

NINETEENTH BIENNIAL REPORT

OF THE

Iowa State College of Agriculture
and the Mechanic Arts

MADE TO

THE GOVERNOR OF IOWA

For the Years 1900-1901

PRINTED BY ORDER OF THE GENERAL ASSEMBLY,

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IOWA STATE COLLEGE OF AGRICULTURE }
AND THE MECHANIC ARTS. }
AMES, IOWA, November 1, 1901. }

To His Excellency, Leslie M. Shaw:

In accordance with the statute defining the duties of the secretary of the board of trustees of the Iowa State College of Agriculture and the Mechanic Arts, I have the honor to transmit herewith the nineteenth biennial report of the board.

E. W. STANTON,
Secretary.

PRESIDENT'S REPORT.

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

GENTLEMEN—The following biennial report is made to you for his excellency, Leslie M. Shaw, governor of Iowa, and for the people of Iowa. It is proper as

A BRIEF PRELUDE

to say that Dr. A. C. True, the national director of the office of United States Experiment Stations, in describing briefly a few institutions among the industrial and technological colleges of America which may serve as types of the rest, makes Iowa one of the types, and officially says: "The Iowa college represents those institutions whose development has been along broad lines, and in which the agricultural course, maintained side by side with a number of courses in the arts and sciences, is being more thoroughly organized and specialized in accordance with the general advance movement in education along industrial lines." A prophecy by a distinguished body representing the general assembly of Iowa several years ago, called the legislative investigating committee, has come true in the number of students: "If it were generally known that the Agricultural College is one of the great institutions and properties of the state, affording instruction along literary and scientific lines, free of tuition charges, and that this instruction compares very favorably with any university or college in the western states, we believe that the number of students would be doubled in a short time."

THE WORK AND GROWTH OF THE BIENNIAL PERIOD

Never in the history of the college could a more favorable report be given of the growth, expansion, and maturing of the educational work of the Iowa State College than for the biennial period just closing. The college has expanded in all particulars. It has been a universal and systematic development. The annual

attendance of students has reached the thousand mark and over. The faculty have improved upon their good work of the past. The building of the horse barn and stock pavilion, the starting of engineering hall, the enlarging of the scope of work in a number of the departments, and the same general recognition upon the part of the public of the worth of the institution to the state and the country all combine in the sum of a most prosperous period. It is a frequent reflection upon the part of the friends most intimately acquainted with the development of the school to observe what irreparable injury would have been wrought the college without the provisions of the last legislature. These persons also clearly understand the irrefutable reasons for a still more liberal support of the college. The doctrine advocated in the askings of the last legislature, "That it is sound statesmanship and good sense to promote a great work that is thrifty and big with outcome," has been fixed as a demonstrable fact in the college for this biennial period. The college is keeping closely and persistently within the bounds of the national and state laws governing its founding and promotion. The new era of commercial industry and industrial education has an atmosphere whose ozone is a tonic to the most vigorous action of the authorities, faculty, and students of such a college. The work of the young women of the college, especially along the lines of general and domestic science, has grown to be a matter of the profoundest gratification in present results and promise. The scientific and industrial education represented in Iowa by this institution has more universal appreciation and advocacy than in any other period of educational thought. For the first time in the history of education in America a president of a state college of agriculture and mechanic arts has been elected president of the National Teachers Association, the largest educational body in America and in the world. The Iowa State College has gained that honor. The people of Iowa in both country and town have come to give a most cordial word and hearty support to the work of the institution. Slighting remarks remain only on the part of persons who are unacquainted with the force of the work and the dignity of its mission. A statement of receipts and expenditures of the college during the biennial period will show a commendable degree of conservatism, a wholesome economy, and a praiseworthy management upon the part of the officers and authorities managing its finances. The spirit of the school throughout the period has been most uplifting. There has been

no serious disturbance of students, disagreement of teachers, nor jarring discords of friends. Never in the period of the life of this college could its friends look more hopefully and believingly to its constituents and legislative authorities for necessary support, expansion, and promotion.

NECESSITIES STILL DELAYED.

Gymnasium.—In any great work a necessity delayed means double urgency for some other need. A serious delay in the provisions of our work is evident in the college being without a gymnasium and facilities for training in physical culture. It sounds well to say, "Let a boy swing an ax or grab a hoe if he needs exercise;" but in the strenuous life of four or five years' indoor studies of a student there must be a systematic training of all his physical energies. There is no deflection from the manly virtue of an ax, a plow, or any useful implement of industry; but there is a universal recognition of the need of a gymnasium in modern-day education. But as authorities we have felt obliged in the view of the more pressing needs to let the matter go by for the present.

College Auditorium.—We have a chapel with a seating capacity of 625 and an enrollment of about 1,000 students a term. We are off in a community by ourselves, away from halls and opera houses, so that it is impossible to rent a room adequate for the needs of our public assemblies. A room with a sufficient capacity for the public work and gatherings of the college is an unavoidable demand, but in view of our other needs this matter must go over.

Chemical Laboratory.—The building in which we have general chemistry is one of the buildings first constructed on the college grounds. We have had in it the electrical engineering department and our classes in general chemistry. The chemical laboratory is wholly inadequate for the large demands made upon us, and the stories in which the electrical engineering has been housed must be fitted over with proper outfitting for work in chemistry, but we are unable to introduce this need at present.

Armory.—We are required by the national law to teach military science and tactics. We have no room whatever that could serve the purpose of a drill-hall. We are dependent upon good weather for most of our drill-service. As a number of the school months are now in the winter, this work will be seriously hindered until we get suitable quarters for a military department.

Washington's maxim was, "To be prepared for war is one of the most effectual means of preserving peace." This sound philosophy is fully understood by the majority of our American people. We have not included this asking in our lawful expectancies of the present legislature.

College Library.—This need has been mentioned to the good people of Iowa for a number of years. Every biennial period adds to the weight of its due. Our work is limited and crippled for want of a more adequate library. With the present support of the college it is impossible to do more than add a few of the most necessitous volumes to our shelves each year. It would require a multiplication of our present library by three to make it reach 50,000 volumes, and that would be a limited capacity for the scope and demand made by these lines of learning. Even such a crying need as this is not included in the present askings of the legislature.

THE EMERGENCY NEEDS OF THE COLLEGE.

The fire in the main building of the Iowa State College, December 7th, 1900, utterly destroyed about one-half of the building and rendered unfit the remnant for permanent uses. While we are making temporary use of the stub building yet it is purely as a makeshift. State Architect Liebbe made a critical examination of the remaining walls and reports as follows:

AMES, IOWA, December 19th, 1900.

To the Board of Trustees, Iowa State College:

GENTLEMEN—Having this day made an inspection of the remains of the burned main building, I beg to report as follows:

1. I find that the north wing is entirely destroyed, and that the rebuilding of this wing is wholly out of the question.
2. I find further that the attic story of the central section is also wholly destroyed and much of the interior of said central part is also destroyed; that is, the floors and wood partitions, doors, and windows are practically all destroyed, but the brick walls stand erect and are safe.
3. I also find that the attic and roof of adjacent south wing are damaged to a considerable extent, which can, however, be repaired. I also find that the now remaining south wing is quite generally damaged by smoke and water and other damage incident to a fire, such as broken doors, windows, etc.
4. I find, also, that the boiler-room roof was entirely consumed, and, in my judgment, was the source of the fire.

Recommendations. As the part that remains is only too poor to much longer serve its purpose, being old, walls badly cracked on all sides and wholly out of line, with wooden floors badly settled and out of level and all finish severely worn with many years' use, I cannot advise the rebuilding of the destroyed wing at any time. The best that can now be done is to

finish the central part with a flat gravel roof and refitting with doors and windows and such restorations of floors as will be found necessary when all rubbish is removed; also replastering and such other repairs as will be necessary to make this part tenatable, together with a general renovation and repair of the whole south wing so that the repaired structure will serve for a brief time as a temporary domicile for the students. But all this should be done in an inexpensive manner, for whatever money is thus expended will serve no useful purpose beyond affording needed temporary relief.

The remnants of the standing walls north of center section should of course be torn down and all useless debris removed.

Respectfully submitted,

H. F. LIEBBE,

State Architect.

The directions of the architect have been carried out, and temporary adjustment made of the remnant of the building until the present legislature could act in the matter.

Before the fire, serious question had entered into the minds of the trustees regarding the safety of the building. The stone in the foundation of the building was gotten from some quarry on the prairies in the early history of building in Iowa and afterward proved to be unfit to be used in any building of this character. The stone soon disintegrates, and becomes insecure as foundation. The board had the building examined a couple of times in recent years by experts in order to keep close watch upon this very matter. The fire made an entirely unexpected demand upon the trustees. The main building was gradually becoming converted into educational purposes. It already contained the Department of Botany complete, the Mathematical, the English, the History, and the Modern Language Departments, with a few miscellaneous rooms employed for literary societies and physical culture. The Executive Council voted funds to fit up temporary quarters in the remnant of the building for botany and recitation-rooms, and for a number of students. They also built a frame building one story, 170 feet in length and fifty-three feet in width, containing ten recitation-rooms. This building is of the most ordinary nature, being shiplap without and within with no plastering whatever. It is uncomfortably hot in warm weather, and hard to heat in cold weather. It is only intended to live until within the period of the appropriation of the present legislature. The main building was put up at a cost of \$221,400. The buildings of the college have all been formed about this place as the center of the campus. The trees and campus itself have been placed and outlined with this building as the central figure. The unprecedented growth of the school in point of numbers and

expansion of work makes it absolutely necessary to devote the new central building wholly to educational purposes. This would have been practically true had the fire not occurred. The regrettable thing about this asking is that \$290,000 will not provide adequately for all the needs urging immediate recognition. In this building it is proposed to put Agriculture, Domestic Science, Horticulture, Botany, Mathematics, English, and such other departments as an economic adjustment may determine. It is not known whether to try for an auditorium in this building or not. It seems very doubtful whether there will be any hope of finding a sufficient amount of space in the building for an auditorium after these other departments have been provided for. A building of this kind will relieve agricultural hall for the necessary expansion of agricultural chemistry, veterinary science, and the agricultural museum, all of which departments are seriously cramped and hindered for lack of room. This need of the central building should be provided first and independent of the other askings of the college. You will observe, by reference to certain statements made regarding auditorium, library, gymnasium, armory, and chemical building, that with every dollar granted in the askings of the board of trustees we would be sadly limited for these other most vital and necessary enlargements. The times are rife with material expansion in educational institutions. Illinois has just dedicated a building devoted to agriculture alone, costing \$150,000. The last legislature of Wisconsin voted \$150,000 for an agricultural building. The last legislature of Minnesota appropriated for new buildings and increased support fund to the agricultural department alone, \$90,000. The last legislature of Kansas appropriated \$350,000 for buildings, improvements, and increase of support fund in the agricultural college. The last legislature of Michigan voted a tax levy to the agricultural college which increases the support fund \$100,000 annually. These instances are cited to show the remarkable activity and thrift upon the part of the states environing Iowa in providing for agriculture and kindred branches. The authorities of the Iowa State College have tried to make the most economical arrangement by putting Agriculture, Horticulture, Domestic Science, Botany, and these other departments in the one building built of stone, made fireproof throughout. It would be a centuryful regret to put an inadequate building in the center of this college campus. It would mar both the harmonies and the utilities of things for years and years to come. While nobody was ready for

the fire, yet the fire, like many a man's distresses in disguise, has made an opportunity of the century for the crowning in a material and educational sense of the college work at Ames. The heating feature in this appropriation refers to the fact that Morrill Hall and the main building are heated from the boilers of this one central building, so that a large part of the heating requirements of the college must be made anew by reason of this fire. This will involve quite a percentage of the money of the appropriation. The board feels embarrassment in not being able to expect more than the \$290,000 for this structure; for this amount will surely come short of what ought to be in this central building, yet with a good plan thoroughly matured and faithfully executed a structure can be erected for this sum that will be an approximate pride to the good taste and a positive utility and inspiration to the youth and citizens of Iowa.

Experimental Barn.—At noon, October 25, 1901, the cattle-barn and new experimental barn were burned. The fire started in the cattle-barn and extended to the experimental barn. The origin of the fire is unknown. These two barns with their contents of hay, feed stuffs, corn, and grain were worth about \$13,000. The work of the experiment station was carried on in these two barns. The Executive Council, October 28th, voted \$3,009.42, with which to construct temporary sheds and purchase feed. It is absolutely necessary to have feeding barns and feeding sheds for experimental work. In connection with these there should be a stock demonstration room, in which animals of the experiment station could be handled in the presence of classes of students, for educational as well as experimental purposes. The barn itself should be constructed of brick with slate roof and, as far as practicable, fireproof. Marked care is exercised with reference to danger of fires, but the barns in public institutions of this kind are exposed to a great many dangers of fire, through visitors and strangers, to which the ordinary barn is not liable. Fifteen thousand dollars will be necessary for the construction of the sheds, experimental barn, and demonstration room.

EXTRAORDINARY ASKINGS OF \$305,000, BY REASON OF FIRE.

The greater bulk of the askings of this legislature by the college is necessitated through the losses of fire. The state does not insure. The only relief of an institution in case of fire must come from the legislature, by whose policies the insurance of state institutions is governed. There is more loss to an institution than

the mere buildings and equipment burned. The delay of months and years amounts to a vast sum of dollars as well as inadequacies and deprivations. Time is money in a state institution as vitally as in a business. An institution compelled under the misfortune of fire to make extraordinary askings should not be crippled at the end of this waiting because the aggregate of its appropriations is thereby larger than usual. While the direct destruction of property by fire in the Iowa State College for the biennial period amounts to something over \$200,000, counting the original cost, yet business sense and wise economy for the future determine even \$305,000 a modest estimate for placing the institution reasonably over the ravages of the fire and in the condition of a reasonable adjustment for the present demand. Aside from the emergencies of the fire, the asking of the trustees for the present legislature are \$75,000 annual support and \$10,000 pure bred stock, so that the needs of the institution can be rightfully understood in the comparative consideration of the extraordinary demands by fire and the ordinary needs of growth and improvement.

SUPPORT FUND.

The college is much hampered for lack of support funds. Of the additional support granted by the last legislature, over \$15,000 are necessary each year to make up the decrease in the rate of interest. Our endowment is now loaned for the most part at the rate of five per cent, so that the increase of support fund by the last legislature was actually less than \$10,000. The work of the college is suffering seriously in a number of ways by this lack of adequate support. The large increase in students makes an unavoidable increase of classes and teachers. There is no department of the college free from this urgency. The faculty as a whole are heavily worked. I know of no easy place in all the positions of the teaching force. This is an unusual thing to be able to say. Mathematics and English, being fundamental to all the courses of study, have marked increase in classes both in number and size. History shares in this to quite an extent. The faculty of the Agricultural Department have three times as many students as several years ago with only the same number of teachers to instruct them. There are several new phases of this work that must be met by additional instructors, and ample assistance must be given the teachers already on hand in this department to hold their own with the marvelous advance made in all the country in scientific agriculture. There is probably no

more frequent demand for well educated and up to-date men as teachers than in scientific agriculture these days. A large part of the success and efficiency of the college depends upon keeping a permanent faculty and strengthening them with proper help and ample equipment. In the Department of Zoology there is an overcrowded condition of work through lack of ample support. There must be relief soon in order to keep the work in its useful efficiency. In the Department of Botany a similar condition prevails. The students have greatly increased, while the teaching force remains much the same, and the equipment has not been enlarged in proportion to the growth of the department. In General Chemistry all available space has been employed to meet the increase in numbers of students, and the class-work is crowded throughout for lack of more means by which to secure help and apparatus. In Agricultural Chemistry the department is crowded three times over the present capacity, and immediate relief must be had. In Veterinary Science, the experimental station part of the work has been hung up practically during the last biennial period for lack of proper teaching force in the veterinary faculty, so that all the force had to do the instruction, and no one was left to do the original investigation of the laboratory. The government at Washington requires us to keep up the Experiment Station side of this work, and we are struggling to meet this demand upon us from headquarters, but we must have more support in order to adequately meet these demands. In the engineering departments there has been a corresponding development. We have very large classes, and have been compelled to deny some phases of the work because we have not the room nor the teaching force to supply the demand. This state of affairs applies largely to all the engineering departments, civil, mechanical, electrical, and mining. The times are demanding educated young engineers as there are educated young farmers. High standards, regarding equipment, teaching force, and amount of instruction given, require strenuous effort when adequate support is at hand. In the creamery department there is also need of additional equipment and help. In modern languages a similar state of affairs prevails. In Domestic Science, one of the most serviceable and far-reaching lines of our work, there is an extreme want of more room, more apparatus, and more teaching force. The instruction of young women in Domestic Economy, in the leading institutions giving attention to this work, now ranks in dignity and scope with any other line of scientific and scholarly

acquisition for young women. The field covers a period of four years and is one of the most hopeful fields in modern day education. In some states like Kansas a special building has been erected solely for the work of domestic science.

All our full professors already employed are underpaid as compared with other state institutions, and have shown laudable loyalty in helping carry on the work to its present efficiency and success. During the biennial period we have lost a number of our faculty solely by reason of the large advance offered them by other institutions.

ADDITIONAL SUPPORT OF EXPERIMENT STATION.

It is emphatically necessary for the Experiment Station to have additional support from the state. This is done in the states surrounding Iowa, and is not a matter of this year's origin. It grows out of the great needs of agricultural and industrial development in America and especially in Iowa. We are asking for \$25,000 annually to be devoted as follows:

1st. For conducting feeding and breeding investigations with live stock, \$7,500. The purpose of these investigations is to do that which no individual or few individuals can do for themselves. By a long series of agricultural experiments the values of foods, their methods of procedure, and the results to be obtained can be reduced to an approximate accuracy that results in vast benefit to not only the farming communities, but to the entire commonwealth. In the breeding and rearing of animals problems of great scientific and commercial worth are pressing upon the attention of the experiment stations of the country. These questions have local as well as general application. The stock interests of Iowa amount to millions of dollars annually, and are capable of decided enhancement through improvement and promotion of breeds. For these purposes Illinois is giving a large sum annually.

2d. For conducting investigations with field crops, physics, and farm mechanics, \$7,500, annually. A vast contribution to the production and permanency of production in field crops is making these days by original investigations, as to the utilization and management of field crops, the analysis and adaptation of soils to various field crops, and their proper treatment in variable seasons. The question of farm mechanics involves thousands of dollars of loss or gain to the people of Iowa. It is proposed to systematically develop the best methods and present the soundest

facts along these lines through the work of the Experiment Station. To these purposes other states are also devoting annual appropriations.

3d. For conducting investigations in plant breeding, horticulture, and forestry annually \$5,000. Minnesota Experiment Station by investigations of wheat has been able to produce varieties of wheat that insure three bushels per acre more than formerly, and thereby add millions of dollars to the commerce of the state. Great possibilities are ahead in the breeding of corn and other useful plants. Experiments are making constantly in wheats, oats, corns, and grasses with a view to Iowa conditions. In horticulture there is a limitless field waiting the science and improvement of fruit and vegetables through original investigations. Improvement of fruits and vegetables is one of the greatest benefactions that can be bestowed upon a community or a commonwealth. In forestry only a limited amount of work can be attempted, but there is great scope for work of this character upon the prairies of Iowa. The nation itself is arousing to the importance of this matter, and has a bureau of forestry at Washington.

4th. For conducting investigations in dairying. The things that have been done in dairying in recent years through scientific investigation are big with promise for still better things to come. The testing of milk by the quality rather than the quantity, the more accurate knowledge in the ripening of creams and the producing of butter flavors, the applications of bacteriology to dairying, are striking examples of what science can do in promoting the practical everyday interests of dairying. Two thousand five hundred dollars annually are asked for investigations of this nature.

5th. For conducting investigations in veterinary science annually, \$2,500. A vast ocean of privilege in research opens to the scientific investigator in veterinary science. The whole realm of disease having to do with domestic animals opens now with urgent demands upon the experiment station. There are local problems having to do with veterinary science, like infectious abortion, bottom diseases of horses, cornstalk disease, parasitic diseases, and others, that demand immediate attention. We need more money than we are asking in this line, but can make a commendable start with \$2,500.

ADDITIONAL SUPPORT OF THE EXPERIMENT STATION BY STATE IS NOT UNUSUAL.

At present there are nineteen experiment stations in the United States receiving state aid in addition to the \$15,000 National Hatch fund. In eight states the amount of money devoted to station use from state sources alone aggregates practically twice as much as the original Hatch fund. Minnesota supplements its \$15,000 Hatch fund with \$32,000 from state appropriations, Wisconsin adds \$16,000 to the Hatch fund, Illinois station now has \$46,000 for the purely agricultural work of its experiment station in addition to the \$15,000 Hatch fund, and the state of New York gives \$69,000 annually to its experiment station. The income of the Iowa Experiment Station is confined to the \$15,000 annual appropriation from the United States government for the staff of experiment station work. The state of Iowa contributes nothing directly for the additional support and maintenance of experimental work, excepting that the college trustees always grant very liberal allotment of lands and considerable equipment for the support of the work. This, however, is done by almost every state. The work of the Iowa experiment station is practically at a standstill for want of funds to conduct the work and publish bulletins. Requirements of this work are more complex, exacting, and extensive with the growth and demands of the years, and therefore more expensive than formerly. No new lines of investigation have been taken up during the biennial period, nor can they be with the present income. Several of the lines of investigation now in progress will need to be curtailed or abandoned in the near future unless additional support is provided.

PURE BRED STOCK.

In these times of marvelous achievements in animal husbandry, when pure bred animals of certain kinds sell readily for three to four and five thousand dollars each, one can readily see the limitations of an appropriation of \$10,000 for the purchase of pure bred stock. The appropriation two years ago gave us a very valuable start in the purchase of pure bred animals. The college authorities have avoided extravagance and extremes, but have been fortunate in securing a number of these animals that prove of marked benefit in the training of young men in agriculture and animal husbandry. It is the policy of the college to keep nothing on hand but pure bred stock. Illinois last year

voted \$32,000 for the purchase of pure bred stock. We ask an appropriation of \$10,000 for the purchase of pure bred stock the coming biennial period. The college does not propose to enter into a general commercial business of raising pure bred stock, but merely to keep on hand the best types of each breed for educational and experimental purposes.

SUMMARY.

Central College building with heating plant.....	\$290,000
Annual support.....	50,000
<i>Experiment Station annual report—</i>	
For conducting feeding and breeding investigations with live stock.....	\$7,500
For conducting investigations with field crops, physics, and farm mechanics.....	7,500
For conducting investigations in plant breeding, horticulture, and forestry.....	5,000
For conducting investigations in dairying.....	2,500
For conducting investigations in veterinary science.....	2,500
	<hr/>
	\$ 25,000
Experimental barn, sheds, and demonstration room	15,000
For pure bred stock	10,000
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Total	\$390,000

THE DEPARTMENT OF EXPERIMENT STATION.

Both national and state authorities have decided, the past biennial period, that the experiment station is a department of the land-grant colleges in the respective states. Dr. A. C. True, director of the experiment stations, Washington, D. C., gives an official announcement regarding the relation of the experiment station to the college as follows: "As a matter of fact there is no department of the college whose property and work are more inseparably united with the property and work of other departments than the experiment station. * * * The station was meant to be and is a department of the college." This decision he bases upon the language of the national statute approved July 2, 1862, entitled "An act donating public lands to the several states and territories which may provide colleges for the benefit of agriculture and mechanic arts;" and in one of the supplements to said act, "A department to be known and designated as an agricultural experiment station." A similar decision is also given by Attorney General Mullan, of Iowa, so that there

is no ground whatever for debate regarding whether the experiment station is a department of the college; and most vital it is too. It gives the thrift of original investigation to the student of agriculture on one side, and, on the other, has the most far-reaching scientific, industrial, and commercial bearing upon the thought and new questions of scientific agriculture. The work of the experiment station, in any one of a number of not a few lines of investigation the past ten years or more, has been worth millions of dollars to Iowa alone. During the biennial period the Experiment Station has issued the following bulletins: No. 41, Some reports from trial stations on new orchard fruits and shrubs. No. 42, Horse Nettle as a Troublesome Weed in Iowa; Two other Troublesome Weeds; and Potato Scab. No. 43, Some Injurious Scale Insects. No. 44, Observations and Suggestions on the Root-killing of Fruit Trees. No. 45, Field Experiments with Corn, Oats, Barley, Wheat, Brome Grass, Rape, Sorghum, Soy Beans, Cow Peas, and Sugar Beets. No. 46, Facts and Opinions about Plums and Plum Growing in Iowa. No. 47, Notes on Vegetables, Cucumbers, Egg-plants, Lima Beans, Sweet Potatoes, Tomatoes, and Peppers. No. 48, Economical Production of Beef; Use of Skim-milk in Calf Feeding; Feeding Steers in Wide and Narrow Rations; Fattening Range Steers; A Study of Pork Production; Fattening Range Lambs; Fattening Lambs in Comparison with Yearlings. No. 49, Miscellaneous Insects. No. 50, Insecticide Methods. No. 51, Winter Wheat. No. 52, Cream Testing; The Influence of certain Conditions in Churning on the Amount of Water in Butter; A Study of Butter Increases. No. 53, The Asparagus Rust in Iowa. No. 54, Grasses of Iowa. No. 55, Field Experiments with Corn, Oats, Barley, Spring Wheat, Speltz, Sorghum, Rape, Kohl Rabi, Soy Beans, and Sugar Beets. No. 56, Grasses of Iowa. No. 57, Experiments in Curing Cheese. No. 58, Parturient Paralysis and the Schmidt Treatment. The report on pork production in bulletin No. 48 represents a continuation and completion of work that had been in progress during the previous period.

The station has also continued the investigations with range colts brought from the West in 1898. These colts are now three and four years old, and most of them will be marketed when five years old. This experiment has already attracted wide attention, and demonstrated the possibilities of horse production in the western or grazing country suitable for the needs of the farmer and for finish profitably by the farmer of the middle west for the

eastern market. Incidentally the superiority of good blood on the range as elsewhere has received additional demonstration.

The dairy herd investigation has been carried on continuously throughout the biennial period, and the results of over three years' work are now being prepared for publication in bulletin form. This work represents a careful record of the college dairy herd, including five pure breeds of cattle, showing the actual daily cost of feed consumed and the net returns in milk and butter fat, and the value of the product on the market at commercial prices, thus giving the net profit or loss of every cow in the herd of each breed during the period of over three years covered by the experiment.

The field experiments with winter wheats and other grain forage crops have demonstrated some very practical and useful lessons. The average yield of winter wheat on the Experiment Station grounds during the past seven years has been a little over forty-five bushels per acre, which is more than double the yield which we have obtained from spring wheat under similar conditions and about three times the average wheat yield of the state. The Turkish Red variety of winter wheat which has been grown with such marked success on the college ground is this year being introduced in nearly every county in the state, where it will be grown under instructions furnished by the station and the results carefully noted. The drouth-resisting grain and forage crops, such as sorghum, Kaffir corn, Soy Beans, Cow Peas, and the root crops, have been given special attention; and their yield on the college farm demonstrates conclusively that the farmer of Iowa by the use of these crops may be to a great extent independent of such a drouth as has prevailed during the past season.

The demand for Experiment Station bulletins has far exceeded the supply. The regular mailing list now contains about 20,000 names. Owing to the limited funds for conducting the Experiment Station work in publishing reports in these bulletins, we have been obliged to curtail the issue of all the bulletins published during the period with one exception. That is, instead of publishing an edition of 25,000 copies, as now required to supply the demand, we have been obliged to limit the edition to 5,000 or 6,000, and send to special lists of names, and send press notices to the papers of the state calling attention to the bulletins and stating that they could be had on application. This leads to a misunderstanding and dissatisfaction on the part of many of the citizens of the state who do not receive the bulletins regularly.

although their names are on the Experiment Station mailing list. The demand for these bulletins is by no means limited to Iowa. There is a very wide call for them from adjoining and distant states, and even foreign countries where some of them have been republished entire in foreign languages. The edition of many of the previous bulletins has been exhausted, and, although the information contained would be of constant service, the station is unable to supply them and has not sufficient funds for reprinting.

Farm Department.—The work of the Farm Department has been materially strengthened during the biennial period by the appropriation made by the last legislature for a new horse-barn and judging pavilion, and the purchase of representatives of some of the pure breeds of live stock. The improvement of the college herds and flocks is distinctly noticeable, and it is a factor of no little importance in the education of the young men who attend the college for training in agriculture. The increased returns that are already coming from a better class of stock on the college farm make it clear that this appropriation was a judicious investment on the part of the state. A similar appropriation should be made for the next biennial period. Other states are recognizing the importance of this feature of college work. Illinois has appropriated \$32,000 for the purchase of live stock during the past biennial period. The college should maintain herds of only pure bred representatives of the highest individual excellence of the leading breeds of live stock for the purpose of furnishing instruction to the students and affording object lessons to the farmers of the state. The department of Agricultural Physics should have all the time of a full professor. Additional facilities for instruction in

FARM MECHANICS AND SOIL PHYSICS

are absolutely essential to the success of the work. A large laboratory should be provided on the ground floor, where power can be furnished for the operation of various kinds of machinery to be used in the demonstration of mechanical principles that apply directly to farm machinery. About 10,000 square feet of floor-space is needed for this purpose, and in addition about 3,000 square feet of ground space under glass-roof for laboratory work in soil physics. With provision of this kind the college can obtain practically free of cost sample machines of all of the modern and most improved arm implements. These can be operated both in the laboratory and in the field, and their principles of construc-

tion, care, and management studied and demonstrated to the classes in agriculture.

THE CREAMERY DEPARTMENT.

The creamery building was erected nine years ago rather as an emergency building than an attempt to provide a modern structure meeting all of the requirements of an educational institution. Unfortunately, the building was poorly constructed and is expensive to maintain, besides affording altogether inadequate facilities for the work. Additional room for class instruction and laboratory work is urgently needed. The refrigerator facilities should be remodeled and the cheese curing room reconstructed on modern plans. The entire building will need to be reconstructed within a few years, and it will be a measure of economy to do it as early as possible.

AGRICULTURAL TEACHING FORCE.

The teaching force in the Division of Agriculture must be materially strengthened at once if we are to keep pace with the progress of agricultural work in the leading institutions. Five years ago we had sixty-seven students enrolled in the four years' course in agriculture, and about 100 students enrolled in the short courses. During the past year we have had about 200 students enrolled in the four years' course, and about 400 in the short courses. The teaching force has remained the same during this time, with scarcely any advance in salaries, and the annual appropriations for current expenses and instruction in the division of agriculture are actually less than they were at that time. A part of this reduction is due to better and more economical results in management and the increased returns from the management of the farm and the live stock equipment, but there is a most urgent need for strengthening the teaching force. The present force in the division of agriculture numbers less than one-half as many professors and instructors as similar institutions in other states employ and the salaries paid are on the average more than one-fourth less. During the past year we have lost two of the strongest and best known men in their respective lines of work that the country affords, namely, Professor John A. Craig of the Animal Husbandry Department, and Professor H. C. Eckles of the Dairy Bacteriology Department. Both of these men left the college solely on account of inadequate compensation, and have accepted positions elsewhere at much higher salaries. The prominent rank and good standing of this institution can

not be maintained without much more liberal support. The demands of the students during the coming year promise to be greater than ever before, and the student body is properly becoming more exacting.

DEPARTMENT OF ANIMAL HUSBANDRY.

This department was unfortunate during the biennial period to lose its former head, Professor John A. Craig, by reason of a higher salary elsewhere, but most fortunate in securing, as his successor, Professor W. J. Kennedy of the Department of Animal Husbandry, in the University of Illinois. The scientific study of domestic animals has made remarkable impression upon the entire industry. The good and bad points of a domestic animal have become as demonstrable as a problem in mathematics. The general and specific value of an animal can be taught now with a remarkable degree of accuracy. A student in the college can gain an accurate judging ability regarding domestic animals, during the four years' course in agriculture comparable with the experience and attainment of twenty and thirty years in the old methods of teaching animal husbandry. This is demonstrated every season in the county and state fairs, and is a weekly occurrence in the classes in Live Stock and Score Card Practice in the college. The purchase of pure bred animals during this biennial period, through the appropriation of the last legislature, has greatly facilitated and advanced the Department of Animal Husbandry. Under the direction of Professor Kennedy, there is every reason to believe the former efficiency of the department will be maintained, and marked improvement and advance be made all along the lines of this work.

DEPARTMENT OF HORTICULTURE.

This department in the last biennial period has passed from the commercial distribution of trees and plants to the more exclusively educational features of horticulture. The work of the department has been greatly enhanced in the equipment, attendance and teaching force. Professor John Craig resigned as head of the department September 1, 1900, and Professor Homer C. Price, of the University of Ohio, was elected his successor, and is carrying on the work very successfully. The department offers ten courses in horticulture and one in forestry, of which four are required in horticulture and one in forestry. More attention is also given to amateur floriculture. The work in olericulture and landscape gardening is greatly enlarged.

Eighty new and hitherto unrepresented species of trees and shrubs have been added to the campus collection. Provisions are making for much improved laboratory facilities. A new barn is much needed for the department.

DEPARTMENT OF AGRICULTURAL CHEMISTRY.

This department has improved decidedly during the biennial period. It absolutely needs more space and better equipment not only for instruction, but for the technical work which is necessary for original investigation. In connection with the department of civil engineering and botany, this department has kept close analysis of the sewage-plant disposal of the college. Results obtained are of general interest to the state at large as well as education to the student at home. The possible pollution of the streams and rivers of the state by the sewage of towns and cities is a problem which must be met more adequately in the future. The department has also been making investigations in the clays of the state. Complete chemical and rational analyses are made of the clays of the state. The chemical work of the experiment station makes large demands upon this department to properly meet which there must be more ample provisions of quarters and facilities.

Agricultural Chemistry has come to be one of the great sources of modern day investigation and enlightenment in agriculture and the sciences bearing upon the industries.

DIVISION OF VETERINARY MEDICINE.

During the biennial period the veterinary department has been enlarged considerably. The teaching force is greatly strengthened. The course of study has been revised and largely augmented. The standard of admission of scholarship is measurably elevated. The hospital work has been greatly improved. There is a great deal more of it than formerly. Hospital appliances have been markedly increased. This division of the college will need very substantial appropriations, in order to develop the legitimate spheres of its work. These needs are in the lines of charts, models, museum appropriations, laboratory apparatus, and especially buildings. It needs more hospital space in all phases of the work. Laboratories must be provided on a scale not hitherto approached. A hundred thousand dollars could be spent in this division for improvements the next biennial period without any element of exaggeration or extravagance.

DIVISION OF ENGINEERING.

Civil Engineering.—During the biennial period the number of students in the Civil Engineering course has increased from fifty to 120. An assistant professor of civil engineering has been added to the teaching force, but the increase in attendance has kept the instruction work heavy. The quarters for the department will be very badly overcrowded until the new engineering hall is completed. The field equipment for surveying and the laboratory equipment need great increases. A certain amount of instruction in practical astronomy is necessary for this department. The college has practically no equipment for that part of the work. The demand for graduates for this department has been greater than our supply. The department has been for some time endeavoring to inaugurate lines of investigation which would be helpful to the industries and the engineering interests of the state. This kind of work has been largely developed during the biennial period. Important tests in connection with the brick and other clay products of the state have been made. Some of the results have been published, and many others are about ready for publication. This is of great general interest and benefit to these lines of industry in Iowa. Tests of the gypsum products also have been made. A college sewage disposal plant under the direction of this department has attracted wide attention, and is being adopted in other places. It is desirable to inaugurate investigations along the line of good roads just as soon as equipment and support will allow. The needs of the department grow out of the vigorousness of its development.

DEPARTMENT OF MECHANICAL ENGINEERING.

Although the attendance in this department has greatly increased in the last biennial period, there has been no increase made in the teaching force. Many students enumerated in other sections take shop-work and drawing in this section, greatly adding to the work. The section has also done extensive work in the testing of the value of Iowa coals. The section is suffering in the line of equipment owing to the inability of our funds to make larger appropriations. There is much need of additional instructors, additional apparatus, and equipment. All the engineering sections are very much cramped for room but the new engineering building which we hope to enter next college year will meet the matter of recitation-room.

DEPARTMENT OF ELECTRICAL ENGINEERING.

This department shares the universal thrift of this college. With the other engineering departments it is suffering for lack of room, but this we hope to remedy in the new engineering building. Its needs are in the line both of more support and of larger equipment. A department shop is one of the necessities of this work. A department shop of this character will need power-lathes, saws, drills, etc., together with machinists' and carpenters' tools adapted to the manufacture and repair of physical apparatus. In many institutions an expert mechanic is employed. A shop of this kind has come to be a necessary adjunct to the modern physical laboratory. Electrical engineering is largely a constructive process, and the student must be taught these methods of repair and construction in the shop.

DEPARTMENT OF MINING ENGINEERING.

The work of this department has greatly enlarged in the past biennial period, and the demands upon it are so urgent that we have been unable to keep up with all of them. It is much in need of an ore-dressing and concentrating plant with proper adjuncts for clay working and clay testing, coal washing, and calorimetric tests of fuels. It is needing much machinery and mine models. The field equipment needs expansion immediately. The teaching force needs enlargement. Iowa has a rapidly growing field for mining engineering. The clay and coal products alone make more demands upon this department both in the training of men and the scientific development of material than the college can adequately supply for several years to come.

DIVISION OF SCIENCE AS RELATED TO THE INDUSTRIES.

DEPARTMENT OF MATHEMATICS.

The rapid growth in attendance at the college multiplies rapidly the classes in this department, as mathematics are taught in all courses of the institution excepting the shorter courses in dairying and kindred branches. About 650 to 800 students are enrolled in this department each college term. These range in branches from elementary mathematics to calculus. This department will need to have ample provision made for it in the new college building.

DEPARTMENT OF DOMESTIC SCIENCE.

The work of this very important department has far outgrown its quarters and facilities. It is worthy a building of itself, such as it has secured already in some institutions of the country. Its expansion must be generously provided for in the new college building. The courses of study in domestic science have been greatly enlarged. The equipment has been increased. Though addition has been made to the teaching force, yet there is more demand for help in this department in every way than we have been able to supply. The students of the department have increased during the biennial period from 152 to 267. The scope of the work embraces sewing, cooking, personal hygiene, home sanitation, dress-making, study of food values, drafting and dress-making, home dairying and domestic chemistry, cooking, and house economics, with several other vital topics waiting to be included as soon as facilities will allow.

DEPARTMENT OF CHEMISTRY.

The demands on this department have greatly increased the past biennial period. It is absolutely necessary to have more and better laboratory facilities for this work. The laboratory methods in connection with class-work are most faithfully and efficiently followed. As soon as the engineering hall is completed the electrical engineering work will be taken out of the building in which this department is now housed and make it possible for much needed enlargement and improvement. But this will necessitate a considerable additional expense and appropriation of money. The encouraging feature about it is that money herein expended will meet a vital need and greatly promote a fundamental part of most of the college courses.

DEPARTMENT OF BOTANY.

The fire destroyed a large amount of valuable material as well as the rooms of this department. The department is now in temporary quarters. Quite a number of botanists of the country came to the aid of the college in generously sending additional specimens from various sections of the land. Urgent need in the department is modern equipment in the way of rooms and larger appropriation for carrying on the work as elsewhere stated in this report. The department has felt vigorously the increase of students, and is crowded in every particular for lack of room. A very suitable portion of the new college building must be devoted

to the work of this department. The Dr. Parry herbarium, for which the college paid \$5,000, was fortunately saved from the fire, and should be put in fireproof quarters in the new building. It is not a question of a few thousand dollars but of a permanent scientific value increasing every year, because the primitive conditions in which the collection was made will never return in American soil.

DEPARTMENT OF ZOOLOGY.

The work in this department has been carried on with very little change of general plan during the past two years. The large increase of students—the number having more than doubled in the two years—has rendered it impossible either to enlarge the scope of the work or to make many needed changes in laboratory methods pursued in the courses now given, which would involve some expenditure for new apparatus.

The methods and scope of the zoological work of the different colleges and universities of the country have been changed very rapidly during the last few years, in consequence largely of the more direct dependence of several of the professions upon this science, which has been brought about by recent discoveries. This has rendered necessary in all zoological laboratories an increased outlay for equipment. In our own institution the appropriations have not nearly kept pace even with the increased number of students, so that our equipment is actually less per student today than it was five years ago. This has brought about a very serious condition, which only a very large expenditure in the near future can remedy. This is absolutely necessary if we are to keep in line with the progress made by institutions of a similar nature in the past few years, and if we are to retain our present high reputation, built up largely when the number of students was many times smaller than at present, for the quality of the work done here.

DEPARTMENT OF ENGLISH.

The rapid increase in students has made very urgent demands upon this section of our work. During the past year the enrollment in this section increased about 44 per cent and the teaching force only about 20 per cent. To begin with each teacher was given heavy work. The recitation and office facilities are inadequate. A faculty member of this section accepted a position the past year in a state institution of a sister state at an advanced salary of about two-fifths more than we were paying. The library

needs of the English section are great and irrepresible. An English laboratory is much in demand. In spite of these obstacles the work of the department has increased in efficiency. This is a wholesome condition for commanding aid of more liberal support.

Modern Languages.—Work even in the agricultural sections of the government bureaus at Washington, and advanced study in the science and work of the state colleges of the nation, require a good reading acquaintance with French and German. The aim of this college is to supply the actual need and to avoid any post-graduate work along these lines. We offer a course in German of two and one-half years and in French of two years. One year of a modern language is required in all the engineering courses, and language work is offered throughout the entire course for women, but not throughout the courses for young men. The work of the department has taken on the general uplift of the institution.

DEPARTMENT OF ELOCUTION.

This department has become very essential to all lines of college work. The aim of the department is not so much to make professional readers and orators as it is to give a good expression to the thought and knowledge of each student, whether he may ever be on the public platform or not. The scope of the work is greatly widened and its efficiency increased within the past biennial period. The growth of the college in numbers has made very urgent demands upon the energies and resources of the department. These are being met in some ways most advisable and practicable.

DEPARTMENT OF HISTORY.

The aim of this department is to teach only essential things of history to the students in the several courses of the college. Yet even this is conservative. Through the multiplication of students and classes it has become necessary to give extra assistance in this department during the biennial period. There is no line of agriculture, science, or learning in which a youngster can get along reasonably well without a living and working acquaintance with history. The department is most fortunate in having at its head Dr. O. H. Cessna, who has given a number of years of special effort to historical studies. This department must be provided for in the new college building.

DEPARTMENT OF LIBRARY.

The growth of the college for the biennial period is quite manifest in the library. The number of patrons of the library has increased largely. The number of books used the first year of the biennial period 17,370; the number used the past year 24,797; an increase in one year of 7,427. Beginning with the freshman class of each year special library instruction is given each student regarding classification, cataloging, the use of periodicals, Poole's Index, reference books, and so on. As a result, the freshmen are using the library more and with better results. By reason of our limited appropriations we are able to add only about one thousand books a year to the library. Of these about three hundred are annually donated. A number of valuable books from the library were destroyed in the fire of the main building. These were in the hands of the professors for class use in the recitation-rooms of that building. The shelves of the library are full and running over, and the space in the library room is already crowded. The library is much in need of special appropriation of the legislature for radical enlargement. The work of the library is in excellent condition.

DEPARTMENT OF VOCAL AND INSTRUMENTAL MUSIC.

In vocal and instrumental music the college provides excellent facilities and instruction to students who may wish to pay extra for work of this kind outside of the regular college class-work. The department is maintained largely independent of the other college courses. It is necessary to have instruction of this nature; there is a growing demand every year for the department. Its enlargement and efficiency are keeping pace with the other upward and onward evolutions in college work. The department is required to furnish music for the Sabbath and chapel services of the college and to help on, incidentally, in connection with public exercises of college work.

WORK OF THE DEAN OF WOMEN.

The construction of Margaret Hall for young woman marked a new era in the history of the living and management of the young women in the college. They are provided with good home environment, steam heat, electric light, and modern-day conveniences. The young women are under Mrs. Marian H. Kilbourne, Dean of woman, whose work during the biennial period has greatly promoted the welfare of the entire department. She has had

long experience in the counsel and training of young women, and the provision of this work now places the training and direction of the young women of the college in a most desirable attitude. The serious question arising is where to get enough room for young women that are coming to the college, as the Hall is now taxed to nearly its full capacity.

THE COLLEGE HOSPITAL.

The building for the college hospital has been entirely rearranged during the biennial period and put in a much improved condition. The space has been enlarged by the change; the heating facilities have been made adequate; a nurse and cook provided, and a general homelike atmosphere created throughout the building. The increase of students in the college requires the entire time of the college physician, and Dr. Wilbert E. Harriman has been given exclusive charge of the whole work, which he has carried on with marked credit and efficiency. For the ordinary cases that occur among so many hundred of students the institution is now amply provided in these lines. This work is maintained largely through hospital fees. It is one of the good advantages of the student.

DEPARTMENT OF MILITARY SCIENCE AND TACTICS.

The high standard of work in this department is still maintained. The long period of fall and winter months shorten greatly the privilege of regular drill as the college is without an armory or any substitute for an armory. This department is very vital for a physical bearing and manly life as well as vital to the strength and defense of the nation. An armory of suitable proportions should be provided immediately, although the trustees have not been able to include it in the askings.

THE CONSTRUCTION OF THE NEW BUILDINGS.

The board of trustees have been fortunate in all their contracts for the new buildings of the last biennial period. It is generally acknowledged that the horse barn, stock pavilion, president's house, and engineering building were let most favorably. The stock pavilion and president's house have been completed in substantial manner with eminent service to the college and a credit to the state. The engineering building has been seriously delayed in construction for want of steel and the supply of certain kinds of brick, but the work thus far promises a structure

that will be fireproof, tasteful in architecture, and most admirably adapted to the engineering departments.

ANOTHER CRITICAL PERIOD.

We had occasion the last biennial period to speak of the critical period in the work of the college by reason of its need of buildings and additional support fund. The sincerity of that presentation has been evidenced on every side during the past biennial period, and the substantial response of the Twenty-eighth General Assembly met a most needy and worthy epoch in the history of the college. Unexpectedly to all of us, the fires of the past year have threatened seriously the usefulness of the college and brought in a more critical state of college needs than existed even two years ago. The askings of this legislature occasioned by the fire amount to \$305,000. With every dollar of this granted, irrepressible demands of gymnasium, chemical laboratory, armory, college library, and college auditorium remain unheeded, though it is hoped we may be able to include the auditorium in the new central building. The college should not be made to suffer and become permanently crippled on account of these losses by fire. The askings of \$85,000 for additional support should not be curtailed because of the emergency call through the losses of fires. It is the adopted policy of the state to make up these fire losses from its own resources. The college has gone right on growing in the face of these calamities so that we have this year the largest enrollment in our history. We have done the best we could with restricted means; can give a good account of the funds and appropriations granted by previous legislatures; and now make a plea for security against the loss of the fires and reasonable provisions for the growths of our expansion both present and to come. Able leaders in making the most of the child have uttered the watchword—"Salvation through Occupation." Our material cry is "Salvation through Appropriation," as conditional to the salvation through occupation of the head, hand, and heart of the Iowa youth.

CONCLUSION.

We still float the banner of goodwill to all the other educational institutions of Iowa, state, denominational, and private. We delight in the thrift and efficiency of all institutions of the state that better humanity. The prosperity of all these is our joy, as we would have our own growth their pleasure. It would

take a long roster in the hall of fame to list the names of the friends who have made the last biennial period of the Iowa State College a chronicle of manly effort and endurance, effective growth, and realization in the betterment of the state and the world. We aspire to fill our bits of destiny as a college upon enduring foundations through worthy ideals for a higher life of the commonwealth and the people. Our fathers used to sing in camp-meeting days (hallowed to their memories):

"I am a pilgrim, I am a stranger,
I can tarry, I can tarry but a night."

There is still a vast patch of this world to compass in education. The mind is a pilgrim and a stranger. The undertaking of education is to make this stranger at home in the earth, to make this pilgrim a permanent resident of the universe, and to convert the night of the old song into a day of eternal hope and life. This may be sentiment, but what is home, country, or man without sentiment, and what can a college do without money?

Very respectfully submitted,

W. M. BEARDSHEAR,

President of the Iowa State College of Agriculture and Mechanic Arts.

FINANCIAL REPORTS.

REPORT OF THE SECRETARY.

INCLUDING A SUMMARY OF PROCEEDINGS OF THE BOARD
OF TRUSTEES.

MEMBERS OF BOARD OF TRUSTEES.

Ex-officio—HON. L. M. SHAW, Governor of Iowa.

Ex-officio—HON. R. C. BARRETT, Superintendent of Public Instruction.

	Term Expires
First District—Hon. S. H. Watkins, Libertyville.....	1904
Second District—Hon. C. L. Barclay, West Liberty.....	1904
Third District—Hon. J. S. Jones, Manchester.....	1903
Fourth District—Hon. C. L. Gabrielsen, New Hampton.....	1904
Fifth District—Hon. W. R. Moninger, Galvin.....	1906
Sixth District—Hon. W. O. McElroy, Newton.....	1902
Seventh District—Hon. W. K. Boardman, Nevada.....	1906
Eighth District—Hon. W. B. Penick, Tingley.....	1904
Ninth District—Hon. L. B. Robinson, Harlan.....	1902
Tenth District—Hon. J. B. Hungerford, Carroll.....	1906
Eleventh District—Hon. W. J. Dixon, Sac City.....	1906

STANDING COMMITTEES.

GROUP I.

Finance Committee—Trustee McElroy, Gov. Shaw, Trustees Robinson, Barclay, Penick, and Gabrielsen.

Building Committee—Trustees Dixon, Jones, Hungerford, Boardman, and Watkins.

GROUP II.

Committee on Agriculture, Horticulture, Experiment Station and Veterinary Science—Trustee Barclay, Gov. Shaw, Trustees Boardman, Gabrielsen, and Moninger.

Committee on Engineering Departments and Physics—Supt. Barrett, Trustees Jones, McElroy, and Dixon.

Committee on Steward's Department, College Hospital and Sanitary Arrangements—Trustees Watkins, Hungerford, Robinson, Penick, and Boardman.

GROUP III.

Committee on Faculty and Courses of Study—Trustees Jones, McElroy, Supt. Barrett, Trustees Robinson, Hungerford, and Gabrielsen.

Committee on College Lands and Investments—Trustee Penick, Gov. Shaw, and Trustee Moninger.

Committee on Rules—Trustees Boardman, Watkins, and Dixon.

GROUP IV.

Committee on Scientific Departments—Trustee Gabrielsen, Gov. Shaw, Trustees Hungerford and Watkins.

Committee on Literary Departments and Library—Trustee Robinson, Supt. Barrett, Trustees Boardman and Penick.

Committee on Public Grounds and Assignment of Rooms—Trustees McElroy, Jones, and Barclay.

Committee on Bonds—Trustees Moninger and Dixon.

PURPOSE OF THIS REPORT.

It is the purpose of this report to give a brief history of the fiscal operations of the college during the last two years together with a statement of its present financial condition. The subject, treated will be,

- I. The college endowment fund.
- II. New buildings, improvements, repairs, and state appropriation for the purchase of pure bred stock.
- III. The experiment station fund.
- IV. The college support funds.
- V. Miscellaneous sources of income.
- VI. The steward's accounts.
- VII. Account with the college treasurer.
- VIII. Condition of the college support funds.
- IX. Miscellaneous matters.

I. COLLEGE ENDOWMENT FUND.

The college endowment fund amounts to \$683,708.52 It has been increased during the past biennial period by the following sums:

Change in valuation of tract of land in Ringgold county.....	\$375.00
Railroad right of way across college farm.....	500.00
Total increase.....	\$875.00

The endowment fund had its origin in the grant of lands by the national government in 1862, for the benefit of colleges of agriculture and mechanic arts, and in the transfer and investment, in the early years of the college, of a portion of its annual income. The amount credited to each of these sources is as follows:

To the original congressional land grant.....	\$589,754.01
To the transfer and investment of interest fund.....	98,954.51
Total.....	\$683,708.52

With the exception of a small tract of land in Polk county, obtained under foreclosure of mortgage, the fund is managed through the land and loan agency, of which agent Herman Knapp

has charge, and the financial agency with W. A. Helsell of Odebolt, Iowa, as agent. The land and loan agent formerly had charge of the loaning of the surplus interest portion of the endowment, in addition to leasing the endowment land. It is the present policy of the board to unite the two agencies and, as soon as practicable, place the management of the entire fund in the hands of the financial agent. To this end all moneys belonging to the portion of the fund managed by agent Knapp are immediately upon collection transferred to the financial agency. The entire fund is at present divided as follows:

(a) Managed by the board directly.....	\$ 2,418.55
(b) Managed through the land and loan agency.....	22,454.08
(c) Managed through the financial agency.....	658,885.89
Total.....	\$683,708.52

Dealing with these divisions in their order, the following is a summary of the financial operations connected with each during the biennial period:

(a) PORTION OF ENDOWMENT FUND MANAGED BY THE BOARD DIRECTLY.

The Polk county tract of forty acres managed directly by the board is leased to B. F. Kemper at an annual rental of \$85. It is situated in the coal area, and will probably be sold or rented as coal land in the near future.

(b) LAND AND LOAN AGENCY.

This agency was charged at the beginning of the biennial period with 8,078.94 acres, appraised at \$36,975.45. During the biennial period there has been patented 5,742.92 acres, appraised at \$26,921.37. This leaves 2,336.02 acres, appraised at \$10,054.08, still owned by the college. It should be borne in mind that all of this land has been held for many years under leases granting to the lessee the right of purchase, or renewal of lease, at the original appraisement. This accounts for the low valuation. The leases now in force bear 8 per cent interest and expire as follows:

In the fiscal year ending June, 1901.....	\$ 960.00
In the fiscal year ending June, 1902.....	2,080.00
In the fiscal year ending June, 1903.....	2,840.00
In the fiscal year ending June, 1904.....	1,590.00
In the fiscal year ending June, 1905.....	500.00
In the fiscal year ending June, 1906.....	1,264.08
In the fiscal year ending June, 1907.....	800.00
	\$ 10,054.08

The loans in the hands of Agent Knapp, at the beginning of the biennial period, aggregated \$44,150. Of this amount \$31,750 has been collected and transferred to the financial agency, leaving uncollected loans in the Knapp agency amounting to \$12,400. These loans are all payable before July 1, 1902. It is therefore probable that this part of the work of the agency will be closed out entirely during the next fiscal year.

(c) THE FINANCIAL AGENCY.

At the beginning of the biennial period there was a large uninvested balance in this agency due to the fact that the state law governing the investment of the endowment fund did not permit the trustees to make loans bearing less than 6 per cent interest, which was above the market rate at that time. This restriction was removed by the last general assembly, whereupon the board of trustees authorized the financial agent to loan the fund at the highest rate obtainable, provided such rate should not be less than 5 per cent per annum. The following is a summary of the transactions of the agency for the biennial period:

Uninvested balance July 1, 1899.....	\$ 98,350.95
Mortgage loans paid during the biennial period.....	219,088.57
Principal of landleases paid.....	26,921.87
Ringgold county tract patented.....	1,575.00
Transferred from Knapp agency (loans collected).....	31,750.00
Railroad right of way damages.....	500.00
Making a total to be loaned of.....	\$ 378,085.89

The agent has loaned,

On 6 per cent mortgages.....	\$ 28,550.00
On 5 per cent mortgages.....	342,800.00
	\$ 370,850.00
Balance uninvested.....	\$ 7,235.89

Of this balance there is,

In the hands of the state treasurer.....	\$ 1,135.89
In the hands of the financial agent.....	6,100.00
	\$ 7,235.89

PRESENT CONDITION OF THE ENDOWMENT FUND.

The present condition of the endowment fund is as follows:

Land under lease at 8 per cent 2336.03 acres.....	\$ 10,054.08
Farm mortgages bearing 7 per cent interest.....	159,450.00
Farm mortgages bearing 6½ per cent interest.....	2,000.00
Farm mortgages bearing 6 per cent interest.....	161,750.00

Farm mortgages bearing 5 per cent interest.....	340,800.00
Polk County tract leased at \$85.....	2,418.55
	\$ 678,472.63
Total yielding income.....	7,335.89
Uninvested cash balance.....	
Total fund.....	\$ 683,708.52

The following table shows when the loans are payable:

Payable in the fiscal year ending June 30, 1901.....	\$ 72,850.00
Payable in the fiscal year ending June 30, 1902.....	131,550.00
Payable in the fiscal year ending June 30, 1903.....	124,600.00
Payable in the fiscal year ending June 30, 1904.....	71,150.00
Payable in the fiscal year ending June 30, 1905.....	155,000.00
Payable in the fiscal year ending June 30, 1906.....	67,950.00
Payable in the fiscal year ending June 30, 1907.....	41,400.00
	\$ 664,000.00

A comparison of the books of the secretary of the board with the accounts of agents Knapp and Helsell, and the state treasurer, shows that these officers have accounted for the entire endowment fund under their charge.

II. NEW BUILDINGS, IMPROVEMENTS, REPAIRS, AND STATE APPROPRIATION FOR THE PURCHASE OF PURE BRED STOCK.

Under this head are included:

- (a) Special appropriations by the Twenty-eighth General Assembly.
 (b) Appropriation of executive council on account of fire damage.
 (c) Annual appropriation for improvements and repairs as per Code of 1897.

The following are the special appropriations to the college made by the last general assembly:

General engineering hall.....	\$ 85,000.00
President's residence.....	10,000.00
Horse barn and stock pavilion.....	12,000.00
Purchase of pure bred stock.....	10,000.00
Total.....	\$ 117,000.00

GENERAL ENGINEERING HALL.

The trustees asked of the last legislature an appropriation of \$150,000 for an engineering hall. The sum of \$85,000 was granted with the understanding that the balance necessary to complete the building should be taken from the proceeds of the one-tenth mill tax allowed the college for buildings.

The board of trustees at its meeting in April, 1900, referred the matter of the employment of an architect for this building to

the building committee to report at the May meeting. Trustee Hungerford, reporting for the committee, stated that he had found, upon investigation, that plans, specifications, and detail drawings could be obtained of a competent architect for the sum of \$3,000.

After considerable discussion as to the best method of securing an architect, the board directed the heads of the engineering departments and the secretary of the board to invite competent architects to present, without cost to the college, plans for the new building. Rules were adopted governing the competition, of which the following are the most important.

1. The plans shall be for a building, the cost of which including heating, lighting, and plumbing, shall not exceed \$150,000.

2. The general type of construction, the materials, and other features shall be in accordance with the general specifications prepared by the college engineers.

3. Each competing architect shall submit the following drawings: Front elevation, side elevation, rear elevation, longitudinal section, transverse section, plans of each floor, perspective drawing.

4. With each set of plans there shall be submitted a set of general specifications, setting forth clearly all general structural features not shown on the drawings.

5. With each set of plans there shall be submitted a memoir not exceeding 2,000 words in length, setting forth succinctly the merits of the design.

6. All drawings, specifications, and memoirs shall be plainly marked with a motto or emblem, and shall be accompanied by a sealed envelope, having on the outside nothing but the same motto or emblem, and containing on the inside the name and address of the architect submitting them. No other clue to the identity of the architect shall appear on any of the drawings or documents submitted.

7. From the designs submitted the board of trustees, the president of the college, and the heads of the engineering departments of the college will select the design to be adopted and built, unless no design submitted shall be by them considered worthy of adoption. From the remaining designs the second and third will then be selected in a similar manner. After this the sealed envelopes will be opened and the names of the architects announced.

8. The architect of the adopted design will be employed as the architect of the building, and shall receive for his service the sum of \$2,500. The architect shall perform the usual duties of an architect in connection with the building except the superintendence of construction, which will be done by the college engineers. The right is reserved to consult the architect by mail at all times without extra charge. The architect shall visit the college for consultation at the opening of bids and during the construction whenever requested by the college, and shall receive therefor the sum of \$10 per day and traveling expenses.

The architects submitting the designs selected as second and third best shall receive respectively the sums of \$50 and \$25.

At a meeting of the trustees held later in the month designs were submitted by seven different architects. These designs and the memoirs accompanying them were carefully examined by a special committee consisting of three members of the board of trustees and the heads of the engineering departments, which committee explained to the full board the special features of each design. The three designs of highest merit were then selected in accordance with the rules governing the competition.

Upon opening the envelopes it was found that these designs had been submitted by the following architects:

Proudfoot & Bird, Des Moines.
 Liebbe Nourse & Ra-mussen, Des Moines.
 Hallett & Rawson, Des Moines.

The board entered into contract with Proudfoot & Bird, allowing them the compensation promised in the rules under which the designs were submitted.

The completed plans and specifications prepared by the architects were, at a later meeting, approved by the board and bids advertised for, to be opened by the board in August.

The following are the bids on the completed building:

Capital City Brick and Pipe Co., Des Moines.....	\$188,786.00
Butler-Ryan Co., St. Paul, Minn.....	184,577.00
Peoria Stone and Marble Co., Peoria, Ill.....	183,252.00
John Volk & Co., Rock Island, Ill.....	185,065.00
Henry W. Schlueter, Chicago, Ill.....	161,800.00
Hennessy & Cox, St. Paul, Minn.....	175,709.00

Numerous other bids on portions of the work were submitted. All bids were referred to a special committee consisting of the architect and the heads of the engineering departments for comparison and report. The following is an extract from the report of this committee:

"Six bids for the complete work were submitted. Of these, five were for \$175,000 or over. The remaining bid, that of Henry W. Schlueter, of Chicago, was for the sum of \$161,800, complete as per specifications. By the substitution of expanded metal floor, this bid is reduced to \$154,800.

"Your committee report that it is impossible by any combination of the sub-bids to lower the above figure of \$154,800. In view of the wide difference in this bid and the next lowest, about \$20,000, and in view of the fact that Mr. Schlueter is a responsible party, we recommend the acceptance of the bid of \$154,800, presented by Henry W. Schlueter, of Chicago, Ill."

In his itemized bid, Mr. Schlueter had placed the painting at \$1,800. Mr. A. N. Harding's bid upon this portion of the work was the same in amount. The board decided to accept the bid

of Mr. Schlueter, to construct the building for \$153,000, exclusive of the painting, and to accept the bid of Mr. Harding to do the painting for \$1,800. Contracts were accordingly entered into with these parties upon the basis of these bids. In the contract with Mr. Schlueter the college was given the option, to be exercised on or before May 1, 1901, of substituting plate-glass for the double-thick glass specified, by adding \$3,000 to the contract price. The board has since exercised this option. The original contract has also been modified by substituting buff Bedford ashler for pressed brick in the facing of the building and the semi-porous hollow tile system of fire-proofing with corresponding structural steel work for the expanded metal system. With these modifications the engineering hall contracts stand as follows:

Henry W. Schlueter, original contract	\$153,000.00
Additional for plate-glass	3,000.00
Additional for stone facings	4,000.00
Additional for hollow tile system of fire-proofing	2,500.00
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A. N. Harding, painting	\$162,500.00
Proudfoot & Bird, architects	1,800.00
	2,500.00
Total	\$166,800.00

The following exhibit shows the amount of the engineering hall appropriation drawn from the state treasury, and the amount expended:

GENERAL ENGINEERING HALL.	
RECEIPTS.	
Amount of appropriation drawn from state treasury	\$34,984.88
EXPENDITURES.	
Advertising for bids and plans	\$ 98.40
Printing specifications	76.58
Express on plans	5.36
Superintendent's stenographer	43.83
Surveying	5.55
Architect's fees, part payment on contract	2,000.00
H. W. Schlueter, estimates to date	30,982.85
Sewer and drain	896.89
Waterworks extension and work on mains	392.48
Fire-proofing tests	222.46
Inspection	205.25
Grading, postage, and other miscellaneous items	53.48
Total expended	\$ 34,984.13
Balance in college treasurer's hands25
	<hr/>
	\$ 34,984.88

The following shows the probable cost of the completed building:

Contracts already made	\$166,800.00
Expenditures to date outside of contracts as shown in foregoing exhibit, about	2,000.00
Estimated cost of superintendence and extras on building, including heading connections	6,200.00
Total	\$175,000.00
To meet this there will be available:	
The special appropriation	\$ 85,000.00
Proceeds of one-tenth mill tax, first year	55,000.00
Part of proceeds of one-tenth mill tax, second year	35,000.00
Total	\$175,000.00

PRESIDENT'S RESIDENCE.

At the meeting of the board in May, 1900, the building committee was authorized to contract with Liebbe, Nourse & Rasmussen to prepare complete plans for the president's residence.

In the contract made under this authority, it was provided that the compensation of the architect should be 2 per cent of the cost of the execution of the work and \$13 per trip when called in consultation by the local superintendent. It was also provided that the architects should advertise for and secure bids; and in case the bids exceeded the appropriation available they were to modify the plans at their own expense until such modified plans should result in a satisfactory contract. The bids submitted were opened July 3d, and found in each case to exceed the appropriation by more than \$5,000. The architects were ordered to modify the plans, and the building committee was authorized to secure bids and let contract for an amount not exceeding the appropriation. Provision was made by the board to meet the expense of heating, lighting, plumbing, and water and sewer connections from the repair and improvement fund. The building committee reported to the board at its August meeting as follows:

"Your committee advertised for bids, and the same were opened August 2d, the bids being as follows:

Maine & McKee	\$ 12,826.00
J. E. Tusant	11,886.00
C. R. Cushman	10,067.75

"The specifications were modified to come within the amount set aside for the president's residence, and the bid of C. R. Cushman for \$10,000, being the lowest and best bid, was accepted. The bond of Mr. Cushman was fixed at \$5,000."

Professor Marston, college engineer, was appointed by the committee local superintendent. The building was constructed under his supervision and to his satisfaction. Final settlement has been made with Mr. Cushman.

The account with the appropriation stands as follows:

PRESIDENT'S RESIDENCE.

RECEIPTS.

Amount of appropriation..... \$ 10 000 00

EXPENDITURES.

Cushman's contract (in part)..... \$ 9,757.75
 Architect's fees..... 287.00
 Advertising and express..... 5.25
 Total..... \$ 10,000.00

The following items have been charged to the improvement fund:

Balance of Cushman's contract..... \$ 342.25
 Extras—Cushman's contract..... 269.45
 Des Moines Plumbing Co contract for heating, plumbing and electric light wiring..... 1,850.00
 Extra—for connecting radiators..... 19.00
 Sewer connections..... 261.35
 Waterworks connections..... 68.35
 Surveying, telephone, and light..... 10.40
 Total..... \$ 2,720.80

This makes the total cost of the president's residence \$12,720.80.

HORSE BARN AND STOCK PAVILION.

The matter of procuring plans and specifications for this building was referred by the board to a special committee consisting of the members of the building committee, the chairman of the farm committee, and Professor Curtiss. The committee employed as architects Liebke, Nourse & Rasmussen, agreeing to pay for the completed plans and specifications 2 per cent of the cost of the work. The first set of bids submitted to the board were rejected because greatly in excess of the appropriation. The second set, based upon revised plans, were as follows:

J. E. Tusant.....\$15,600 00
 W. M. Rich..... 14,909 00
 G. Anderson..... 15,000 00
 W. Starr..... 14,450 00
 C. E. Atkinson..... 13,893 00
 Maine & McKee..... 13,555 00

The bid of Maine & McKee was accepted, the board setting aside in addition to the state appropriation \$3,000 of the annual improvement fund to cover the balance of the Maine & McKee contract and the cost of painting, plumbing, and all other expenses necessary to the completion of the building. The bond of Maine & McKee was fixed at \$9,000. Professor Curtiss was appointed local superintendent. The building has been completed except in a few minor details, for which the sum of \$155.43 has been reserved from the contract price. The following is the summary of the account with the state appropriation.

HORSE BARN AND STOCK PAVILION.

RECEIPTS.

Amount of appropriation.....\$12,000 00

EXPENDITURES.

Maine & McKee, on contract.....\$11 540.00
 Architect's fee..... 288.70
 Advertising for bids..... 24.95
 Electric wiring..... 107.50
 Procuring plans..... 88.80
 Miscellaneous items..... 5 05
 Total.....\$12,000.00

The following items have been charged to the annual improvement fund:

Maine & McKee, on contract.....\$1,889 57
 Main & McKee, extras on contract..... 110 48
 Des Moines Plumbing Co.
 Plumbing, contract..... 600 00
 Extras on boiler connections..... 40 00
 Drainage and water connections..... 34.92
 Lights..... 6.70
 Repairs on gates, windows and doors..... 6.70
 Minor items..... .65
 Total.....\$2,688.97

Adding this sum and the unpaid balance of the Maine & McKee contract to the state appropriation we have as the cost of the completed building \$14,844.40.

STATE APPROPRIATION FOR THE PURCHASE OF PURE BREED STOCK.

By order of the board of trustees, Professor Curtiss and the farm committee have had charge of the expenditure of this appropriation. The account stands as follows:

Amount of appropriation.....	\$10,000.00
Amount expended:	
Paid for stock purchased.....	8,554.00
Freight.....	139.12
Expenditures in purchasing stock.....	367.68
Total.....	\$ 9,060.80
Amount in the state treasurer's hands unexpended.....	939.20
Total.....	\$10,000.00

This concludes the statement of the expenditure of the special appropriations of the Twenty-eighth General Assembly.

STATE PROVIDENTIAL FUND.

By the burning of a portion of the main college building, in December, 1900, several departments were deprived of recitation-rooms and offices, and the botanical department was greatly crippled by the loss of valuable apparatus and collections. In the emergency the college asked aid of the executive council. The state architect made an examination of the main building, and submitted to the board of trustees a written statement of his conclusions, which will be found on page 8 of this report.

Acting along the line of the architect's recommendations the board petitioned the executive council for an appropriation from the state providential (or contingent) fund to temporarily repair the main building. In addition they asked for an amount sufficient to erect a building for the temporary accommodation of the departments deprived of quarters, purchase for them necessary furniture, and render to the botanical department such special assistance as the fund would permit. After a personal inspection of the situation and a conference with the board of trustees, the council made to the board the following appropriations, to be expended on itemized and verified bills, approved by the trustees and also by the council:

For the erection of an economically constructed, flat-roofed wooden building of ten rooms, upon plans to be approved by the council, heating plant being included.....	\$10,408.30
For the repair of the remaining portion of the main building for temporary use.....	3,500.00
For necessary furniture.....	1,800.00
For the botanical department as a nucleus for re-equipment.....	1,200.00
Total.....	\$16,908.30

The council afterwards authorized the board to employ any balance not needed in the second and third items in completing

the recitation-room building. Plans for this building—known as emergency hall—were drawn by Architect Liebbe and approved by the board and the executive council. Bids for its erection were submitted to the board on January 3, 1901. H. W. Schlueter being the lowest bidder was awarded the contract, the building to be completed by February 5th. The contract price was \$8,000, with the proviso that the contractor should forfeit \$100 for every day that the building should remain uncompleted after February 5th, and receive a premium of \$50 for each full day that the building should be completed prior to that date. The amount paid under the contract was \$8,200. Professor Bissell was chosen to represent the board in superintending the erection of the building. He was also given charge of the installation of the heating and lighting plant, and the superintendency of the repairs of the main building, which from the nature of the work could not well be done by contract. The building committee of the board had special charge of the purchase of furniture and a general oversight of the expenditure of the entire appropriation. All bills before payment were signed by the local superintendent, the chairman of the building committee, the auditing committee of the college, and the members of the executive council. The amount and character of the expenditures under this appropriation are shown in the following exhibit:

STATE PROVIDENTIAL FUND APPROPRIATION.

RECEIPTS.	
Amount received from state treasurer.....	\$16,909.58

EXPENDITURES.	
Emergency Hall:	
H. W. Schlueter, contract for erection of building..	\$ 8,200.00
Architect's fees.....	200.00
Advertising for bids.....	6.00
Preparing foundations.....	37.63
Steam heating plant and plumbing.....	2,050.40
Wiring for electrical light.....	64.08
Telephone messages.....	1.80
	\$ 10,559.90

Repairing south wing of main building for temporary use:	
Labor and materials.....	\$ 2,259.99
Steam heating.....	951.05
Electric lights.....	147.79
	\$ 3,358.83
Furniture for recitation rooms, laboratories, and department offices in emergency hall and in main building.....	\$ 1,789.57

Botanical department:	
Remounting damaged specimens.....	223.46
Repairing cases.....	202.94
Laboratory supplies.....	448.49
Microscopes and other necessary apparatus.....	325.11
	1,200.00
Amount returned to state treasurer.....	1.28
Total.....	\$ 16,909.58

(c) ANNUAL REPAIR AND IMPROVEMENT APPROPRIATION.

Prior to the Code of 1897 the state provided for the maintenance of the college-plant at Ames by annual appropriations for repairs and improvements aggregating \$18,500. These appropriations were combined by the Code, section 2674 of which, reads as follows:

"Appropriations.—For the repairs, general improvements, and current expenses of the State College of Agriculture and Mechanic Arts, in its several departments and chairs, and in aid of the income fund, the sum of \$18,500 is annually appropriated out of any money in the state treasury not otherwise appropriated."

It has always been the policy of the trustees to employ this annual fund in keeping the college buildings in repair, in replacing and repairing furniture, and in making such general improvements as the immediate necessities of the case seemed in their judgment to require. There are forty-five buildings on the college-grounds, valued at nearly half a million dollars; and their maintenance and improvement have made demands upon the fund largely in excess of its ability to meet. The account for the last two years stands as follows:

RECEIPTS.

Balance of annual appropriation for year ending June 30, 1899..	\$ 5,987.71
Amount of appropriation for the year ending June 30, 1900.....	18,500.00
Amount of appropriation for the year ending June 30, 1901, drawn from state treasury.....	18,429.99
Total.....	\$ 42,917.70

EXPENDITURES.

Agricultural hall:	
Completing the agricultural museum.....	\$ 334.40
Fire escapes.....	77.83
Repairing office rooms.....	11.75
Basement approaches.....	36.41
Completion of pathological laboratory.....	418.22
Repair of boiler and boiler-house.....	267.30

Extension of heating plant.....	103.13
Office furniture, polishing floors, and other repairs for the horticultural rooms.....	90.78
Office furniture for animal husbandry department.....	28.50
Fitting up agricultural physics room.....	43.67
Fitting up live stock room for hospital, and building storm shed.....	109.87
Fitting up agricultural and horticultural society rooms.....	48.30
General repairs on building.....	62.10
	\$ 1,632.16

Farm buildings and improvements:

Fencing and tiling.....	\$ 1,659.19
Repairs on station cottage.....	214.85
Repairs on cattle barn.....	157.09
Painting farm buildings.....	397.10
Completing new horse barn.....	2,697.82
Barnyard tanks and boxing the same.....	73.12
Repairs on foreman's cottage.....	42.40
Repairs on north bridge.....	24.10
Repairs on farm cottage.....	65.87
Repairs in horse barn, experiment station barn, and wagon and station sheds.....	414.51
Surveys for farm drainage.....	52.98
Repairing barns and hog house, and other general repairs.....	104.71
	\$ 5,908.74

Creamery:

Cream vats.....	\$ 200.47
Buttermilk pipes.....	98.75
Fitting up and repairing farm dairy room.....	146.42
New radiators.....	24.50
Boiler, boiler-room drain, and arch.....	64.79
Test engine and main creamery rooms.....	154.28
Gas machine.....	357.87
Fitting up bacteriological laboratory.....	247.45
Sewer.....	16.15
General repairs.....	126.26
	\$ 1,431.44

Chemical and physical building:

Chemical laboratory repairs and improvements.....	\$ 118.98
Plumbing and sinks in physical department.....	85.09
Blackboard and repair of floor in physical department.....	84.74
General repairs in physical department.....	6.75
General repairs in chemical department.....	14.32
	\$ 304.88

Engineering buildings:

Foundry.....	\$ 65.01
Grease extractors.....	56.95

Shed for locomotive presented by the C. & N. W. Ry.	497.45	
Boiler and setting the same	1,440.36	
Steam hammer	348.81	
Completing hydraulic laboratory	50.95	
Repairs on old pump-house	100.79	
Repairs on power station	25.80	
Cementing west entrance to engineering hall	32.00	
New engineering hall (plans, etc.)	164.24	
General repairs	104.55	
		\$ 2,881.91

Main building:

Recitation-rooms for the department of English	182.05	
Herbarium cases and tables for botany department	117.00	
Lockers, specimens, cases, and repairs for the botany department	162.56	
Hard-wood floor in office of botany department	17.03	
Fuel in winter vacation for botany department	19.25	
Boiler-house roof	385.80	
Mathematical rooms	760.60	
Repairs on roof, gutters, and elevator	54.53	
Grates over areas and storm-sheds	100.90	
Repairs on Welch society room	25.28	
Calceining rooms in main building	105.00	
Sinks and closets in south wing	145.56	
General repairs	111.76	
		\$ 2,187.81

Morrill hall:

Venetian blinds for chapel and library	\$ 246.10	
Repairs on walls	135.65	
Typewriter for department of geology and mining	92.50	
Apparatus for department of mining	53.50	
Gas machine	56.85	
Screens, shelf, tank, and tables for zoology department	237.26	
Repairs of a room for a bindery and library	29.14	
Lockers	7.50	
Fitting up a laboratory for ceramics	605.33	
Storm-windows, pointing keystone, repairs of gutters, and other general repairs	82.57	
Repairs of pipe-organ	33.70	
Library rugs	291.94	
		\$ 1,873.00
Professors' houses		2,659.03

Furniture:

Class-room chairs and tables (including cartage and freight)	\$ 540.00	
Library chairs	76.68	
Margaret hall	193.88	

Furniture for professors' offices	69.50	
Veterinary department desk	50.00	
Domestic economy department	114.23	
Department of English	161.12	
Chapel chairs	87.00	
Department of geology and mining	33.76	
Main building	48.66	
Office of Professor Curtiss	13.50	
		\$ 1,383.43

Horticultural department:

Greenhouse repairs, center bench, table, and glazing roof	247.42	
Foreman's house	133.93	
New horticultural building	166.36	
		\$ 547.71

Margaret hall:

Decorating walls of reception room	\$ 39.75	
Preceptress' room	176.98	
Plastering kitchen and servants' hall	78.40	
General repairs	214.60	
		\$ 509.73

College hospital:

Remodeling building	\$ 1,788.90	
Plumbing and gas-fitting	549.00	
Gas machine and fixtures	513.86	
Furnaces	365.00	
Furniture	187.90	
Miscellaneous repairs	16.91	
		\$ 3,421.57

Veterinary department:

Dissecting tables (2)	\$ 32.75	
Counter and shelves	18.75	
General repairs	41.98	
		\$ 93.48

Fire station:

Extinguisher and apparatus	\$ 175.24	
General repairs and expenses	17.31	
		\$ 192.55
Maintenance of sewage disposal plant	602.56	
Maintenance and extension of sewer	894.71	
Hydrant boxes	33.70	
Repair and improvements of music hall	208.89	
Experimentation	1,550.04	

Fire and lights repairs	2,358.52
Heating, plumbing, water connections, and sewer for president's residence	2,720.80
President's barn	500.00
Installation of clock and minor repairs on tower	94.64
Lighting plant extension	2,835.50
Survey of campus residence lots	93.44
Campus maps	10.80
Office building repairs	23.95
Cottage repairs	98.62
Papering, painting, extending electric lights, and general repairs of house rented to Faculty club	128.49
Salary of J. F. Cavell, custodian of buildings	700.00
Wages of college carpenter	275.00
Emergency hall, curtains and general repairs	67.14
Boiler insurance	288.00
Purchase of houses used as detention hospitals	503.89
Watchman's clock	39.89
Telephone repairs	26.15
Account books, stationery, stamps, and other minor repair fund expenses	68.55
Total	\$42,910.70

There is an unexpended balance of the fund for last year in the state treasurer's hands of \$77.01, which, added to the annual appropriation, makes the amount available for the present fiscal year \$18,577.01. Of this amount the following sums have already been set aside by the trustees for the purposes specified below:

Unpaid bills	\$ 255.00
Balance due on contract for erection of horse barn and stock pavilion	155.43
Fixtures for mathematical recitation-room	100.00
Repairs on east boarding cottage	300.00
Mechanical department repairs	45.00
Fire escapes on Margaret hall	100.00
Painting, electric light fixtures, screens and cistern for president's residence	258.00
Salary of custodian of buildings	600.00
Repairs on heating, lighting, and water supply plants	750.00
Maintenance of sewage disposal system	350.00
Sewer maintenance	50.00
Wages of college carpenter, repair and purchase of furniture, and minor current repairs on college buildings (estimated)	1,700.00
Horticultural laboratory in connection with greenhouses	6,000.00
Plastering cheese curing room at creamery	50.00

Creamery boiler and setting the same	600.00
Repair of Creamery engine	100.00
Minor creamery repairs	75.00
Farm fencing	250.00
Enlarging sheep barn	325.00
Repairing north farm bridge	210.00
Grading down, leveling and seeding college gravel pit	100.00
Partition in director's office	30.00
Repairs on farm house cistern	25.00
Filing cases for president's office	75.00
Typewriter for secretary's office	65.00
Library shelves \$15; repairing flag pole \$20	35.00
Bookcase for department of English	14.00
Painting water tank and tower	525.00
Total appropriated	\$13,142.43

This leaves of the fund an unappropriated balance of \$5,434.58. The board referred to the building committee the following additional items, with power to act but with instructions to reserve \$3,000 subject to the future orders of the board:

Painting greenhouse	\$ 275.00
Rearrangement of rooms in veterinary hospital	75.00
Veterinary museum repairs	75.00
Stall for dental operations, veterinary hospital	50.00
Piping and foundation for machinery, mechanical engineering department	200.00
Floor in machine shop	100.00
Stairs in machine shop	75.00
Herbarium cases for botanical department	280.00
Lockers for zoological laboratory	100.00
Farm cottage repairs	55.00
Varnishing floors in Margaret hall	50.00
Telephone for domestic economy department	30.00
Repairs on south hall	45.00
Plastering ceiling in boiler-room of Margaret hall	15.00
Repairs on Morrill hall	300.00
Various repairs recommended by the custodian of buildings	530.00
Additional fire extinguishers	300.00
Lighting and heating bulletin room; vestibule for treasurer's office	40.00
Repairs on book department building	75.00
Gas machine for department of domestic economy	550.00
Total	\$3,170.00

The following items, many of which were considered urgent, were listed for future action:

Fitting up additional rooms for agricultural chemistry	\$1,500.00
Addition to veterinary hospital	500.00
Locomotive test plant	500.00

Equipment for astronomical observations in civil engineering department.....	800.00
Barn for horticultural department.....	2,500.00
Fitting up rooms for physical laboratory work-shop.....	500.00
Electric light extension to professor's residences.....	300.00
Extension of sewage disposal plant.....	1,000.00
Total.....	\$7,600.00

It will be noticed that the entire list of needed repairs and improvements largely exceeds the amount available.

The needs of the college, in the line of buildings and improvements, requiring legislative action, are fully set forth in the report of President Beardshear.

III. THE EXPERIMENT STATION FUND.

The experiment station receives from the national government an annual fund of \$15,000 for its maintenance and support. The scope of its work is outlined in the national law as follows:

"It shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage-plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective states or territories."

While the experiment station is a department of the college and as such is under the general control of the board of trustees, its immediate management is in the hands of a director and a board of direction. The rules of the trustees governing the station, as lately revised, are as follows:

1. The president of the college, the director of the station, and the heads of the sections of agriculture, horticulture, agricultural chemistry, entomology, botany, veterinary science, animal husbandry, and dairying, shall constitute a board of direction.

The director shall be the executive officer of the station.

The board of direction shall hold semi-annual meetings two weeks previous to the June and December meetings of the board of trustees.

Other meetings may be held at the call of the director of the station or the president of the college.

2. The working staff of the station shall consist of the director of the station and the professors or the heads of the sections of agriculture, horticulture, agricultural chemistry, entomology, botany, veterinary science, animal husbandry, dairying, and their assistants.

3. Competent assistants shall be employed in such sections of the station as require them, and when employed shall be under the control and direction of the head of the section to which they are respectively assigned. It shall be their duty to carry on the work assigned to them in the said section, and they shall receive due credit in the bulletin for the same.

4. The plan of experimentation devised by the heads of sections and their working staff, and the estimated expense of conducting the same, shall be submitted to the director of the experiment station at least one week previous to the June meeting of the board of direction. The heads of the various sections of the station shall also at the same time submit to the director of the experiment station an outline of all experimental work contemplated during the ensuing year, together with an estimate of the funds necessary to carry on such work, the assistants or help necessary for conducting the work, and the compensation for the same. In cases of emergency or when desirable to take up additional work during the year, the head of the section wishing to take up such work shall consult with the director and present an outline and the expense of such additional work, for approval.

5. If, in the judgment of the director of the station, the funds, or any part of the funds, appropriated to any section are not needed for work contemplated or are not being properly used, the director may refer the matter to the agricultural committee of the board for reapportionment of such funds.

6. It shall be the duty of the heads of sections to recommend to the director of the experiment station, one week previous to the June meeting of the board of trustees, the number of assistants needed in his section, their compensation, and to recommend candidates for the position.

7. When it becomes necessary for any section of the station to have any additional scientific assistants, or in case of vacancies, and the work of the station may be delayed by waiting for the regular meeting of the board of trustees, such assistants may be selected by a committee consisting of the president of the college, the director of the station, and the head of the section for which such additional help is asked, their selection to be submitted to the board of trustees at its next meeting.

8. The director of the experiment station shall submit to the board of trustees through the president of the college, at its annual meeting in June, an outline of the experimental work to be conducted by the several sections of the experiment station during the ensuing year, and an estimate of the expense for the work of each section, and the general and incidental expenses, the number of assistants to be employed in each section, and the compensation for each. The director shall also report to the board of trustees all recommendations of the station board of direction and all other matters of direct interest concerning the work of the experiment station.

9. The several sections of the station shall report the condition of experimental work in progress when called upon by the director of the sta-

tion or the board of direction, and shall submit to the director of the station and the board of direction reports of such investigations, when finished, for publication in the station bulletins. These bulletins shall be published quarterly or oftener. Such reports of experiment station investigations shall be confined to original research matter, except in such cases as the director may see fit to make exceptions; but all material before being used in the bulletin shall be read before the board of direction for its approval.

10. The duties of the director shall be advisory and executive. It shall be his duty to examine the work of each section so as to be advised personally of the character of the work done and in progress, and to revise and arrange such details as will make the whole experimental work uniform and conducive to the best results in experimental agriculture; and, where two or more sections are at work jointly upon experiments or investigations, it shall be his duty to see that they work in harmony, and in case of any disputes he shall be the final arbiter. He shall have charge of and conduct the general correspondence of the station, see to the publication and distribution of the bulletins, and perform such other duties as shall be assigned by the board of trustees. The director of the station shall approve and audit all bills to be paid from station funds. All action taken by the director of the station or the board of direction relating to the work and management of the experiment station shall be subject to the approval of the president of the college and the board of trustees.

11. The experimental station shall use such land as shall be assigned to it by the board of trustees for experimental work.

12. The board of trustees or the professor of agriculture shall assign such farm tools, machinery, stock, materials, labor, and teams for the use of the station as he may be able to do, without interfering with the college work in his department.

13. The station library shall not be fitted up or equipped with station funds except by special vote of the board of trustees, but all purchase of books or periodicals for station use shall be purchased in the usual way, through the college library.

The expenditure of the station fund is subject to the most stringent regulation by the national law. No portion of it can be used for educational purposes; it must be kept entirely separate from all other funds and accounted for by detailed report to the agricultural department at Washington. The following is a summary of these reports for the biennial period:

IOWA AGRICULTURAL COLLEGE EXPERIMENT STATION,
In account with the United States appropriation, 1899-1900:

DR.

To receipts from the treasurer of the United States as per appropriation for the biennial period ending June 30, 1901, as per act of congress, approved March 2, 1887..... \$30,000.00

CR.	For fiscal year 1899-1900.	For fiscal year 1900-1901.
By salaries.....	\$ 8,181.96	\$ 7,491.83
Labor.....	2,318.71	2,210.36
Publications.....	1,471.18	1,127.75
Postage and stationery.....	422.64	454.73
Freight and express.....	238.12	361.98
Heat, light and water.....	288.24	511.92
Chemical supplies.....	338.75	291.23
Seeds, plants and sundry supplies.....	565.69	505.73
Fertilizers.....	2.10
Feeding stuffs.....	521.80	536.11
Library.....	4.05	15.62
Tools, implements, and machinery.....	65.65	248.47
Furniture and fixtures.....	72.65	109.13
Scientific apparatus.....	305.96	539.39
Live stock.....	104.95	534.85
Traveling expenses.....	37.82	32.23
Contingent expenses.....	26.25	10.00
Buildings and repairs.....	33.48	93.68
Total.....	\$15,000.00	\$15,000.00

The income of the station from sales during the past two years has been as follows:

For the year ending June 30, 1900.....	\$2,829.67
For the year ending June 30, 1901.....	2,476.49
Total.....	\$5,306.16

This income is used for the same purposes as the appropriation but by a ruling of the agricultural department is not included in the report to the national government. While the appropriation itself must be entirely expended each year the income from sales is not subject to this restriction. The balance to the credit of this portion of the fund at the close of the biennial period was \$53.59.

During the past two years the board has aided the work of the station by an appropriation from the state improvement fund of \$1,550. For the coming year it has placed an emergency fund of \$1,000 at the disposal of the professor of agriculture to be used at his discretion in the station or in other lines of agricultural work. This is in addition to the regular appropriations to the agricultural department. The government fund for the year has been divided as follows:

1. Salaries of station staff.....	\$ 5,025.00
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2. Salaries of assistants:		
Assistant in agricultural section.....	\$	200.00
Assistant in botanical section.....		300.00
Assistant in chemical section.....		400.00
Assistant in dairy section.....		400.00
Assistant in entomological section.....		400.00
Assistant in horticultural section.....		400.00
		<hr/>
3. Bulletins, for printing and distribution.....	\$	2,100.00
4. Appropriations for sections:		1,500.00
Agricultural section (including building fund, repairs, and improvements).....	\$	2,390.00
Botanical section.....		250.00
Chemical section.....		600.00
Dairy section.....		500.00
Entomological section.....		275.00
Horticultural section.....		625.00
Veterinary section.....		500.00
		<hr/>
5. General expenses.....	\$	5,140.00
6. Artist.....		500.00
7. Stenographer.....		375.00
		360.00
		<hr/>
Total.....	\$	15,000.00

The experiment stations are inspected each year by a government inspector. In his report he gives the one at Ames high credit for the work it has done and the care with which it has handled its funds. While the high character of the work of the station merits this commendation and has received general recognition, the value of its service to the state would be greatly enhanced if it were supplied with the means sufficient to widen the scope of its investigations and thus meet more fully the demands of the agricultural interests. To this end the board asks the legislature to supplement the government appropriation by placing at the disposal of the station an additional annual fund of \$25,000.

IV. THE COLLEGE SUPPORT FUNDS.

It should be borne in mind that the experiment station fund cannot, under the national law, be used for educational purposes. It constitutes no part of the support fund of the educational departments of the institution. Neither is the state appropriation for repairs and improvements logically a part of that fund.

The educational departments may be considered as deriving their support wholly from the following sources:

1. Interest on national endowment fund.

2. Annual appropriation by national government.
3. Annual appropriation by the state.

The income from these sources during the past two years has been as follows:

	Income 1899-1900	Income 1900-1901
Interest on endowment fund.....	\$ 41,819.27	\$ 43,801.05
Morrill fund.....	25,000.00	25,000.00
State fund.....		25,000.00
	<hr/>	<hr/>
Totals.....	\$ 66,819.27	\$ 93,801.05

The expenditures for instruction and administration, current expenses, equipment of the departments, and general college expenses for the fiscal year ending June 30, 1900, were as follows:

SUPPORT FUND EXPENDITURES 1899-1900.

Instruction and administration:

Salaries charged to salary roll.....	\$ 35,917.56
Salaries of assistants charged to department accounts.....	15,028.54
	<hr/>
	\$ 50,946.10

Current expenses and equipment of departments:

Agriculture, including credit for the purchase of exhibition stock.....	\$ 2,688.18
Creamery.....	918.13
Dairy.....	168.51
Horticulture.....	1,495.74
Veterinary science.....	341.71
Mechanical engineering.....	999.06
Civil engineering.....	1,349.66
Physics and electrical engineering.....	1,408.51
Mining engineering.....	299.97
Geology.....	200.00
Military science.....	107.75
Agricultural chemistry.....	526.11
English and rhetoric.....	200.00
Chemistry.....	447.40
Zoology.....	289.88
Pathology.....	49.72
Histology.....	2.30
Botany.....	849.88
Mathematics and secretary's office.....	96.49
Political economy.....	65.73
Domestic economy.....	291.28
Music.....	380.81
Library.....	1,555.29
	<hr/>
	\$ 14,183.11

General expenses:

Sabbath services.....	\$ 445.76
Public grounds.....	1,125.85
Public rooms—heating, lighting, and janitor service.....	64.75
Tower clock.....	1,305.00
Contingent expenses.....	6,963.59
	<u>\$ 9,904.95</u>
Total.....	\$ 75,084.16

It will be noticed that the expenditures exceeded the income for this year by \$8,214.89, thus reducing the cash balance to the credit of the support funds from \$10,709.87 to \$2,494.98.

The expenditures for the fiscal year ending June 30, 1901, chargeable to the support funds were as follows:

SUPPORT FUND EXPENDITURES 1900-1901.

Instruction and administration:

Salaries charged to salary roll.....	\$ 42,188.11
Salaries of assistants charged to department accounts.....	17,557.34
	<u>\$ 59,745.45</u>

Current expenses and equipment of departments:

Agriculture, including credit for purchase of exhibition stock.....	\$ 2,223.74
Creamery.....	990.94
Dairy.....	221.01
Horticulture.....	1,027.99
Veterinary science.....	304.32
Mechanical engineering.....	1,200.00
Civil engineering.....	1,397.65
Physics and electrical engineering.....	1,498.50
Mining engineering.....	399.94
Geology.....	199.53
Military science.....	99.96
Agricultural chemistry.....	486.78
English and rhetoric.....	299.77
Chemistry.....	430.71
Zoology.....	399.18
Pathology.....	48.70
Histology.....	45.47
Botany.....	521.94
Mathematics and secretary's office.....	147.03
Domestic economy.....	283.70
Music.....	83.56
Library.....	1,947.42
	<u>14,357.83</u>

General expenses:

Sabbath services.....	416.75
Public grounds.....	1,276.83
Public rooms—heating, lighting, and janitor service.....	4,016.05
Contingent expense.....	6,499.28
	<u>12,208.91</u>
Total.....	\$ 86,162.19

The cash account of the support funds for this year shows as follows:

	CR.	
Balance at the beginning of the year.....	\$ 2,494.98	
Sale notes belonging to the fund, paid.....	211.47	
Loan to farm for purchasing stock, paid.....	629.65	
		<u>3,336.10</u>
Income from national and state sources.....		93,801.05
Total.....	\$ 97,170.15	
	DR.	
Expenditures as shown above.....	86,162.19	
Balance of support fund on hand.....	11,007.96	
Total.....	\$ 97,170.15	

Bills for the compendiums and catalogue for last year, as yet unpaid, amounting to \$2,298.15 will reduce the available balance to \$8,709.81.

The income for this year was much above normal for the reason that it included a considerable amount of delinquent interest. With more than \$500,000 loaned there is now only about \$1,000 of interest due and unpaid. This is the least amount ever reported. The receipts for the past year under normal conditions would have been about \$89,000. If all interest falling due during the coming year is paid, the income will be in the neighborhood of \$88,000. Granting that it will be safe to reduce the working balance to \$3,000, there will be about \$94,000 available to meet the year's expenses.

The budget for the year as fixed by the board is as follows:

APPROPRIATIONS FOR 1901-1902. FROM SUPPORT FUNDS.

Instruction and administration:	
Salaries chargeable on salary roll.....	\$ 45,458.32
Salaries to be charged to department accounts.....	19,705.00
	<u>65,163.32</u>
Department expenses and equipment:	
Agriculture.....	2,100.00
Emergency fund to be used in station or agriculture at the discretion of the professor of agriculture.....	1,000.00

Dairy.....	180.00	
Creamery.....	\$ 1,000.00	
Horticulture.....	1,150.00	
Veterinary science.....	500.00	
Mechanical engineering.....	1,200.00	
Civil engineering.....	1,800.00	
Physics and electrical engineering.....	1,200.00	
Mining engineering.....	500.00	
Geology.....	200.00	
Military tactics.....	100.00	
Agricultural chemistry.....	500.00	
English.....	400.00	
General chemistry.....	500.00	
Zoology.....	400.00	
Botany.....	525.00	
Mathematics and secretary's office.....	200.00	
Political economy.....	75.00	
Domestic economy.....	300.00	
Music.....	125.00	
Library.....	1,950.00	
		\$ 16,005.00
General expenses:		
Sabbath services.....	450.00	
Public grounds.....	1,400.00	
Public rooms—heating, lighting, and janitor service.....	4,000.00	
Contingent expense:		
President's private secretary.....	\$ 840.00	
Clerk hire in president's office.....	400.00	
Catalogues and compendiums.....	1,100.00	
Advertising.....	200.00	
Stationery, printing, and postage.....	2,000.00	
Telephone service.....	80.00	
Ringing chimes.....	100.00	
Mail service.....	270.00	
Proctors.....	320.00	
Preceptress fund.....	150.00	
Clerk's for treasurer's office.....	600.00	
Emergency fund.....	150.00	
Advertising in "Student".....	50.00	
Advertising in "Bomb".....	50.00	
Advertising in the "Iowa Engineer".....	50.00	
Commencement address.....	100.00	
Agricultural college association fee.....	10.00	
Institute fund.....	50.00	
Commencement expenses.....	20.00	
Department of history.....	50.00	
Insuring treasurer's safe and balances.....	9.00	

Stationery for Professor Budd.....	15.00	
Excursions to college.....	200.00	
Total.....	\$ 6,814.00	\$ 12,664.00
Total appropriated.....		\$ 93,892.32

The salary roll as fixed for the coming year is as follows:

W. M. Beardshear, president.....	\$ 4,350.00
E. W. Stanton, mathematics and economic science, secretary of the board of trustees.....	2,400.00
J. R. Lincoln, military science.....	1,000.00
A. A. Bennett, chemistry.....	1,800.00
L. H. Pammel, botany, station botanist.....	2,000.00
G. W. Bissell, mechanical engineering.....	1,700.00
A. Marston, civil engineering, college engineer.....	2,000.00
J. B. Weems, agricultural chemistry, station chemist.....	1,600.00
C. F. Curtiss, agriculture, director of experiment station.....	3,000.00
Miss Lizzie May Allis, French and German.....	1,200.00
L. B. Spinney, physics and electrical engineering.....	1,500.00
W. J. Kennedy, animal husbandry.....	2,000.00
S. W. Beyer, geology and mining engineering.....	1,700.00
A. B. Noble, rhetoric and English literature.....	1,600.00
H. E. Summers, zoology, station entomologist.....	1,600.00
A. M. Newens, elocution and public speaking.....	1,200.00
J. J. Repp, pathology and therapeutics.....	1,200.00
G. L. McKay, dairying.....	1,800.00
O. H. Cessna, history and ethics.....	1,850.00
L. H. Klein, veterinary medicine and sanitary science, physiology.....	1,200.00
J. N. McNeill, anatomy, and principles and practice of surgery.....	1,200.00
Miss Mary A. Sabin, domestic economy.....	1,200.00
H. C. Price, horticulture, station horticulturist.....	2,000.00
W. H. Meeker, mechanical engineering.....	1,600.00
C. W. J. Neville, civil engineering.....	1,200.00
B. S. Lanphear, physics and electrical engineering.....	1,400.00
Mrs. M. H. Kilbourne, preceptress.....	900.00
Dr. W. E. Harriman, college physician.....	1,100.00
Miss Maria M. Roberts, mathematics.....	1,000.00
Jas. Atkinson, agriculture and experiment station.....	1,000.00
H. Knapp, college treasurer and recorder, and station treasurer.....	1,250.00
Total salaries on salary roll.....	\$50,550.00

Of this amount \$5,025 are charged to the experiment station, including \$800 of the salary of Director Curtiss; \$600 each of the salaries of Professors Weems, Repp, and Atkinson; \$900 of the salary of Professor Kennedy; \$675 of the salary of Professor Price; and \$250 of the salary of Professor Knapp.

Houses on the college grounds are occupied by President

Beardshear and Professors Curtiss, Noble, Summers, Stanton, Weems, Marston, Bissell, McKay, Atkinson, and Edgerton. Their annual rental is considered by the board to be equivalent, on the average, to \$200.

It will be noticed that the aggregate of the salary list differs somewhat from the salary appropriation for the fiscal year. This is due to the fact that the salary year begins September 1st, and changes made do not, in general, go into effect until that time; while the salary appropriation runs for the year beginning July 1st.

The following is a list of instructors and assistants for the ensuing year, with the salary of each, and the fund from which it is paid.

	Experiment Station.	Support Funds.	Total
J. J. Edgerton, farm foreman.....		\$ 900.00	\$ 900.00
F.R. Marshall, assistant in animal husbandry \$	200.00	200.00	400.00
———dairy, dairy section of station.....	400.00	400.00	800.00
A. T. Erwin, assistant in horticulture.....		800.00	800.00
Al. Deubendorfer, gardener.....		600.00	600.00
W. L. Johnson, house surgeon.....		200.00	200.00
Carl W. Gay, assistant in veterinary science		600.00	600.00
T. Lennox, assistant in mechanical engineering.....	1,080.00	1,080.00	
E. C. Potter, assistant in mechanical engineering.....		810.00	810.00
E. C. Boutelle, assistant in mechanical engineering.....		765.00	765.00
W. M. Wilson, assistant in mechanical drawing.....		500.00	500.00
Miss Elmina Wilson, assistant in civil engineering.....		800.00	800.00
E. B. Tuttle, assistant in physics and electrical engineering.....		300.00	300.00
L. E. Young, assistant in geology and mining engineering.....		900.00	900.00
I. A. Williams, assistant in geology and mining engineering.....		700.00	700.00
C. E. Gray, assistant in agricultural chemistry.....		400.00	400.00
Miss Bessie Larrabee, assistant in English..		650.00	650.00
Miss Elizabeth Maclean, assistant in English		650.00	650.00
Miss Ida Simonson, assistant in English....		650.00	650.00
Miss Helen Reed, assistant in English.....		600.00	600.00
Miss Lola Placeway, assistant in chemistry		650.00	650.00
Miss Hazel Beardshear, assistant in chemistry.....		400.00	400.00
Miss Grace Norton, assistant in French and German.....		600.00	600.00

	Experiment Station.	Support Funds.	Total
E. A. Pattengill, assistants in mathematics.		800.00	800.00
Miss Julia T. Colpitts, assistant in mathematics.....		800.00	800.00
Miss Annie W. Fleming, assistant in secretary's office.....		600.00	600.00
Miss Sarah Ellis, assistant in domestic economy.....		600.00	600.00
Miss Alice Hess, assistant in domestic economy.....		300.00	300.00
F. J. Resler, director of music.....		500.00	500.00
Mrs. J. Resler, instructor in instrumental music.....		100.00	100.00
Miss Vina E. Clark, librarian.....		725.00	725.00
Miss Olive Stevens, assistant in library....		375.00	375.00
W. W. Otto, assistant in library.....		100.00	100.00
W. T. Shaw, assistant in zoology.....		300.00	300.00
Miss A. E. Paddock, assistant in botany....		350.00	350.00
W. T. Shaw, assistant in entomological section of station.....	400.00		400.00
E. E. Little, assistant in horticultural section of station.....		400.00	400.00
Miss Charlotte M. King, artist for station..		375.00	375.00
———, assistant in botany section of station.....		300.00	300.00
C. E. Ellis.....		400.00	400.00
Totals.....	\$ 2,475.00	\$ 19,705.00	\$ 22,180.00

The following is a summary of the expenditures on account of the support funds for the biennial period, together with the appropriations for the present fiscal year:

	Expenditures for 1899-1902.	Expenditures for 1901-1901.	Appropriations for 1901-1902.
Salaries.....	\$50,046.10	\$50,695.45	\$85,163.32
Department expenses.....	14,183.11	14,257.83	16,005.00
General expenses.....	9,904.95	12,208.91	12,664.00
Totals.....	\$75,034.16	\$86,162.19	\$93,832.32

V. MISCELLANEOUS SOURCES OF INCOME.

The college has received under this head the following sums during the biennial period:

Rental of rooms in college dormitories.....	\$5,703.83
Diploma fees.....	761.43
Rental on donated land.....	67.20
Agricultural scholarship fund.....	200.00
Total.....	\$6,732.46

The following exhibits show how these sums, together with the balances on hand at the beginning of the biennial period, are accounted for:

ROOM RENT.	
RECEIPTS.	
Balance at the beginning of the fiscal period.....	\$ 1,471.22
Received from students and others.....	5,703.89
Total.....	\$ 7,175.05

EXPENDITURES.	
Wages of college carpenter making current repairs upon student dormitories.....	\$ 279.70
Repairs upon rooms in office building and creamery dormitories.....	96.48
Cottage dormitories, repairs.....	313.73
Metal ceiling and painting side walls of student dining room.....	861.00
Heating and lighting dining room and servants' hall....	470.92
Repairs and furniture for Margaret hall dormitory.....	400.35
Furniture for rooms in main building dormitory.....	790.79
Repairs in main building.....	569.84
Expenses in student hospital during typhoid fever epidemic.....	3,339.81
Total.....	\$7,122.62
Balance on hand.....	52.43
	\$7,175.05

DIPLOMA FUND.

RECEIPTS.	
Balance at the beginning of the fiscal period.....	\$ 1,088.68
Received from \$5.00 fee charged graduates.....	761.43
Total.....	\$ 1,850.11

EXPENDITURES

Expense of diplomas.....	\$ 245.17
Record cards.....	181.45
Expenses of keeping student records.....	178.10
Programs of student exercises.....	17.25
Classification cards.....	38.25
Cabinet for student records.....	37.50
Class books, stamps, and express.....	11.44
Expenses in student hospital during typhoid fever epidemic.....	957.15
Total.....	\$ 1,666.31
Balance on hand.....	183.80
	\$1,850.11

A statement of the reason why some of the hospital expenses were charged to these accounts is made further on in this report under the head of college hospital.

DONATION FUND.	
Balance at the beginning of the biennial period.....	\$ 60.88
Rent collected.....	67.20
Balance on hand (no expenditures).....	\$ 128.08

AGRICULTURAL SCHOLARSHIP FUND.

The \$200 credited to this fund comes from the Clay, Robinson Co. prizes won by the agricultural department at the Chicago fat stock show in the fall of 1900.

VI. STEWARD'S ACCOUNTS.

The accounts of the steward's departments are kept separate from those of the college proper for the reason that neither state nor national funds are involved.

All the expenses of this department are paid from its receipts and the board acts simply as a trustee in the management of its affairs.

THE BOARDING DEPARTMENT.

Mr. J. F. Cavell is employed by the board as steward in this department. Since he also acts as custodian of buildings, his salary of \$1,200 is equally divided between the boarding accounts and the building fund. The college treasurer, under the orders of the board, makes all collections and pays all bills, such bills having first been passed upon by the college board of audit. A standing committee of the board of trustees has general oversight of the department, and its accounts are thoroughly examined by the board at the close of each fiscal year. The receipts and disbursements during the biennial period are as follows:

RECEIPTS.		
Cash balance on hand at the beginning of biennial period.....	\$	535.63
Receipts from students and others, 1899-1900.....	\$ 31,805.14	
Receipts from students and others, 1900-1901.....	25,795.66	57,000.80
Total.....		\$ 58,136.43

DISBURSEMENTS.

Paid for labor and supplies, 1899-1900.....	\$ 32,334.11
Paid for labor and supplies, 1900-1901.....	25,810.28
	<hr/>
Cash balance on hand.....	\$ 58,134.89
	2.04
Total.....	\$ 58,136.43

The present financial condition of the department is shown in the following statement:

Unpaid bills.....	\$ 1,138.04
Cash on hand.....	\$ 16.66
Accounts collectible.....	153.77
Inventory of supplies.....	347.28
	<hr/>
	\$ 417.71

Debit balance.....	\$ 720.33
--------------------	-----------

The following are the department balances at the close of each of the last three fiscal years:

1899 credit balance.....	\$ 1,231.67
1900 credit balance.....	127.40
1901 debit balance.....	720.33

Owing to the erection of private boarding houses adjacent to the college-grounds, the number of students boarding in the college dining-hall has been materially decreased during the past year, leading to a reduction of the income of the department, as will be noticed in the report, of about \$6,500. This decrease in patronage, together with a marked increase in the cost of supplies, accounts for the unfavorable balance at the close of the year. The trustees, having decided that under the present conditions first class table-board cannot be furnished at \$2.25 per week, fixed the price for the coming school year at \$2.75 per week, with a charge of twenty-five cents for single meals. After due consideration it was announced as the policy of the board that no concession to private parties to establish lunch-counters upon the college-grounds would be granted, but that the board viewed with favor the movement to furnish, outside of the grounds, facilities for rooming and boarding students. With the increase in the price of table-board, the cost to the student entering college of board, fires, lights, laundry, books, and incidentals may still be limited to \$175 for the school-year of thirty-three weeks.

DEPARTMENT OF FIRES, LIGHTS, AND INCIDENTALS.

This department has the following sources of income:

(a) Every student whether boarding in the college dormitories or not pays to the fires and lights fund the sum of \$5 per term.

(b) An additional charge of fifty-five cents per week is made against all students rooming in the main building or Margaret hall; while students having rooms in the creamery building or the boarding cottages pay forty cents per week.

(c) A small profit is made on coal furnished parties living on the college campus.

Any deficit at the end of the year is charged to the college support fund and is considered as a fair equivalent for heating, lighting, and care of the public rooms.

The receipts and expenditures for the past two years are as follows:

RECEIPTS.

Receipts from students and others 1899-1900.....	\$ 15,954.97	
Receipts from students and others 1900-1901.....	15,910.11	
	<hr/>	\$ 31,865.09
Paid by college support fund 1899-1900.....	64.75	
Paid by college support fund 1900-1901.....	4,016.05	4,080.80
Total receipts.....		\$ 35,945.88

EXPENDITURES.

Paid for supplies and labor 1899-1900.....	\$ 16,019.72
Paid for supplies and labor 1900-1901.....	19,926.16
Total expenditures.....	\$ 35,945.88

The expenditures for the past year can be itemized as follows:

Janitor service.....	\$ 4,238.94
Heating service.....	8,196.58
Lighting service.....	2,284.64
Water and plumbing service.....	2,302.97
Service for other departments afterwards paid by them.....	2,478.61
Office work.....	429.43
Total.....	\$ 19,926.16

It will be noticed that the cost to the college of heating and lighting the public rooms was much greater the second year than the first. This is largely due to the change in the school year of the college by which the long vacation, formerly coming in the winter, now comes in the summer.

THE COLLEGE HOSPITAL.

The college hospital was established in 1885. It was organized upon a self-supporting basis, the entire cost of its maintenance being paid from the proceeds of a hospital fee charged

college students. This fee at first was sixty cents per term for each student, but as the service was improved the charge was advanced to \$1.25. The fee insured to each student, taken sick while attending college, free nursing and expert medical attendance. For many years the income received proved sufficient to meet all expenses, and upon the basis of long experience the board felt warranted in making the pledge to the student as to care during sickness, a very strong and distinct one.

In the compendium of 1900 it was promised that the student paying the hospital fee would be taken care of free of personal expense however much he might be ill. It was under this pledge that the college encountered in the fall of 1900 the typhoid fever epidemic, caused by an infected milk supply. The fund was found insufficient to meet the extraordinary expenses of this sickness, and in the emergency a portion of such expense was charged as already shown to the funds received from students for diplomas and for the rent of rooms. A number of bills are yet unpaid, but under conservative management these can all be met from the student funds during the coming year. No state or national funds have been used to meet these hospital expenses. The account with the hospital itself for the two years stands as follows:

COLLEGE HOSPITAL FUND.

RECEIPTS.

Balance on hand July 1, 1899.....		\$ 156.44
Received from students 1899-1900.....	\$1,225.40	
Received from students 1900-1901.....	2,388.45	3,618.85
Total.....		\$3,770.29

DISBURSEMENTS.

Paid for medical attendance, labor and supplies.....	\$1,240.12
Paid for medical attendance, labor and supplies.....	2,079.63
Cash balance on hand July 1, 1901.....	450.54
Total.....	\$ 3,770.29

In order to better provide for the accommodation of sick students, and at the same time insure that the expenses of their care shall not exceed the income derived from the fees charged, the board at its meeting in 1900 adopted the following rules for the government of the hospital:

1. The hospital fee for the term is fixed at \$2.00, and is required of all students living in college buildings.

2. Students entering the hospital shall be charged \$3 per week for board, fires, and lights. No other charge on these accounts shall be made by the college during the time the student is in the hospital.

3. For any time in excess of three consecutive weeks per term spent in the hospital, an additional charge above that mentioned shall be made of \$4 per week.

4. In case a special nurse or physician is employed, the expenses shall be borne by the particular patient. The selection of such physician or nurse shall be approved by the college physician.

5. Students not making the hospital deposit will be admitted to all the privileges of the hospital allowed students making the deposit upon the basis of a charge of \$10 per week.

6. The college physician is authorized to exclude from the college dormitories and recitation rooms any person afflicted with a contagious disease.

7. The privileges of the hospital shall not be extended to cases of smallpox.

8. The college assumes no responsibility whatever, and the hospital fee of \$2.50 does not provide for medical attendance, nurses, medicine, or other expenses incurred in treating or caring for students afflicted with smallpox.

9. The charges named are based upon the probable actual cost of medical attendance and hospital service, and the fund created will be carefully devoted to those purposes. The college will not assume any liability beyond the extent of the fund so created.

10. The privileges of the hospital are extended to students not rooming in the college buildings, provided (1), that no calls shall be made by the physician at their residence, and (2) that the usual hospital fee is paid within the first ten days of the term.

The hospital building is neat, commodious, and well located. It is heated by furnaces, lighted by gas, and has perfect sanitary plumbing. The hospital is under the charge of the college physician, Dr. W. E. Harriman, assisted by a professional nurse and a competent housekeeper. It has proven a great blessing to the student body in the past and as now organized promises even better results for the future.

OTHER STEWARD ACCOUNTS.

The remaining accounts of the steward's department may be summarized as follows:

	Old Balance.	Receipts.	Expenditures.	Present Balance.
Damages.....	\$293.14	\$185.20	\$ 75.00	\$403.34
Piano rent.....	41.20	284.25	324.45	1.00
Elocution fees.....	75.55	200.23	269.78	6.00

Total balances..... \$410.34

If to this there is added:

Boarding department balance..... \$ 2.04

College hospital balance.....	450.54
We have as the total balance to the credit of the steward's department funds.....	\$862.92

VII. ACCOUNT WITH THE COLLEGE TREASURER.

The college treasurer keeps three separate ledgers devoted respectively to (a) the general college funds; (b) the experiment station fund; (c) the steward department funds. In the account of the secretary of the board with this officer a similar division is made. From the duplicate receipts filed with him the secretary charges the treasurer with all items of cash received under each of the three heads, and credits him with expenditures made on bills properly audited.

The following exhibits, taken from the secretary's books, show in condensed and classified form the receipts and disbursements making up the debit and credit sides of the general college ledger during this biennial period:

A. RECEIPTS AND DISBURSEMENTS FOR THE FISCAL YEAR ENDING
JUNE 30, 1900.

RECEIPTS.

Cash balance on hand July 1, 1900.....	\$ 13,398.60
State appropriations for buildings, repairs, and improvements.....	25,243.78
National support fund.....	66,819.27
Sales of departments.....	36,753.12
Accumulated interest loans paid in for transfer to financial agency.....	19,365.56
Right of way damages.....	500.00
Miscellaneous items:	
Room rent.....	\$ 3,011.18
Diploma fees.....	380.00
Rent on donated land.....	99.00 9,280.00
Total charged treasurer on account of general funds....	\$165,473.51

DISBURSEMENTS.

For maintenance of college departments as per exhibit "A"....	\$ 75,084.16
For buildings, repairs, and improvements.....	25,243.78
From room rent and diploma funds for repairing dormitories, purchasing furniture, and diplomas.....	4,250.55
Proceeds of department sales expended.....	36,753.12
Principal of interest fund loans remitted state treasurer.....	19,365.56
Total disbursements.....	\$ 160,647.17
Cash balance on hand belonging to general funds....	4,826.34
Total.....	\$ 165,473.51

B. RECEIPTS AND DISBURSEMENTS FOR THE FISCAL YEAR ENDING
JUNE 30, 1901.

RECEIPTS.

Cash balance on hand July 1, 1900.....	\$ 4,826.34
Sale notes, paid.....	211.47
Loan for purchasing stock, paid.....	662.65
	\$ 5,700.46
National support fund.....	68,801.05
State support fund.....	25,000.00
	93,801.05
State fund for improvements and repairs.....	24,556.97
State appropriation for buildings.....	53,592.22
State appropriation for purchasing pure bred stock.....	5,566.51
	59,158.73
State providential fund.....	16,909.58
Sales of departments.....	31,863.95
Interest funds loans collected for transfer to financial agency.....	12,384.44
Miscellaneous items:	
Room rent.....	\$ 2,692.65
Diploma fees.....	381.43
Rent on donated land.....	35.20
Agricultural scholarship fund.....	200.00 \$ 3,309.28
Total charged treasurer on account of general funds.....	\$247,684.46

DISBURSEMENTS.

For maintenance of college departments.....	\$ 86,162.19
For buildings, repairs, improvements, and pure bred stock.....	100,621.43
On room rent and diploma accounts.....	4,538.38
Proceeds of department sales, expended.....	31,863.95
Principal of interest fund loans remitted state treasurer.....	12,384.44
Railroad right-of-way damages remitted state treasurer.....	500.00
	\$236,070.39
Cash balance on hand belonging to the general funds.....	11,614.07
	\$247,684.46
This balance belongs to the following funds:	
Interest fund.....	\$ 11,007.96
State appropriations.....	3.85
Donation fund.....	128.03
Diploma fund.....	133.80
Room rent.....	52.43
Railroad damages.....	88.00
Agricultural scholarship.....	200.00
Total.....	\$ 11,614.07

The receipts and expenditures on account of the experiment station and the steward's department have already been sufficiently summarized under their respective heads.

Trustees Robinson and Gabrielsen, acting for the board, made a most careful examination of the treasurer's books and vouchers at the close of each of the fiscal years included in the biennial period, and duly certified the accounts correct. They reported the following cash balances on hand June 30, 1901.

General ledger.....	\$ 11,614.07
Experiment station.....	53.59
Steward's accounts.....	862.92
Total.....	\$ 12,530.58

Herman Knapp was re-elected treasurer, his bond being fixed at \$50,000. Said bond has been filed with the secretary of state and approved by him.

VIII. CONDITION OF THE COLLEGE SUPPORT FUNDS.

It has been the policy of this report, in dealing with the funds available for the support of the educational departments of the institution, to exclude the appropriation made by section 2674 of the Code and also the experiment station fund. The first has always been used for repairs and minor improvements, and, as has already been shown in this report, is not sufficient to meet the college needs in that direction. The experiment station fund is excluded since no portion of it can be used for educational purposes.

The following table shows the income of the support funds for each of the two years together with the cost of maintaining the educational departments; also an estimate of the income and expenditures for the present year.

The cash balance has of course decreased or increased each year according as the expenditures have been more or less than the income.

SUPPORT FUNDS.

Year.	Income.	Expenditures.
Ending June 30, 1900.....	\$ 66,819.27	\$ 75,034.16
Ending June 30, 1901.....	93,801.05	*88,460.34
Ending June 30, 1902.....	88,000.00 (estimated)	93,832.32
Ending June 30, 1903.....	85,000.00 (estimated)	

* This sum includes, in addition to the \$86,162.79 of expenditures, shown on a previous page, the cost of the catalogue and compendiums for that year, \$2,295.15, not paid until the following year.

The figures show:

First. That the income of the college, which, at the beginning of the biennial period had been greatly diminished by the reduction in the rate of interest, was, in the first year of that period, some \$8,200 below the basis of expenditure on which the college was running. Since that time the annual expenses of the college have increased, in round numbers, \$19,000, making the present basis of expenditure over \$27,000 above the income at the beginning of the biennial period.

Second. That the income has not increased to the same amount. Several temporary influences, such as the collection of delinquent interest and a change in the system of accounts which brought the interest collections of thirteen months within the year, caused the income of the second year, despite a reduction in the rate of interest upon many loans, to exceed that of the first by more than the \$25,000, which the last general assembly granted as an addition to the annual support fund. With the disappearance however, of the temporary influences mentioned and the further change of 6 and 7 per cent mortgages into those bearing only 5 per cent interest the income will be so reduced as to bring it for the present year to a basis only \$21,000 above that at the beginning of the biennial period. Thus while the expenditures are now \$27,000 above the income at that time, the increase in income is only \$21,000, showing as do the actual figures for the year, in the table, that the college is now running upon an expense basis \$6,000 above its present income. This it can do for a single year by taking \$6,000 from its present cash balance, but since the balance at the end of the year will not exceed \$3,000 it cannot continue the process. It is moreover estimated that during the year the income will be still further reduced by some \$3,000. The college will then be running upon a basis of expense no greater than the present yet \$9,000 above its income. In other words, it will require an addition to our annual support fund of \$9,000 to maintain the college upon its present basis of expenditure.

To keep the expenses down to the present figures the board was compelled at its last meeting to refuse askings, many of which it regarded as vital to the welfare of the college, amounting in all to more than \$20,000.

The urgent need of additional funds with which to further develop some of the important features of the college work is fully set forth in the president's report.

IX. MISCELLANEOUS MATTERS.

In order to reach a division of the college income that would best further the interests of the various departments, and at the same time insure that the expenditures of the college as a whole were kept within the limit of the available funds, the board adopted the following resolution:

Resolved, that the heads of the college departments be directed to report through the president, at the close of each fiscal year, carefully prepared detailed estimates of funds needed in their departments during the ensuing year for maintenance, support, and additional equipment; also, under separate head, a detailed statement of the amount required for repairs and improvements. These reports are required in order that the entire fund available for support and improvements during the ensuing year may be equitably apportioned and advantageously applied to the needs of the various departments and to the college as a whole. No further appropriation shall be asked during such year by the head of any department, nor will any additional appropriation be made by the board of trustees except in case of urgent and unforeseen emergency.

The following rules relating to the departments were adopted:

1. The heads of all departments shall file complete inventories at the close of each fiscal year.
2. All bills for goods purchased or services rendered on account of the college shall be made out in the name of the institution stating the department for which such goods or services were ordered and by whom ordered.
3. Professors and officers of the college are directed not to incur personal expense bills on college account except such expense is authorized by the chairman of the committee having charge of the department to which such expense is chargeable, and the written approval of such chairman must be indorsed upon the expense bill prior to its presentation to the board of trustees for audit.
4. In case the services of a veterinarian are required for the stock of either farm or experiment station, the professor of agriculture is empowered to call on Dr. McNeill to treat the same. Dr. McNeill is authorized, at his discretion, to call on the other professors of his department for consultation and assistance.
5. The funds appropriated for the fiscal year ending June 30, 1902, are made available pro rata only, as the months shall pass, except upon consent of the auditing committee, obtained before the obligation to be paid from such appropriation shall have been incurred.

In compliance with the request of the Twenty-seventh General Assembly the following rule relating to student government was adopted by the board:

The use of intoxicant liquors by students of the college and the frequenting of places where the same is kept or sold as a beverage is prohibited. The president is authorized to suspend or expel any student found guilty of either of these provisions.

The following table shows the number of students graduating in the different college courses during the past two years:

	First Year	Second Year		Total.
	Nov., 1899.	Nov., 1900.	June, 1901.	
In the course in agriculture.....	7	10	15	25
In the course in the sciences relating to the industries.....	25	18	2	15
In the course in mechanical engineering.....	3	2	2
In the course in civil engineering...	4	4	4
In the course in electrical engineering.....	15	5	4	9
In the course for women.....	12	9	1	10
In the course in veterinary science.	5	6	1	7
	71			73

Appropriate degrees were conferred upon these graduates.

In November, 1899, the degree of Master of Scientific Agriculture (M. S. A.) was conferred upon F. W. Bouska, and the degree of Master of Science (M. Sc.) upon Wilman Newell.

In December, 1900, the degree of Master of Science (M. Sc.) was conferred upon J. C. Brown, H. N. Grettenberg, and Elmer R. Hodson; and the degree of Master of Scientific Agriculture (M. S. A.) upon J. J. Vernon.

In June, 1901, the degree of Master of Scientific Agriculture (M. S. A.) was conferred upon S. E. Barnes, E. E. Little, and H. Harold Hume.

Respectfully submitted,

E. W. STANTON,
Secretary.

TREASURER'S REPORT.

The following is a complete statement of the transactions of all the accounts for the fiscal year ending June 30, 1900.

	BALANCES JULY 1, 1899.		FISCAL YEAR.		TOTALS.		INTEREST FUND.		MOBRILL SUPPORT FUND.		BALANCES JUNE 30, 1900.	
	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.
Interest on lands belonging to congressional grant.....		\$10,963.54		\$ 1,897.15		\$ 12,860.69		\$12,860.69				
Interest on accumulated int.....				5,140.89		5,140.89		5,140.89				
Interest on investment of endowment fund.....				34,653.73		34,653.73		34,653.73				
Interest on lands obtained by foreclosure.....				127.50		127.50		127.50				
Contingent principal fund.....		44,150.00	\$ 19,365.56		\$ 19,365.56	44,150.00					\$24,784.44	
Mortgages receivable.....	\$44,150.00			19,365.56		44,150.00		19,365.56				
Donation fund.....		60.83		32.00		92.83						92.83
Diploma fund.....		1,038.68		467.74		1,418.68						950.94
Room rent.....		1,471.22	3,782.81		3,011.18	3,782.81		4,482.40				699.59
Railroad damages.....		88.00						88.00				88.00
Right of way damages.....				500.00		500.00						500.00
Personal accounts.....	476.95					476.95					476.95	
Bills receivable.....	577.25					577.25					577.25	
Morrill support fund.....		800.53	22,549.49		25,000.00	22,549.49		25,800.53	\$22,549.49	\$25,800.53		
Salaries.....			13,368.07			13,368.07		\$13,368.07				
Farm department.....			14,293.70		10,555.60	14,293.70		10,555.60		800.00		
Creamery.....			15,180.35		14,262.22	15,180.35		14,262.22				
Dairy.....			3,013.01		1,144.50	3,013.01		1,144.50		1,700.00		
Horticulture.....			3,170.70		1,301.63	3,170.70		1,301.63				
Chemistry.....			2,667.55		1,270.15	2,667.55		1,270.15				
Civil engineering.....			2,170.97		21.31	2,170.97		21.31				
Zoology.....			1,065.66		475.78	1,065.66		475.78		751.04		
Mechanical department.....			9,217.20		5,081.04	9,217.20		5,081.04				
Physical department.....			2,653.36		344.85	2,653.36		344.85				
Veterinary.....			1,097.08		605.37	1,097.08		605.37				
Botany.....			990.60		290.93	990.60		290.93				
Music.....			930.81			930.81		930.81				
Public rooms.....			64.75			64.75		64.75				
Tower clock.....			1,305.00			1,305.00		1,305.00				
Contingent expense.....			6,963.59			6,963.59		6,963.59				
Library.....			2,696.26		90.97	2,696.26		90.97				
English literature and rhetoric.....			1,813.60		13.60	1,813.60		13.60				

Domestic economy.....			1,321.00	429.72	1,321.00	429.72	891.28					
Political economy.....			66.73		66.73		66.73					
Mathematics.....			1,391.49		1,391.49		1,391.49					
Military.....			107.75		107.75		107.75					
Geology.....			204.00	4.00	204.00	4.00	200.00					
Mining engineering.....			308.00	8.03	308.00	8.03	299.97					
Agricultural chemistry.....			1,382.85	683.34	1,382.85	683.34	699.51					
Public grounds.....			1,295.93	170.08	1,295.93	170.08	1,125.85					
Sabbath services.....			445.76		445.76		445.76					
Pathology.....			49.72		49.72		49.72					
Histology.....			2.30		2.30		2.30					
State appropriations.....			25,243.78	25,243.78	25,243.78	25,243.78						
Totals.....	\$45,204.20	\$58,572.80	\$ 160,647.17	\$ 152,104.91	\$ 205,851.37	\$ 210,677.71	\$49,233.63	\$52,782.81	\$25,800.53	\$25,800.53		3,549.18
Balance interest fund on hand.....				8,542.26		4,826.34						4,826.34
Cash to Balance.....	13,368.60											
Totals.....	\$58,572.80	\$58,572.80	\$ 160,647.17	\$ 160,647.17	\$ 210,677.71	\$ 210,677.71	\$52,782.81	\$52,782.81	\$25,800.53	\$25,800.53	\$30,664.98	\$30,664.98

TREASURER'S REPORT—STEWARD'S DIVISION.

	BALANCES JULY 1, 1899.		FISCAL YEAR.		TOTALS.		BALANCES JUNE 30, 1900.	
	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.
Boarding Dept.....	\$ 535.63		\$32,324.11	\$31,805.14	\$32,324.11	\$32,340.77		\$ 16.66
Damages.....	293.14		25.00	74.35	25.00	367.49		342.49
Hospital.....	150.44		1,240.12	1,225.40	1,240.12	1,381.84		141.72
Fires, lights and incidentals.....			15,964.84	15,964.84	15,964.84	15,964.84		
Piano rent.....	41.20		131.45	90.21	131.45	131.45		
F. J. Resler.....			35.50	35.50	35.50	35.50		
A. M. Newens.....	75.55		228.53	152.98	228.53	228.53		
Cash to balance..	\$ 1,101.96			601.09	500.87		\$ 500.87	
Total.....	\$ 1,101.96	\$ 1,101.96	\$49,949.55	\$49,909.75	\$50,450.42	\$50,450.42	\$5003.87	\$ 500.87

TREASURER'S REPORT—EXPERIMENT STATION.

Expenditures on account of government appropriation for the fiscal year ending June 30, 1900.

	GOVERNMENT APPROPRIATION.	
	Debit	Credit
Appropriation (government).....		\$ 15,000.00
Salaries.....	\$ 6,000.00	
Stenographer.....	220.00	
Artist.....	364.35	
General expenses.....	646.21	
Bulletins.....	1,514.47	
Agricultural section.....	2,249.31	
Botany section.....	479.20	
Chemical section.....	956.00	
Dairy section.....	853.31	
Entomology section.....	487.53	
Horticultural section.....	861.47	
Veterinary section.....	368.15	
Total.....	\$15,000.00	\$ 15,000.00

EXPERIMENT STATION—CREDITS.
(Sales.)

	BALANCE JULY 1, 1899.		FISCAL YEAR.		TOTALS.		BALANCE JUNE 30, 1900.	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Experiment Sta- tion.....		\$.38	\$2,234.49	\$2,829.67	\$2,234.49	\$2,830.05		\$595.56
Cash to balance..	\$.38		595.18		595.56		\$595.56	
Total.....	\$.38	\$.38	\$2,829.67	\$2,829.67	\$2,830.05	\$2,830.05	\$595.56	\$595.56

STATE APPROPRIATIONS.

	DRAWN FROM STATE TREASURER.	EXPENDED.
Improvements and current expenses year ending June 30, 1899.	\$ 5,987.71	\$ 5,987.71
Improvements and current expenses year ending June 30, 1900.	12,369.62	12,369.62
General engineering fund.....	505.26	505.26
Horse barn and judging pavilion.....	2,886.90	2,886.90
Pure-bred stock.....	3,494.29	3,494.29
Total.....	\$ 25,243.78	\$ 25,243.78

Respectfully submitted,

HERMAN KNAPP,
Treasurer.

TREASURER'S REPORT.

The following is a complete statement of the transactions of the accounts for the fiscal year ending June 30, 1901.

ACCOUNT.	BALANCE JULY 1, 1900.		FISCAL YEAR.		TOTALS.		INTEREST FUND.		STATE SUPPORT FUND.		BALANCES JUNE 30, 1901.	
	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.
Interest on lands belonging to Congressional grant.....		\$ 2,494.98		\$ 1,014.36		\$ 3,509.34		\$ 3,509.34				
Interest collected from old sale notes.....				211.47		211.47		211.47				
Interest on accumulated interest.....				1,809.82		1,809.82		1,809.82				
Interest on investment of endowment fund.....				40,934.37		40,934.37		40,934.37				
Interest on lands obtained by foreclosure.....				42.50		42.50		42.50				
Contingent principal fund.....		24,784.44	12,384.44		\$ 12,384.44	24,784.44						\$12,400.00
Mortgages receivable.....	24,784.44		12,384.44		24,784.44	12,384.44						
Donation fund.....		92.83		35.20		128.03						128.03
Diploma fund.....		950.94		1,198.57		1,332.37						133.80
Room rent.....		699.59		3,339.81		3,392.24						54.43
State support fund.....				25,000.00		25,000.00				\$25,000.00		
Agricultural fellowship.....				200.00		200.00						200.00
Railroad damages.....		88.00				88.00						88.00
Right of way damages.....		500.00		500.00		500.00						
Morrill support fund.....				25,000.00		25,000.00						
Salaries.....				17,936.78		17,936.78		\$17,936.78				
Farm department.....				13,243.76		13,243.76				\$ 2,644.42		
Creamery.....				10,651.22		10,651.22		990.94				
Dairy.....				1,817.17		1,817.17				787.67		
Horticulture.....				2,552.60		2,552.60				2,197.99		
Chemistry.....				2,842.97		2,842.97				1,380.71		
Civil engineering.....				2,214.04		2,214.04		2,197.65				
Zoology.....				1,298.22		1,298.22				699.18		
Mechanical department.....				9,513.53		9,513.53		1,214.60		3,140.40		
Physical department.....				2,105.68		2,105.68				1,798.50		
Veterinary.....				1,796.63		1,796.63				460.23		
Botany.....				1,252.66		1,252.66				871.90		
Musical department.....				683.56		683.56		683.56				
Public rooms.....				4,016.05		4,016.05				4,016.05		
Contingent expense.....				6,499.28		6,499.28		6,499.28				

French and German.....			600.00		600.00		600.00					
English literature and rhetoric.....			2,261.67		2,261.67		2,249.77					
Library.....			3,186.27		3,186.27		108.12			3,078.15		
Domestic economy.....			1,586.12		1,586.12		552.42			1,033.70		
Mathematical department.....			1,482.38		1,482.38		1,482.38					
Military.....			99.96		99.96		99.96					
Geology.....			206.43		206.43		6.90			199.53		
Mining engineering.....			1,603.81		1,603.81		37.25			1,566.56		
Agricultural chemistry.....			1,633.29		1,633.29		751.41			881.88		
Public grounds.....			1,420.64		1,420.64		143.81			1,276.83		
Sabbath services.....			416.75		416.75		416.75					
Pathology.....			48.70		48.70		48.70					
Histology.....			55.97		55.97		10.50			45.47		
State appropriations.....			100,621.43		100,621.43		100,621.43					3.85
Totals.....	\$24,784.44	\$29,610.78	\$236,070.39	\$242,858.12	\$260,854.83	\$272,468.90	\$35,499.54	\$46,507.50	\$25,000.00	\$25,000.00		
Balance interest fund.....							11,007.96					11,007.96
Cash to balance.....												
State appropriations.....				3.85		3.85						3.85
Other sources.....	4,826.34		6,783.88		11,610.22							11,610.22
Total.....	\$29,610.78	\$29,610.78	\$242,858.12	\$242,858.12	\$272,468.90	\$272,468.90	\$46,507.50	\$46,507.50	\$25,000.00	\$25,000.00	\$24,014.07	\$24,014.07

TREASURER'S REPORT—STEWARD'S DIVISION.

ACCOUNT.	BALANCES JULY 1, 1900.		FISCAL YEAR.		TOTALS.		BALANCES JUNE 30, 1901.	
	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.
Boarding department	\$ 16.66		\$25,810.28	\$25,795.66	\$25,810.28	\$25,812.32		\$ 2.04
Damages	342.49		50.00	110.85	50.00	453.34		403.34
Hospital	141.72		2,079.63	2,388.45	2,079.63	2,530.17		450.54
Fires, lights and incidentals			19,926.16	19,926.16	19,926.16	19,926.16		
Piano rent			193.00	194.00	193.00	194.00		1.00
A. M. Newens			41.25	47.25	41.25	47.25		6.00
Cash to balance	\$500.87		362.05		862.92		862.92	
Total	\$500.87	\$500.87	\$48,462.37	\$48,462.37	\$48,963.24	\$48,963.24	\$862.92	\$862.92

TREASURER'S REPORT—EXPERIMENT STATION.

Expenditures on account of the government appropriations for the fiscal year ending June 30, 1901.

ACCOUNT.	GOVERNMENT APPROPRIATIONS.	
	Debit.	Credit.
Appropriation (Government)		\$ 15,000.00
Salaries	\$ 4,655.00	
Stenographer	360.00	
Artist	375.00	
Bulletins	1,077.46	
General expenses	453.57	
Agricultural section	3,142.11	
Botanical section	549.96	
Chemical section	1,000.00	
Dairy section	820.79	
Entomology section	675.00	
Horticultural section	1,394.91	
Veterinary section	496.20	
Total	\$15,000.00	\$ 15,000.00

EXPERIMENT STATION—CREDITS.

(Sales by departments.)

	BALANCES JULY 1, 1900.		FISCAL YEAR.		TOTALS.		BALANCES JUNE 30, 1901.	
	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.	Debit.	Credit.
Experiment station		\$ 595.56	\$3,018.46	\$2,476.49	\$3,018.46	\$3,072.05		\$ 53.59
Cash to balance	\$ 595.56			541.97	53.59		\$53.59	
Total	\$ 595.56	\$ 595.56	\$3,018.46	\$3,018.46	\$3,072.05	\$3,072.05	\$53.59	\$ 53.59

STATE APPROPRIATIONS.

ACCOUNT.	DRAWN FROM STATE TREASURER.	EXPENDED.	BALANCES JUNE 30, 1901.
Improvements and current expenses, year ending June 30, 1900	\$ 6,130.38	\$ 6,130.38	
Improvements and current expenses, year ending June 30, 1901	18,426.50	18,422.99	\$ 3.60
State providential fund	16,909.58	16,909.58	
President's residence	10,000.00	10,000.00	
General engineering hall	34,479.12	34,478.87	25
Horse barn and judging pavilion	9,113.10	9,113.10	
Pure bred stock	5,566.51	5,566.51	
Total	\$ 100,625.28	\$ 100,621.43	\$ 3.85

Respectfully submitted,

HERMAN KNAPP,
Treasurer.