1925

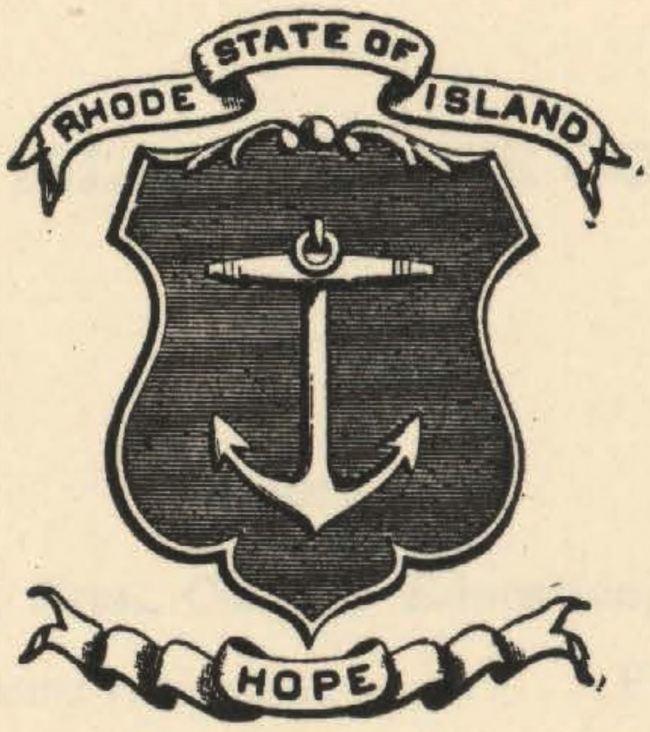
Annual Report 1925

University of Rhode Island

Bulletin of Rhode Island State College.

VOL. XX. FOR FEBRUARY, 1925

REPORT OF THE BOARD OF MANAGERS



KINGSTON, R. I.

1925

PUBLISHED QUARTERLY BY THE COLLEGE
MAY, AUGUST, NOVEMBER, FEBRUARY

ENTERED AT KINGSTON, RHODE ISLAND, AS SECOND-CLASS MATTER

The Auto Press, Printers, Pawtucket, R. I.

RHODE ISLAND STATE COLLEGE

Corporation

HON. WALTER E. RANGER, *Pres.*, Com. of Education, *ex-officio*....Providence

HON. ZENAS W. BLISS, *Vice-President*.....Providence Co., Providence

HON. ROBERT S. BURLINGAME, *Clerk and Treasurer*....Newport Co., Newport

HON. THOMAS G. MATHEWSON.....Kent Co., East Greenwich

HON. CHARLES ESTES.....Bristol Co., Warren

HON. ROWLAND HAZARD.....Washington Co., Peace Dale

HON. I. L. SHERMAN, Member of State Board of Agriculture.....Newport

REPORT

To His Excellency Aram J. Pothier, Governor, and the Honorable General Assembly of the State of Rhode Island and Providence Plantations, at its January Session, 1925:

I have the honor to submit herewith the Thirty-Seventh Annual Report of the Board of Managers of Rhode Island State College, as required by law.

WALTER E. RANGER,
President, Board of Managers.

REPORT OF THE PRESIDENT OF THE COLLEGE.

To the Board of Managers, Rhode Island State College:

GENTLEMEN: I have the honor to present the following as my report for the State fiscal year begun on December 1, 1923 and ended December 1, 1924.

Lack of Appropriations.

The outstanding feature of the year has been the struggle to operate the college without maintenance funds from the state, and it has been a rather harrowing experience. The year has been successfully completed only by patiently meeting each problem as it developed. No comprehensive financial program for the year was at any time possible, because it was only gradually that the full proportions of the menace unfolded themselves. As we look back over the year, it is a source of legitimate pride to us to be able to say that, during the whole year, through your foresight, loyal devotion and efficiency, no single laborer in our employ failed to receive his wages promptly and in full as each weekly payday came round, and only once (and then only twenty-nine days late) did the monthly salary check of officers, professors and instructors fail to go out promptly on the first of each month. The one failure to pay salaries occurred on the first of July, and then from no miscalculation on your part. It merely happened that a yearly remittance from Washington, which we had every reason to expect would be received at the usual time, was in some way, still unexplained, delayed far beyond the time of payment.

Acknowledgments to Merchants and Banks.

The same boast cannot be made as to bills incurred for supplies of all kinds. They have remained unpaid to the end of the calendar year. Such a condition has become possible only by the fine forbearance and helpful spirit of merchants and dealers as

well outside as inside the state. I desire here to record our thanks not only for the vital service rendered by this class of our fellow-citizens but also for their intelligent appraisement of the conditions, and the loyal and generous spirit of public service in which, with one or two exceptions, they came to the rescue. Without their generous and courageous co-operation we should have been unable to carry on.

The same recognition of loyal devotion to the public welfare, as concretely represented by this institution, is due and is gladly recorded concerning the banks which came to our aid. Specifically, our gratitude is due to the National Exchange Bank of Providence for its action in lending the college money at a low discount rate on the personal note of three members of your Board and an officer of the college, and to the Aquidneck National Bank of Newport for other and more extensive loans to the college, at the same low rate, on the notes of the college, as a corporation.

It is a pleasure further to note the prompt action of the new General Assembly now in progress to enable us to pay all the engagements in the form both of bills incurred and of loans made during the year.

It is actions like those here recorded that strengthen our faith in human nature and give us renewed courage and a firmer confidence in the enlarging social consciousness and essential solidarity of our civic and economic organization.

Attitude of the Board.

As it became increasingly apparent in the course of the year that the State Senate was ceasing to function and that, in common with all other State enterprises, the college would be left without necessary state support, your Board deliberated long and earnestly as to its duties and obligations in the premises. The easiest course and indeed the apparently obvious course was to close the college until such time as it should receive a new mandate from the constituted authorities of the State in the form of an adequate maintenance appropriation. There were indeed persons unweighted with responsibility who advised, and sometimes rather insistently, that such a course should be followed. There existed considerable unrest among the students before the end of the college year in June, and there came before the begin-

ning of the 1924-1925 college year in September, very many letters and verbal inquiries as to whether the college would open at the usual time in September.

Your Board resisted the pressure to close before the usual date in June, arguing that to do so would be a distinct and unjustifiable breach of faith with students then in attendance and especially with those who after nearly four years of work had a right to expect graduation and a degree in due course. It seemed to us a distinct accomplishment and we felt genuine relief when the Commencement exercises were over and the last student was at home.

The decision to undertake without funds the work of a new college year in September was arrived at mainly by the consideration that your Board was distinctly charged by legal mandate with the duty of operating the college; that the failure to provide funds was not an intentional blow at the college, nor could it in the remotest degree be regarded as a method of revoking the original mandate consciously adopted; that both sides to the unfortunate contest in which the fortunes of the college were accidentally involved had previously professed a desire to promote its welfare; and finally that we had every reason to assume that the people of the State desired and had a right to expect of all officials charged with responsibility for the public business the utmost effort and the most courageous energy and initiative in maintaining the efficiency of their institutions and preserving them intact from harm under the anomalous conditions existing. Under such considerations your Board unanimously decided that it would be both cowardly and disloyal to the high trust reposed in them not to go forward and not to stretch to the utmost every power within their grasp in order to continue the work of education so vital to the public welfare.

Limitation of Freshman Class.

On the other hand it seemed equally clear that no expense other than what was necessary to maintain the efficiency of the college at the stage to which it had previously arrived should be undertaken. Among other things, therefore, it became necessary to limit the total attendance in the college year 1924-25 to approximately the same number as for the previous year. As the

classes had been growing steadily larger, and as we seemed to be under an implied contract to all undergraduate students previously enrolled to allow them to continue, the only way to limit the total attendance for the year was to reduce the size of the incoming class by some twenty-five percent. as compared with the freshman class of the previous year. Accordingly, it was announced that only one hundred and sixty students would be admitted as Freshmen in September. The number actually admitted was one hundred and fifty-nine. The membership of the Freshman class in 1923 was two hundred and eleven, and the total enrollment for 1923-24 was four hundred and sixty-nine. When it is noted that the number of freshman applications for 1924 was two hundred and fifty-six (in spite of the apparent public uncertainty as to whether we would be able to open or not) and the total enrollment for the current year is at this time four hundred and seventy, it will be seen that an honest effort was made to restrict our activity within the limits set by the previous year.

Athletics.

For some years I have felt that differences of opinion among us had arisen, and that especially with some of the college alumni these differences were becoming accentuated. There is among the alumni of many colleges an insistent demand for winning teams, and it would seem that to some the whole sum and substance of college athletics lies in the winning of intercollegiate games. Everywhere an immense amount of time, much thought, and large sums of money are expended on the athletic side of college life, and if the value of it all consists merely in winning games, in advertising the college, in furnishing a sort of gladiatorial show for public delectation, in providing alumni with a basis for boastful gloating over a rival, and in return therefor enlisting their financial support for the college in general and especially for the enlargement of athletic facilities; then it is undeniable that the time, thought and money expended is enormously disproportionate—that distinctly anti-social evils are fostered and encouraged at what should be the fountain-head of social virtue and morality for the coming generation, and that college life itself is in danger of becoming rather a menace than

a bulwark of safety for society and citizenship. Let me sketch out a series of evils which wrong ideals and a false emphasis laid on winning and winning alone in inter-collegiate games draw after them. In such case the coaches and athletic directors sought after are those who can produce "results" as reckoned in games won. For such persons salaries entirely disproportionate to those paid college or university employees in other lines of college training are offered and paid from sources which the college does not control. The prestige and the tenure-of-office of these persons are co-extensive with the string of victories in the field and promptly end when a series of reverses begins. Since under any system of training a supply of good "material" is essential for "success", the "successful" coach or director must see to it—no matter how, he must see to it—that proper material becomes available. He is under the severest pressure by fraud and evasion to make use of forms of "scouting", "bidding" and proselyting for athletic material wherever found; when procured to retain it against college rules by low cunning or by intimidation; and to make it effective by training it to use in action any foul means it can practice and "get away with".

Such practices and ideals on the athletic field and in the athletic department very soon propagate themselves among the student body, and you get an admiring exaltation of clever fraud as the true philosophy of life. We frequently condemn our day and age as materialistic. There is no more genuine materialism than that which elevates triumph over others into an ideal and glorifies clever knavery as the finest quality of manhood. These students are those who as future leaders and controllers of our destinies are to enter our economic and political life. If we planned to pour into this stream of life a fountain of social poison that should bring about social distress and social death, we could not do better than by inoculating these future leaders with the virus of such training for our athletic contests.

Athletics the Laboratory for Character Training.

For the last two years I have made it a point to attend the annual Conference of the National Collegiate Athletic Association. I desired to determine for myself, through the discussions of the men of this conference, gathered as they are from all the

great institutions of our land, what they regarded as the function of our system of athletics in college life and what the trend of their thought is in regard to its value. I have been delighted to find in this great conference a body of earnest men, thoroughly imbued with the fine idealism of the teacher aflame with love for his students and organized for the repression of the evils that they recognized as threatening, not merely to the educational standing of their subject, but also to the young manhood and womanhood of our land. Throughout their discussions ran two recurrent topics—the combatting of evils grouped under the general name of commercialism, and an insistence on the character-building value of athletics.

I came back more firmly convinced than ever that athletics under proper management and in the hands of competent teachers are the most valuable and effective means that we know for the development not only of health and a sound body, not only of courage, self-reliance and initiative, but also and for me more especially, of fine ideals of honor, chivalry, loyalty and self-sacrifice. The athletic field is a miniature reproduction of the arena of life; in its contests are brought into play all the motives operative in the conflicts of the business and political world. All the precepts of conduct in whatever classroom imbibed are here tested under conditions that demand instant decision and furnish immediate measurement of their value and of the degree to which one has made them a part of oneself. All results are possible. One may conquer and know himself despised in the eyes of all true men; one may be defeated and still stand without fear and without reproach. Best of all the tests are not final; they are repeated and progressive. In them one may study himself; he may discover his powers and his failings; he may increase the one by exercise, he may eliminate the other by conscious effort. As he grows in physical strength he may also grow in self-direction and moral stamina.

And this is the educational function of athletics—obviously to train for soundness of body, definitely to practice in clearness of perception and judgment and promptness of decision, but more subtilely and even more surely to mobilize conscience and to develop steadiness of character. So considered athletics become of vital importance. In selecting a coach the primary question

becomes not, Can he turn out a winning team? but, Has he sound character and the power to project that character into his students?

Our Policy.

Our college is young. It has begun late. It has the opportunity to profit by the recognized errors of older and larger institutions. One of these errors (recognized, confessed, and repented of) is alumni control of athletics, of the appointment and discharge of coaches and directors. We cannot permit any authority over this department of college life outside of the legally constituted administration of the institution, any more than we would permit such outside authority in any other department.

We must more fully develop our facilities so that all students may participate in some form of athletics. This must be done by laying larger stress upon, and creating greater interest in, intramural athletics, and by enlarging the number of sports encouraged. We must not permit all our athletic interest and activity to sum itself up in the one ambition to develop a great 'varsity team. We must frankly recognize that for the purpose of intercollegiate contests our athletic prowess should develop and will develop only as our college facilities and achievements in other lines develop. Athletic success in intercollegiate contests depends in the last analysis on the securing among our attendance of extraordinary athletic material. Unless unworthy means are used, or some peculiarly unusual and temporary combination of chance brings about a contrary condition, a small body of four hundred students will not contain anything like as many outstanding athletes as will a body of four thousand students. The obvious consequence of this obvious fact is that for intercollegiate games colleges fall into classes, more or less clearly defined, and in making up schedules it is as grotesque and unwise to go outside one's class as it is in pugilism to pit a lightweight fighter against a heavyweight. The small college so scheduled either serves the larger colleges merely as a scrub or second string team for practice in preparation for games against their real rivals, or arouses well grounded suspicions as to the lessons of honesty, of good faith, and of fine sportsmanship it is teaching its students.

Realizing these facts our college is striving, in making its intercollegiate schedules, to keep within its own class as to the natural resources of athletic material. As a practical method of determining class it has adopted a rule that it will schedule games only with those colleges that are willing to contract for games alternately at the two colleges concerned. Not only does such a rule determine approximate classification, but it also keeps up home interest and morale by providing an adequate home schedule. This rule is not intended to preclude us, on occasion from showing friendliness and courtesy to our neighbors, and so in this year, on invitation from Brown University to play the first football game in their new stadium, we have scheduled a game with them.

I have written thus at some length on athletics in this report because the subject is a vexed one and the matter is of grave importance.

Vesper Services.

The following letter sent out to the central authority of all religious organizations that could be reasonably expected to respond actively is self-explanatory.

October 1, 1924.

For some time it has seemed evident to some of us that our college community is not fulfilling its full duty toward itself or toward the students among us in regard to the spiritual life of the college community, considering the spiritual life without reference to creed or sect. There exists in all the churches a common inheritance of religious thought and aspiration, a vital community of faith in the reality of the spiritual life and a need for its cultivation. We think that, under existing conditions and without compromising individual convictions, and without introducing principles on which there are differences, this common body of thought and feeling can be and should be made to take hold of and permeate our community existence.

We have here a college community totalling some six or seven hundred people of various religious faith. It is true that a very large part of this community is able to go home on Sunday and to have the opportunity of church ministrations at home. A large part, on the other hand, remain here Sunday after Sunday and

are dependent on local church facilities. We feel strongly that these local church facilities have not proved adequate for the needs in question. We desire to take such measures as are possible to foster in larger degree and in wider scope the highest ideals and aspirations of the human soul. We are concerned in a common effort of all the churches to quicken and foster spiritual concepts common to all forms of religious thought vitalizing the impulse of worship itself, raising man above the beast, and binding him to the God of the universe.

Our present plan is to hold a series of vesper services at seven o'clock on Sunday evenings during the college year, at which a representative of each form of religious faith may, in turn, conduct a service and speak to a voluntary audience of students, faculty and community the message that is in his heart. For success it will require the best and finest talent that your organization can furnish. This is necessary to draw and maintain the attendance from Sunday to Sunday. Such is the general purpose.

With regard to concrete plans. We have corresponded with authorities in all branches of the Church Universal and have received encouragement to think that we can arrange a series of meetings of the kind desired and, accordingly, we have arranged dates for representatives of the various denominations that have agreed to take part in the furtherance of our plan. At least eight organizations through representative officials have undertaken to aid us, and I have arranged a date for each in alphabetical order. The hour we think should be seven o'clock in the evening to secure the best attendance. If, however, any clergyman should find it possible to be here in the afternoon, say at 3:30 or 4:00, and cannot be present in the evening, we will try to arrange for the afternoon hour. We will undertake to pay to each clergyman an honorarium of twenty-five dollars and expenses. We recognize, of course, that this amount is by no means adequate recognition of the service that such a man will render to our community, but we believe that both he and the church which he regularly serves will be ready to make whatever sacrifice is required to meet a need of the kind that we have attempted to present. The attendance will be entirely voluntary, but we believe that the community is deeply interested in the movement and will be responsive.

It is, of course, frankly an experiment. If it succeeds, it will be something definite accomplished. If it fails, we shall at any rate have the consciousness that we have made a worthy effort.

The meeting will be from beginning to end in the hands of the clergyman officiating. He may choose whatever hymns, songs or readings he will, our only request being that nothing calculated to arouse sectarian sensitiveness be introduced. It would be well, too, if the hymns to be used should be communicated to us beforehand so that our pianist and singers may be prepared to use them.

Very truly,

President.

The responses received have been most gratifying and have shown a most encouraging spirit of unity in the common cause of cherishing and strengthening religious thought and life among us.

Under our plan ten organizations have entered into co-operation with us and on the first series of meetings the following representatives of the corresponding organizations have participated:

Oct. 19. Rev. George R. Baker, Associate Secretary, Board of Education, Northern Baptist Convention, New York City.

Oct. 26. Rev. David I. Quinn, Pastor St. Francis' (Catholic) Church, Wakefield, R. I.

Nov. 2. Rev. Harry T. Stock, Secretary, Congregational Education Society, Boston, Mass.

Nov. 9. Rev. Malcolm Taylor, Executive Secretary, Protestant Episcopal Church, Boston, Mass.

Nov. 16. Dr. R. D. Hollington, Pastor Mathewson Street Methodist Episcopal Church, Providence, R. I.

Nov. 23. Rev. Merchant S. Bush, Presbyterian University Pastor for Greater Boston, Cambridge, Mass.

Dec. 7. Dr. Vivian T. Pomeroy, Pastor First (Unitarian) Parish, Milton, Mass.

Dec. 14. Dr. John S. Lowe, General Superintendent, Universalist General Convention, Boston, Mass.

Jan. 11. Dr. Paul E. Scherer, Pastor Lutheran Church of the Holy Trinity, New York City.

Jan. 25. Rabbi Herman H. Rubenovitz, Temple Mishkan Tefila, Boston, Mass.

The attendance on this series has averaged around one hundred persons. We purpose beginning a new series on February 1.

Burning of the College Horse Barn.

On August 6 the college horse barn was burned, the loss being (a) the building itself valued at $10,000, (b) tools and agricultural machinery old and new stored therein, the value of which it difficult to estimate but considered to be about $4200, (c) hay stored, $800. The fire occurred about four o'clock in the afternoon. How it originated has never been determined. It may have been due to the heating of freshly stored hay or more probably it may have originated from some one's lighted cigarette. At that time of the summer vacation, there were very few persons around the campus; the men and the horses were out on the farm at work. When discovered by children the loft and the hay therein were in full blaze.

The fire companies of Kingston, Peace Dale and Wakefield were summoned and did excellent work, being able to save the two ends projecting toward the south from the front of the main barn. Our thanks to these organizations were duly expressed at the time and record is here again made. It is good to note that the college water supply was fairly adequate on this occasion. The tower was full and the pumps set going kept up the supply so that with two powerful fire engines throwing water on the fire from the nearest main, the tower at the end of the fire was still fully two-thirds full.

To house horses, automobiles, implements and the like, your Board authorized an expenditure not to exceed $4000. Sheds were built during the summer at an actual cost of $1,731.75, which amount is included in the table of expenditures under the head of (6) construction and repairs. If the five-year program proposed last year is carried out, the present machine shop which was formerly a barn will be vacated, and can be turned back again into a horse barn. It has therefore been thought best not to make at this time any further move to replace the fire loss.

Atttendance for the Current Year.

The usual tables of attendance for the current year, with comparative figures for previous years, are herewith submitted. In accordance with intention, as previously stated, the total attendance has been restricted to practically the same number as that of the previous year by limiting the size of the freshman class to one hundred and sixty members. This was done in accordance with the thought of your Board that no development beyond that of the previous year should be permitted in the absence of a definite authorization from the General Assembly in the form of an appropriation.

ATTENDANCE.

TABLE NO. 1.

Showing Attendance by Classes During the Years 1921—25.

CLASSES	1920-21	1921-22	1922-23	1923-24	1924-25
Graduate students	4	4	4	3	7
Seniors	34	59	54	56	64
Juniors	69	75	67	84	80
Sophomores	98	93	90	87	134
Freshmen	134	138	150	208	159
Irregular	11	15	14	14	21
Total, college courses	350	384	379	452	465
Two-year courses	6	17	12	10	5
Total	356	401	391	462	470

TABLE NO. 2.

Showing Number of Men and Women, of New and Previous Matriculates, and Number in the Several Courses by Classes for Collegiate Year 1924—25.

CLASS	Sex		Date of Matriculation	
	Men	Women	Previous to 1924	1924
Graduates	4	3	1	6
Seniors	51	13	63	1
Juniors	65	15	80	
Sophomores	108	26	132	2
Freshmen	137	22	5	154
Irregular	20	1	18	3
Total College	385	80	299	166
Two-year	5		3	2
Grand Total	390	80	302	168

	Agr.	Engineering					Gen. Sci.	Home Ec.	Bus. Ad.	Total
CLASS		Civil	Chem	Elec.	Mech	Total				
Graduate	—	—	—	—	—	—	—	—	—	7
Senior	12	6	2	11	5	24	17	11	—	64
Junior	3	9	5	12	13	39	27	11	—	80
Sophomore	6	17	4	23	20	64	24	17	23	134
Freshman	6	—	—	—	—	86	21	18	28	159
Irregular	3	—	—	1	—	2	1	—	14	21
Total	30	32	11	47	38	215	90	57	65	465
Two-Year	5	—	—	—	—	—	—	—	—	5
Grand Total	35	32	11	47	38	215	90	57	65	470

HOME RESIDENCE OF STUDENTS.

A. Resident outside of the State:

Connecticut:

East Hartford	1
Farmington	1
Hartford	1
New London	4
Norwichtown	1
Stonington	2
South Windsor	1
West Hartford	1
	12

Maine:

Kingman	1
Biddeford	1
	2

Massachusetts:

Attleboro	1
South Boston	1
Brockton	26
Brookline	1
Bryantville	1
Campello	1
Chatham	1
Dedham	2
East Braintree	1
East Carver	1
Fairhaven	1
Fall River	6
Harwich Port	1
Haverhill	2
Holyoke	3
Hyde Park	1
Lynn	1
Malden	1
Marblehead	1
Middleboro	1
Montello	1
New Bedford	1
North Attleboro	2
Plymouth	1
Revere	1
Roxbury	1
Seekonk	2
South Attleboro	1
Swampscott	1
Webster	3
West Tisbury	1
Whitman	1
Willimansett	3
	73

New Jersey:

Denmark	1

New York:

New Rochelle	1

Pennsyvlania:

Palmerton	2

Total attendance from without the State 91

B. Resident in Rhode Island by Counties and Towns:

Bristol:

Barrington	5
Bristol	2
Warren	1
	8

Kent:

Coventry	3
East Greenwich	4
Warwick	10
	17

Newport:

Jamestown	3
Little Compton	6
Middletown	3
Newport	32
Tiverton	3
	47

Providence:

Burrillville	8
Central Falls	8
Cranston	29

East Providence	11	Washington:	
Glocester	2	Charlestown	2
Johnston	1	Hopkinton	2
Lincoln	5	North Kingstown	9
North Providence	5	Richmond	1
Pawtucket	28	South Kingstown	21
Providence	138	Westerly	21
Scituate	2	Narragansett	1
Woonsocket	13		—
	—		57
	250		

Total attendance from within the State.....379

Entrance Statistics for Class Registering in 1924.

Number received from high schools	150
Number re-classified and repeating work	5
Number received by examination	2
Number transferred from other colleges	2
Total enrolled in freshman class	159

Analysis of high school students with regard to number of units credited:

Number credited with fifteen or more units	129
Number credited with fourteen and a half units	6
Number credited with fourteen units	14
Number credited with thirteen units	1
Total	150

Number entering with conditions in required subjects as follows:

One-half unit of condition	21
One unit of condition	30
One and one-half units condition	6
Two units condition	15
Total number enrolled with conditions	72
Total number enrolled without conditions	78
Total	150

Average age of men and women Oct. 1, 1924..18 years, 8 months, 28 days
Age of youngest member of class, Oct. 1, 1924.16 years, 5 months, 11 days
Age of oldest member of class, Oct. 1, 1924...26 years, 11 months, 5 days

Preparatory Schools Represented in Registration of Freshman Class.

In Rhode Island:	
Barrington High	1
Bristol—Colt Memorial	1
Burrillville High	3
Central Falls High	3
Cranston High	8
East Greenwich Academy	2
East Providence	6
Newport—Rogers High	14
North Kingstown High	2
Pawtucket High	7
Providence:	
Classical	2
Commercial High	1
Hope Street	4
Technical	31
LaSalle Academy	1
St. Francis Xavier	1
South Kingstown High	7
Westerly High	8
West Warwick High	2
Woonsocket High	3
	107
In Connecticut:	
Farmington High	1
Stonington High	1
West Hartford High	1
	3
In Maine:	
Biddeford High	1
Mattanawcook Academy	1
	2
In Massachusetts:	
Attleboro High	1
Braintree High	1
Brockton High	14
Chatham High	1
Chicopee High	2
Cushing Academy Ashburnham	1
Dean Academy, Franklin	1
Drury High, North Adams	1
Fairhaven High	1
Fall River:	
B. M. C. Durfee High	3
Holyoke High	2
Hyde Park High	2
Lawrence Academy	1
Marblehead High	1
Middleboro High	2
Mt. Hermon Academy	1
New Bedford High	1
North Attleboro High	2
Swampscott High	1
Webster, Bartlett High	3
Whitman High	1
	43
Nova Scotia:	
Picton Academy	1
Scotland, Glasgow:	
Allen Glen's High	1
Grand Total	159

Finances.

I am here incorporating the communication sent to the State Treasurer December 15 last, as required by law. It includes (a) a statement of financial needs for the year 1925, together with (b) a table of receipts and expenditures for the last three years

ranged under the usual headings. Beside these there is ranged under the same headings an estimate of receipts and expenditures for the year from December 1, 1924 to December 1, 1925.

To the State Treasurer:

In compliance with the requirement that institutions and departments of the State shall, on or before the fifteenth of December, transmit to your office a statement of their financial needs both current and special for the ensuing year, I am authorized and instructed by the Board of Managers of Rhode Island State College to state that the college will need from the State for the year 1925 the following:

1. For maintenance, December 1, 1924 to December 1, 1925, (See Item No. 4 in statement herewith $126,700 00
2. For special purposes as follows:
   1. Aid for experiment station..... $3,600 00
   2. Replacement of agricultural machinery 2,000 00
   3. Repairs, including renewal of electric light lines..... 4,400 00
   4. Replacement of coal reserve used 7,000 00

   ——— 17,000 00

3. In 1924 a request was made for an appropriation for an engineering building to cost $200,000, one-half of amount to be available in 1924 and one-half in 1925. This request was embodied in a resolution H 860 and referred to the House Finance Committee. It was reported as H 860 Substitute A, being a measure to submit to the people a bond issue for a five year building program at the college. This passed the House and was reported to the Senate. The measure, on account of its comprehensiveness, was entirely acceptable to the Board of Managers, although it did delay the beginning of an urgently needed building for a year. The Board does not desire to relinquish the bond-issue proposal; yet, as it could not be carried to the people for two years, and as the need for the engineering building is increasingly pressing, it is hoped that the General Assembly will find a way in connection with the bond-issue proposal to enable the college to begin building this year.

4. The Board desires to call attention to the deficit in the account of the year 1924, amounting to $100,249.22 and represented by bills now in the office of the State Auditor awaiting payment.

I am enclosing herewith detailed statement of maintenance receipts and expenditures for 1924, together with detailed estimates under the same headings for the year from December 1, 1924 to December 1, 1925.

Very respectfully submitted,

HOWARD EDWARDS,

President.

ANALYSIS OF EXPENDITURES INCLUDED IN FOREGOING STATEMENT OF INCOME AND EXPENDITURES.

		1922	1923	11 Months 1924	1925
1.	Advertising	$346 50	$223 00	$138 00	$400 00
2.	Apparatus	2,351 29	820 36	2,190 01	1,800 00
3.	Auto & Stable Sup...	1,375 71	728 23	609 18	1,000 00
4.	Books & Periodicals.	1,647 46	726 46	1,103 48	1,200 00
5.	Commencement	1,266 63	1,181 28	1,096 85	1,200 00
6.	Constr. & Repairs...	6,016 66	5,985 44	12,237 40	6,000 00
7.	Electricity	2,088 27	1,867 26	2,251 99	2,500 00
8.	Entertainment	807 42	768 16	872 26	900 00
9.	Exp. Station Aid...	3,343 25	3,371 84	3,820 51	3,400 00
10.	Extension Offset ...	1,554 41	2,339 91	989 64	1,500 00
11.	Feed	4,628 97	4,153 66	5,476 50	5,700 00
12.	Fertilizer	730 95	1,183 45	635 49	1,000 00
13.	Freight & Express..	1,287 93	936 51	1,027 72	1,200 00
14.	Fuel	18,820 96	25,727 31	13,216 68	20,000 00
15.	Furniture	1,021 97	209 11	772 72	400 00
16.	Gasoline & Oil.....	2,058 47	1,673 53	1,844 02	2,000 00
17.	Janitor Supplies	536 56	425 57	598 11	600 00
18.	Labor	27,094 78	27,807 14	33,006 77	33,500 00
19.	Lab. Supplies	4,690 14	5,221 27	6,292 82	6,500 00
20.	Live Stock		1,309 25		
21.	Post., Sta. & Print.	3,578 47	3,397 14	2,987 38	3,000 00
22.	Refunds	1,177 41	986 85	1,552 46	500 00
23.	Rentals	3,628 18	3,418 09	4,453 80	4,500 00
24.	Salaries	102,177 53	100,542 35	112,457 29	122,500 00
25.	Seed	652 15	330 51	358 20	500 00
26.	Telephone & Tele...	1,258 05	787 32	738 58	900 00
27.	Tools & Machinery..	382 57	484 05	387 76	500 00
28.	Travel	3,175 62	2,235 47	2,102 97	3,000 00
29.	Veteran's Bureau...			532 75	
30.	Miscellaneous	2,297 50	2,529 95	3,066 14	3,000 00
		$199,995 58	$201,370 47	$216,817 48	$229,200 00

COMPARATIVE STATEMENT—MAINTENANCE FUNDS

of Rhode Island State College (showing income and expenditures for the year 1922, for January to November inclusive of 1923—eleven months; for twelve months, December 1923 to November 1924 inclusive; and estimate of income and expenses for December 1924 to November 1925 inclusive).

		11 Months		Estimated
INCOME	1922	1923	1924	1925
1. Morrill Fund 1862....	$2,500 00	$2,500 00	$2,500 00	$2,500 00
2. Morrill Fund 1890 Bal. Brought Forward.....	25,040 73	19,587 24	13,876 57	27,300 00
Rec'd. July 1.....	50,000 00	50,000 00	50,000 00	50,000 00
3. Current Fund. Bal. Brought Forward	51 43	63 19		
Receipts during period	42,053 85	45,013 28	50,692 52	50,000 00
4. State Appropriation..	100,000 00	98,083 33	26,750 00	126,700 00
Total Income	$219,646 01	$215,247 04	$143,819 09	$256,500 00
EXPENDITURES				
Total Expenditures ... (For analysis under headings see Statement following)	199,995 58	201,370 47	216,817 48	229 200 00
Balance (carried forward to succeeding year)	$19,650 43	$13,876 57	$72,998 39 Dr.	$27,300 00
(For 1924, Morrill Fund debit, being amount that should be carried forward to year 1925).....			27,250 83Dr.	
(Total Deficit, represented by bills now in Auditor's office awaiting payment)			$100,249 22Dr.	

Note: The measures carrying appropriations for the College in 1924 were:

General Appropriation bill.....	$115,500 00
Special; House Resolution No. 859 Substitute A.	14,000 00
These passed the House and were reported to the Senate	$129,500 00

The amounts included in the foregoing statement as chargeable to the State Treasury are:	
Bills paid Dec. 1923 to Feb. 1924 inc.	$26,750 00
Bills pending in Auditor's office..	100,249 22
	126,999 22
Difference	$2,500 78

(a) Maintenance Asked for.

It will be noted that the amount from the State deemed necessary for maintenance for the current year is $126,700. This increase of approximately $10,000 over the amount deemed necessary last year, or $12,000 over the amount carried in the appropriation bill which passed the house last year is due mainly to increases in the estimate on labor ($3500), on salaries ($6700) and on laboratory supplies ($1500). The actual cost last year of labor and laboratory supplies was approximately these amounts over the estimates for that year on these items. The increase for salaries is necessary to carry on the salary scale agreed upon a year ago and put into operation last September.

(b) Special Appropriation Requested.

The items covered in the special appropriation asked for this year are:

1. Experiment station aid	$3,600 00
2. Replacement of agricultural machinery	2,000 00
3. Major repairs including the general reconstruction of electric light lines	4,400 00
4. Replacement of surplus coal usually carried over in January	7,000 00

It should be explained that the experiment station aid is greatly needed. For want of it, we have found it necessary to curtail the regular work of the vital department of chemistry.

The loss of agricultural machinery in the barn fire has brought about the request for the sum of $2,000 for new machinery.

The electric light lines all over the college grounds and farm have long been in need of thorough overhauling and replacement. Hence the request for that item.

For several years we have carried over into the following year a considerable supply of coal. When the stringency of 1924 came upon us it seemed best to use up our supply on hand and to buy from month to month as it became necessary. Hence we are entering on a new year without our usual supply on hand. We are asking for $7,000, the difference between our usual expenditure during the year and the actual expenditure of 1924, to replace the stock that we usually carry over.

(c) The Five-Year Building Program.

By reference to the report for 1924, it will be seen that your Board asked for a $200,000 appropriation for the construction of an engineering building. On that request, the House Finance Committee requested that we submit a building program and proposed a referendum for a bond issue to carry out the program.

The building program consisted of the following items:

1.	An engineering building	$200,000
2.	Furnishing apparatus and equipment for the same	45,000
3.	Library and auditorium	140,000
4.	Gymnasium and drill hall	100,000
5.	Addition to power plant	10,000
6.	Remodeling Lippitt Hall for department offices and lecture rooms	30,000
7.	Men's dormitory	75,000
	Total	$600,000

This measure, like others, was not acted on.

We are loath to give up the referendum idea, and yet we have already foregone for a year the beginning of the erection of a much-needed building. To defer such beginning for a referendum which cannot be taken before two years from now is to put off for three or four years the entering upon a program recognized as imperative last year. It is earnestly desired that some means may be devised to allow of a beginning on the engineering building this year, providing at the same time for a bond issue from the proceeds of which the state treasury may be reimbursed for the building outlay incurred. Argument for this need will not be repeated here. They were elaborated in the 1924 report to which reference is made.

Visit of the General Assembly.

On February 20, 1924, the General Assembly, having accepted the invitation of the college to do so, came as a body on a visit of inspection. Notwithstanding that the weather was as bad as it could be, a large majority of the members did us the honor to come and many who had never been here before gained some idea of the size and work of the institution. The needs of the college and its future possibilities for forwarding the interests of the body politic were earnestly presented and the impression produced seemed to be highly favorable. Speeches from the leaders of both political parties pledged cordial support for the institution. Undoubtedly had not the political impasse of the year intervened, these promises would have been carried into effect and our program would now be in progress of realization. It is earnestly hoped that these good impressions will carry over into the present session, and we shall obtain the fruitage of the seed then sown.

Changes in Personnel.

The following resignations have been offered and accepted during the year:

1. Dr. Paul S. Burgess, from the position of chemist of the experiment station.
2. Mr. Robert L. Jones, from the position of assistant in chemistry in the experiment station.
3. Dr. George B. Viles, from the professorship of modern languages.
4. Mr. W. S. McGuire, from an instructorship in chemistry.
5. Mr. Ralph P. Tittsler, from an instructorship in bacteriology.

Positions 1 and 2 have not been filled. Position 3 was filled by the appointment of Professor Frank B. Mitchell of the U. S. Naval Academy where he had been an instructor in modern languages since 1921. Professor Mitchell is an A. B. (1914) of Boston University. He was then an instructor in Lawrence Academy. During the war he was for twenty months an interpreter and member of the First Army Intelligence Corps in France and subsequently in Germany. From 1919 to 1921 he was an instruc-

tor in the University of Vermont and in 1921 he went to the U. S. Naval Academy. He has done graduate work for three years at Johns Hopkins University.

Position 4 was filled by the appointment of Cecil L. Brown. He is a B.Sc. graduate of the University of North Dakota, and an A.M. of the University of Missouri. He has had three years of experience in high-school teaching.

Position 5 was filled by the appointment of Mr. Herman E. Segelin. He is a B.S. graduate of the Michigan Agricultural College, 1922, and has had some experience in teaching.

Promotions.

During the year Professor John Barlow who, for some twenty years has had the department of zoology, was made Dean of the courses in General Science.

Miss Helen E. Peck was advanced from the position of Assistant Professor to that of full Professor of English Literature.

Commencement.

In spite of many prophecies of evil due to the financial situation, the commencement was held at the appointed time in due and full form. The graduating class numbered fifty-two. The advanced degree of Master of Science was conferred on Mr. Robert L. Jones, B.S., 1921, Massachusetts Agricultural College.

The baccalaureate address on Commencement Sunday was made by the writer, the subject being The Pursuit of Happiness. The main address on Commencement Day was given by President William Mather Lewis of George Washington University, Washington, D. C.

Scholarships and Awards.

We gratefully acknowledge the continued interest of the State Federation of Women's Clubs in the award of two scholarships of fifty dollars each, the recipients being Miss Mary Hoxsie Hanson of Peace Dale and Miss Hazel May Kimber of Kenyon. Our thanks are also due to the Triangle Club of Kingston for their scholarship of fifty dollars awarded to Miss Constance Katharine Knobelsdorff of Newport. These scholarships are open to students in the home economics course only.

The award for the highest grade in agriculture for the year was given to Mr. Noel Vernon White Smith, and for the highest grade in home economics for the year to Katharine Bowen Whaley. These awards are offered by the Rhode Island State Grange and to that organization we wish again to express our deep appreciation.

All of which is respectfully submitted.

HOWARD EDWARDS,

President.

January 15, 1925.

REPORT OF THE TREASURER.

R. S. BURLINGAME, Treasurer, *in account with the different funds of* RHODE ISLAND STATE COLLEGE, *for the year ending November* 30, 1924.

MORRILL FUND OF 1890 AND NELSON ACT OF 1907.

1923.				
Dec. 1	To Balance on hand			$29,600 00
1924.				
Aug. 2	U. S. Warrant for year ending June 30, 1925			50,000 00
Dec. 1	By instruction		$50,491 68	
	Balance on hand		29,108 32	
			$79,600 00	$79,600 00

MORRILL FUND OF 1862.

1923.				
Dec. 1	To cash from landscrip fund			$2,500 00
1924.				
Dec. 1	By instruction		$2,500 00	
			$2,500 00	$2,500 00

SMITH-LEVER FUND OF 1914.

1923.				
Dec. 1	To Balance on hand			$969 81
1924.				
Feb. 5	U. S. Warrant (second installment for year ending June 30, 1924)			5,799 41
Aug. 7	U. S. Warrant (first installment for year beginning July 1, 1924)			5,799 41
Dec. 1	By communication service		$18 80	
	Equipment		105 77	
	Publications		227 50	
	Salaries		9,417 85	
	Supplies		155 03	
	Traveling		1,530 50	
	Balance on hand		1,113 18	
			$12,568 63	$12,568 63

STATE—MAINTENANCE FUND.

1924.					
Jan.	1	To 3/12 amount appropriated for previous year ending November 30, 1923			$26,750 00
Dec.	1	By apparatus	$499 15		
		Auto service	24 58		
		Books and periodicals	328 31		
		Construction and repairs	1,504 33		
		Experiment Station—Aid	262 45		
		Extension — Offset	8 75		
		Feed	884 93		
		Fertilizers	635 49		
		Fuel	198 54		
		Furniture	198 22		
		Gasoline and oil	255 53		
		Gasoline and oil (truck)	101 38		
		Janitors' supplies	153 50		
		Labor (janitor, farm, etc)	5,218 04		
		Laboratory supplies	963 04		
		Postage, stationery and printing	132 86		
		Rental	250 00		
		Salaries	14,713 77		
		Seed	12 75		
		Stable supplies	55 75		
		Tools and machinery	53 59		
		Traveling	250 79		
		Miscellaneous	44 25		
				$26,750 00	$26,750 00

1924.					
Jan.	1	To additional expenditures incurred for maintenance during year 1924			$88,750 00
Dec.	1	By Auto service	$420 62		
		Commencement	700 00		
		Construction and repairs	189 43		
		Extension — Offset	521 04		
		Feed	3,810 73		
		Fuel	11,838 17		
		Janitors' supplies	299 90		
		Labor	17,910 71		
		Laboratory supplies	3,813 08		
		Oil and gasoline	361 80		
		Oil and gasoline (truck)	987 41		
		Postage, stationery and printing	1,510 81		
		Rental	270 00		

Salaries			43,980 55	
Seed			198 70	
Stable supplies			31 00	
Tools and machinery			197 80	
Traveling			647 20	
Miscellaneous			861 05	
			$88,750 00	$88,750 00

STATE—SPECIAL.

1924.				
Jan. 1	To	amount passed by the House of Representatives and approved by the Senate Finance Committee in January session 1924		$14,000 00
Dec. 1	By	Construction and repairs	$6,533 63	
		Books	164 50	
		Furniture	411 80	
		Apparatus	1,491 75	
		Experiment Station—Aid	2,897 54	
		Unexpended balance	2,500 78	
			$14,000 00	$14,000 00

CURRENT FUND.

1923.				
Dec. 1	To	Reserve fund		$2,000 00
		Department service		1,465 14
		Department sales		19,441 51
		Department fees		4,719 98
		Dormitory fees		7,915 68
		Laboratory sales		5,723 20
		Tuition		3,962 50
		Interest		375 75
		Vocational Board		4,010 71
		Project Trainees		1,423 30
		Commencement		261 80
		Miscellaneous		1,392 95
1924.		Amount overdrawn		1,876 10
Dec. 1	By	Overdraft	$15,723 43	
		Advertising in publications	138 00	
		Apparatus	199 11	
		Auto service	59 03	
		Books and periodicals	610 67	
		Commencement	396 85	
		Construction and repairs	4,010 01	

Electric current furnished	2,251 99	
Entertainment	869 51	
Experiment Station—Aid	660 52	
Extension — Offset	478 46	
Feed	780 84	
Freight and express	1,027 72	
Fuel	1,179 97	
Furniture	162 70	
Janitors' supplies	144 71	
Labor (janitor, farm, etc.)	3,172 92	
Labor (student)	6,705 10	
Laboratory supplies	1,516 70	
Oil and gasoline	13 00	
Oil and gasoline (truck)	124 90	
Postage, stationery and printing	1,343 71	
Refunds	1,552 46	
Rental of dormitories	3,808 80	
Rental of land	125 00	
Salaries	771 29	
Seed	146 75	
Stable supplies	18 20	
Telephone and telegraph	738 58	
Tools and machinery	136 37	
Traveling	740 38	
Veteran Bureau	797 35	
Miscellaneous	2,163 59	
Reserve Fund	2,000 00	
	$54,568 62	$54,568 62

Trust Fund.

1923.					
Dec.	1	To	Balance on hand		$10,452 44
			Boarding receipts		84,871 42
			Dairy—advanced registry		3,291 38
			Store receipts		9,700 21
1924.					
Dec.	1	By	Boarding	$87,506 77	
			Dairy—advanced registry	2,206 68	
			Store	9,890 16	
			Balance on hand	8,711 84	
				$108,315 45	$108,315 45

HATCH FUND—EXPERIMENT STATION.

1923.				
Dec. 1	To	Balance on hand		$336 38
1924.				
Jan. 15		U. S. Check for quarter		3,750 00
April 14		U. S. Check for quarter		3,750 00
Aug. 5		U. S. Check for quarter		3,750 00
Oct. 20		U. S. Check for quarter		3,750 00
Dec. 1	By	Building and land	$185 90	
		Communication service	48 07	
		Feeding stuffs	518 89	
		Fertilizers	1,089 58	
		Furniture	6 15	
		Heat, light, water and power	404 48	
		Labor	4,869 23	
		Library	210 73	
		Publications	284 55	
		Salaries	5,968 95	
		Scientific supplies	5 32	
		Stationery and office supplies	83 79	
		Sundry supplies	346 30	
		Tools and machinery	124 31	
		Transportation	317 75	
		Traveling	110 72	
		Contingent expenses	53 88	
		Balance on hand	707 78	
			$15,336 38	$15,336 38

ADAMS FUND—EXPERIMENT STATION.

1923.				
Dec. 1	To	Balance on hand		$157 57
1924.				
Jan. 25		U. S. check for quarter		3,750 00
April 14		U. S. check for quarter		3,750 00
Aug. 5		U. S. check for quarter		3,750 00
Oct. 20		U. S. check for quarter		3,750 00
Dec. 1	By	Building and land	$75 68	
		Communication service	1 08	
		Feeding stuffs	1,398 06	
		Furniture	50 00	
		Heat, light, water and power	778 10	
		Labor	2,101 06	
		Library	12 00	

		Live stock	67 50	
		Salaries	10,430 56	
		Scientific equipment	90	
		Scientific supplies	54 83	
		Stationery and office supplies	18 50	
		Sundry supplies	97 62	
		Tools and machinery	26 82	
		Transportation	31 43	
		Balance on hand	13 43	
			$15,157 57	$15,157 57

MISCELLANEOUS FUND—EXPERIMENT STATION.

1923.				
Dec. 1	To	Balance on hand		$1725 62
		Department sales		7,145 42
		Department service		217 90
		Interest		52 62
1924.				
Dec. 1	By	Building and land	$154 42	
		Communication service	20 62	
		Feeding stuffs	364 00	
		Furniture	4 83	
		Heat, light, water and power	144 06	
		Labor	2,688 08	
		Library	37 29	
		Live stock	49 00	
		Salaries	3,789 80	
		Scientific supplies	44 82	
		Sundry supplies	106 57	
		Stationery and office supplies	18 20	
		Tools and machinery	160 29	
		Transportation	93 75	
		Traveling	123 87	
		Contingent expenses	27 65	
		Balance on hand	1,314 31	
			$9,141 56	$9,141 56

STATE FEEDING STUFF INSPECTION—EXPERIMENT STATION.

1923.				
Dec. 1	To	State Appropriation		$1300 00
1924.				
Dec. 1	By	Communication service	$1 06	
		Labor	1,046 43	
		Publications	125 58	

Stationery and office supplies.....			5 00	
Sundry supplies			23 73	
Traveling			93 20	
Contingent expenses			5 00	
			$1,300 00	$1,300 00

STATE FERTILIZER CONTROL—EXPERIMENT STATION.

1923.				
Dec. 1	To	Fertilizer Fees.....		$3,376 00
1924.				
Dec. 1	By	Communication service.....	$22 82	
		Heat, light, water and power.....	190 80	
		Labor	2,806 61	
		Scientific apparatus	113 84	
		Scientific supplies	75 02	
		Stationery and office supplies.....	17 00	
		Transportation	20 53	
		Traveling	124 35	
		Contingent expenses	5 00	
		Balance on hand.....	03	
			$3,376 00	$3,376 00

EXPERIMENT STATION—AID.

(Included in Current and State Maintenance Funds.)

1924.				
Dec. 1	By	Feeding stuffs.....	$68 96	
		Heat, light, water and power.....	269 61	
		Labor	311 10	
		Library	131 35	
		Publications	854 00	
		Salaries	2,141 49	
		Transportation	44 00	
			$3,820 51	

I hereby certify that the above is correct and true, and truly represents the details of expenditures for the period and by the institution named.

R. S. BURLINGAME,
Treasurer.

This is to certify that we, the undersigned, auditing committee of the Board of Managers of Rhode Island State College, have examined the accounts of R. S. Burlingame, Treasurer of the said college, and find the same correct.

THOS. G. MATHEWSON,
CHARLES ESTES,
Auditors.

Summary, Exclusive of Experiment Station.

Total income, including balances:		
United States—1890	$79,600 00	
United States—1862	2,500 00	
United States—1914	12,568 63	
		$94,668 63
State:		
Maintenance appropriation asked for	$115,500 00	
Special appropriation asked for	14,000 00	
		$129,500 00
Institution:		
Current	$52,692 52	
Trust	108,315 45	
		$161,007 97
		$385,176 60
Total expenditures:		
United States—1890	$50,491 68	
United States—1862	2,500 00	
United States—1914	11,455 45	
		$64,447 13
State:		
Maintenance	$115,500 00	
Special	11,499 22	
		$126,999 22
Institution:		
Current	$54,568 62	
Trust	99,603 61	
		$154,172 23
		$345,618 58
Balance on hand		$39,558 02
		$385,176 60
Balance held as follows:		
Morrill Fund—1890	$29,108 32	
Smith-Lever Fund	1,113 18	
Special Fund	2,500 78	
Trust Fund	8,711 84	
Current Fund Deficit	1,876 10	
		$39,558 02

Summaries Dealing with Certain Phases of Receipts and Expenditures for the Year Ending June 30, 1924.

Summary for the Year.

Balance on hand July 1, 1923	$74,509 47
Total income during year	272,945 52
Total	$347,454 99
Total expenditures during year	397,787 62
Debit Balance on hand July 1, 1924	$50,332 63

Income.

Income from students:

Tuition fees	$3,465 00	
Matriculation and incidental fees	4,685 35	
Chemicals and laboratory supplies	5,734 61	
Dormitory fees	8,063 36	
Dining halls	80,828 71	
Store sales	10,718 85	
		$113,495 88

Income from State and Nation:

State—Maintenance	$26,750 00	$26,750 00
Federal—Morrill Act of 1890 and Nelson Act of 1907	$50,000 00	
Morrill Act of 1862	2,500 00	
Hatch Act of 1887—Experiment Station.	15,000 00	
Adams Act of 1906—Experiment Station	15,000 00	
Smith-Lever Act of 1914—Extension	11,598 82	
		$94,098 82

Income from other sources:

Department sales and service	$30,455 30	
Interest	566 64	

Experiment Station:

Department sales and service	$7,491 99		
Interest	86 89		
		$7,578 88	
			$38,600 82
Total income			$272,945 52

Receipts from tuition:		
Students taking course of one year or more		462
Students paying tuition (non-resident in Rhode Island) at rate of $50.00 per year		75
Amount of tuition paid		$3,465 00

EXPENDITURES.

Expenditures, exclusive of Experiment Station and Extension Service:		
Advanced herd registry	$2,501 79	
Advertising in publications	228 00	
Apparatus	1,306 74	
Auto service	95 29	
Boarding	87,973 54	
Books and periodicals	922 61	
Commencement	1,354 00	
Construction and repairs	8,681 63	
Construction and repairs, special	32,146 63	
Dormitory and land rental	4,422 55	
Electric current furnished outside college	1,872 54	
Entertainment	1,025 17	
Feed	5,148 44	
Fertilizers	635 49	
Freight and express	1,281 57	
Fuel	17,329 20	
Furniture	559 38	
Gasoline and oil	1,788 28	
Janitors' supplies	501 11	
Labor (engineers, poultrymen, farm, etc.)	25,357 45	
Labor (undergraduate exclusive of boarding)	6,685 25	
Laboratory supplies	5,568 53	
Live stock	1,309 25	
Postage, stationery and printing	2,265 27	
Refunds	1,499 99	
Salaries	111,110 29	
Seeds and plants	283 73	
Stable supplies	393 97	
Store	9,802 78	
Telephone and telegraph	820 01	
Tools and machinery	306 57	
Traveling	2,482 05	
Veteran Bureau	797 35	
Miscellaneous	3,111 57	
		$341,568 02
Expenditures, Experiment Station	43,115 50	
Expenditures, Extension Service	13,104 10	
Total expenditures		$397,787 62

ANALYSIS OF BALANCE, JULY 1.

	1923	1924
Morrill Fund of 1890	.....	.....
Morrill Fund of 1862	.....	.....
Smith-Lever Fund—Extension Service	.....	.....
Hatch Fund—Experiment Station	.....	.....
Adams Fund—Experiment Station	.....	.....
State — Maintenance	$22,998 93	$44,445 99Dr.
State—Repairs and Improvements	22,846 63	.....
State — Practice House	9,300 00	.....
Current Fund	13,306 37	3,411 92Dr.
Trust Fund	1,453 02	4,629 89Dr.
Miscellaneous — Experiment Station	2,604 52	155 17
Reserve Fund	2,000 00	2,000 00
	$74,509 47	$50,332 63

THIRTY-SEVENTH ANNUAL REPORT OF THE DIRECTOR OF THE AGRICULTURAL EXPERIMENT STATION.*

PRESIDENT HOWARD EDWARDS,

Rhode Island State College.

DEAR SIR:—

Hereby are submitted brief statements of such experimental results obtained during 1924 as will serve to indicate the nature of the more important lines of work.

In such a report of progress it should be understood clearly that present ideas regarding some of the results are liable to modification in the future as the researches are continued. Nevertheless, it seems desirable to transmit annually a paragraph concerning the impressions derived from each project, even if some readers do attach too much importance to certain indications.

Weather.

Detailed records may be found in the Climatological Data, New England Section, of the U. S. Department of Agriculture Weather Bureau.

The latest killing spring frost was on April 12, and the earliest killing autumn frost was on October 14. Even the maximum temperature in May was only 72°, beating the 35-year record, and the average temperature for the month was about 2° below normal. Some idea of the variation in minimum night temperature between the regular observation place on Kingston Hill and the crop level at the experimental plain, one mile distant and at about 130 feet lower level, may be gained by the following morning readings of some of the cooler autumn days:

	Sept. 25,	27,	Oct. 3,	13,	14,	15,	21,	23,	Nov. 15,	17,	18,	19.
Kingston Hill	42°	41	48	34	32	36	27	29	26	11	10	11
Exp. plain ..	30°	29	31	28	22	23	19	15	14	11	4	2

---

*Contribution 314. *In* Bulletin of Rhode Island State College, Vol. XX, February, 1925.

According to the notes taken at the plain, the corn and millet were touched by the frost on October 13; the peppers, buckwheat, summer squash and soybeans were killed on October 14; and beets, cauliflower and celery injured on October 21.

In 1924 occurred the driest June (1.76 in.) since 1915, and the driest July (1.44 in.) since 1907. Between the rainfall of 2.51 in. on May 12, and the record breaker of 6.90 in. within 24 hours beginning August 25, only 6.10 in. of rain fell. The rainfall for the same period in 1923 was 6.33 in. For this particular period of the year, these are the lowest records in many years, a search as far back as 1905 not having revealed any record nearly so low. October was the driest of any month, excepting March 1915. Between September 11 and November 21 only 1.26 in. of rain fell.

Organic Matter for the Soil.

In the spring of 1924, the winter legumes which were planted on August 31, 1923, for winter cover crops were in the following condition: alfalfa half covered the ground and was the best; winter vetch covered only a tenth of the ground; red clover was very scarce, and sweet clover was missing. Early cucumbers were planted on May 19, with a low-nitrogen fertilizer as usual in this experiment. The largest crop of cucumbers was from the alfalfa plat, although on the average in other years, red clover and sweet clover had been followed by the best yields. There was very little cucumber blight, hence no advantage or difference between spraying or dusting with Bordeaux.

Based on the average of the last five years where corn is grown continually with complete fertilizer, 49 bushels of corn were produced with 20 pounds of nitrogen per acre each year and with a legume cover crop plowed in; 44 bushels resulted from 60 pounds of nitrogen and a rye cover crop plowed in, and 38 bushels from 60 pounds of nitrogen and no cover crop.

When supplied with plenty of high-nitrogen fertilizer, early cabbages following late celery of the previous year continued to yield satisfactorily whether, during the rotation, organic matter had been supplied in stable manure, peat or green manures. For the first time the same was true of early tomatoes, but it has not yet been true of late celery. Early lettuce and late beets and

spinach continued to yield less on the plats which receive their organic matter in peat instead of stable manure, although with heavy application of acid phosphate the comparison is becoming closer. A compost of the refuse of the rotation together with peat, straw and a little manure has also been introduced as a source of organic matter.

Green manure crops, planted during the latter half of July to find out which will produce the largest amount of material above ground, have yielded the following as an average of the last six years:

	Dry matter per acre.		Dry matter per acre.
	Tons.		Tons.
Japanese millet	1.71	Buckwheat	1.22
Barley	1.39	Corn	1.16
Pearl millet	1.33	Sudan grass	1.09
Sunflower	1.30		

The barley only was left undamaged by the temperature of 20° on October 14, and was not harvested until November 3. All the other crops failed to make an average growth because of the unusually dry weather during a large proportion of their life.

Planted during the last half of July each year for green manure, red clover, cow-horn turnips and soybeans are plowed under in the autumn, and their effect on both early lettuce and beets compared with that of red clover, rye and timothy turned under in the spring. The crops were slightly larger on the fall-plowed plats.

Where ten cords of only manure are used regularly in comparison with only fertilizer, the onions got the best start with the fertilizer but the unusually dry weather later in the season resulted in favor of the manure.

In case of the following three-year rotation: 1, beets before cauliflower; 2, spinach before carrots; 3, eggplant; as large crops have, in general, been produced when 16 tons instead of 32 tons of stable manure have been supplemented by fertilizer; mild exceptions being beets and eggplant. By replacing cauliflower with

Italian ryegrass and clover for plowing in, the manure has been reduced to 8 tons and the yields of all the crops except eggplant maintained by fertilizer.

In pots, with ample water and abundant nutrients, neither the degree of decomposition nor the maturity of buckwheat used as a green manure made any difference in the growth of a subsequent lettuce crop. With smaller amount of fertilizer, however, the subsequent crops were superior when the green manures were turned under in an immature condition and allowed to decompose somewhat before planting the subsequent crop. It may prove difficult to apply economically in field culture the large amount of fertilizer necessary to secure to a rotation the benefits of the organic matter in an abundant green-manure crop and also obtain a satisfactory yield of the crop immediately following the green manure.

Efficiency of Fertilizers and other Manures.

During seven continuous years, mixed hay with an annual topdressing of 75 pounds of phosphoric acid in acid phosphate, and 50 pounds of potash in wood ashes, has yielded the following average weights with the different nitrogenous topdressings:

	Tons of hay per acre.
Horse stable manure, 4 cords	2.96
Nitrate of soda, 50 lbs. N. an acre	3.19
Nitrate of soda, 25 lbs. N. an acre	2.72
Cyanamid, 25 lbs. N. an acre	2.41
Sulfate of ammonia 25 lbs. N. an acre	2.39

Where more lime is used with sulfate of ammonia than with nitrate of soda, as is necessary if acidity is reduced to the same amount, there was not much difference in the average yield of vegetables.

For mixed hay, the floats or undissolved phosphate rock was the most uneconomical of all the carriers of phosphorus.

Where the different commercial potash salts are so used that not only an insufficient amount of potassium, but the associated elements also, have an opportunity to exert an influence, the low-

est average increase in five years was with magnesium-potassium sulfate. The percentage increases over the amount obtained with this material were 9 with sulfate of potash, 13 with muriate of potash and 35 with kainit. The superiority of the kainit was doubtless due to its sodium, which is useful when potassium is insufficient. The magnesium and sulfur have not yet been useful.

As usual on the early market-garden crops, 1500 pounds of a 4-10-2 fertilizer were a decidedly better supplement to 16 tons of stable manure than were an additional 16 tons of manure instead of fertilizer. A larger amount of nitrogen in the fertilizer, however, was profitable with the early cabbages, tomatoes and lettuce. There was no gain from additional phosphorus and potassium, although lettuce has usually improved with more phosphorus. For the second crops of this rotation, 1000 pounds of a 5-7-6 fertilizer were used to supplement the spring application of manure and fertilizer chemicals. Owing to the unusually dry weather, normal late crops were not obtained but the celery responded markedly to extra nitrogen, and the spinach to extra phosphorus; but the beets did not respond to any extra fertilizer.

In the rotation where about four cords of cow manure with straw bedding versus planer-shavings bedding have been compared, the latter has been replaced by sawdust. The yield of oats and Canada peas increased a fifth where acid phosphate, and somewhat less where muriate of potash were added with the manure and sawdust. The subsequent attempt to grow rutabagas was a failure due to the unusually dry weather, but as usual with turnips, the best growth was made where the acid phosphate was supplied.

Plant Differences and Needs.

Twenty-two potato crosses supplied by the U. S. Department of Agriculture yielded from 188 to 455 bushels of potatoes heavier than 2 ounces. Under similar conditions the Green Mountain yielded 332 bushels. Where conditions were somewhat different from these, the bushel yields were: Spaulding Rose, 325; Green Mountain, 299; Early Eureka, 173, and Irish Cobbler, 135.

In the non-manure, five-year rotations of corn, potatoes, rye, grass and clover, and grass, there are plats with such differences

in the fertilizer that each year quite complete comparisons are possible with one of the crops (potatoes in 1924). Some common multiple of the following ratio numbers represents the pounds of each ingredient used per acre. The common multiplier 13 was used for the potatoes.

	Low	Medium	High
Ammonia	4	6	8
Available Phos. Acid	6	9	12
Soluble Potash	6	9	12

The cheapest fertilizer ratio producing the maximum crop of 340 bushels was 6-12-9, or the equivalent of a ton of 4-8-6 fertilizer. It seems quite remarkable that where nitrogen is omitted from the fertilizer throughout the entire rotation, 261 bushels of potatoes were produced, which, moreover, is about the average of four successive, fifth-year yields under such conditions. With ample nitrogen the average yield for the same years has been 349 bushels, an increase of about a bushel of potatoes for each pound of added nitrogen. In 1924 the increase in the yield from the lowest to the highest ratio of phosphoric acid and also of potash was equal to 2 bushels from each pound of the added fertilizer ingredient.

For early spinach, the Savoy-leafed yielded better than the Giant Thick-leaf, contrary to the results of 1923.

The timothy strain test conducted in co-operation with the U. S. Department of Agriculture was discontinued after the haying. The strains were seeded in 1921, and the following observations will serve to give relative indications of the growth characteristics:

Sample	Height	Maturity	Avg. weight of hay. Tons per A.
No. 3937 "Huron"	taller	later*	3.36
No. 6762	taller	earlier	3.19
No. 6779	taller	later	2.99
No. 6807	shorter	earlier	2.90
Commercial, Farm Impl. Co., Elyria, Ohio	shorter	earlier	3.03
No. 9327	shorter	earlier	3.07
No. 9349	taller	later*	3.53
No. 9400	taller	later*	3.36
No. 9647	shorter	earlier	3.54
Commercial, Nungesser-Dickinson Seed Co	shorter	later	3.58

*The three latest maturing strains.

From the same number of cabbage plants set out April 18-19, the following yields were obtained on two early dates:

	July 18		July 21		Lbs. per
	Heads.	Lbs.	Heads.	Lbs.	Head.
Copenhagen	132	289	272	660	2.35
Charleston Wakefield	74	146	276	655	2.00

The asparagus was cut before the sodium salts of 1924 were applied, therefore the yields were influenced by no later sodium application than those of July 29, 1923. The full rations of these were equivalent to 1200 pounds of sodium oxid an acre. The nitrogen and phosphorus applications were liberal. The full rations of potassium salts were equivalent to 80 pounds of potassium oxid on both July 29, 1923, and April 18, 1924. Even where like soil acidity was maintained (pH 5.8) the full application of sodium chlorid increased the crop when used with an insufficient amount of potassium, while the sodium carbonate did not. With the smaller applications, the potassium carbonate was less useful than the chlorid. On July 2, after the harvest, the full sodium applications made were equivalent to 1500 pounds of sodium oxid an acre. The full and three-fourths rations of sodium carbonate killed the chickweed but had little effect on the purslane, while the salt had no apparent effect on either.

Annual sweet clover sown on April 15 in a grass mixture was estimated to constitute only a tenth of the growth where potassium was very deficient, the remainder being mostly redtop; although with ample potassium, four-fifths of the growth was sweet clover; here the alfalfa, alsike and red clover of the seed mixture were represented but there was only a trace of the timothy and redtop. Wood's clover, *Dalea alopecuroides*, an annual legume of the corn belt, was added in small proportions to the seed mixture, but plants could not be found. Sown by itself, however, plants were grown and seeds formed. In second-year grass, alsike clover represented about a third of the mixture even with a wide difference in soil acidity; but on the strongly acid plat, alfalfa and red clover were absent, and timothy much reduced, whereas the proportion of redtop was increased five-fold.

In 1923, 10 pounds of timothy and 15 pounds of mammoth, versus medium, red clover were sown. The timothy was too thick, yet in the aftermath there was a fairly uniform stand of the medium, but less than half a stand of mammoth. Both looked about alike. In 1924 there was still a fair stand of the medium, which blossomed earlier than the mammoth.

The more slowly maturing Rosen rye again produced considerably more grain than the common, or Excelsior, rye. The growth of clover in the Rosen rye was inhibited less than usual.

Home-grown Hubbard squash seed was compared with strain 270 from the Vermont Experiment Station. The yields were about the same, around six tons. The Vermont strain ripened earlier and bore a larger number of squashes, averaging 3.1 pounds, but the home-grown strain averaged 5.5 pounds per squash.

In the greenhouse various kinds of plants were grown mainly for eating uncooked in garnishings and salads. White mustard, curled cress and Chinese mustard were first ready for harvest; Swiss chard and beet grew more slowly; chives, corn salad and endive grew very slowly. Later a yield comparison was made of the most promising two kinds, the white mustard yielding about a fourth more than the curled cress, but of material generally considered to be less palatable.

No additional information was obtained concerning the attempt to grow greenhouse lettuce and cucumbers without manure. The salt concentration had become so great in certain sections (ten thousand parts of salts per million of dry soil) that the old soil was discarded. In the new soil and sea-sand mixture an attempt is being made to grow tomatoes for late winter.

In the greenhouse, tomatoes of the largest yield and size were of the John Bear variety. There was not much difference in either respect between Bonny Best and Comet.

Cereal plants, not allowed to tiller, have for a number of seasons been grown to maturity in solution in the greenhouse to determine their minimum requirements of each fertilizer nutrient for normal growth, provided all other nutrients were plentiful. At this time the following amounts in dry matter seem to be sufficient:

	Nitrogen	Phosphoric acid, P_2O_5	Potash K_2O
	Per cent.	Per cent.	Per cent.
Barley	1.0	0.2	0.7
Oats	0.7	0.1	0.5
Wheat	0.9	0.2	0.6

Soil cultures gave similar results to the foregoing for nitrogen and potash; but in our soil, even when the soil cultures were carried on side by side with the solution cultures; two to three times as much absorbed phosphoric acid was required. This again gives evidence that when there is a supposed deficiency of phosphorus as a nutrient, some unrecognized factor or factors in certain soils may be inhibiting growth, and that the response resulting from the application of phosphorus is due to other than plant-food effects.

Effect of Crops on One Another.

In 1924, the area used to determine the effect of two years' growth of sixteen different crops on a single crop grown subsequently was devoted to the first year of the miscellaneous crops.

Late cabbages following four different first crops grown in the same season, under conditions intended to be suitable, have given the following yields as a seven-year average.

	Late cabbage heads Tons per acre.
Grown after beets	9.30
Grown after spinach	8.84
Grown after potatoes	8.55
Grown after peas	8.09

There has been practically no difference during three seasons in the growth of celery set out in the middle of July, using the equivalent of about a ton of 5-8-5 fertilizer, whether there had been plowed in, early in June, fully headed rye or slightly headed wheat; or oats a month later.

During the last three years, the yield of early tomatoes has been about the same whether preceded by vetch and rye, or red clover as winter green-manure crops; but biennial sweet clover produced a fourth larger crop. These cover crops, however, planted after early cabbages of the preceding year, were frequently in poor condition in the spring.

In the sunken pots, the soil in which was nearly neutral, redtop, a crop with low lime-response and lime-content, grew better following mangels than following rye, onions, redtop or buckwheat; whereas, mangels are markedly deleterious to a subsequent crop with high lime-response.

Modification of Sour Soils.

The plats which receive high-calcium or high-magnesium hydrate or carbonate were in second-year grass and legume mixture. No important differences were noticeable in the herbage. The last applications of the limes, on an equal neutralizing basis, were made in 1921. In 1924, the pH of the unlimed soil was 4.6; of the carbonate soil, 5.7; and of the hydrate soil, 5.9; the acre calcium-oxid requirement by the Jones method was 4400 pounds for the unlimed soil, 1895 pounds for the carbonate soil, and 1490 pounds for the hydrate soil. Here is shown a cumulative tendency for the hydrates to neutralize to a greater extent than the carbonates. New applications equivalent to 3,000 pounds of calcium oxid were made at the close of the season.

In connection with numerous plats of lawn or putting-green grasses receiving various topdressings, acid-soil conditions have been maintained by annual applications of 250 pounds each of sulfate of ammonia, acid phosphate and muriate of potash an acre, and such troublesome weeds as plantain, dandelion, chickweed and crabgrass entirely eliminated thereby from competition with bent and fescue grasses.

Acid-soil conditions are changed according to the crop which is grown: for example, where mangels had been grown in comparison with corn, the former left the soil somewhat higher in specific acidity, lime absorption, and active alumina. Especially crops with high lime-response grew much better after corn than after mangels, in case the alumina was active, the phosphorus content was low, and the "lime requirement" was high.

The following determinations on cropped soils from the no-phosphorus plats show certain cumulative influences of an increased amount of lime: specific acidity, less lime, 125; more lime, 8: lime requirement by Jones method, less lime, 2700 pounds; more lime, 950 pounds calcium oxid: active alumina, .5 *N* acetic

acid, less lime, 715 p.p.m.; more lime, 350 p.p.m.: .02 *N* acetic acid, less lime, 85 p.p.m.; more lime, 9 p.p.m.: active phosphoric acid, .2 *N* nitric acid, less lime, 115 p.p.m.; more lime, 77 p.p.m.

Large amounts of acid phosphate, which reduce alumina toxicity, proved useful in modifying the soil in preparation for low-resistance crops, especially bunch beets, the first pullings of which were again increased threefold.

This station has for years advised against liming to neutrality, and this year demonstrated again that even crops known to have high lime-response lacked that uniform green color, indicative of health, where soil had been limed in the past to slight alkalinity, even though at present slightly acid (specific acidity 3, and CaO requirement, Jones method, 495 pounds); whereas strictly comparable soil except that it had never been limed to neutrality (specific acidity 25, and CaO requirement 1062 pounds) produced early lettuce of good color and twice as prolific; and, subsequently, late beets with much less reddish leaves and twice as large a yield. It should be stated, however, that an unusually large application of acid phosphate was made in addition to the other manures.

A given nutrient solution was changed toward alkalinity with certain seedlings and toward acidity with others. To test the effect of soluble aluminum on various seedlings they were grown in a nutrient solution to which phosphorus was added for a half week and aluminum for an alternate half week to be sure that aluminum phosphate was not precipitated. Under these conditions lettuce was injured by 2 parts of alumina per million of the solution, and its life was at stake with 7 p.p.m., although the latter concentration simply depressed the growth of rye a fifth, and it took 24 p.p.m. to depress the growth of rye a half. The low resistance of lettuce to aluminum requires in the field special attention to liming and phosphating for antidotal purposes. It is well known that rye needs no such special attention.

Inheritance Studies with Poultry.

The analysis of the records on the Cornish-Hamburgh cross is nearly completed and ready for publication. This bears out the preliminary analysis which showed that the offspring from the cross between Silver Spangled Hamburghs and White Corn-

ish attain approximately the weight of the Cornish parent, and that this weight is continued in the second generation crosses. Due to the appearance of weird colors in plumage, shanks and body skin, this cross is not recommended for the production of meat fowls.

Additional pens of Light Brahmas and White Leghorns were mated during the year. The first pens of second-generation crosses will be mated during the coming season.

The data on the inheritance of egg weight have not yet been analyzed. It is planned to take up this work in the near future.

Eggs from Infected Hens.

No increase of infection was found in the yolks of eggs laid by hens undergoing artificial immunization or even suffering from infection with poultry pathogens. In no case were the organisms inoculated into the hens obtained from the yolks of their eggs. In most cases there was no change in germicidal power of blood serum. Except with fowl cholera cultures, agglutination was produced in the blood serum of the inoculated hens and also to a lesser extent in the albumen of eggs laid by such hens.

Study of Diseases in Poultry.

The attempt to rear turkeys by the rotation system continues to be quite successful. On account of the limited number of poults hatched, the poults have all been reared with mother hens. They were put into small, movable pens and moved to new ground each week. After they were old enough to leave the hen they were still moved each week, but not always to entirely new ground. They were brought back to the same ground after four or five weeks. Due to the small number of poults hatched, no other experimental work in connection with blackhead could be undertaken.

The application of the agglutination test to the eradication of the white diarrhea of chicks is being studied.

Some work has been done in the past year on the immunization of birds against infection with *B. pullorum*. So far no definite conclusions can be drawn from this work. Methods of standardization of bacterial suspension are under investigation.

All attempts to transmit paralysis from diseased adult fowls to normal birds have failed. Work on the cause of the disease is being continued. All evidence seems to point toward intestinal parasites as playing an important role in bringing on the disease. It is impossible at present, however, to place the responsibility on any particular parasite. Autopsy frequently shows paralysed birds to be almost free from parasites, but field study nearly always associates the disease with old barns in which poultry has been kept for years or with badly overcrowded conditions; conditions that are highly favorable to intestinal parasites.

Intestinal Disinfectant for Poultry.

This is at present one of the main lines of work carried on with poultry. Some preliminary toxicity experiments were conducted with young chicks during the last year. The use of some disinfectants in connection with infection experiments is now being tested on about seventy-five cockerels. During the hatching season this work will be continued on chicks.

Publications.

Thirty-sixth annual report of the station. *In* Bul. of Rhode Island State College 19:39-50.

Inspection of feeds. Annual feed circular, April, 1924, 12 p.

Inspection of fertilizers. Annual fertilizer circular, October, 1924, 12 p.

The examination of eggs from infected and immunized hens, with germicidal tests on albumen and blood serum. Bul. 197, May, 1924, 48 p.

The yield and mineral content of crop plants as influenced by those preceding. Bul. 198, June, 1924, 26 p.

The effect on present soil reaction of long-continued applications of equivalent amounts of high-calcium and high-magnesium limes. *In* Soil Science 18:169-172.

Field crop response to the ingredients of potassium salts. *In* Jour. Amer. Soc. of Agronomy 16:660-665.

The effect in pot culture of green manure, in different stages of growth and decomposition, on the subsequent crop. *In* Jour. Amer. Soc. of Agronomy 16:750-753.

Changes in Station Staff, 1918-1924.

Name.	Position.	Beginning of employment.	Ending of employment.
Adams, Waldo L.	Asst., Chemistry	February, 1923	
Bridge, Chester G.	Asst., Chemistry	July, 1919	January, 1920.
Burgess, Paul S.	Assoc. and Chief, Chemistry	September, 1920	July, 1924.
Caldwell, Dorothy W.	Asst., An. Breed. and Path.		September, 1920.
Crandall, Fred K.	Asst. Field Expts.	March, 1918	
Gross, F. Philip Jr.	Asst., Chemistry	July, 1920	September, 1921.
Haag, J. Roy	Asst., Chemistry	February, 1919	March, 1920.
Hadley, Philip B.	Chief, An. Breed. and Path.		September, 1920.
Hall, Henry B.	Economics	July, 1922	July, 1923.
Heath, Bertha M.	Asst., An. Breed and Path.	January, 1920	June, 1920.
Holmes, Myron G.	Asst., Chemistry	January, 1922	September, 1922.
Jones, Robert L.	Asst., Chemistry	August, 1921	October, 1924.
McLean, Forman T.	Plant Physiology	September, 1923	
Mather, William	Asst., Chemistry	July, 1919	August, 1921.
May, Henry G.	Chief, An. Breed. and Path.	August, 1920	
Merkle, George E.	Asst., Chemistry		September, 1918.
Northam, Alfred J.	Asst., Chemistry	September, 1922	January, 1923.
Pember, Fred R.	Assoc., Glasshouse Expts.		September, 1923.
Scott, Walton H.	Asst., An. Breed. and Path.	November, 1918	
Segelin, Herman E.	Asst., Path.	September, 1924	
Shott, Alfred N.	Asst., Chemistry	August, 1922	October, 1922.
Smith, John B.	Assoc., Chemistry	January, 1923	
Tibbetts Helena A.	Asst., An. Breed. and Path.	February, 1919	July, 1921.
Tittsler, Ralph P.	Asst., An. Breed. and Path.	July, 1922	August, 1924.
Wessels, Philip H.	Assoc., Chemistry		August, 1922.
Williams, Mary E.	Asst., An. Breed. and Path.	July, 1921	July, 1922.

Respectfully submitted,

BURT L. HARTWELL,
Director.

Kingston, R. I.
January 10, 1925.

REPORT OF THE EXTENSION SERVICE, 1924.

PRESIDENT HOWARD EDWARDS:

DEAR SIR:

I beg to present herewith the Annual Report for the Twenty-Third Year of the Rhode Island State College Extension Service.

Organization of Extension Service.

There has been no change in the organization at the college. As in past years, the work has been grouped under six projects—Administration, County Agent Work, Home Demonstration Work, Boys' and Girls' Club Work, Farm Management, and Plant Industry Extension.

The only change affecting the extension work in co-operating organizations is a revision of the constitution of the Newport County Farm Bureau so as to provide for a Home Bureau with a definite plan of organization and relationship to the agricultural work originally provided for when the Farm Bureau was organized.

Personnel.

There has been no change in the Extension Staff at the College and the only changes to be noted among the County Extension Workers is the resignation of Miss Laura M. Piedalue, Home Demonstration Agent for Newport County, which took effect July 1, 1924 and that of Mrs. Ruth Murray Cruickshank, Home Demonstration Agent for Providence County, on February 14, 1924. Mrs. Cruickshank was succeeded by Mrs. Vivian P. MacFawn. Because of lack of funds in the Farm Bureau, no successor to Miss Piedalue has as yet been chosen. Mr. Lawrence G. Dodge who has been employed on part time each of the last three winters for Farm Management Work finds that his time is so completely taken up by his farm enterprises that he will no longer be available for a continuance of this project.

In the Extension Office of the College Miss Alice Inez McMeehan, Secretary to the Director, resigned August 1, 1924 and was succeeded by Miss Helen Lowe Urquhart. Miss Sybil B. Hyde, Filing Clerk, resigned November 15, 1924 and her position was filled by the appointment of Miss Marjorie Bedell.

Equipment.

The following equipment was purchased for the office: One map case, six books, and a small stapler for desk use.

Publications.

The following monthly bulletins have been issued:

Extension Bulletin No. 33, "Poultry Diseases."
" " No. 34, "Grapes in Rhode Island."
" " No. 35, "Home Preservation of Eggs."
" " No. 36, "Strawberries in Rhode Island."

Material dealing with extension work was also supplied from time to time to the newspapers especially by the county workers. We are co-operating with the *Rhode Island Country Life* and supplying the paper with agricultural news and subject matter material.

Finances.

The following financial statement is based on the report made to the United States Department of Agriculture for the fiscal year ending June 30, 1924.

Smith-Lever Funds:	
Federal Smith-Lever	$11,195 31
Supplementary Federal Smith-Lever	384 90
State Smith-Lever Offset	1,195 31
Supplementary State Smith-Lever	384 90
United States Department of Agriculture Funds allotted to Rhode Island:	
For county agent work	$3,300 00
For home demonstration work	2,700 00
For club work	1,200 00
For farm management work	750 00

Conferences Dealing with Extension Work.

Very little change has been made in plans for conferences through which the work of different employees is supported and co-ordinated. Monthly conferences of the county agents and home demonstration agents have been held, sometimes at the Farm Bureau offices and at other times at the State College. Quarterly conferences of all extension workers have been held on schedule the same as in past years. A Tri-State Conference of County Agents which included workers from Massachusetts, Connecticut and Rhode Island, was held in July at Storrs Agricultural College and employees from the Rhode Island Extension service were present. No conference of home demonstration agents for the three southern New England States, such as has been held in past years, was conducted this year, the general understanding being that all agents who could, would attend the annual meeting of the American Home Economics Association held in Buffalo. The Extension Service was also represented at the Annual Meeting of Extension Directors of the United States held under the auspices of the Association of Land Grant Colleges. An annual conference of extension workers was held December 4th and 5th at which Miss Florence E. Ward and Mr. H. W. Hochbaum of the Federal Extension Service assisted in a special discussion of methods in extension work.

Considerable time was given by representatives of the extension service, both at the college and in the counties, to the work which culminated in the holding of a three-day Agricultural Conference under the auspices of the Farm Bureau Federation and various other organizations in the Biltmore Hotel, March 4-6, 1924 and also in some of the work which was planned as a result of this conference.

Camp Edwards, for members of Boys' and Girls' Clubs and Club Leaders, was again held at the college with a very full and enthusiastic attendance and a successful program.

Co-operation with Other Organizations.

Relations with other organizations are generally satisfactory. Granges especially are giving our work the most cordial support. In many cases they are heading up the community work and practically every grange in the state accepts the assistance of the

Extension Service in connection with its program. This is in line with a policy persistently adhered to since the beginning of our extension work that we shall so far as possible work with existing organizations rather than form new associations. The County Fairs have been particularly helpful in offering space for exhibits and in return the county workers have assisted as managers of educational features at the fairs.

Work by Projects.

Very little of the work of the Extension Service can be recorded because of the limitations set on the number of pages that can be printed. Continued emphasis has been laid on the development of the work by the project method which requires careful planning, the setting of goals, and continued effort throughout the year to attain the goals set. It is difficult for the county workers to limit the amount of time which is given to miscellaneous activities and work with individual persons. People generally do not understand the importance of a carefully mapped out program and conscientious adherence to the plans made and are apt to feel disappointed if they do not get all the personal service for which they are inclined to ask. The demands for personal service tends to increase as people become acquainted with the county agents. The function of the workers, however, as leaders in the development of definitely planned programs for systematic improvement in the agriculture of the state rather than as itinerant dispensers of information in the form of individual service is being emphasized in conferences and meetings and we believe that there is a general understanding developing which will eventually lead to a fuller recognition of the real objectives of the Extension Service.

Program of Work.

The work of the Extension Service, in accordance with agreements entered into at the time of its reorganization under the Smith-Lever Act, is carried on largely through the Farm Bureaus. A good deal of miscellaneous work comes into the main office and, owing to the fact that there are no club workers in the counties, the organization activities connected with the Boys' and Girls' Club Work is carried on at the college.

As an instance of the effort towards more carefully planned agricultural work which is now being made may be given this year's program of work for Southern Rhode Island.

A. Program of Work for 1924:

1. **Community Organization Development**
   Community meetings
   Tours
   Field Day

2. **Dairying—A Major Project.**
   Fundamental Problem is More Economical Milk Production.
   (1) Eliminating poor cows, by
      a. Dairy cost accounts
      b. High Production Sires
      c. Use of Publicity
   (2) Cheaper production, by
      a. Growing more legumes.
         (1-a) Red and Alsike Clover
         (1-b) Soy Beans
      b. Pasture Improvement
   (3) Diversification by developing
      a. Poultry
      b. Fruit
      c. Special Crops

3. **Poultry—A Major or Minor Project.**
   Fundamental Problem for Southern Rhode Island is more and better poultry.
   (1) Poultry cost accounts—Adult
      Poultry cost accounts—Junior
   (2) Disease Control
   (3) Culling Demonstrations
   (4) Breeding Pens

4. **Market Gardening—A Minor Project**
   More Economical Production and Marketing
   (1) Better Seed
   (2) Better Grading
   (3) Disease and Insect Control

5. **Fruit—A Minor Project.**
   Greater returns
   (1) Co-operative Demonstration of Spraying and Fertilization.
   (2) Fertilization
   (3) Marketing
   (4) Disease Control Helps
   (5) Introduction of Blueberries

6. Field Crops—A Minor Project.
   Tied up very closely with No. 2
   (1) Farmers using Certified Seed Potatoes
   (2) Fertilizer as top dressing for meadows
7. Assisting Local Co-operatives.
   Establish contacts for purchasing Certified Seed Potatoes
   Advise as to formulas for mixed fertilizer

Similar programs, varied to suit local demands and needs, are outlined for the other two counties. This is by no means a complete program such as should eventually be worked out for each county, but nevertheless it is impossible for a single agent to make any striking headway in any one year in carrying out such an extensive plan as this and the present purpose is to concentrate on fewer projects in order to give more adequate time to each line of work undertaken, having in mind, however, that we must eventually develop and carry through a much more comprehensive program, even than that given, in order to secure a more adequate and better balanced agriculture.

The following statistical data, summarized for the state from a few of those given in the reports of the county agents, will give some idea of the amount and variety of work carried on. The agents have conducted definitely planned extension work in 60 communities of the state with a total number of 186 projects, they have worked out local programs based on the general program in 39 communities, they have made 1218 farm visits, have spent 492 days in the field, have had 1869 office calls, 2465 telephone calls, have written 2213 individual letters, sent out 9613 circular letters, distributed 987 bulletins and reports in response to requests for information, written 150 articles for local papers, have held 82 demonstrations at which there has been an attendance of 1342 people, and they have attended 188 grange and other meetings at which extension work in some form has been discussed. Thirty-one local leaders have assisted in the work and definite reports have been received from farmers acknowledging help received which has resulted in definite adoption of improved practices in 768 cases.

Home Demonstration Work.

In Home Demonstration Work the program for the year, carried out with minor changes in the different counties, has been as follows:

I. Clothing the family.
   A. Appropriateness with regard to selection and combination of materials, line design and color, relation of one garment to costume, occasion, and standard style.
   B. Construction, making use of the permanent pattern and hats with variations.

II. Feeding the family.
   A. Selection of foods
   B. Simple food facts based on the following topics: How and why to plan meals underweight and overweight, and constipation.

The goal reached in this program has been as follows:

Seven hundred ninety-six families have been reached with definite information on general appropriateness in dress, 1435 individuals on methods in the choice and making of garments and hats, 359 permanent patterns were completed and 790 hats were made. Eighty-eight families have adopted improved practices relative to nutrition work and 25 method demonstrations in nutrition were given.

The home demonstration agents have conducted work in 45 out of 69 communities; they have spent 366 days in the field; they have had 423 office calls and 1476 telephone calls; 969 individual letters were written; and there were held 155 demonstrations at which there was an attendance of 1956 people. Ninety-eight communities have participated, 126 local leaders have assisted in the work and 1685 homes have adopted improved practices.

Miss Kinne, Home Demonstration Agent for Southern Rhode Island, has been able to render service to an unknown number of people through radio talks given from station WJAR.

In Club Work the following projects have been carried on: clothing, handicraft, foods, canning, poultry, gardening, dairying, and health (growth clubs). There are a total of 139 rural clubs working in 63 rural communities and 15 city clubs. Eighty-four club leaders have given assistance in the work. Six hundred eighty-two garments and 2263 other articles of clothing have been completed. Five hundred twenty-four articles have been made by the handicraft clubs and the poultry clubs have raised 1255 birds.

Among other items of achievement for this year are the following:

Five times as many Club Work Exhibits as in any previous year.

Six times as many demonstrations as in any previous year.

88% of Club members completed the season's work, a higher percentage than ever before.

Over 400 new club members enrolled during the past fall.

First purebred heifer club organized.

Poultry Club at West Kingston doubles average production per hen.

Growth Work brings the fourth "H," Health, into Rhode Island Club Work.

Special emphasis has been given this year to the securing and training of leaders. The work at Camp Edwards has been very helpful in this connection. The participation in the Eastern States Exposition by champions of Rhode Island Club Work has also been an excellent incentive to better work and greater persistence of effort throughout the year on the part of club workers.

The work in Farm Management was greatly handicapped this year on account of the inability of Mr. Dodge to give as much time to it as was originally contemplated. A survey, however, was made of a number of market garden farms and an effort was made to reach fruit growers with but little result in the latter instance. Considerable follow-up work was done with the farm account work. Experiences in the work of this project indicate with unusual emphasis that the personal assistance of trained men is necessary in order to put across the work of reorganizing farm management plans and in keeping up an interest in farm accounts. Farmers, well started along projects of this kind, very frequently fall by the wayside and fail to carry out plans made unless ready, efficient, and sympathetic assistance is available to them in helping them over the hard places or in encouraging them in continuing the work when other farm activities are insistently calling for attention.

Plant Industry Work has been this year, as in the past, largely a matter of supplying information to fruit growers on problems of culture and management of orchards and fruit plantations and

on the prevention of damage from insect pests and diseases. No definite record is kept of questions that come in and the number of replies made, but it is estimated from the number of envelopes used that from 1500-2000 replies to inquiries of various kinds are sent out each year. Judging at the fairs has been a prominent feature in the fall of the year as has been also the identification of fruit sent in by growers. Last spring a definite project to demonstrate better practices in orchard fertilization and orchard spraying was outlined and a co-operative agreement was made with an orchardist in each of the three farm bureau districts through which he would carry out his orchard management according to accepted practices and especially in the application of fertilizer and in the uses of spraying material. The co-operation of the Board of Agriculture in supplying spray mixture and in doing the spray work was enlisted, but unfortunately the Board was unable to carry out its part in the program on account of the fact that no appropriations were made for the work of the Board. Results satisfactory to the owners were achieved, however, and the work will be continued for two more years.

Respectfully submitted,

A. E. STENE,

Director.