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University of Rhode Island

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Sixteenth Annual Report

OF THE

Corporation, Board of Managers

OF THE

Rhode Island College of Agriculture and Mechanic Arts,

MADE TO THE

General Assembly at its January Session, 1904.

Part I.

Part II—Experiment Station Report—is printed under separate cover.

Part III—Catalogue—is printed under separate cover.

Providence, R. I.

E. L. Freeman & Sons, Printers to the State.

1904.

Rhode Island College of Agriculture and Mechanic Arts.

Corporation.

HON. MELVILLE BULL.....NEWPORT COUNTY.
HON. C. H. COGGESHALL.....BRISTOL COUNTY.
HON. CHARLES DEAN KIMBALL.....PROVIDENCE COUNTY.
HON. THOMAS G. MATHEWSON.....KENT COUNTY.
HON. J. V. B. WATSON.....WASHINGTON COUNTY.

Officers of the Corporation.

HON. CHAS. DEAN KIMBALL, President...P. O., PROVIDENCE, R. I.
HON. C. H. COGGESHALL, Clerk.....P. O., BRISTOL, R. I.
HON. MELVILLE BULL, Treasurer.....P. O., NEWPORT, R. I.

REPORT.

To His Excellency Lucius F. C. Garvin, Governor, and the Honorable General Assembly of the State of Rhode Island and Providence Plantations, at its January Session, 1904:

I have the honor to submit herewith the Sixteenth Annual Report of the Board of Managers of the Rhode Island College of Agriculture and Mechanic Arts, as required by law.

CHARLES DEAN KIMBALL,

*President of the Board of Managers of the Rhode Island
College of Agriculture and Mechanic Arts.*

In order to place before your Excellency and the Honorable General Assembly the present condition of affairs at the college and to transmit such recommendations as have been made by your Board and by the president of the college, we include as Part I of this report the following: A statement of appropriations to be asked of the General Assembly—this statement embodying resolution of the Board of Managers; the annual report of the treasurer of the Board; the report of the president of the college for the year; and an abstract of an inventory of college property. Part II will contain the usual report of the experiment station. Part III will be a statement of the courses of study and other details.

STATEMENT OF APPROPRIATIONS TO BE ASKED OF THE GENERAL ASSEMBLY BY RESOLUTION OF THE BOARD OF MANAGERS OF THE RHODE ISLAND COLLEGE OF AGRICULTURE AND MECHANIC ARTS.

The Board of Managers at its regular meeting, December 2, 1903, voted to ask the next legislature for the following appropriations:

I. An increase of the annual appropriation for current expenses from \$15,000.00 to \$19,000.00; \$2,000.00 of the increase to be used for student labor and \$2,000.00 for demonstration and extension work.

II. Special appropriations for building, repairs, and other permanent improvements:

1. For a greenhouse, to include sufficient room for both experimental and educational purposes, and suitable workrooms in connection, \$15,000.00.
2. For certain additions and improvements in connection with the dairy barn, \$500.00.
3. For additional fire protection, \$500.00.
4. For general repairs, \$2,000.00.

CHAS. DEAN KIMBALL,
C. H. COGGESHALL,
THOS. G. MATHEWSON,
J. V. B. WATSON.

TREASURER'S REPORT.

MELVILLE BULL, *Treasurer, in account with the* RHODE ISLAND COLLEGE OF
AGRICULTURE AND MECHANIC ARTS.

1903.	DR.	
Jan. 1. To cash balance on hand.....		\$71 39
Receipts from president of college for students' board, etc.....		15,092 22
Cash received from interest		75 01
		\$15,238 62

1903.	CR.	
By salaries.....		\$349 57
Postage, stationery, and printing.....		277 77
Freight and express.....		337 67
Traveling.....		227 70
Labor.....		5,952 94
Store.....		864 75
Incidentals.....		1,959 85
Construction and repairs.....		2,331 83
Provisions.....		1,622 31
Boarding expense.....		1,312 49
Balance.....		1 74
		\$15,238 62

This is to certify that the undersigned, auditing committee of the Board of Managers of the Rhode Island College of Agriculture and Mechanic Arts, have examined the account of Melville Bull, treasurer, as above, and find the same to be correct, leaving a balance in the said treasurer's hands of one dollar and seventy-four cents (\$1.74).

THOMAS G. MATHEWSON,
J. V. B. WATSON,

Auditors.

MELVILLE BULL, *Treasurer, in account with the UNITED STATES FUND OF 1862.*

1903.	DR.	
	To balance from last year.....	\$2,568 13
Dec. 26.	Interest received from state treasurer.....	2,500 00
		\$5,068 13
1903.	CR.	
By salaries.....		\$1,076 06
Text-books.....		909 50
Stock and material.....		106 70
Apparatus.....		69 96
Tools and machinery.....		21 43
Balance.....		2,884 48
		\$5,068 13

This certifies that the undersigned, auditing committee of the Rhode Island College of Agriculture and Mechanic Arts, have examined the accounts of Melville Bull, treasurer, of the United States Fund of 1862, and find the same correct.

The total receipts were \$5,068.13, and the total expenditures were \$2,183.65, thus leaving a balance to new account of \$2,884.48.

THOMAS G. MATHEWSON,
J. V. B. WATSON,

Auditors.

THE RHODE ISLAND STATE AGRICULTURAL EXPERIMENT STATION, *in account with the UNITED STATES APPROPRIATION.*

1903.	DR.	
To receipts from the treasurer of the United States as per appropriation for fiscal year ended June 30, 1903, as per act of Congress approved March 2, 1887.....		\$15,000 00
1903.	CR.	
By salaries.....		\$7,794 97
Labor.....		2,334 53
Postage and stationery.....		218 96
Freight and express.....		142 35

1903.	CR.	
Heat, light, and water.....		785 11
Chemical supplies.....		53 72
Seeds, plants, and sundry supplies.....		834 12
Fertilizers.....		229 17
Feeding.stuffs.....		570 92
Library.....		274 78
Tools, implements, and machinery.....		306 43
Furniture and fixtures.....		628 40
Scientific apparatus.....		342 23
Traveling expenses.....		203 80
Contingent expenses.....		16 00
Building and repairs.....		264 51
		<hr/>
		\$15,000 00

We, the undersigned, duly appointed auditors of the corporation, do hereby certify that we have examined the books and accounts of the Rhode Island State Agricultural Experiment Station for the fiscal year ended June 30, 1903; that we have found the same well kept and classified as above, and that the receipts for the year from the treasurer of the United States are shown to have been \$15,000, and the corresponding disbursements \$15,000, for all of which proper vouchers are on file, and have been by us examined and found correct, thus leaving no balance.

And we further certify that the expenditures have been solely for the purposes set forth in the act of Congress approved March 2, 1887.

CHARLES DEAN KIMBALL,
C. H. COGGESHALL,

Auditors.

MELVILLE BULL, *Treasurer, in account with the RHODE ISLAND STATE AGRICULTURAL EXPERIMENT STATION.*

1903.	DR.	
To balance from last year.....		\$1,145 79
Station receipts.....		1,227 92
Interest.....		105 71
		<hr/>
		\$2,479 42

1903.	Cr.	
By publications.....		\$17 38
Heat, light, and water.....		154 94
Furniture and fixtures.....		131 07
Traveling.....		13 81
Contingent expenses.....		4 50
Balance.....		2,157 72
		\$2,479 42

This certifies that we, the undersigned, auditing committee of the Board of Managers of the Rhode Island College of Agriculture and Mechanic Arts, have examined the accounts of Melville Bull, treasurer of the Rhode Island State Agricultural Experiment Station, and find the same correct.

The total receipts were \$2,479.42, and the total expenditures were \$321.70, thus leaving a balance to new account of \$2,157.72.

CHARLES DEAN KIMBALL,
C. H. COGGESHALL,

Auditors.

Synopsis of the Report of the Treasurer of the Rhode Island College of Agriculture and Mechanic Arts to the Secretary of Agriculture and the Secretary of the Interior, of amount received under Act of Congress, of August 30, 1890, in aid of Colleges of Agriculture and the Mechanic Arts, and of the disbursements thereof, to and including June 30, 1903.

Balance on hand, July 1, 1902.....	\$	35
Installment for 1902-3, received July 8, 1902.....		25,000 00
		\$25,000 35

DISBURSEMENTS THEREOF FOR AND DURING THE YEAR ENDING
JUNE 30, 1903.

SCHEDULE A.—Disbursements for Instruction in Agriculture and for facilities for such instruction.....	\$4,268 27
SCHEDULE B.—Disbursements for Instruction in the Mechanic Arts and for facilities for such instruction.....	8,015 04

SCHEDULE C.—Disbursements for Instruction in the English Language and for facilities for such instruction.....	\$3,012 85
SCHEDULE D.—Disbursements for Instruction in Mathematical Science and for facilities for such instruction.....	2,305 62
SCHEDULE E.—Disbursements for Instruction in Natural Science and for facilities for such instruction.....	6,278 48
SCHEDULE F.—Disbursements for Instruction in Economic Science and for facilities for such instruction.....	1,120 09
Total expended during the year.....	\$25,000 35

I hereby certify that the above account is correct and true, and, together with the schedules hereunto attached, truly represents the details of expenditures for the period and by the institution named; and that said expenditures were applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their application in the industries of life, and to the facilities for such instruction.

MELVILLE BULL, *Treasurer.*

REPORT OF THE PRESIDENT OF THE COLLEGE.

*To the Honorable Board of Managers of the Rhode Island College of
Agriculture and Mechanic Arts.*

GENTLEMEN:—I herewith submit the following report of our college work for the year ending December 31, 1903.

I wish, in the first place, to acknowledge as a personal matter and in the most cordial terms the value of the services of Dr. H. J. Wheeler as acting president. During the first three months of the year, and prior to my arrival here April first, Dr. Wheeler and I were in constant correspondence relative to the work and policy of the college. I found myself in entire accord with the plans which he had developed during the autumn, and can give my most hearty approval to the results which have accrued from his services. It was due in no small measure to his earnestness and foresight that we secured the legislative appropriation of three thousand dollars for student labor and demonstration work. I cannot too cordially commend this move. During this time, also, the new agricultural high school, which will be mentioned more fully later, was inaugurated. Dr. Wheeler also set on foot comprehensive plans for advertising the college, securing the names of many prospective students and otherwise paving the way for effective personal work in this line. Dr. Wheeler's earnestness, his devotion to the best interests of the college, his intelligent planning, and his loyalty to the purpose of the incoming administration dominated his incumbency of the office of acting president and made the work of the president elect much easier.

CHANGES IN COURSES.

During the year, several changes have been made in the courses of study, principally in the preparatory school. At the opening of the present college year, there was offered an agricultural high school course consisting of two years of study. It is designed, in this course, that the student shall devote about half of his time to ordinary high-school subjects—mathematics, English, and elementary science—and about half of his time to class and handicraft work in agriculture itself. The course is planned to accommodate those young people who may desire to secure a fair start in agricultural education, but who are not likely to take time for full college work.

The faculty also adopted an industrial high-school course based upon the same general principle as the course just mentioned, offering handicraft work along the following four lines: carpentry, machine shop, mechanical draughting, and steam engineering. A large amount of practice is given in the college shops and draughting room. The course is planned to meet the needs of those young men who cannot take college work, but who wish to avail themselves for a time of school advantages. It is expected that students taking this course can acquire the principles and practice of a trade and at the end of the period take places in the shop as journeymen.

The faculty has felt for some time that a number of the candidates for the general preparatory course of two years were not fitted to carry on the work and yet, in some cases, could not secure adequate advantages near home. The faculty therefore voted to offer for the present college year a special preparatory year. It is thought that this plan will especially meet the needs of students who come from the rural schools. It is considered as a somewhat temporary arrangement to meet existing conditions.

The faculty also voted to establish a course in farm mechanics, which will become a part of our system of special winter courses. It will be offered for the first time during the winter term, which begins

January 6 next. It is designed to assist young men who have not time for extensive work in the college to reduce the time for their apprenticeship for some of the trades, and also to be of service to young men who wish to settle in the smaller cities and larger villages as skilled mechanics.

POLICY OF THE PREPARATORY SCHOOL.

The wisdom of our continuing to offer the work of the preparatory school at this college is occasionally questioned. Doubtless the faculty would much prefer that all our work should be of college grade. But, after considering the situation with some care, I am convinced that the policy of former administrations in continuing the preparatory work is justified. It seems apparent that the college has not had the close connection with the high schools of the state that should exist. Consequently, a very small proportion of the graduates of Rhode Island high schools has entered this college. During the last collegiate year, two-thirds of the students in the college proper received their preparatory training in our own preparatory school. Moreover, it seems to be an undisputed fact that in large portions of Rhode Island high-school facilities are somewhat meagre. There are localities where it is difficult indeed for boys and girls of the neighborhood to secure proper high-school education. Many of these come to us for their preparatory work. It is to be hoped that the time may come when this college can devote all its energies to work of a purely college grade, but until the conditions described are distinctly improved, it would seem wise to continue the preparatory school.

There is one feature of the preparatory school brought into prominence during the current year that may possibly be regarded as a permanent phase of our plan. I refer to the work offered in the agricultural and industrial high schools. These courses, while of a high-school grade from an academic point of view, are so specifically industrial and vocational in their purpose that I am inclined to think they are proper courses for us to maintain so long as they seem

to be serving a real need and so long as other institutions are not meeting this particular demand.

CHANGES IN THE FACULTY.

Several changes in the teaching force have taken place during the year. Dr. A. C. Scott, professor of physics and electrical engineering, accepted a position as professor of electrical engineering in the University of Texas. Dr. Scott was a graduate of this college in the class of 1895, and had secured his subsequent thorough training in Harvard, Cornell, and Wisconsin universities. It was due to his efforts that the course in electrical engineering was established and brought to its present standard. It was with keen regret that we were compelled to lose his services. The position made vacant by his resignation has been filled by the appointment of Professor Gilbert Tolman, A. M., a graduate of the University of Maine, who has had some years' experience in teaching and who came to us directly from Columbia University, where he had been doing both teaching and graduate work.

The college community was shocked and grieved to learn, in July, of the sudden death of Captain Solomon E. Sparrow, who for two years and a half had been military commandant at this college, detailed by the U. S. War Department. Captain Sparrow's gentlemanly deportment had made him many friends among the faculty. The War Department refused to make another detail to take Captain Sparrow's place, because of the small number of cadets reported as drilling last year. Arrangements were therefore made with Dr. Lewis Balch, of Kingston, late brigade surgeon U. S. Volunteers, to act as instructor in military science and tactics.

Miss Sarah W. Sanderson resigned at the end of the college year as instructor in English. She had filled this position for three years in the most satisfactory manner. Her genuine teaching talent and her charming manner won the loyalty and esteem of all her students. The position thus made vacant was filled by the appointment of Miss Josephine O. Bostwick, A. B., a graduate of Acadia College, New Brunswick.

Mr. Blydon E. Kenyon, assistant in physics, resigned at the end of the college year, to go into practical work. This position was filled by the appointment of Mr. Walter A. Mitchell, A. B., a graduate of Trinity College, Hartford, Conn. Mr. Merrill A. Ladd, engineer in the department of electrical engineering, also resigned, and Mr. Stephen Quinn was made engineer. Both Mr. Kenyon and Mr. Ladd are graduates of this college, and their promotion to better positions than were available here is well deserved.

For the demonstration work, Mr. W. D. Hurd, a graduate of the Michigan Agricultural College, and a man who had had considerable experience in similar lines, was secured for the three summer months. At the end of that time Mr. Hurd had a very flattering offer from the University of Maine, which he accepted. He had proved himself extremely efficient in the difficult task assigned him. In September, this work was taken up by Mr. J. Weston Hutchins, a Michigan practical farmer, who has long been identified with agricultural educational work, particularly with farmers' institutes, and who is also editor of the grange department of the Michigan Farmer. The work of these two men will be mentioned more fully on a later page.

The title of Professor Fred W. Card has been made professor of agriculture, and, by common consent, the division of responsibility and authority between the departments of agriculture and of animal industry has been more clearly outlined.

ATTENDANCE.

The attendance at the college, for the college year ending June, 1903, was as follows:

College.....	39
Preparatory school.....	39
Specials.....	7
Special winter courses:	
Farm practice, 4; Poultry keeping, 18.....	22
Total.....	107

I am glad to report increased attendance at the opening of the present college year. The enrollment at this date is 112, divided as follows:

College.....	56
General preparatory course.....	46
Industrial high school.....	3
Agricultural high school.....	1
Specials.....	2
Special winter course—farm practice.....	4
	<hr/>
Total.....	112

To this will be added for the college year the students in poultry keeping and in farm mechanics.

I submit herewith a statement showing the enrollment of so-called "regular" students at this date in each of the last five years, excluding those attending the special winter courses:

For 1899.....	90	students.
“ 1900.....	82	“
“ 1901.....	86	“
“ 1902.....	73	“
“ 1903.....	106	“

It will be observed that the attendance of the present fall term is about forty-five per cent. greater than a year ago and one-sixth greater than the largest previous attendance in the history of the college in 1899. This is very gratifying, and it is hoped that it indicates the beginning of a substantial and permanent increase. The Freshman class in the college consists of 22 members, about half of them coming from various Rhode Island high schools. Of the total enrollment, 57 consist of day students, who do not room or board upon the college grounds. A few of the day students, however, live in the village and are really a part of the college population. The men's dormitory, which accommodates comfortably about 45, is

practically full. In mentioning our dormitory accommodations, I wish to suggest that, if the attendance of young women is to be encouraged at this college, an adequate dormitory for women must be provided in the near future. The old farmhouse, "Watson House," is at present used for this purpose. But it accommodates only six or eight and is entirely inadequate even for these, needing constant repair and being in no way suitable for the purpose.

STUDENT LABOR.

By an understanding with your Board, it was determined last spring to apply about two-thirds of the special appropriation made by the legislature of 1903 to student labor and about one-third to demonstration work. The expenditure of this fund has been as follows:

Appropriation from legislature.....	\$3,000 00
Expended for student labor.....	\$1,815 93
Expended for demonstration.....	771 56
	————— \$2,587 49

This balance of \$412.51 is considered sufficient to carry the demonstration work until April first, and to allow also the expenditure of about \$135.00 more for student labor.

With respect to student labor, it may be said that the policy has been to give worthy and competent students such work as can be economically performed by them. It has not been the aim to create work for them, although certain services which formerly had been performed by hired men have been given over to students. Still no serious departure has been made from the previous policy of the college in this respect. There has been, however, perhaps an unusual demand for work on the part of new students. It ought to be considered, in this connection, that this student labor fund is neither a philanthropy nor a bonus. It is utilized for services that have to be done by somebody, and it is thought that, under proper arrangements, they can be performed by students, who are thus given the

opportunity which they desire to pay a portion of their expenses. The amount of work which can be given to students is limited; and, if the attendance increases, the rules governing student labor must gradually be changed. Probably it will be necessary to confine the work more closely to those who are planning to graduate. Even now, it is designed to give work only to those who need it, who do it well, and who, otherwise, both in the classroom and in department, conduct themselves properly. It may also be of interest to state that, during the summer vacation, five or six students remained during the entire time, working on the farm and in the repairs of buildings. Of the total amount expended from the special fund, \$476.05, or about one-fourth, was expended for student labor on the farms, in the barns, and in the horticultural department. During the autumn the preliminary work of clearing from rocks a field of 7.78 acres was well begun, partly by student labor. During the fall term about 40 students performed paid service to a greater or less extent.

DEMONSTRATION AND EXTENSION WORK.

Mr. Hurd's work during the three months of the summer was entirely in giving demonstrations of spraying for insects and diseases, examining orchards to discover the prevalence of the San José scale, etc., the testing of soils, and in general giving such practical information as would be of most value to the farmers of the state. Wherever possible, his visit to a farm was made the occasion of a gathering of the neighbors. The records show that Mr. Hurd made 70 visits during the summer. These visits were in different parts of the state and reached a large number of people. It is designed to repeat this demonstration work during the early spring months, when spraying for the San José scale and for other pests can be carried on. The plan is to show how the pests may be recognized, how they should be treated, and how to manipulate the apparatus.

Mr. Hutchins's work thus far during the year has been principally along other lines of extension work. He has assisted Professor

Card with the Nature-Guard work. The Nature Guard endeavors to interest the pupils of the schools in nature study and agriculture, and is meeting with a most cordial reception from the teachers and educational workers generally. During the fall, the Nature Guards collected a great many weed seeds which have been classified at the college, and cases for the preservation of which are being obtained by the schools. The cases may be kept in the schoolroom for reference and for comparison by farmers, with the hope that the spread of injurious weeds can thus be retarded. Other plans for enlarging this nature work in the schools of the state are now under way. I wish to call your attention to the extreme value of this work, both in interesting the pupils in the fundamentals of agriculture and in nature, and in arousing their interest in this college and its work. Mr. Hutchins has also assisted very materially in the farmers' institutes which have been held under the auspices of the State Board of Agriculture, and has visited individual farmers and farmers' gatherings. During the next two months, some member of the college force will give a lecture on a practical farm topic before every grange in the state desiring it. This also is a part of our extension work, and is under Mr. Hutchins's general direction.

I wish to give my most cordial approval to this extension and demonstration work. There can be no question about the absolute necessity of the college keeping in the closest possible touch with the farmers of the state, and it can be done in no way so fully as by the personal visits of members of the college. That alone would be sufficient excuse for continuing this work, but it is really a minor argument for extension study. There are three distinct lines which a college of agriculture must follow. First, research. This work is done now by the experiment station. Second, teaching of students. This is done in our regular college course in agriculture, in the agricultural high school, and in the special winter courses in farm practice and poultry keeping. Third, extension work. This carries to the farmers in their homes and in their associations, the best knowledge that the college experimenter and teacher as

well as the expert farmer can convey. I wish to suggest that this is a permanent work that will always be in demand. It is not enough to send printed matter to the farmers. The personal contact of college professor and experimenter with the practical farmer is of advantage to both, and is the best means of imparting practical information. This extension work should be regarded as a prime feature, and, in my judgment, should be enlarged and perfected in such a manner that the college, through this phase of its work, shall be enabled to touch personally and somewhat intimately practically all the farmers of the state. I cannot urge too strongly the maintenance and enlargement of this work. I regard it as absolutely essential to the largest success of our agricultural work at the college, and of first importance to the progress of agriculture in the state generally.

STUDENT ACTIVITIES.

Last winter, through the liberality and public spirit of the faculty, the drill room in Lippitt Hall was fitted up with some gymnasium apparatus, and a room in Davis Hall was also prepared as a social room. The gymnasium is being utilized more or less by the students to their advantage, although the equipment is still incomplete. The social room has been neatly furnished and provided with periodicals, and plans are already under way for connecting with it a game room and a small library. This room is constantly open and accessible to all men students, and it has been much appreciated by them. The Young Men's Christian Association has been revived, and is making plans for greatly enlarged work during the coming winter. A student council has been organized under the advice of the faculty, and it is hoped that this council will assist in directing student activities and will be, in every way, representative of student sentiment and a means of communication between students and faculty. Athletics have been encouraged by the faculty to a moderate extent, because of a feeling that, under proper control,

they are of value to the students participating and perhaps of even more value in arousing and cementing a proper college spirit.

THURSDAY LECTURES.

During the fall term a scheme of Thursday lectures has been inaugurated; the class periods of the day being slightly shortened and a forty-minute period just before the noon hour being devoted to the lecture. We have been fortunate in securing the presence of distinguished clergymen and business men. Members of our faculty have also participated. The plan has been well received by the students.

ALUMNI REUNION.

One of the pleasant events of the year was a dinner given in the city of Providence by the alumni of the college, May 29. A large number of graduates were present and expressed thorough loyalty to the college and a desire to help it to an enlarged career of usefulness. No college can permanently succeed unless its sons and daughters love it and will rally to its needs. I am sure that this college can count on the active support of the men and women it has trained for better work and higher success.

COMMENCEMENT.

Commencement exercises were held during a season of somewhat inclement weather, which reduced the attendance. The baccalaureate address was given by the president of the college, on June 14. The commencement address, on June 16, was delivered by Dr. W. H. Jordan, Director of State Experiment Station, Geneva, New York, on the subject, "The Education of the Rural People." It was a masterly exposition, and was thoroughly well received. Remarks were also made by Governor Garvin. The degree of Bachelor of Science was conferred on six candidates.

LIGHTING OF JAIL AND COURT HOUSE.

During the year arrangements have been made by which the college furnishes power for the electric lights for the Washington County jail and court house; this service to be rendered at actual cost to the college.

BOARD OF AGRICULTURE.

One of the most satisfactory events of the year has been the holding of two joint meetings of our Board of Managers and the State Board of Agriculture, one in Providence and one at the college. There is every reason why these two boards should work together with harmony of purpose and of feeling in order that the agricultural and industrial interests of the state may be advanced.

EXHIBIT AT ST. LOUIS.

It has been thought best that the college should not exhibit largely at the St. Louis Exposition in connection with the college and station exhibits. Our present plan includes a small exhibit, showing as far as possible the work which the college and station are now doing for the benefit of Rhode Island agriculture; this exhibit is to be placed in connection with the general agricultural exhibit from this state. The college and station are also assisting the Board of Agriculture and the Board of Fair Commissioners in preparing an adequate exhibit of the agricultural interests of the state.

ADVERTISING.

Newspaper advertising for the year has been largely omitted. Names of prospective students have been secured so far as possible, and personal correspondence has been carried on with them. This plan, while more expensive, is I believe much more effective, as I trust results will finally show. It is extremely desirable that the people of the state should visit the college and learn at first hand of

its work and the facilities offered. Large excursions are out of the question, because of our inability to provide transportation for the people from the railroad station. But it is hoped that a large number of small excursions can be held during the summer season, and I am satisfied that great good will come out of this system. During the past year we have had pleasant visits from the Rhode Island Press Club, the Rhode Island Horticultural Society, the Board of Agriculture, thirty-eight members of Cumberland Grange, and the St. Louis Fair Commissioners. I am satisfied that, as soon as the people of this state understand the work of this college and the opportunities it offers, they will at once concede its educational position in the state and will patronize it more largely.

A part of our advertising plan also comprises visits by the faculty to many parts of the state. Besides our extension work, and besides frequent addresses by the president of the college, various faculty members have attended meetings of the grange and of various agricultural organizations, and have given addresses at the same. During the spring term a committee of the faculty visited 37 rural schools in Washington County, getting acquainted with the teachers and pupils and making known the college. A similar committee also visited practically all of the high schools of the state on the same errand. I am convinced that these efforts are valuable in bringing us into touch with the school interests of the state and in giving us a closer intimacy with our sources of supply of new students.

EXPERIMENT STATION.

The by-laws of the experiment station have been amended so as to conform to the action of your Board about a year ago in placing the station on a somewhat more independent administrative basis. Although still regarded as a department of the college, the director reports directly to your Board rather than through the medium of the president of the college, the latter remaining, however, as a member of the station council. Under present

conditions, this plan is likely to work harmoniously. The station report will be made to your Board as usual. I desire to express my appreciation of the work of Dr. Wheeler as director of the station as well as of the work of the staff, not merely because the station work is efficient in itself, but because it is contributing so fully to the reputation of the college and is giving the farmers of the state a new reason for faith in agricultural education.

SOIL SURVEY.

Through the request of Dr. Wheeler and myself, the Bureau of Soil Survey of the U. S. Department of Agriculture has very kindly agreed to make a soil survey of the entire state in the near future. It is hoped that this soil survey will be of value in determining the productive areas of the state, in indicating what portions should be put into forests, in ascertaining the best orchard regions, etc., thus advertising to the farmers of Rhode Island, and indeed to the farmers of other states, the possibilities of successful agriculture in this state.

FINANCES.

I judge, from such study of the finances of the institution as I have been able to make since my arrival here, that the present income is barely adequate to maintain the present plant. It is, of course, perfectly understood that the income from the first Morrill Fund of 1862, amounting to \$2,500.00 annually, and that from the second Morrill Fund of 1890, amounting to \$25,000.00 annually, can be used only for specific purposes. These funds pay salaries, except in certain prohibited cases, and a large proportion of the new equipment necessary for proper instruction. The expense of all new buildings, repairs, fuel, the entire cost of the maintenance of the plant in every respect, must according to Federal law be borne by the state.

The present appropriation of \$15,000.00 a year made by the state legislature is hardly sufficient to meet this demand. So far as I am able to discover, it is not possible materially to reduce the cost per capita

of student instruction; nevertheless, the increased attendance we hope for and should have must necessarily increase somewhat the total demands upon our finances. Again, the college is lacking in certain equipment, such as, for instance, the greenhouse; but, if we have the greenhouse, we must remember that this involves a new burden of maintenance which must come from our current state appropriation. I think we should face these things squarely, and should very frankly state them to the legislature and to the people. It is our policy to be economical and businesslike, and the public should be acquainted with our methods and with our needs. I am convinced that when the public does know the exact situation, it will be perfectly willing to support the institution adequately. Incidentally, I desire to state that the law requiring us to transport students from and to the Kingston station, free of cost to the students, involves the college in considerable expense, and I would recommend the consideration of the question whether it would not be more economical to contract with private parties for this transportation than to carry it on under the auspices of the college.

PRESENT NEEDS.

I desire to repeat here the substance of my oral recommendations already made before your Board. By your vote of December 3, the legislature will be asked for appropriations aggregating slightly less than the sum I recommended. With your vote I am in heartiest accord. But I retain here my original recommendation, as it gives me the opportunity better to state our financial needs as I see them.

In the first place I would recommend that the legislature be asked to increase our current annual appropriation from \$15,000.00 to \$20,000.00 per year, with the distinct understanding that, of the additional \$5,000.00 thus provided, we shall use \$3,000.00 for student labor and \$2,000.00 for extension and demonstration work. It will be observed that this plan will give us the same current income for general purposes that we have at present. It will give us \$1,000.00 more for student labor than we had last year from the special

appropriation, and instead of \$1,000.00 it will give us \$2,000.00 for the extension and demonstration work; thus virtually increasing our current income for all these purposes only \$2,000.00 beyond the present year.

In this connection, I desire to state that \$5,000.00 was the sum asked of the legislature last year for student labor and demonstration work. Moreover, during the current year we have paid out for student labor as follows:

From current fund (January-June).....	\$1,309 01
From special fund (July-December).....	1,815 93
	\$3,124 94

It will be seen that at this rate the amount recommended (\$3,000.00) is none too great for present needs, especially when we recall that we are utilizing student labor wherever feasible and that we have the largest attendance in the history of the college. There is appended herewith a statement of the amount expended for student labor during the past few years:

1898.....	\$3,900 56
1899.....	2,924 13
1900.....	1,708 24
1901.....	1,855 23
1902.....	2,054 12
1903.....	3,124 94

I desire to make a strong plea for the appropriation of \$2,000.00 for demonstration work. With the present funds, we can provide for the work only a portion of the time. With \$2,000.00, I am satisfied that we can develop a very satisfactory department of college extension, and one that will commend itself very fully to the farmers and to citizens generally.

I also wish to call your attention to the extreme desirability of our having funds available for student labor and extension work as

current annual appropriations. Otherwise, it is extremely difficult to plan this work satisfactorily. And, indeed, it is next to impossible properly to adjust both these lines of work unless we are assured of their permanent support.

I would further call your attention to the need of a greenhouse. It is undoubtedly the desire of the people of the state that agricultural instruction at this college shall be emphasized. But, in view of the great importance of the horticultural interests of Rhode Island, it is manifestly impossible for us to give adequate instruction unless we have a suitable greenhouse. We have prepared plans for such a structure, and estimates on these plans give the cost as \$20,000.00. I am satisfied, however, that we can construct a satisfactory building for \$15,000.00. Of course, a greenhouse can be built for a less sum than this even; but a greenhouse of this sort should be well built, modern, and suited not only for educational and instructional purposes but also for experimental work. It should be accompanied by a workroom that is in keeping with our good college buildings. There can be no excuse for unnecessary expense in such a structure, but it is a part of wisdom that it should be not only well built but attractive as well.

There are certain improvements at the dairy barn, including a suitable milkroom, platform scales, etc., for which I would recommend an expenditure of \$500.00; also the building of a manure pit or shed which will enable the better preservation of the liquid manure and the handling of it; also the deepening of the well on the plain, and the installation of a complete fire-alarm system, these being imperative for proper protection from fire.

I would also recommend that the legislature be asked to appropriate in addition to the above sum not less than \$2,000.00 for special repairs. In connection with this item, it is urged that it be made our policy to ask the legislature to distinguish between our current expenditure, which can in a general way be previously estimated and which is certain to come up annually, and our special appropriations for certain specific purposes. I would include, under these

specific purposes, the annual repair fund. While it is true that we can calculate on a certain amount of repairs each year, we cannot tell just how much they will be nor what contingencies may arise. It is simply a business proposition that these repairs be made in order that the plant shall be kept in proper shape. It would seem, therefore, only fair that the legislature should regard repairs, as it does new buildings, properly subject to special appropriations upon recommendation of your Board.

HIGHWAY ENGINEERING.

I desire to endorse the idea contained in the resolution adopted by your Board, May 18, 1903, "Voted, that the college shall offer a course in highway engineering provided proper financial arrangements can be made." I am satisfied that the time is opportune for the installing of such a course. It is a course wholly appropriate for this college to undertake, connected as the subject is with both engineering and farm progress. With very slight extra expenditure for teaching, the instruction work can be arranged for. It is necessary, however, that the students in this course should have some opportunity for practical road work. I would recommend, as the most satisfactory, the plan of asking the legislature to appropriate a sufficient sum to enable us to buy road machinery for use on the college grounds. But as I understand that you do not deem this wise at present, I recommend that a committee of your Board be appointed to act with Dr. Hewes and myself for the purpose of negotiating with the authorities of an adjacent town, or of the state, or of the Federal government, for the limited use of road machinery either on our own grounds or on some neighboring highway. I would recommend that the legislature be asked to appropriate \$500.00 for the purpose of meeting the expenses of the course.

Accompanying this report is an inventory of all property in the charge of the college, made by order of your Board. It has been made with great care, and is a conservative statement of present

valuations. The details have been card catalogued, and are on file in the various departments as a permanent record.

All of which is respectfully submitted.

KENYON L. BUTTERFIELD,

President.

December 31, 1903.

Summary of Inventory, December 31, 1903.

Farm and campus.....	\$14,855 00	
Buildings and heating of same:		
Watson House, purchased 1889.....	\$995 00	
Taft Laboratory, built 1890.....	22,025 00	
Boarding Hall, built 1890.....	9,365 00	
Laundry, built 1901.....	1,938 50	
Ladd Laboratory, built 1890.....	9,330 00	
Davis Hall—dormitory, built 1895.....	46,714 00	
Botanical Laboratory, built 1895.....	1,050 00	
Chemical Laboratory, built 1895.....	2,330 00	
Lippitt Hall, built 1897.....	37,306 00	
Greenhouse, built 1890.....	140 00	
Hot-bed and cold frames, built 1903.....	155 00	
Poultry buildings.....	531 00	
Carpenter shop, built 1895.....	595 00	
Ice house, built 1894.....	1,180 00	
Powder house, built 1892.....	48 00	
Forge shop, built 1892.....	350 00	
Horse barn, built 1890-1901.....	8,380 00	
Dairy barn, built 1898.....	6,635 00	
Barn on plain, built 1743-1902.....	2,300 00	
		151,367 50
Lighting, water, and sewer systems:		
Lighting.....	\$1,899 59	
Water.....	8,135 00	
Fire apparatus.....	1,082 00	
Gas mains.....	256 50	
Sewer.....	1,816 40	
		13,189 49
Equipment, apparatus, etc., by departments:		
Agriculture:		
Crops.....	\$1,514 00	
Tools and machinery.....	1,895 93	
Wagons, harnesses, etc.....	1,119 50	
Horses.....	600 00	
Soil laboratory.....	200 70	
		5,330 13

Animal Industry:		
Cattle.....	\$1,363 75	
Hogs.....	74 00	
Dogs.....	45 00	
Fowls.....	185 50	
Waterfowl.....	46 00	
Pigeons.....	12 00	
Belgian hares	52 20	
Poultry appliances.....	289 25	
Tools, etc.....	523 31	
Grain.....	58 00	
	<hr/>	\$2,649 01
Art:		
Casts.....	\$230 44	
Photographs.....	221 20	
Other studio furnishings.....	795 83	
	<hr/>	1,247 47
Boarding Hall:		
Furniture.....	\$1,157 53	
Linen.....	309 44	
Silver and dishes.....	549 12	
Kitchen furnishings.....	1,030 35	
	<hr/>	3,046 44
Laundry.....		768 20
Botany:		
Microscopes and accessories.....	\$699 11	
Models, maps, charts, and photographs.....	133 50	
Laboratory furniture.....	232 10	
Apparatus and tools.....	281 44	
3,531 herbarium specimens and other museum material.....	225 38	
	<hr/>	1,571 53
Chemistry:		
Apparatus.....	\$3,564 04	
Chemicals.....	1,308 05	
	<hr/>	4,872 09
Civil Engineering and mathematics.....		883 08
Geology.....		250 00
Horticulture.....		102 75
Library.....		16,368 69

Mechanic Arts:

Machine shop	\$5,118 76	
Mechanical drawing	322 87	
Mechanical engineering.....	1,163 67	
Forge shop	268 55	
Patternmaking.....	88 10	
Carpenter shop tools.....	782 14	
Woodworking.....	1,486 53	
	<hr/>	\$9,230 62

Physics and Electrical Engineering:

Physics.....	\$4,000 00	
Electrical engineering	2,461 72	
Lantern slides.....	534 78	
Physiographic models and photographic material.....	150 00	
	<hr/>	7,146 50
Typewriting.....		175 00

Zoölogy:

Apparatus.....	\$1,211 83	
Specimens.....	3,810 90	
Models and shells.....	1,721 62	
Furniture.....	141 25	
Other zoölogical material.....	57 30	
	<hr/>	6,942 90

Miscellaneous:

Executive office furniture.....	\$778 83	
Printing department.....	605 45	
Lippitt Hall furnishings.....	1,230 91	
Telephone system.....	558 71	
Davis Hall furnishings.....	483 95	
Store.....	788 44	
Military department.....	115 00	
Quarrying apparatus.....	1,635 00	
Watson House furnishings.....	471 39	
	<hr/>	6,667 68

Total, College.....	\$246,664 08
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Brought forward		\$246,664 08
Agricultural Experiment Station:		
Agricultural Division.....	\$1,935 25	
Apiary.....	366 20	
Biological Division.....	3,002 05	
Chemical Division.....	3,989 61	
Horticultural Division.....	577 34	
Office furniture and fixtures.....	1,679 47	
Library.....	1,900 00	
Photographic outfit.....	338 54	
Pot experiment house.....	1,025 00	
Poultry buildings.....	2,954 50	
Vegetation experiment outfit.....	619 00	
	<hr/>	
Total, Experiment Station.....		\$18,386 96
United States property in trust for use in Military Department..		3,150 00
	<hr/>	
Grand total.....		\$268,201 04