment Stations,
New Brunswick, New Jersey

ASSOCIATION

OF

AMERICAN AGRICULTURAL COLLEGES

AND

EXPERIMENT STATIONS.

EXECUTIVE COMMITTEE,
1899-1900.

HENRY H. GOODELL, LL. D., CHAIRMAN,
President Massachusetts Agricultural College,
Director Agricultural Experiment Station,
Amherst, Mass.

HENRY P. ARMSBY, Ph. D.,
Director of Experiment Station and Dean of
College of Agriculture,
State College, Pa.

ALEXIS COPE,
Secretary Ohio State University,
Columbus, Ohio.

JOHN H. WASHBURN, Ph. D.,
President Rhode Island College of Agriculture
and Mechanic Arts,
Kingston, Rhode Island.

WILLIAM M. LIGGETT,
Dean College of Agriculture, University of
Minnesota,
Minneapolis, Minn.

BIBLIOGRAPHER.

A. C. TRUE, Ph. D.,
Director Office of Experiment Stations,
U. S. Department of Agriculture,
Washington, D. C.

Amherst, Mass., October 26th, 1900.

President J. K. Patterson, Chairman Section on College Work, A. A. A. C. and E.
Lexington,
Kentucky.

Dear Sir,

It is necessary for me to commence on the general program for
our convention. Will you kindly send me at once the program of the Section on
College Work, of which you are chairman, in order that it may be published?

I am

Yours very truly,

Dictated.

H H Goodell

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College of Kentucky, Lexington,
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Director New York Agricultural Experiment
Station, Geneva, New York.

R. H. JESSE, LL. D.,
President College of Agriculture and
Mechanic Arts of the University of Missouri,
Columbia, Missouri.

L. G. CARPENTER, M. S.,
Director Colorado Agricultural Experiment
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President Washington Agricultural College
and School of Science,
Pullman, Washington.

EDWARD B. VOORHEES, D. Sc.,
Director Agricultural Experiment Stations,
New Brunswick, New Jersey.

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Athens, Ga.

BIBLIOGRAPHER.

A. C. TRUE, PH. D.,
Director Office of Experiment Stations,
U. S. Department of Agriculture,
Washington, D. C.

Amherst, Mass., February 1st, 1901.

President James K. Patterson,

Lexington,

Kentucky.

Dear President Patterson,

Your note of the 30th January written from the
Ebbitt House reached me last night.

The measure you propose the Executive Committee took very carefully into
consideration on Monday, preceding the conference of college presidents in the
evening. While we came to no actual decision, yet it was rather the feeling
that it was wiser not quite yet to inaugurate such an aggressive movement. Of
course, we should render hostile to us and to the measure the Speaker and the
leaders of the House. Whether they could control the House and force it into
voting as they desired I do not know; but we have not come to a final conclusion.

I go back next week to watch the course of events and to attend to the
matter of resolutions from the different legislatures and from the different min-
ing bodies. The Executive Committee will probably meet very soon after for final
action, and my belief is they will decide to carry on the action outlined at our

The Pennsylvania State College,
CHEMICAL LABORATORY.

PROFESSORS:
WILLIAM HALE HERRICK,
General and Analytical Chemistry;
WILLIAM FREAR,
Agricultural Chemistry.

State College, Pa. May 2^d 1887

Prof. Jas. R. Patterson, Ph.D.,
State College of Kentucky,
Lexington, Ky. } Dear Sir! ~

Your very kind communication of
the 29th ult, relative to the Directorship of
your experiment station has been received
and duly considered. In reply I may say, -
intimate any intention of committing
myself in my present ignorance of the
conditions surrounding the position, to any
line of action for the future, - that if
affairs should terminate ~~as~~ by the
resignation of Prof. Scovell, and you ~~have~~
should care to make any definite proposition
I should give it careful consideration, pro-
viding it came in time for me to with-
draw honorably here, if I should so decide.
Will you kindly supply me with a copy of the
law establishing the station, and one of its
reports?

Very truly,
William Frear.