

1924

Present Needs of the College of Agriculture and the Maine Agricultural Experiment Station

Maine Federation of Agricultural Associations

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PRESENT NEEDS

of the

**COLLEGE OF
AGRICULTURE**

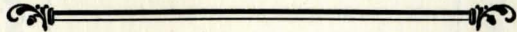
and the

**MAINE AGRICULTURAL
EXPERIMENT STATION**



Report of a special committee
of the Maine Federation
of Agricultural
Associations

1924



At its annual meeting in 1923 the Maine Federation of Agricultural Associations appointed a committee to consider the needs of the College of Agriculture and the Maine Agricultural Experiment Station.

The committee comprised Commissioner of Agriculture Frank P. Washburn, E. C. Buzzell of Fryeburg, William J. Ricker of Turner, Ray D. Hews of Easton and Charles Gillispie of Meddybemps.

This committee made a thorough study of the matter and at the annual meeting of the Federation held at Orono, April 2, 1924, in connection with Farmers' Week at the College of Agriculture, submitted a report, the full text of which is here given.

The report was accepted and its recommendations unanimously adopted by the delegates in attendance at the meeting.

JOHN W. LELAND,
President of Federation.

A. L. T. CUMMINGS,
Secretary.



THE COMMITTEE'S REPORT

THE Maine Federation of Agricultural Associations at its last meeting provided for the selection of a committee of five members whose duty it should be to investigate and report upon the needs, both present and future, of the College of Agriculture and the Maine Agricultural Experiment Station. This committee was duly selected and has given careful consideration to the important matter with which it was charged. Several days were spent in actual study of conditions at Orono and upon these observations, as well as the testimony of a considerable number of teachers and workers in the two institutions, we base the following report:

NEEDS OF THE COLLEGE OF AGRICULTURE

The College of Agriculture has rendered active service to the farmers of Maine for more than half a century. Its history is at once inspiring and disappointing—inspiring because of the work accomplished and the progress made; disappointing because it has been necessary to overcome so much of prejudice and lack of appreciation which have existed even in the minds of the farmers themselves where this, their own institution, was concerned. Even today when we have learned what the College is doing in solving our agricultural problems, and when our farmers are responding to its influence and beginning to have confidence in its work, we are still allowing it to be handicapped by lack of equipment and neglect as to its maintenance.

The accomplishments of our College of Agriculture and its indispensable place among our agricultural institutions are now too well known to require extensive comment here, but we may enumerate a few of its influences. The agricultural college is just as essential in placing a class of educated persons upon our farms as are our colleges of technology and arts and sciences in placing such persons in shops and in business. Again, leadership in rural affairs is rapidly passing into the hands of men who have been associated with colleges of agriculture and experiment stations. If we are to supply teachers for the boys and girls taking agricultural courses in our high schools and academies, they must be trained. If we are to develop experts in the many lines of agriculture common to our farms they must be given the opportunity for study and research. If we are to recruit from time to time the splendid company of College of

Agriculture Extension workers which has brought this branch of agricultural service in Maine up to its present preeminent position, it is a satisfaction to know that they may be trained within our own State.

FROM COLLEGE TO AGRICULTURAL PURSUITS

Statistics gathered by the College disclose the fact that more than 66 percent of our former agricultural college students are actually engaged in farming, either for themselves or managers of farms and as herdsmen for other people. Twenty-two percent are engaged in teaching agriculture, in extension work, in experiment station work, expert service in state and federal departments of agriculture, and in commercial agricultural enterprises, leaving but 12 percent engaged in other lines of industry or whose vocation is unknown. Such figures prove conclusively that criticism so often heard in other states, to the effect that agricultural college students do not follow agricultural pursuits, cannot be applied with justice to our Maine situation, and such a statement regarding the activities of agricultural college graduates as that given above, holds in itself a ray of promise for the future of our farms and the re-population of our country towns.

LACK OF EQUIPMENT

A close observation of the conditions under which our College is now compelled to render service reveals a lamentable lack of equipment and opportunity. In making this and other similar statements we must not be misunderstood. No criticism is offered or intended of those who have had in hand the affairs of the College. Beyond doubt they have given of their best, in thought and purpose, in distributing the few bounties which have been accorded the institution. With the limited and often inadequate support given the University by the State, it has been wisely judged that the comfort and safety of students should be considered first. With the insufficient funds provided for equipment and maintenance it is perhaps only natural that the College of Agriculture should suffer most seriously because agricultural education and experimentation are the most expensive to maintain of all educational functions, their branches are so manifold, laboratories so extensive, and equipment so difficult of upkeep.

Again, our farmers have to a great extent themselves to blame, for the policy of neglect which has prevailed in the matter of providing

for both College and Station. We have never known or interested ourselves in finding out how much was required to make these institutions effective. It is indeed fortunate that we have now enlisted the interest and sympathy of this great association of agricultural organizations which will demand that justice be done to these institutions.

ONLY TWO MODERN BUILDINGS

Considering first the equipment of the College of Agriculture as it exists today we find but two establishments that may in any way be classed as modern and worthy of a place in the agricultural group of a great State university. These are Winslow Hall and the dairy barns, the latter being the only buildings of importance added to the college outfit in a period of thirty-four years.

Contemplation of the remaining buildings and physical equipment of the College does not disclose any cause for such pride as should be taken in viewing an important State institution, an institution that is the first source of instruction in the important branches of horticulture, dairying, forestry, animal and poultry husbandry, and other subjects upon which the future prosperity of our State depends. The buildings now attached to the agricultural group, with the exception of those previously mentioned and a small greenhouse erected last year, are almost without exception obsolete in construction, ill-fitted to the purposes to which they are assigned and display a neglect in the essentials of repair and painting which is a discredit to the State and its agriculture. The amount accorded the University as a whole for maintenance has probably never been sufficient and evidently the share of such fund that has finally reached these buildings has been almost negligible.

The committee would, however, express its satisfaction in the care and consideration given by faculty, students and other workers to the two principal buildings heretofore mentioned. Notwithstanding the severe treatment accorded all buildings of the University, because of overcrowding and the military purposes to which Winslow was at one time assigned, these buildings are exceedingly well preserved and speak plainly of the appreciation with which an adequate equipment would be received by both students and faculty. Your committee cannot, however, but be apprehensive that a continuation of the present policy of neglect on the part of the State would soon involve even these structures.

WINSLOW HALL OVERCROWDED

Winslow Hall, practically the only recitation and laboratory building connected with the College, is today overcrowded with classes and obliged to assume many functions for which it was never intended. The study of forestry, which means so much to our State, is seriously handicapped, but the needs of the school of forestry may in our opinion be provided for at Winslow whenever certain other departments shall be removed to quarters of their own. Classes in horticulture are compelled to carry heavy equipment, even the fruit to be packed by students as practice work, to the upper floors of the building. Valuable experiments in soil tests and analyses must often be left incomplete in the chemical laboratories in order to make room for other projects. Accommodations are also urgently needed for qualitative and quantitative analytical work in chemistry and for advanced work in bacteriology. In fact, a point has been reached where it is impossible to give proper and efficient consideration to all the classes requiring recitation and laboratory space, and it is evident that some additional class and laboratory accommodations must be provided at the earliest possible date.

ENCROACHING ON THE COLLEGE FARM

One of the outstanding problems presenting itself to anyone who would make a comprehensive study of the College and its needs, is that of preserving the integrity of the College farm as an essential to an intelligent and successful teaching of agronomy, horticulture and animal husbandry. With each successive expansion of the University the actual acreage of tillable land, already insufficient, is encroached upon. Building projects already approved will permanently retire some twenty acres of the best land heretofore used for the operation of the farm and the maintenance of its herds.

The first great need is for corn land, as corn is an essential in the study of successful dairying as carried on in many parts of Maine. There can be no curtailment in the study and attention now being given to various breeds of dairy cattle by the department of animal husbandry, and there is a probability that the increasing demand for the establishment of a beef herd may soon require attention. Any further subtraction from the area of the College farm should be immediately compensated either by purchase of additional land or by the clearing of the best and most

available of the rough land now belonging to the College. A careful observation of the College and surrounding lands leads us to the belief that either proposition will be expensive but not to be forgotten in preparing estimates for future building and expansion projects at the University which involve the permanent occupation of land upon which the projects and teachings of the College farm depend. Already those in charge of the farm have been forced to the use of forage crops not truly representative of typical dairying conditions in Maine. The land and buildings, the orchards and crops of an agricultural college can no longer be regarded as mere museums. They are laboratories and laboratory material essential to the successful teaching of agriculture.

FINE QUALITY OF WORK

In presenting criticisms and comments upon the present condition of land, buildings and equipment at the College we would not have it understood that such deficiencies as we may note have been permitted to materially affect the quality of the work done or the value of the training offered to students. At every turn in its investigation your committee has been impressed with the sincerity and enthusiasm of instructors who are working often under disheartening circumstances. The qualifications and fitness of graduates and the positions to which they have been called offer a splendid tribute to the ability and perseverance of members of the faculty and the corps of instructors. Pride and enthusiasm cannot, however, always overcome such handicaps as these men have encountered and it is a question whether we have the right to require this group of faithful public workers to longer sacrifice their time, efficiency and zeal in overcoming deficiencies of equipment which a grateful State should long ago have removed. The time has come when we can no longer afford to neglect our College of Agriculture, as the welfare of the greatest industry of the State so closely depends upon it as an agency of progress and improvement.

The committee declares itself emphatically as favoring adequate support for the University of Maine in all its present branches, but stands squarely for this principle: the College of Agriculture should receive every attention and bounty necessary to its successful operation, as it is the only institution in the State supplying that education and training now considered essential in meeting the problems of scientific agriculture and of modern country life.

DEFINITE PROGRAM RECOMMENDED

With these facts and principles plainly in view, your committee proceeds to the recommendation of a definite program of improvement and progress at the College, a program somewhat ambitious in its nature, but unquestionably warranted by conditions now existing at the College and by agricultural conditions throughout the State. There are but few ways in which a state may directly aid its farmers. We cannot legislate prosperity back to our farms nor occupants back to our idle acres. Here is, however, one opportunity for the State to take a materially forward step in aid of its agriculture by upholding and strengthening the arm of its foremost agricultural institution. This is a proposition to which those who boast of an interest and concern in our present agricultural situation may well give heed.

Realizing that all the needs of the College of Agriculture in buildings and their equipment cannot be supplied at once, and that no one legislature may have at its disposal funds sufficient to restore the institution to the position in which it might have been maintained had a more liberal and truly economical policy been followed in its support, we are recommending that the various projects which our investigations have led us to believe are most essential, be distributed over a term of years embraced in the next five legislative periods, extending ten years from January, 1925, at which time the Eighty-second Legislature will assemble.

NEW DAIRY BUILDING NEEDED

We recommend that the Eighty-second Legislature provide for the erection of a dairy building, and the second unit of the greenhouse system already started, as the first needs of the College. This dairy building should be thoroughly modern in type and equipment, and refrigeration facilities should be supplied. The teaching of dairying in all its branches should be contemplated and some attention given the new and rapidly developing branch of ice cream manufacture. Such a building has already been approved by legislative action but the actual construction was prevented by wartime conditions.

The present dairy building is not creditable either to the College or to our great dairying industry. Its further use will tend to discourage rather than encourage those contemplating the study of dairying. The building we propose for this purpose should cost not less than \$50,000 and its equipment not less than \$30,000.

ADDITION TO GREENHOUSE

The second unit of the greenhouse system already started should be included in the building program for this period. The single unit just completed must soon prove inadequate to a comprehensive study of the problems now confronting our horticulturists. A head-house and individual heating plant should be included in the plans for greenhouse construction. The present overloaded heating system of the University should not be depended upon where a single failure in operation may absolutely destroy much valuable class room material which cannot be replaced. The head-house should provide laboratory and class room accommodations, thus furnishing the first step for the relief of congested classroom conditions in Winslow Hall. The cost of the greenhouse with head house and heating plant will approximate thirty thousand dollars.

HOME ECONOMICS BUILDING

For the period of 1927-28, the project demanding first attention is, in our opinion, the erection of a suitable building for the department of home economics. This department as at present conducted is unquestionably one of the most valuable in the College. Great results have been attained and one branch of the department has been made practically self-supporting. The accomplishments of the department are, however, very largely the result of unusual effort and ability on the part of the teachers and they are today greatly handicapped by lack of room and equipment. The training of young women for teaching home economics in the schools of the State, for service in extension work, or as dietitians in hospitals and public institutions, is important, but we are even more impressed with the effort of those directing this department to train its young women as home makers, rightly believing that the homes of the State are its greatest asset. The building should be fully equipped with laboratories and class rooms, thus providing further relief in the present recitation building. Opportunity should also be given for the establishment of a model cafeteria.

HORTICULTURAL DEPARTMENT

We believe that during the period of 1929-30, the needs of the horticultural department should be substantially recognized. No department of the College has suffered more severely under the present conditions and yet most praiseworthy results have been attained. A high standard of work has been maintained and courses adapted to the needs of our State provided. An orchard

has been started upon land cleared and prepared under most difficult conditions. The latter project should be carried forward vigorously and its support definitely provided for, but it is equally essential that a suitable building for the study of horticulture be erected, containing laboratories, class rooms and storage and packing rooms for fruit.

Included also in the building program for this period should be an establishment for the housing and study of farm machinery. Present accommodations in this line are most unsatisfactory and one result is that the College has been deprived of the opportunity usually afforded such institutions of receiving free use of all kinds of machinery supplied by manufacturers for demonstration purposes. This building should be of considerable size but need not be elaborate in its interior construction. It would replace a number of makeshift arrangements now in use for the storage of machinery, where there is very little opportunity for its study, and would also provide class and laboratory room for students in agricultural engineering.

MODERN POULTRY PLANT

The growing importance of the poultry industry in Maine should receive attention, and as the principal feature in the program for 1931-32, we recommend the addition of a complete plant for the study of poultry husbandry in yards, houses, laboratories and class rooms. The third unit of the greenhouse system might also well be included in the improvements suggested for this period. Its construction, together with that of the poultry plant, should approximate in cost the projects recommended for other legislative periods.

Numerous valuable and needed improvements suggest themselves for consideration during the final period of this ten-year program. Your committee does not, however, make a specific recommendation at this time, recognizing the fact that agricultural conditions are changing rapidly and that no one can, we believe, foretell the greatest needs of the College, or of agriculture in our State ten years hence. It should not be inferred from this that the committee contemplates the abandonment or slowing up of a vigorous policy of improvement and development at the College in 1933 and 1934. We believe that a substantial amount could be wisely expended by the State during this as in the previous periods considered, but it should be applied to such construction and such projects as the needs of the College and of our agriculture shall at that time demand.

SUMMARY OF COLLEGE NEEDS

A brief summary of our recommendations for the program of building and development is, then, as follows:

1925-26, new dairy building and second unit of greenhouse construction.

1927-28, building for home economics department.

1929-30, horticultural and machinery buildings.

1931-32, poultry plant and poultry husbandry building with third unit of greenhouse plant.

1933-34, a development comparable with that suggested for the foregoing period, along those lines which an actual study of the needs of the College and of our agriculture shall disclose to be most valuable and pressing. Such study and recommendations to be made by representatives of this Federation.

No estimates of cost are supplied for the various projects except the first, as it is manifestly impossible to foresee building conditions and actual difficulties of construction which may arise seven, five or even three years hence. The committee has in mind the approximate expenditure of \$100,000 for each period but would emphasize the importance of buildings and equipment adequate to the purpose outlined in each case.

In this connection we wish to express our hope that the Federation may continue to concern itself with each successive feature of the program suggested, and our belief that it should participate through an appropriate committee in the actual preparation of plans and estimates for each building and its equipment. A most important result would thus be achieved. The work of the Federation would not end with the mere suggestion of such a program as set forth in this report but its continued support and active interest in each project would be assured.

It should be distinctly understood that the foregoing recommendations apply to the construction and equipment of such new buildings as are and may become essential to the successful operation of the College. No attempt has been made to enumerate or provide for the future needs of the College in the way of additions and repairs to equipment already in use or for necessary increases in the teaching force. Such needs will be very many and very real as the years go on and should be taken care of as they appear, in the annual budget of the institution.

In addition to the foregoing, we make several general recommendations concerning the policy and support of the College and its relation to other branches of the University. The College of Agriculture should be regarded as the nucleus

NEEDS OF THE AGRICULTURAL EXPERIMENT STATION

around which the University might be developed, and as one of the first objects in its establishment. All officials of the University in arranging courses and hours of recitations should give full consideration to the needs of the faculty and students of the College of Agriculture, in providing a convenient schedule of general subjects required, in combination with the many hours necessary to the intelligent study of agricultural subjects. We believe that already an intelligent effort looking toward such cooperation among the several colleges has been made, and we have faith that it will be continued.

The courses of study in agricultural economics now offered by the College should be enlarged and increased in scope, so as to adequately cover the entire field of instruction in this subject and embrace the study of marketing, agricultural statistics, cooperative marketing and agricultural finance, a knowledge of which is of such tremendous importance to agriculture. Courses in the various phases of forestry economics are also offered, but may well be strengthened wherever and whenever need shall appear.

The Federation in all its branches should interest itself in appointments made to the board of trustees of the University. We do not imply by this that any disproportionate number of farmers should be appointed or that men chosen from other professions are incapable of a fair and intelligent administration of the College of Agriculture, but in a State as largely agricultural as Maine the frequent appointment of men who are known as leaders in rural thought would seem advisable.

It will undoubtedly be found advisable to repair or build anew certain small buildings necessary to the operation of the College farm. In some cases existing buildings which will be superseded as the program suggested in this report is carried out, may well be utilized for this purpose.

Finally, one outstanding need of the College of Agriculture appeals to us with particular force. The policy of neglect of buildings and equipment which has been forced upon the College is a destructive and extravagant one, and the present condition of many buildings in the agricultural group is the direct result of insufficient appropriations for maintenance. We recommend the incorporation into the University budget of an annual appropriation of \$3000 for repair and maintenance of buildings and for the purchase of needed farm machinery in the College of Agriculture alone.

Your committee has also given consideration to the present condition and most pressing needs of the Maine Agricultural Experiment Station. We have consulted members of the Station staff, observed their work, and are reasonably familiar with the projects being carried forward on the experimental farms at Highmoor and Presque Isle. Many of the observations and recommendations made regarding the College of Agriculture apply with equal force and justice to our Experiment Station, particularly those in appreciation of the quality of service rendered. The work of the Station has been characterized by inspiring ideals and noteworthy achievements.

In considering the needs of the institution its functions should not be overlooked nor confused with those of other existing agricultural agencies or organizations. Its duty is to study and undertake the solution of the problems which the individual farmer is not in a position to solve for himself and to discover fundamental facts and truths upon which agricultural practices, teaching and extension work may be based.

This involves time-consuming and expensive work. For example, for a quarter of a century or more this station has been slowly but surely accumulating a fund of information about the culture and diseases of the potato, much of which has been put to practical use by the more progressive potato growers. Work of outstanding merit has also been performed by the Station in live-stock breeding, feeding and selection. New varieties of grain and forage crops have been developed which have in a few years returned to our farmers in increased yields more than the entire cost of the institution since its inception.

PRE-WAR CONDITIONS STILL PREVAIL

Experimental work is necessarily expensive and agricultural experiment stations should not be expected to be self-supporting. It is a wise economy that provides liberally for institutions that discover and warn our farmers against mistakes and failures and at the same time recommend new and valuable methods and varieties. It should be remembered that the income of the Station from Federal sources remains the same as under pre-war conditions, while the purchasing power of this fund is only about half what it was a decade ago.

COMPARISON WITH OTHER STATES

In this connection it may prove interesting to compare the support given experimental station work in Maine with that provided in other states where agriculture is more extensive but of no greater importance in comparison with other interests and industries. To take for illustration the State of Ohio, we find it has seven and three-tenths times the population of Maine, four and five-tenths times the rural population, nine and one-tenth times the area of improved land, five and three-tenths times the number of farms, produces six and one-tenth times the value of farm crops, and appropriates sixteen times as much money to the support of the various activities of its experiment station. The last Maine Legislature recognized the needs and the meritorious service of our station by increasing the State appropriation from \$15,000 to \$25,000 as against \$57,000 appropriated by the State of Connecticut for experimental work alone, and \$100,000 by the State of Massachusetts.

The difficulty of carrying on research work under the expensive conditions of the last ten years, with no increase in Federal support and a very limited consideration on the part of the State, has reacted most seriously against the efficient operation of the Maine Station. It has been compelled to abandon certain valuable lines of work; talented members of the Station staff have been compelled to seek positions where their abilities were better rewarded, and those who remain are held by their spirit of loyalty to the institution and their devotion to their work.

STATION SALARIES INADEQUATE

The first need of the Station is, then, in our opinion, an addition of \$3000 annually to the support given by the State to the institution, with the distinct understanding that it is to be used in bringing the salaries of members of the Station staff up to a point where they may at least compare with salaries paid at the University and at other similar institutions.

It may not be generally known, but the salaries paid at our Station are among the lowest in the country, while the educational requirements for such positions are exacting and expensive to acquire. There is no question today causing the Station Director more concern than that of the salaries paid to his Station staff, some of whom are staying on simply because they desire to com-

plete projects and problems now under way. Sooner or later these people for their own safety must consider material advantages offered elsewhere, which will mean for the Maine Station either higher paid individuals or an inferior grade of workers. There are in our opinion at least six members of the Station staff who should immediately receive increases in salary averaging \$500 each.

Another outstanding need of the Station is for two additional members of its staff, a chemist and an economic entomologist. The latter seems especially necessary in consideration of problems which have arisen in connection with the discovery of insect transmission of degeneration diseases of the potato, but this is only one of the types of problems requiring the assistance of an economic entomologist. In orcharding there is still much to be done in the study of apple insects. Root maggots of several species also do tremendous damage annually to crops in Maine, including corn, while more work is needed on blueberry insect pests, particularly with reference to their control.

The Station has a well organized and efficient chemical department but with present funds it can undertake no investigational work in chemistry. There is great need for another chemist who can devote his time to research problems. We believe that \$7000 should be appropriated annually for these necessary additions to the Station staff.

The purpose for which Federal funds may be expended are very definitely prescribed in the Hatch and Adams acts, and as a general thing, state appropriations are also made for specific purposes. There is not, and never has been, any adequate fund for maintenance or contingencies of the Station buildings, land or equipment. As in the case of the College of Agriculture, we believe that a definite contingent fund of \$3000 annually should be provided to meet such needs as the Director and Station Council may find most pressing.

A few purposes to which this fund should be applied are already apparent. The roofs of most of the buildings at Highmoor are in such condition as to require immediate repair and 90,000 shingles will be needed. Additional orchard land should be acquired either by purchase or clearing. The cattle breeding experiment at Highmoor is the most expensive the Station has undertaken. It has, however, progressed so far toward com-

pletion that it appears now imperative that it should be carried through to a finish.

Work at the Station at Orono consists in laboratory study and compilation of field data, while actual experimentation must be carried on either at Highmoor, 100 miles to the west or at Aroostook farm 170 miles to the north. In consideration of the great expense and of the time involved in traveling and the difficulty in obtaining living accommodations at either place, it would seem a wise economy to establish some simple living quarters for two or three members of the staff at each place.

The recommendations we have made call for an increase of \$13,000 in the appropriations for the Station, making a total of \$38,000 annually to be made by the State for this institution. This seems entirely reasonable in comparison with other states of equal agricultural importance and in consideration of the important position which agriculture takes among the industries of Maine. While enormous amounts are being expended for highway improvement, for institutions of all kinds, for improvement of our shipping facilities, and for bringing the resources and advantages of our State to public attention, we may well recognize the importance of the farming industry upon which the tax paying ability of our people must ultimately depend.

In conclusion, your committee believes that the recommendations we have made with regard to these two institutions, with such additions and amendments as the Federation may adopt, should be made a part of the program of the organization and strongly advocated before the next and succeeding legislatures. It is probable that we are just entering upon a period when the effective operation of the College and Station will be of unusual importance. We appear to be at the beginning of an era in which experiments and foresight and invention and knowledge of agricultural subjects will transmute as never before the labor bestowed upon the land into wealth and health and happiness for our farmers and into progress and development for our State. It is essential that our College of Agriculture and our Experiment Station be prepared and equipped for extended service and increased usefulness.