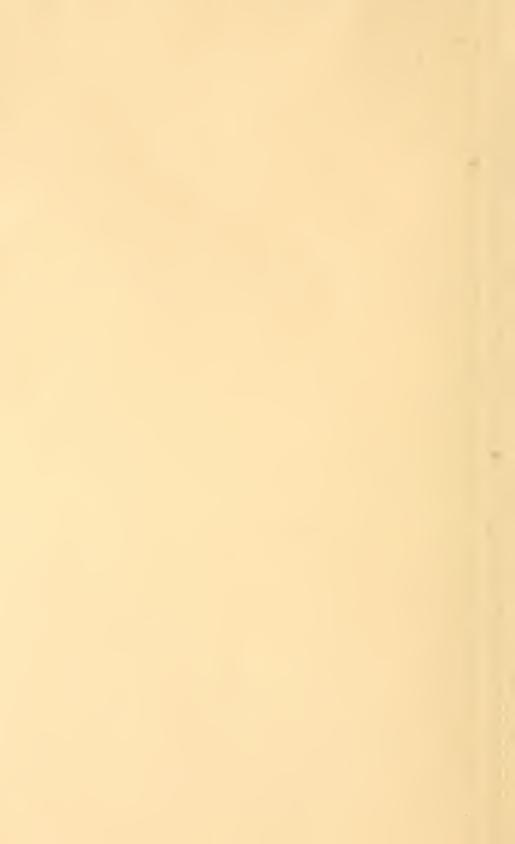
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AGRICULTURAL EDUCATION IN NEW YORK STATE.

BEING A STATEMENT CONCERNING

CERTAIN CHARGES MADE AGAINST

CORNELL UNIVERSITY.

BY L. H. BAILEY.

By transfer

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STATEMENT CONCERNING CERTAIN ALLEGATIONS RESPECTING AGRICULTURAL EDUCATION IN NEW YORK STATE.

There is a bill before the Legislature appropriating \$250,000 for buildings and equipment for the College of Agriculture at Cornell University. At a hearing before the Finance Committee of the Senate on February 23rd, opposition was made by several college presidents. The principal address was made by Chancellor James R. Day, of Syracuse University, who read a paper making grave charges against Cornell University. Many of these statements were refuted at the time, but they nevertheless have been published with the imprint of "University Press, Syracuse, N. Y.," in a pamphlet entitled "A Protest and some Proposals concerning Agricultural Education." This pamphlet has been widely distributed; and subsequently another set of charges has been published by Chancellor Day. Many of these statements are so misleading and so inaccurate that they cannot go unrefuted.

I have no desire to become a party to a controversy. I wish to make no plea. But it is time now for someone to speak. I have no intention of replying to all the astounding misrepresentations that are now being made; but, since the University stands in close relation to the farmers of the State through its College of Agriculture, it becomes my duty to put the farmers in possession of the essential facts. This will lead necessarily to a consideration of some of the tendencies of modern agricultural education, a subject that is wholly misapprehended by some of the current discussions.

I shall not engage in any contention between educational institutions. I am proud of all the colleges and universities of the State. They are doing excellent work for education, in many fields. It should be the policy of such institutions to fight ignorance, not to fight each other.

The College of Agriculture of Cornell University is supported by three classes of funds: (1) federal funds, part of which are held in trust by the State; (2) endowment funds of Cornell University. (3) State funds. The federal funds are expended under certain restrictions as prescribed by law, and accounting is made to the proper public officers. The State funds are all expended under the supervision of the State Commissioner of Agriculture, who by signature approves all youchers.

I. CHARGES RESPECTING THE LAND GRANT AND RELATED FUNDS

Allegation of Chancellor Day, No. 1:

Chancellor Day accuses Ezra Cornell, who has been dead thirty years and who in his lifetime committed no offence but to found and endow with his own legitimate earnings a university "where any person can find instruction in any study," of manipulating the congressional land grant approved by President Lincoln, July 2, 1862. Here are Chancellor Day's words: "Ezra Cornell was a state senator. Through his manipulations, which have passed into history, that vast amount of land was secured to Cornell University upon the terms defined by Congress, except \$25,000 grudgingly given to Genesee College, then moribund but with sufficient life to see the injustice of this act and to protest against it."

The Facts:

The benefit of the federal land grant was, by chapter 511 of the laws of 1863, bestowed upon the People's College of Havana. But when that institution failed to comply with the conditions of the grant, the Legislature, by chapter 585 of the laws of 1865, appropriated the proceeds of the sale of the public lands to Cornell University. The only "manipulation" of Ezra Cornell was to satisfy the legislative requirement of a gift of at least \$500,000 to be made by him to the new institution. There was indeed one other condition of that act of 1865: it provided that Cornell University should receive no portion of the proceeds of the land grant "unless within six months from the passage of this act Ezra Cornell, of Ithaca, shall pay over to the trustees of Genesee college, located at Lima, in this State, the sum of twenty-five thousand dollars." Chancellor Day says that all the land grant was given to Cornell University "except \$25,000 grudgingly given to Genesee College." The fact is that Ezra Cornell was required to pay Genesee College out of his own pocket \$25,000 for the privilege of being allowed to give \$500,000 to found a new University.

Allegation of Chancellor Day, No. 2:

Chancellor Day accuses Ezra Cornell and Cornell University of "the diversion of the original grant" of 1862. He says: "The land grant was eagerly taken for the purposes declared by Congress. It was manipulated so that more than four-fifths of the money that proceeded from it are used at Cornell to-day for 'general purposes'."

The Facts:

The State of New York received from the sale of its scrip for 990,000 acres of public land, \$688,576.12. The average receipts were about the same in other states which received and sold the federal scrip. The government price of public lands in 1862 was \$1.25 per acre. But states not having public lands within their own borders and therefore receiving land scrip under the act of Congress of July 2, 1862, were required, by the second section of that act, to sell their scrip ("said scrip to be sold by said states"). These forced sales of large amounts of land scrip caused a decline in the price of public lands, which fell below 50 cents an acre. New York did well to make \$688,000 out of its scrip for 990,000 acres; for the State was compelled by the congressional act donating the scrip to sell it, and the market was glutted in consequence of similar forced sales by other states.

Any one was free to buy scrip from the state authorities of New York. At the outset, scrip for 76,000 acres was sold to different parties at a little over 80 cents an acre. But as other states were offering their scrip at a much lower rate, sales soon ceased. Anyone who had foreknowledge of the future, faith in the development of his country, capital to invest, skill in locating lands, and financial strength and patience to wait for returns, could have purchased from the State all the rest of the land scrip at 50 or 60 cents an acre and sold it fifteen years later for four times that amount, or twenty-five years later for a good deal larger sum. But no one embraced the opportunity of making this future fortune. Now, what any one might have done, Ezra Cornell and the Board of Trustees did for the benefit of Cornell University. And because they succeeded in a venture which no one else would touch, instead of congratulations Chancellor Day heaps obloquy upon them. If Ezra Cornell and Henry W. Sage had used their foresight and sagacity to make profits out of this scrip for themselves-scrip bought in open market-scrip any one else might buy-Chancellor Day would not have blamed them, for it is the object of business men to make profits by their investments; but because they have permitted the profits created by their management to inure to the benefit of Cornell University they have, in the eves of Chancellor Day, committed an offense.

Donors of endowments have the right to define the objects of their gifts. Ezra Cornell stipulated that the profits to be made out of the scrip he bought in the open market from the State, should be funded "as a donation from Ezra Cornell to Cornell University" and the income thereof used "for the general purposes of said institution." All this was in accordance with the act of April 10, 1866, and Mr. Cornell's agreement with the State of August 4, 1866. And this transaction, so highly meritorious from the point of view

of morals and philanthropy, has been judicially confirmed by the decision of the New York State Court of Appeals and the Supreme Court of the United States in the matter of the estate of Jennie McGraw-Fiske, 136 U.S., 152. Mrs. Fiske had bequeathed to Cornell University from \$1,000,000 to \$2,000,000 of property. At that time the charter of the University set limits to the amount of property it could hold, though the restriction has since been removed. It was claimed that Cornell University was incapacitated from receiving the legacy on the ground that its property, including the profits made on the lands located by Mr. Cornell, already exceeded the limits specified in the charter. The courts were asked to rule that these profits on Mr. Cornell's lands were a part of the federal land grant and had they done so Cornell University would have received Mrs. Fiske's legacy. But the courts held that those profits were the gift of Ezra Cornell and the absolute property of the University, and the University accordingly lost the \$1,000,000 to \$2,000,000 left it by Mrs. Fiske. The decision of the highest court of our State and the Supreme Court of the United States is final.

Allegation of Chancellor Day, No. 3:

"The enormous profits went to Cornell for 'general purposes.'
That was the way the farmers failed to receive the generous gift of
our Government in the land grant to establish agricultural schools in
this state.''

The Facts:

It has been shown that the money which Ezra Cornell gave to Cornell University for general purposes was his own money. He might have donated it for agriculture, but he did not. But the character of his donation did not lessen the amount or change the object of the state land grant fund. Because Ezra Cornell did not, like other buyers of land scrip in the United States, put his profits into his own pocket, but chose instead philanthropically to donate them to a University for its general purposes, must be be charged with preventing farmers from "receiving the generous gift of our Government in the land grant?" The value of the federal land grant was what the scrip would bring when sold, as by the act of Congress it had to be sold, in the open market. And in New York there was realized on it \$688,000. The income of this fund is used by Cornell University in accordance with the terms of the act of Congress donating the lands, the fourth section of which provides that the interest on the fund derived from the sale of the land scrip shall be inviolably appropriated "to the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts." Cornell University receives an annual interest of \$34,428.80 on the land grant fund of \$688,576.12 and devotes this income sacredly to the objects specified in the act of Congress.

Allegation of Chancellor Day, No. 4:

"Why did they [Ezra Cornell and Cornell University] exact from the legislature the condition that all of the profits of the sale of the land scrip, which amounted to over four million dollars, should be used at Cornell 'for general purposes' and not for the purposes designated by the Government? Simply because they did not wish to make Cornell distinctively a great Agricultural and Mechanic Arts College but a general College, a classical and literary University."

The Facts:

Any one else might have bought the land scrip of the State at the current rates, as Ezra Cornell bought a portion of it, and have done what he liked with his profits, if he ever made any, twenty or thirty years later. Ezra Cornell chose to donate his hypothetical profits for the general purposes of Cornell University. It was no injury to our farmers or mechanics that Mr. Cornell's gift embraced all members of the community and all kinds of studies. He wanted a University for teaching and investigation in agriculture, mechanic arts, engineering, science, humanities, and every other branch of knowledge. He had come to formulate his conception in the memorable words: "I would found an institution where any person can find instruction in any study." By a union of his own resources with the proceeds of the land grant he saw a way to the realization of his purpose. This union was effected by the act of April 27, 1865, establishing Cornell University, and appropriating to it the proceeds of the sale of the public lands granted by Congress to the State of New York; and the founder's broad conception of a university was reconciled with the narrower purpose of the act of Congress donating public lands to the states establishing colleges for the benefit of agriculture and the mechanic arts, by providing in the charter that "such other branches of science and knowledge may be embraced in the plan of instruction and investigation pertaining to the university, as the trustees may deem useful and proper." In the same liberal spirit it was provided in regard to the board of trustees, that "at no time shall a majority of the board be of one religious sect, or of no religious sect"; in regard to professors and other officers, that "persons of every religious denomination, or of no religious denomination shall be equally eligible to all offices and appointments"; and in regard to students, that

the university should admit them "at the lowest rate of expense consistent with its welfare and efficiency," and more particularly that it should "annually receive students, one from each assembly district of the state, . . . and shall give them instruction in any or in all the prescribed branches of study in any department of said institution, free of any tuition fee . . . in consideration of their superior ability, and as a reward for superior scholarship in the academies and public schools of this state."

Allegation of Chancellor Day, No. 5:

"Since 1869, Cornell has received in interest, aside from the income of the more than four millions of profit from the grant for 'general purposes,' \$1,021,807 for agricultural, mechanic arts and military instruction. Within ten years Cornell has received by special legislation \$360,000 for a Veterinary School. Within fourteen years Cornell has received \$363,000 by special acts of the legislature, for agricultural purposes."

The Facts:

This paragraph mixes up University funds and state appropriations. The "four millions" is the gift of Mr. Cornell, which the University owns. The "\$1,021,807 for agricultural, mechanic arts and military instruction" which, "since 1869, Cornell has received in interest," is the aggregate interest for 37 years on the land grant fund of \$688,000 which, as already explained, is the gift of the United States to the State of New York on certain conditions, one of which was that the State should hold and invest the fund at 5 per cent interest and appropriate this income to the state land grant college, namely, Cornell University. The buildings of the State Veterinary College, erected in 1896, cost \$150,000; for the maintenance of the College the State has since appropriated \$25,000 annually. In agriculture, the State in 1893 erected and equipped a Dairy Building at a cost of \$50,000; and there is now an annual appropriation to the College of Agriculture of \$35,000 for the promotion of agricultural knowledge. The total grants of state money for all these fourteen years for these several objects are scarcely, if at all, more than some of the western states have spent on the mere buildings and grounds of their agricultural colleges.

The item of \$363,000 for "agricultural purposes" is \$28,000 too great. This error is of itself of little consequence in this discussion, only as it shows the inaccuracy of Chancellor Day's information. In his "More Reasons," issued March 10, 1904, Dr. Day itemizes by years these appropriations for "Agricultural College"; but he apparently includes \$18,000 that was appropriated for the weather

bureau and was no part of the agricultural college work, \$8,000 appropriated to the State Experiment Station at Geneva, and \$2,000 more not appropriated to College of Agriculture.

II. THE FEDERAL EXPERIMENT STATION

Allegation of Chancellor Day, No. 6:

"You [the Legislature] have designated Cornell as the sole beneficiary of the act of the government establishing experimental stations in this State, thereby shutting out all other colleges present and prospective from a share of that fund."

The Facts:

The above statement implies (1) that it would be lawful for other colleges to receive a share of the federal experiment station funds, and (2) that it would have been advantageous for such distribution to have been made.

- (1) The federal law specifically states that the funds are to be used for the establishment of experiment stations in the different states and territories, under the direction of the colleges founded upon the land grant act of 1862; but in states having a separate agricultural experiment station established by law, the funds may be applied also to the work of such station. ("Under direction of the college or colleges, or agricultural departments of colleges * * * established * * * in accordance with the provisions of an act approved July second, eighteen hundred and sixty-two" etc. "Such states shall be authorized to apply such benefits to experiments at stations so established by such states." The Legislature of New York could not have designated as recipients of the federal experiment station fund any institution except Cornell University and the State Experiment Station at Geneva.
- (2) No effective research work for agriculture could be accomplished by the division of the fund of \$15,000 among several institutions. Experience since 1887, when the stations were established, has proved this. Agricultural research work is difficult and expensive. The number of important questions is increasing daily. The constituency is increasing. Some of the states are now aiding these federal stations with state grants. The Iowa Station is now asking the legislature for \$65,000.

III. THE SCHOLARSHIPS

Allegation of Chancellor Day, No. 7:

"The argument presented to you by Cornell in her annual demand for money is that 600 scholarships are being given by Cornell to the state. Gentlemen, that scholarship business was a bargain and a transaction to which Cornell agreed cheerfully. If the trustees of that institution find the contract burdensome, I will agree on behalf of the trustees of Syracuse University to take them for half the money that Cornell made on the profits of the land grant sales."

The Facts:

The "bargain" was for Cornell University to take one free scholar from each assembly district. The plan was modeled after that of West Point. It meant one free scholar at a time from each of the 128 assembly districts. The State afterwards desired Cornell University to take four free scholars at a time from each of the assembly districts. The University willingly acquiesced. Then the State asked Cornell University to take more than four free students from certain assembly districts when other districts sent fewer than four. Instead of 128, this made 512 free scholars. Then the constitution increased the number of assembly districts to 150, and Cornell University was asked by the State to receive 600 free students. Chancellor Day says his university would take over these scholarships for half the profits made on the lands Mr. Cornell bought in the open market from the State. Mr. Cornell's profits were over \$4,000,000, and half that sum at 5 per cent is \$100,000. But the value of the land grant fund, which was the consideration for which Cornell granted the above free scholarships, was only \$688,000, which brings at 5 per cent, \$34,000. On Chancellor Day's own showing, therefore, Cornell University presents the State with \$66,000 a year.

Allegation of Chancellor Day, No. 8:

"More than half of the scholarships are used for Liberal Arts."
"But of the award of free scholarships, as I have shown you, less than half of them have gone to agriculture and mechanic arts."

The Facts:

It is not true that 50 per cent of the free state scholarships have gone to the College of Liberal Arts. Not even 40 per cent are in it now. But what has that to do with agriculture? All students in Cornell University studying agriculture (except winter-course students from outside the State) are given free tuition and always have been; these students this year number 276. The 600 free state scholarships,

four for each assembly district, are in addition to the free instruction in agriculture. Over one third of these scholarships are today held by the students in mechanic arts and engineering. For the rest, Cornell University has nothing to do with assigning free state scholars to courses; they go where they choose. The law simply directs that Cornell University "shall give them instruction in any or in all the prescribed branches of study in any department of said institution, free of any tuition fee."

Allegation of Chancellor Day, No. 9:

"You [the Legislature] began in 1890 to appropriate \$5,000 annually 'for examination certificates, etc., relating to state scholarships." I use the exact language. In 1896 you increased that to \$8,000. In 1900 you made it \$22,300 and changed the language to 'for preparing, printing and awarding scholarships, teachers' certificates, etc." Last year you had increased the amount to \$26,400." "We are conducting your examinations free of charge. We have given you the occupancy of our buildings and the service of our professors without a nickel of expense, for your state bar examinations and for state teachers' certificate examinations."

The Facts:

Cornell University stands ready so to conduct the state bar and teachers' examinations free of charge, and has done it in the past. Cornell University has never asked the Legislature for an appropriation to examine candidates for its 600 free scholarships. That matter is entirely in the hands of the Superintendent of Public Instruction and the Legislature; the University knows nothing of the methods or the results until the successful candidates present to the President scholarship certificates signed by the State Superintendent of Public Instruction. A part of the above funds is used for awarding "teachers' certificates," which has nothing to do with Cornell scholarships. Cornell University has nothing to do with the cost of holding competitive scholarship examinations. It does not ask for or handle any part of the appropriation. The matter is wholly in the hands of the state authorities.

IV. THE STATE VETERINARY COLLEGE

Allegation of Chancellor Day, No. 10:

"It [the State] pays \$25,000 per year for veterinary maintenance [of the State Veterinary College] and had in 1903 one professor and

one assistant giving exclusive time. The other men employed are from the other departments and their salaries are pieced out from the \$25,000."

The Facts:

The faculty of the State Veterinary College consists of six full professors and their respective assistants. The names of the full professors and the titles of their departments (see Register 1903-4) are as follows:

James Law, F.R.C.V.S., Professor of Principles and Practice of Veterinary Medicine, Veterinary Sanitary Science, and Parasitism.

Simou Henry Gage, B.S., Professor of Microscopy, Histology, and Embryology.

Veranus Alva Moore, B.S., M.D., Professor of Comparative Pathology and Bacteriology, and of Meat Inspection.

Walter L. Williams, V.S., Professor of Principles and Practice of Veterinary Surgery, Obstetrics, Zootechny, and Jurisprudence.

Pierre Augustine Fish, D.Sc., D.V.M., Professor of Comparative Physiology, Pharmacology, and Therapeutics.

Grant Sherman Hopkins, D.Sc., D.V.M., Professor of Veterinary Anatomy and Anatomical Methods.

Professors Law, Williams, Fish, and Hopkins give all their time to the State Veterinary College and do no work outside that College. (Dr. Law's work in the State Veterinary College includes one hour of lecturing a week in the winter to farmers' sons who come to Cornell University for instruction in agriculture, horticulture, veterinary medicine, etc.). These four professors are paid wholly from the funds of the State Veterinary College. But the departments of Professors Gage and Moore, which teach both veterinary students and medical students in substantially equal numbers for equal times, are maintained jointly by Cornell University and the State Veterinary College. The University pays the salaries of Professor Gage and his five assistants and all the expenses of his laboratory; and the State Veterinary College pays the salaries of Professor Moore and three of of his assistants, while the University pays more than half of his running laboratory expenses, pays the salaries of the remaining assistants in his department, and has spent \$1,700 in equipping his laboratory. It is obvious, therefore, that in the co-operation of these two departments, the State Veterinary College fund is considerably the gainer. The assistants in all other departments of the State Veterinary College give their entire time to the College. Students in the State Veterinary College get instruction in chemistry, agriculture, and animal industry from Cornell University without charge. Not a cent of the \$25,000 appropriation is used to "piece

out" salaries of men in "other departments"; it is all devoted to the State Veterinary College.

Chancellor Day mentions 1903 as date. The facts just presented are for the period from July, 1903, to the present time. For the year beginning September, 1902, and ending June, 1903, the facts are substantially the same, though one difference should be specified. The Professor of Physiology in the Medical College being absent in Europe, Cornell University appointed junior officers of instruction to do his work—at a cost to the University of \$1,710—under the supervision of Dr. Fish of the State Veterinary College. Dr. Fish did all his regular work in the State Veterinary College and also this extra work, for which Cornell University paid him an additional salary of \$500.

Allegation of Chancellor Day, No. 11:

"For ten years Cornell has received \$25,000 annually for the maintenance of a Veterinary School. That amount of money would pay the salary of ten full professors in either of these other colleges."

The Facts:

The State Veterinary College is an institution both for teaching and investigation. Laboratories, equipments and supplies are required. More is demanded of a technical college than that mere salaries shall be paid.

The research work of the Veterinary College is large. Much of this work is done for the State Department of Agriculture, notably in bacteriological diagnosis, inspection of dangerous and insidious outbreaks of disease, and the like.

Even if the period were "ten years" instead of eight, as it actually is, a single discovery made last year by the Faculty of the State Veterinary College, as appears from a report just made to the Legislature, returns all this money many times over to the State. The latest discovery of the College is of incalculable value to the vast dairy interests of this State. The owners of cattle know that the improvement which in the past century has been effected in the capacity of the milch cow has been offset by the increasing liability to milk fever-a disease which attacks the best milkers only. Nearly all the best milkers were attacked and the attacks ended fatally in half or two thirds of all cases. The dairyman lost at once his most valuable cows, his best milkers, and his highest breeds. Now the New York State Veterinary College has recently made the discovery that cows affected with this disease are promptly cured by the distension of the udder through the injection into the teats of filtered atmospheric air by means of a simple apparatus like the

Davidson syringe with an attachment of sterilized rubber tubes containing a filter of sterile cotton. For the first time in the history of the dairy industry it now becomes possible to increase indefinitely the yield of milch cows without exposing them to destruction from milk fever. There are in this State 1,500,000 milch cows; and if their present annual yield be estimated at 2,000 quarts each, at a selling price of a cent and a half per quart, the value of the yearly return would be \$45,000,000. Now the discovery made by the State Veterinary College of a simple method of overcoming the terrible bane of milk fever will make it possible to increase greatly the yield from the same number of cows, perhaps even to the extent of doubling the present returns.

V. THE COLLEGE OF AGRICULTURE

Allegation of Chancellor Day, No. 12:

"In agriculture there are two professors and one instructor. Six professors credited to that faculty [of agriculture] are from other departments or schools at Cornell. In an imposing list of other officers of instruction in agriculture, there are two stenographers, one clerk and one matron,—four are from other departments of the University, and the others are assistants and occasional lecturers." "The faculties of our colleges, by only small increase in the scientific side, could carry the work. That is the way it is now being carried at Cornell."

The Facts:

The above statement implies that there is really no separate college or faculty of agriculture at Cornell; and that, therefore, liberal arts colleges can carry agricultural work as well as Cornell can.

The above statements are said to be drawn from the Cornell catalogue of 1902-3. The facts are that in the University Register of 1902-3 there are 5 professors and 14 assistants of various grades (not including clerks and stenographers), who were exclusively engaged in the College of Agriculture. Part of the duties of Professors Roberts and Wing was to give in each week during one term two and three hours instruction, respectively, on farm animals to students in veterinary medicine. For this, no remuneration was made from the funds of the Veterinary College, notwithstanding Chancellor Day's allegation that "other men employed [in the Veterinary College] are from other departments and their salaries are pieced out from the \$25,000 [given to the Veterinary College]."

The present status of the College of Agriculture is more to the point, however. The College was reorganized nearly a year ago. In an announcement of the College issued September, 1903, there are o professors who are members of no other faculty; and there are 19 instructors and assistants (not including clerks and stenographers) not in any other faculty. Since that announcement was issued, James E. Rice has been added as Assistant Professor of Poultry Husbandry, this being the second professorship of this kind in the United States. Other appointments have also been made, so that at the present time there are in the College of Agriculture 12 men of the rank of professor and 20 persons of other grades, who are members of no other faculty. Aside from this agricultural staff, there are many teachers in other faculties of the University who are giving instruction to agricultural students,-thus making one of the strongest instructing staffs in agriculture in the Union. The names of the persons who give their time to the College of Agriculture, as teachers or investigators or both, and are members of no other faculty, are as follows:

Liberty Hyde Bailey, M.S., Director of the College of Agriculture, Dean of the Faculty, and Professor of Rural Economy.

Isaac Phillips Roberts, M.Agr., Professor of Agriculture, Emeritus. Henry Hiram Wing, M.S., Professor of Animal Husbandry.

John Craig, M.S., Professor of Horticulture.

Thomas Forsyth Hunt, M.S., D.Agr., Professor of Agronomy and Manager of the University Farms.

Raymond Allan Pearson, M.S. in Agr., Professor of Dairy Industry.

Jay Allen Bonsteel, Ph.D., Professor of Soil Investigation (detailed from Bureau of Soils, United States Department of Agriculture).

Mark Vernon Slingerland, B.S., M.Agr., Assistant Professor of Economic Entomology.

George Walter Cavanaugh, B.S., Assistant Professor of Chemistry in its relations with Agriculture.

John Lemuel Stone, B.Agr., Assistant Professor of Agronomy.

Stevenson Whitcomb Fletcher, Ph.D., Assistant Professor of Extension Teaching in Agriculture.

James Edward Rice, M.S., Assistant Professor of Poultry Husbandry. George Nieman Lauman, B.S.A., Instructor in Rural Economy and Secretary to the College of Agriculture.

Samuel Fraser, Instructor in Agronomy and Superintendent of Farms. Robert Starr Northrop, B.S., Instructor in Horticulture.

John Walter Spencer, Supervisor in the Extension Department.

Anna Botsford Comstock, B.S., Lecturer in Nature-Study.

Alice Gertrude McCloskey, Assistant in Extension Department.

Martha Van Rensselaer, Supervisor Farmers' Wives' Reading-Course.

James M Van Hook, A.M., Assistant in Plant Pathology in the Extension Department.

Herbert Hice Whetzel, A.B., Assistant in Plant Pathology in the Extension Department.

John Washington Gilmore, B.S.A., Assistant Agronomist.

James Adrian Bizzell, Ph.D., Assistant Chemist to the Experiment Station.

John Main Trueman, B.S.A., Assistant in Animal Husbandry and Dairy Industry.

Hugh Charles Troy, B.S., M.Agr., Assistant in Dairy Laboratory.

Walter Wager Hall, Assistant in Cheese-Making Laboratory.

Webster Everett Griffith, Assistant in Butter-Making Laboratory.

G. Arthur Bell, Albert F. A. Schlotzhauer, W. F. Burlingame, Assistants in Dairy Industry in Winter-Course.

George Walter Tailby, Farm Foreman.

Charles Edward Hunn, Gardener.

In the face of the above facts, the contention that other colleges can carry agriculture "by only a small increase in the scientific side" is absurd. Cornell has the "scientific side" to which she has added the agricultural side. It is this method of "carrying agricultural work" that has made agricultural instruction so inefficient in the past.

The Agricultural College at Cornell University has other facilities, than men. It has farms of about 250 acres, and rents nearly 100 acres besides for strictly farm purposes, and it has of livestock the following:

Horses, 11 work horses, 1 colt; total number of horses, 12.

Cattle, 7 thoroughbred Holstein cows, 3 thoroughbred Holstein heifers, 4 thoroughbred Holstein calves, 5 thoroughbred Jersey cows, 3 thoroughbred Jersey heifers, 2 thoroughbred Jersey calves, 2 thoroughbred Guernsey cows, 2 thoroughbred Ayrshire cows, 1 thoroughbred Ayrshire heifer, 7 grade Holstein cows, 2 grade Holstein calves, 6 grade Jersey cows, 1 grade Guernsey cow, 1 crossbred cow, 4 cross-bred calves, 3 common cows, 3 grade Holstein yearling steers, 5 grade Hereford steer calves, 5 grade Galloway steer calves, 3 grade Short-horn steer calves, 3 grade Angus steer calves, 2 grade Holstein steer calves, 1 grade Jersey steer calf, 2 Holstein bulls, 1 Jersey bull, 1 Guernsey bull; total number of cattle, 79.

Sheep, 5 Rambouillet ewes, 5 Delaine ewes, 4 Dorset ewes, 2 Southdown ewes, 19 grade ewes, 1 Cheviot ram, 1 Southdown ram,

1 Dorset ram; total number of sheep, 38.

Swine, 9 brood sows, I boar, 55 fattening pigs; total number of swine. 65.

Fowls, more than 450 (not including this year's hatch), and comprising eight breeds and 2 breeds of ducks.

The College of Agriculture also has a large equipment of farm machinery, both for farming use and for instruction; barns; forcing-houses; orchards; poultry houses; probably the best agricultural college library in the country. These things cannot be procured in a day or a year. They are matters of slow development. There is an agricultural spirit, born with Cornell University, that cannot be developed in one of the old classical colleges in years. There are four agricultural societies among the students, one Greek letter agricultural fraternity, one students' agricultural journal.

If the funds were divided among the colleges of the State, there would not be money enough in any one institution to develop, equip, and carry properly any one of the following integral parts of a modern college of agriculture: (1) a faculty; (2) a dairy department; (3) an animal industry department; (4) a horticultural department; (5) a farm machinery department; (6) an agronomy department; and a number of other units that should be a part of any up-to-date agricultural college.

Allegation of Chancellor Day, No. 13:

"The time has passed for building up a great center, a caravansary to which you are to bring the farmer boys of such a large state as this. It may be done in some of the states but not in a state so immense as New York. We want departments of agriculture in connection with all of our well located and vigorous colleges."

The Facts:

Experience must be the only guide in a question of this kind. Every state and territory has considered the question of agricultural education and every one of them has adopted the policy of providing one agricultural institution. Moreover, it is the experience of every state that is taking the lead in these questions that no mere attachment to or department in a college can effectively handle the subject of technical agricultural education. Of all education, that relating to agriculture is most expensive to equip and maintain. Failure to recognize this fact is the cause of such unsatisfactory results in the past, and the leading agricultural states are now beginning to realize When the land grant act was passed, it was a common opinion that the object of the act could be promoted by distributing the funds to many institutions, but that "time has passed," and no one who is abreast of the times in this respect now seriously advocates such division. The opponents of Cornell University urged the division of the land grant funds in the beginning, and the present opposition is a renewal of that old and outworn controversy. The tendency in every state is to centralize and strengthen its agricultural college work, not to divide and weaken it.

How extensive the preparations are in competing agricultural states may be seen from the following figures of moneys given by the states for buildings for their colleges of agriculture.

Relative rank of a few states in total agricultural wealth and the amount that the state has given for buildings for agricultural college (two or three have given more than the amount indicated):

	Rank	Buildings
Minnesota	12	\$685,000
Massachusetts	28	375,000
Michigan	14	365,000
Wisconsin	10	317,000
Iowa	2	300,000
Pennsylvania	5	250,000
Illinois	I	200,000
Missouri	6	137,000
Nebraska	13	135,000
Connecticut	37	100,000
(Ontario		250,000)

The following figures show some of the provisions that some of the above colleges make for running and other expenses:

Iowa, annual expenses, regular, \$120,000; asking this year for \$536,600, of which \$65,000 is for Experiment Station; \$75,000 for dairy Building; \$25,000 for dairy farm land; \$25,000 for furnishing and equipping dairy farm and poultry department.

Minnesota, annual running expenses, \$113,000.

Illinois, expenses of College of Agriculture for two years from direct state appropriation, \$270,000. Of this, \$25,000 is for beef, pork, mutton, and horse interests; \$10,000 for corn growers; \$25,000 for soil investigations; \$10,000 for orchard investigations; \$15,000 for dairy investigations; some for buildings.

The promotion of agriculture is peculiarly a work for the state to maintain. Experience, both state and national, justifies and demands such work by the government. Private funds are not given to agriculture. Agriculture demands special attention because it is the fundamental industry, because it receives only indirect benefits from most of thell aws that are designed to foster industry and trade, because farming interests are scattered and therefore incapable of being combined and syndicated, and because the investment of the individual farmer is small and he is in a disadvantageous position with respect to other industries.

Allegation of Chancellor Day, No. 14:

"Taking a period of the best ten years, from 1893-1902, I find that during that time there have been 735 students of New York State in Agricultural Courses at Cornell, 492 of whom were in the eleven weeks courses."

The Facts:

It is true that in all agricultural colleges students have been comparatively few in the past. The past generation has been the era of experiment in agricultural education. It has been a long and laborious process to put agriculture into pedagogic form. No one is more conscious than the men in the agricultural colleges of the mistakes that have been made. But it has been a great accomplishment for these colleges to have put agriculture on an equal plane with other academic subjects and to have aided in the development of agricultural science and leadership. Now the new time is coming. Students are coming to these colleges in greater numbers, to Cornell as well as to the others. The agricultural colleges stand today, in point of attendance, where the mechanical and engineering colleges stood ten years ago. The next five years will see greater progress than the past twenty-five have seen. A few institutions will now leap to the fore. And this is the very burden of the present agitation,that New York State shall keep up with this progress, or, better, lead it. New York was well ahead until the colleges of the middle west began to receive generous state aid.

The following table gives the number of students in agriculture enrolled at Cornell (not including postgraduates, for which the College of Agriculture is well known) for the past five years:

Figures for the Past Five Years.

	REGULAR	SPECIAL	WINTER	TOTAL
1899 – 1900	41	47	83	171
1900 - 1901	48	51	94	193
1901 – 1902	49	43	96	188
1902 - 1903	60	54	121	235
1903 - 1904	76	64	136	276
m , 1	11			
Total enr	ollment for p	oast nve yea	ITS	1,063

Of the total number of winter-course students from 1893, when the winter-course was established, 88 per cent are from New York State. Is will be seen from the above figures that students are now increasing with considerable rapidity.

This contention over mere numbers of students, seems to lose sight of the fact that a modern agricultural college has many interests aside from teaching students that come to it. It is also an investigating and research enterprise, and stands ready at all times to aid in solving the problems and difficulties that arise on the farms of the State.

Allegation of Chancellor Day, No. 15:

"Gentlemen, the showing is conclusive that you cannot force or attract farmer boys to an agricultural school at a distance from the farm homes. Of the short winter course at Cornell, for 1902-03, the most favorable to farm boys, only sixteen were from any distant portions of the state,—three only from St. Lawrence County and three from the western counties. Cornell draws state students from practically her neighborhood. Farmers are not flush with cash. They need schools near at haud."

The Facts:

The following table shows the distribution of the New York State students in the winter-course in agriculture for the years 1903 (Cornell Register, 1902–03, May) and 1904. This table shows forty-one counties represented in 1903 and thirty-nine in 1904, and it shows that the College does not "draw State students from practically her neighborhood":

DISTRIBUTION OF WINTER-COURSE STUDENTS FOR 1903 AND 1904

COUNTY	1903	1904
Albany	I	2
Allegany	5	4
Broome	2	2
Cattaraugus	I	
Cayuga	2	2
Chautauqua	2	4
Chenango	3	3
Clinton		4
Cortland	I	7
Delaware	9	7
Dutchess	2	
Erie	I	I
Essex		2
Franklin	2	2
Genesee	I	I
Greene		2
Herkimer	1	2
Jefferson	3	4
Livingston	2	5
Madison	6	I
Monroe	I	5
Montgomery	3	2
New York		2
Niagara	2	I

Oneida	5	8
Onondaga	2	3
Ontario	2	2
Orange	1	2
Orleans		I
Oswego	3	I
Otsego	2	11
Rensselaer	I	I
St. Lawrence	6	7
Schenectady	2	_
Schoharie	5	4
Schuyler	I	
Seneca	3	
Steuben	I	4
Suffolk	2	I
Sullivau		I
Tioga	2	2
Tompkins	5	5
Ulster	4	I
Washington	I	
Wayne	I	3
Wyoming	2	
Yates	I	

In 1903, 102 New York students; 19 from outside the State. In 1904, 122 New York students, and three others not accounted for by county, making 125 state students; 11 from outside the State.

VI. ALLEGED MISUSE OF EXTENSION FUNDS

Allegation of Chancellor Day, No. 16:

"Thirty-five thousand dollars of it [state appropriation] is used to advertise Cornell among the farmers under the name of 'institute work.'" "Institute lecturers,' paid by Cornell out of the \$35,000 appropriated by the Legislature to promote agricultural knowledge in the state, have scoured the state for at least two years to secure resolutions, petitions and letters to influence favorable action upon this bill. The opposite side has been carefully concealed."—"More Reasons," issued March 10.

The Facts:

Cornell University has nothing whatever to do with the management of the farmers' institutes. The institutes are a part of the work of the State Department of Agriculture, for which a separate specific appropriation is made to that Department.

The College is glad to send members of its staff to speak at farmers' institutes, but sends them only when requested to do so by the Director of Farmers' Institutes (who is an officer of the State Department of Agriculture.)

VII. ATTITUDE OF FARMERS

Allegation of Chancellor Day, No. 17:

"But it is argued that this bill is urged by the farmers throughout the state. That movement is not spontaneous, but has been worked up during the past two years, adroitly. You know, gentlemen, how petitions are managed. Give me ten hours and I can get a petition to electrocute within the next thirty days every member of this honorable committee."

The Facts:

The best refutation of this charge is contained in the remarks of W. N. Giles, Secretary of the State Grange, at the hearing before the Finance Committee of the Senate on the occasion when the charge was made. Mr. Giles said:

"I had the honor two weeks ago to be present when the resolution that was passed by the State Grange was under discussion, and it is somewhere in your possession now. And we have published to the world among other things that we are in favor of an appropriation of \$250,000, for an agricultural building at Cornell University. That is the exact position of the State Grange.

"I will say this, that that resolution [the resolution passed by the New York State Grange recommending a legislative appropriation of \$250,000 for an agricultural hall for the College of Agriculture of Cornell University] and the one that preceded it a year ago were not the work of any ambassadors from any one college to this grange, nor of the worthy Master Norris, who has been called away, nor of the leaders of the Grange, but our organization is composed of hundreds of bodies, and they have been working on and investigating this matter, and it came up before the State Grange a year ago at Syracuse, and at Cortland, and the Grange recommended the establishment of this agricultural college at Cornell.

"Now then, it may be cunning advertising, as has been said here, but I want to tell you, Mr. Chairman, that aside from the arguments which we believe to be in favor of its establishment there, why we are in favor of it as an organization. First of all, its prime duty is made by the act of its inception to teach agriculture. What we get there is something practical that fits a man better for his work, some-

thing that teaches in the right direction practically. We did not know that we were doing that for advertising purposes. We felt ourselves that it would be a great benefit to us, and incidentally, perhaps, we were at the same time advertising Cornell University.

"Now, turning to the other institutions in the State there is no other institution that we know that can furnish us that practical education in agriculture that Cornell can.

"I want to set the worthy doctor [Chancellor Day] right in this matter. The Grange did after full consideration of the long letter of Professor Chapin pass this resolution: 'Resolved, That the New York State Grange regards it to be of prime importance to the welfare of the Empire State that we keep abreast of the educational movement of the times by building and equipping a first-class college of agriculture and that we hereby call on our representatives in the Senate and the Assembly to pass the bill now before them appropriating \$250,000 for the College of Agriculture at Cornell University."

The state and general societies that have signed a plea for this bill, in the person of their presidents, are as follows:

State Dairymen's Association.
State Agricultural Society.
New York State Grange.
State Breeders' Association.
Western New York Horticultural Society.
State Fruit Growers' Association.
State Sheep Breeders' Association.
Shropshire Sheep Association.
State Association of Beekeepers' Societies.
State Poultry Society.
State Association of Agricultural Societies.
Patrons of Industry.

The farmers do not care for any contention between colleges: they want the best possible facilities for agricultural education, and naturally they turn to the only college or university in the state that has done anything in the teaching of agriculture, and which must, by the terms of its charter and its contract with the state, always teach agriculture.

The movement is an agricultural movement, it is spontaneous, and it is abiding. The new agricultural education must come; nothing can stop it, unless we stop the laws of evolution and of progress.

VIII. STUDENTS IN SEPARATE AGRICULTURAL COLLEGES AS COMPARED WITH THOSE IN AGRICULTURAL COLLEGES CONNECTED WITH UNIVERSITIES

In the hearing before the Finance Committee on March 15, 1904 in the interest of a proposed agricultural college at Cobleskill, state-

ments were furnished the Cobleskill representatives purporting to show the great superiority in number of students of the separate college over the agricultural college connected with a university. Nothing can be more deceptive than the figures there presented.

Without explanation or correction, these figures seemed to show conclusively that agriculture does not thrive in connection with universities, but they are wholly unreliable for such comparison. These separate colleges are founded on the land grant act. They teach mechanic arts, and other subjects, as well as agriculture; yet in the figures presented before the Finance Committee all the students attending such colleges are treated as if they were agricultural students. For example, the Michigan College is cited as having 504 students in regular courses; but only 190 of them are in agriculture, and yet the whole number is set over against the specific agricultural students in Cornell. If the total number of regular students in these Colleges is to be compared with the number in Cornell, then the mechanic arts, civil engineering and some other students in Cornell must also be included. This would make the Cornell showing very different from that given before the committee. The institutions with which the Cornell College of Agriculture is compared are spoken of as "distinctive agricultural colleges," but with one or two exceptions they are not so. There is no "Iowa State College of Agriculture" for example: the institution is the "Iowa State College of Agriculture and Mechanic Arts." In the catalogue of this institution for 1901-2, there are 858 students in regular courses, of whom 193, or about 23 per cent., are agricultural. The departments of this institution in which special degrees are given are agriculture, veterinary medicine, mechanical engineering, electrical engineering, mining engineering, civil engineering, technology, science, domestic science; yet the regular student body of this college is set over against the specific College of Agriculture at Cornell!

But these thriving colleges of the middle west all have liberal state aid. They are also in regions in which agricultural sentiment is at present more dominating than in the East.

Once it was thought that agricultural education could not thrive in connection with a general university. That time has now passed. Finally, agriculture has taken its place along with other educational subjects. It is dignified by association in such institutions. The separate colleges are themselves developing into what are practically universities, with great breadth of courses.



Laying aside all the foregoing considerations, the essential question would still remain, "What is to be done for agricultural education in New York State?" It is admitted by nearly everyone that something must be done by the Legislature. The farmers will not rest until the question is solved. There are three ways: 1. To distribute state money to several or many institutions. In this case no one institution would have funds enough to accomplish anything worth while. Every one of these institutions would be impelled, if it did anything at all, to endeavor to build up a full-equipped college of agriculture, and there would be endless conflict in asking for legislative aid. 2. To establish a separate state agricultural college. A separate college would cost the State an immense sum to equip and maintain, for all the fundamental branches would have to be duplicated there. It would be years before such a college could develop its work and attain standing. And such a college would also be a competitor of the other colleges of the State. Such a college would inject one more element of conflict and dispute, for the mutual obligations of the State and Cornell University would remain the same as now. 3. To aid the College of Agriculture of Cornell University. This is the continuation of a policy on which the State has already entered, and which the farmers of the State and the state agricultural societies approve. Cornell University opposes no educational program on which the State may desire to enter. It will work in harmony with any and every institution in the State. It believes that the aid now asked of the Legislature is justly due it because of the peculiar relations existing between the State and the University, that the request is in the interest of the agricultural people of the State, and that the granting of it will not prejudice any other interests.

L. H. BAILEY,

Director of the College of Agriculture of Cornell University.

Ithaca, N. Y., March 18, 1904.



