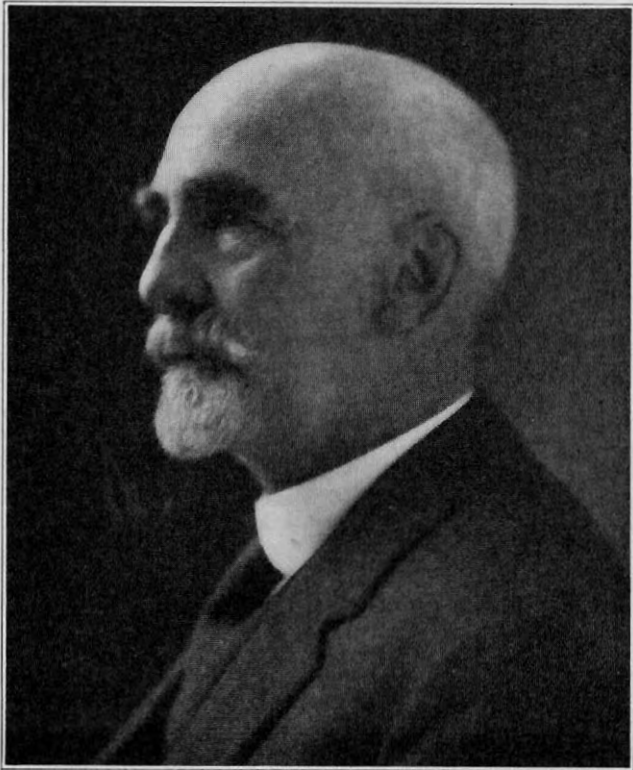


DEDICATION  
OF  
JENKINS LABORATORY

OCTOBER 11, 1932



Connecticut  
Agricultural Experiment Station  
New Haven



EDWARD H. JENKINS

## DEDICATION OF JENKINS LABORATORY

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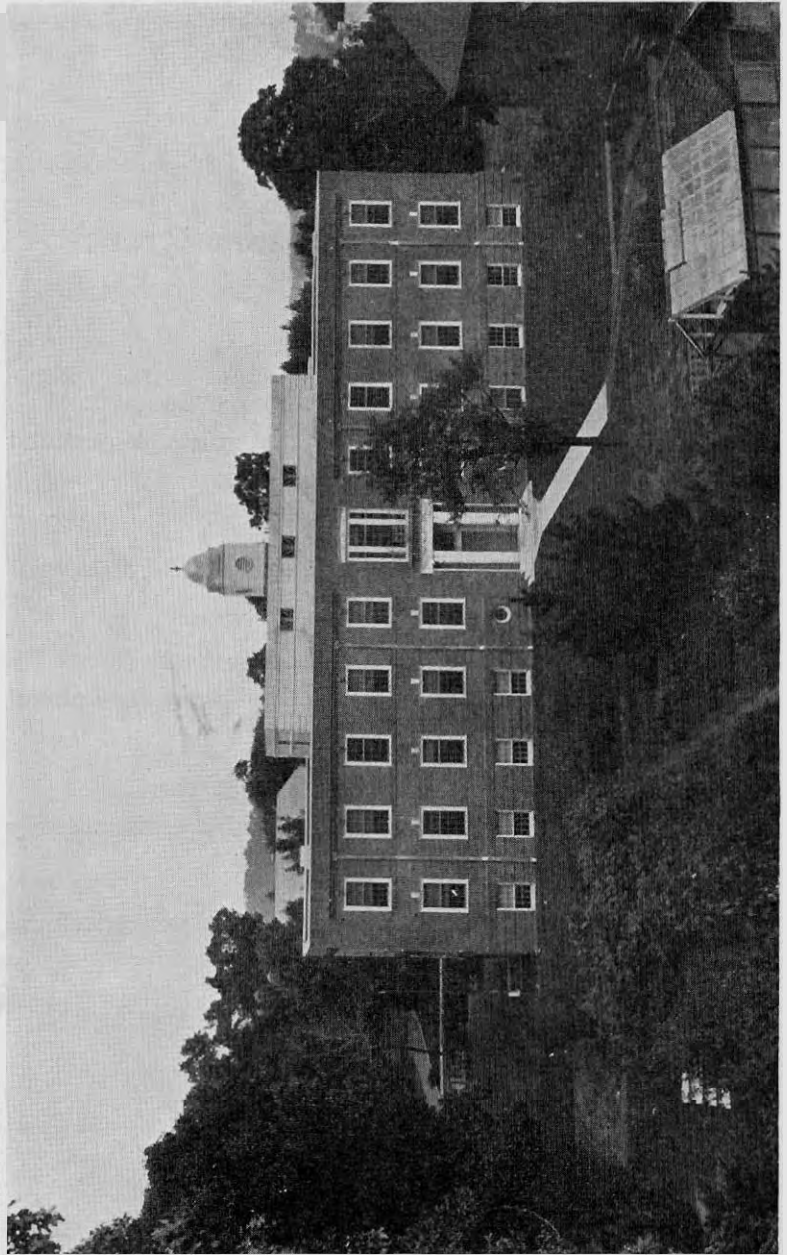
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**GREETINGS, WITH INTRODUCTION OF  
ELIJAH ROGERS, CHAIRMAN**

WILLIAM L. SLATE

Just seven years ago today, and in this same tent, we gathered here to celebrate the fiftieth anniversary of the founding of the Connecticut Agricultural Experiment Station. It was a notable event, for this was the first station, the pioneer enterprise of its kind, in this country. In the words of its founder, Prof. Samuel W. Johnson, its purpose was, and still is, "to put science at work for agriculture."

Today we have come together on an occasion of equal moment. The completion of this new laboratory is, of course, a matter of importance to the Board and the Staff. For the past ten years we have been living under crowded conditions that made scientific work extremely difficult and sometimes ineffective. Naturally we are happy in our new quarters and your presence here is evidence that you share in our satisfaction.

But while the convenience and comfort of the worker is important, that alone would not justify the effort and cost. The Station was founded, and is maintained, for service to the State. Therefore, we may confidently expect these new facilities will enhance that service.

Serious consideration of the need for more space began some eight years ago, but true to its New England tradition, the Station always has been modest in its requests of the General Assembly and deferred laying the matter before that body until the last session, when the appropriation was made. We hope you will like the result. Much of the credit should go to our architect, Mr. Douglas Orr, and his staff and to Mr. Allyn Wadhams, the builder. They cooperated with us splendidly and were very patient with the unusual ideas and needs that a group of scientists are always sure to insist upon.

But of greater significance than the completion of the laboratory is the fact that we are here to pay honor to the man whose name it bears, Dr. Edward H. Jenkins, who for so many years was our leader and friend. If it were possible to epitomize his life and work in a single word, that word would be loyalty; loyalty to his antecedents and training, loyalty to his ideals; and above all, loyalty to the Station. May we who carry on his work be filled with the same spirit.

We are happy to have you with us and share in this occasion. It is my pleasure and privilege, on behalf of the Board and the Staff, to extend to you our heartiest welcome.

To all acquainted with agricultural affairs in Connecticut, Mr. **Elijah Rogers is a familiar figure.** Dean of the fruit growers of the state, a leader in all agricultural matters, he has won the respect and sincere regard of all. But Mr. Rogers is bound to the Station with special ties. His years of association with Dr. Jenkins, his long service on the Board, his keen and active interest in all the affairs of the Station, have brought him into close contact with the Staff. It is to him that we turn most frequently for council and support, and he never fails us. And so on this occasion we again turn to him to act as chairman of these exercises. It is with particular pleasure that I introduce Mr. Elijah Rogers, vice-president of the Station Board of Control.

## THE STATE AND THE EXPERIMENT STATION

WILBUR L. CROSS

I hardly know what I ought to say to you today. It is a little difficult for me to collect my ideas on farming. Recently I have been talking mostly about George Washington. The Father of His Country was a farmer on a large scale. At one time he had 50,000 acres down in Virginia and out towards the West, and sometimes he had under cultivation as many as 3,000 acres. Whatever science there was of agriculture in those days Washington knew. Not only did he have in his library the best books on agriculture of the period, but he annotated them and kept up a direct correspondence with the writers on agriculture in both France and England. I suppose there was really little science of agriculture in those days, but Washington and others came to a good many sound conclusions by observation. Washington was all the time studying the question of the proper rotation of crops, and he worked out the problem, I think, pretty well; for when he died he left an estate of half a million dollars, which is doing considerably better than most modern farmers who have the scientific knowledge, either in Connecticut or elsewhere!

There could be no exact science of agriculture until we had agricultural chemistry, which dates from the second quarter of the nineteenth century. Its home was Germany. Young men who studied in Germany with Liebig and others brought the science of plant chemistry to the United States. Several of them associated themselves with Yale University in founding the Sheffield Scientific School, which, in the beginning, was only a chemistry laboratory. Those first Yale men, fresh from Germany, I did not know. They were John Addison Porter and John Pitkin Norton. I had a little acquaintance with Samuel W. Johnson, who lived down into my time. Dr. Jenkins and some of his associates I met often. I used to hear these men and Professor Brewer talk about the work they had done in Germany, and how they had brought agricultural chemistry to the United States and to the department of Yale which was destined to become the Sheffield Scientific School. This Experiment Station may be regarded as an offshoot of the Sheffield Scientific School. Dr. Atwater, who was early associated with this work, was at Wesleyan University at Middletown, but he had studied at Yale University. The Station was almost entirely a Yale institution in its origin; so it is one of the glories of the Yale University as well as of the State that we have this Experiment Station.

I have been told that at first the chemists of the Station began work on the fertilizers that were then being sold to the farmers. Many of these fertilizers were good for nothing. Observe how the work has expanded during all these years since that time. Here began the spraying of trees, the study of tobacco, and the work on

**dairy farms.** Later on came the work that was done on proteins by Dr. Osborne, who was a son-in-law of Professor Johnson, in collaboration with Lafayette Mendel. The connection with Yale has been kept up. Dr. Osborne was a member of the faculty of the University as Lafayette Mendel is today. Dr. Mendel is also a member of the Station Staff. Those studies in proteins have become world famous as have also the studies on nutrition.

Perhaps you can sum up the character of Dr. Jenkins in that one word—"loyalty," which has been uttered here today. He devoted his life to building up this Experiment Station. I knew him mostly on the social side. Thirty-five years ago I first became acquainted with him. He was then Chairman of the Board of Governors of the Graduate Club Association, and I was then a member of the Board. We used to meet once a month about six o'clock in the evening, have dinner, and afterwards retire for business in an upper room. Our business was usually completed by nine o'clock. We had light refreshments and sat there and told stories until about twelve o'clock, as Mrs. Jenkins probably remembers, and then we went home.

Dr. Jenkins was one of the finest story tellers I ever knew. His stories were not fabrications, as I found out when I was able now and then to run one down. They always started, I dare say, with some real incident. But he had the literary ability to touch them up. **That is all there is to first-class story telling.** It is just the same as what the novelist does, for if things were written out precisely as they are spoken they would make no impression. They have to be elaborated in the interest of art. I remember telling the Board of Governors on a night of an experience I had recently had down in Maine, where I had traveled all day on a railway train without any opportunity to get anything to eat. Immediately Dr. Jenkins told a better story. He also had been down in Maine over the same railroad. He said that, if I had been a little more observant, I could have found a station where I could have got something good to eat. He recalled how, going into a restaurant on that line and seeing a lot of pies facing him on the shelves behind the counter, he said to the girl in charge; "I think I will have a piece of that huckleberry pie." "That ain't huckleberry pie," the girl informed him as she brushed away the flies, "that is pumpkin pie."

Dr. Jenkins was endowed with a genial temperament which assured the success of this Experiment Station or any other undertaking. Another characteristic was that while genial and willing to discuss any matter of business in hand, there was always a time when he came to a decision that was his own. That final decision of character accounts, I think, for his great administrative ability.

The State of Connecticut takes very great pride in the history of this Experiment Station and in the work now being done here. As Governor, I am glad to see this new building bearing the name of Dr. Jenkins. No other name could be as appropriate.



## THE AGRICULTURAL STATION AS A PUBLIC SERVICE INSTITUTION

JACOB G. LIPMAN

This Experiment Station, with many others, is an instrument fashioned by the needs of a basic industry. The farmer, the consumer of his products and the commonwealth have a stake in it. It was created out of the thinking and the experience of men of science and of men of the soil. The events which preceded its genesis and evolution reach back beyond the dawn of history. But for us here assembled the less remote past and this very day are linked together by the hopes and intuitions of pioneers and builders and the sober judgment of men and women facing life bravely as it changes about them.

There are a few rather simple questions that seem especially pertinent at this time. One of them reads: "What is an agricultural experiment station?" Most of us know the answer, but few of us understand fully the spirit that has vitalized the labors of trained workers in the experiment station field. We say that the experiment station is a department of a Land-Grant college; or, occasionally, an independent institution, provided with a technical staff and suitable equipment for inquiring into the nature of plant and animal life; for marshalling the facts of soil and plant science; for correlating scattered observations and experience; in a word, for revealing the truth, to the end that land may be made more fruitful, plants and animals more numerous and finer, pests less damaging, human toil less arduous and life in the cities more pleasant because of the uninterrupted flow of food and of other commodities from the land.

But the Experiment Station is more than a mere research institution. It does not hide its light under a bushel. There is vast wealth in its store-house of facts, wealth that is not hoarded but bestowed freely on the rich and poor alike. The experiment stations and the Federal Department of Agriculture have interpreted pure science in terms of applied science and have helped to make American agriculture what it is today. And shall we find fault with them for having wrought better than they knew? Shall we lend a friendly ear to those who accuse them of having brought about over-production, crop-surpluses, price declines, capital losses and insolvency? If the truth must be told the Experiment Station can furnish knowledge, but it cannot furnish wisdom. Knowledge has given us an endless variety of machines and tools, lack of wisdom has made them a source of unemployment and wretchedness.

The automobile is a case in point. It had its birth in technical knowledge, it is a source of utility and joy, and lack of wisdom may make of it a means of terrible destruction. Shall we then blame science for the knowledge it has given us, rather than blame ourselves for the abuse of this knowledge?

There is another question that is timely. It reads: "What were the conditions and needs that gave birth to the experiment stations?" The answer to this question is not hard to find. If we are after contrasts between ancient and modern life we may read human records on tablets of baked clay, on stone, on parchment, in old books and new. We shall find there the story of pestilence and famine, of land hunger, of mass migrations and wars impelled by land hunger. If the land grew poor, if the crops were puny, if the livestock were stunted and if insects and diseases left little to harvest there was, perhaps, better land and a more abundant life beyond the horizon. To wander over the face of the earth, to kill those who stood in the way, such was the expedient of hungry peoples. That this expedient is not quite obsolete is shown by the present day happenings in the Far East. But let us not roam too far afield. Rather, let us focus our attention on the decades that immediately preceded the founding of the experiment stations.

In describing the condition of British farming at the beginning of the reign of Queen Victoria, Lord Prothero tells us that:<sup>1</sup> "In 1837 agriculture was languishing; farming had retrograded; heavy claylands were either abandoned or foul, and in a miserable state of cultivation. Indifferent pasture, when first ploughed, had produced good corn crops from the accumulated mass of elements of fertility which they had stored. But this savings bank of wealth had been soon exhausted. At peace-prices half crops ceased to be remunerative and the newly ploughed arable area was now recovering itself from exhaustion to grass as best as it could without assistance." In his letters on Modern Agriculture, published in 1859 Liebig says:<sup>2</sup> "The deplorable effects of the spoliation system of farming is nowhere more strikingly evident than in America, where the early colonists in Canada, in the State of New York, in Pennsylvania, Virginia, Maryland, etc., found tracts of land, which for many years, by simply ploughing and sowing, yielded a succession of abundant wheat and tobacco harvests; no falling off in the weight or quality of the crops, reminded the farmer of the necessity of restoring to the land, the constituents of the soil carried away in the produce. We all know what has become of these fields. In less than two generations, though originally so teeming with fertility, they were turned into deserts, and in many districts brought to a state of such absolute exhaustion, that even now, after having lain fallow more than a hundred years, they will not yield a remunerative crop of a cereal plant."

<sup>1</sup> English Farming, Past and Present, p. 348 and following.

<sup>2</sup> Letters on Modern Agriculture, p. 179.

As with land so with plants and animals. Empirical agriculture could not hold its own in a world gone technically modern. There was a population-drift from the land. There were sharper contrasts between the city and the farm. Long hours of labor with hand tools and indifferent implements bent the back and stooped the shoulders of the men, while the unremitting drudgery of the farm home made the women old before their time. Low and declining productivity of most of the land, a narrow range of crops ravaged by rust, mildew, blight, scab, wilt and root-rot, and devastating hosts of insect enemies were in the way of agricultural progress. The farm animals were underfed in the summer and feeble in the spring. Outbreaks of disease and high mortality among livestock were common. The yields of eggs, milk, wool, beef, mutton and pork were low. The farm home was deficient in comforts and conveniences. Malaria, typhoid, tuberculosis, diphtheria and scarlet fever brought constant grief to the farm population. Smallpox and cholera were not unknown. In the southern states yellow fever made its occasional appearance. The roads were worse than poor and, at times, practically impassable. For the rural population library facilities were scant and secondary schools and colleges were for the very few.

Despite its compensations life on the farm was hard and, not infrequently, cruel and stupid. The tools of science were already within reach and men of vision were not wanting who could anticipate their use and the relief from drudgery and sorrow that they were destined to bring to the man with the hoe. It was these men of vision who helped to crystalize the thinking toward the establishment of the Agricultural Experiment Station. We rejoice with you in your having given to our Nation able leaders like Atwater, Johnson and Jenkins. They and others have builded better than they knew. For ourselves, we have the advantage of retrospection. More than a half century of planning, of study, of thinking and of joint effort have filled to over-flowing our treasure-house of agricultural science. We of today can understand, because we can see in tangible form what to the pioneer was only a vision and a hope. But, withal, we have found an answer to our question. The experiment stations were established because they were badly needed as an instrumentality for modernizing an ancient art. They were needed even more for quickening the thinking and stirring the imagination of the men of the soil. And this brings us to our third question—"What have the Experiment Stations accomplished?" The story of these accomplishments would be long in telling and would call for skill and talents far beyond mine. It is temerity enough for me if I attempt scarcely more than the barest mention of the major problems that the experiment stations have attacked and solved. Even this more limited task I can perform but crudely. Shall we begin, then, with the foundation of our cor-

poral existence, the land and the soil? When the United States of America came into being as a national organism it found itself rich in natural resources. Its land holdings grew to the south and the west until the Public Domain became a proud empire. The tide of migration flowed toward the Gulf of Mexico and the Pacific Ocean, but always it was the migration of individuals rather than of organized masses. Home were established, land was made arable and the constituents of soil and air were minted into plant and animal values. But, what is more important, human organisms were the major product of synthesis, organisms sturdy, virile, dominating. Thus the Empire stretched, population swelled and soil capital was exported in increasing volume within and without the boundaries of the country. It was inevitable that the drain on the land make itself felt. Soils lost as their population gained. Organic matter was being dissipated and soil acidity increased. Erosion became more serious and adequate drainage more difficult. And so the experiment stations faced one of their challenging tasks, the conservation of soil capital. I scarcely dare to linger for more than a moment on a story of inspiring achievement. We think of their contributions on the origin, formation, classification and mapping of soils. We appraise gratefully their labors on the maintenance of soil fertility, the use of lime and green manures, the significance and application of chemical fertilizers and of all the other expedients of successful soil management. But the maintenance and building of soil fertility, translated into present day practice, are merely the expression of far reaching studies in the domain of soil science and its more limited fields of soil physics, soil chemistry, soil microbiology and plant nutrition. Truly it may be said that the experiment stations have rendered yeoman service to this Nation in guarding the treasure of its soils.

The experiment stations have done no less for our domesticated plants and animals. Valuable plant and animal migrants are here by the grace of the thinking and the efforts of devoted workers in the experiment stations and the Federal Department of Agriculture. Superior plants and animals are here also because of the profound learning and the uncanny skill of the geneticist. And yet we accept with scarcely a comment the 300 egg pullet, the 30,000 pound of milk cow, the ton litter of pigs or the 2,500 pound bull. We are familiar with disease resistant plants and animals, with vaccines and sera, with passive and active immunity. There has been tremendous progress in the elaboration of techniques of plant and animal protection. The entomologist and plant pathologist are very much in earnest when they say to the horticulturist, "Let us spray."

The farmer, and for that matter the man in the city, is under constant attack of insects, bacteria, fungi, and all sorts of internal and external parasites. The barest mention of such pests as the

boll weevil, the corn borer, the hessian fly, the chinch bug, the army worm, grasshoppers, plant lice, Japanese beetle, bean beetle, gipsy moth, coddling moth, grain moth, mosquitoes, flies and scores of other insects makes us stir uneasily. We must pay tribute to nematodes, tape worms, cattle ticks, leafhoppers and what not, either because of direct damage done by them, or because they serve as carriers of protozoa or of virus diseases. We are taxed heavily by tuberculosis, hog cholera, contagious abortion, various distempers of animals and no end of other afflictions. Microorganisms attack living and dead tissues and the fight against them is hard and unending. The experiment stations have fought a sturdy battle against visible and invisible enemies of plants, animals and man. They have won notable victories and they have laid the foundation for other victories still to be won.

In going on with our story, we must pause here and there, to note the effect of station research on important agricultural practices. If we consider the relation of environment to plant and animal production we think at once of fertile investigations of the factors of temperature, humidity, light and pressure as they relate themselves to the life of plants and animals. If we ponder over labor efficiency on the farm and in the farm home we remember the blessings that have been brought to both by the agricultural engineer. Products from the field, garden, orchards and dairy may be eaten as such, or processed. Various animal products may be similarly treated. On this subject the experiment stations have worked effectively and fruitfully. The chemistry of food, the functions of different nutrients, the interrelation of these, dietaries, food assimilation and the relation of food to health and disease have all been a part of the station's research program. This Station has done more than its full share in dealing with the problem of human nutrition and has bestowed a great gift on all the nations through the labors of Osborne, Mendel and their associates.

Indirectly, net yields per acre have increased by the reduction in wastage of farm products. Reference has already been made to new techniques of plant and animal protection. But mention should not be omitted of the far-reaching conservation of food values by means of storage, refrigeration, dehydration, canning and other forms of processing. Neither should we forget the valuable contributions of the stations in the field of fermentations such as lactic, acetic, propionic, butyric, citric and many others. Agricultural science has found these a fascinating and profitable subject of study in behalf of agriculture, as well as of non-agricultural industries. We need only recall the fermentations of sugars, starches and celluloses, and such interesting products as industrial solvents and gums. Germicides, antiseptics, preservatives; heat and cold, the removal of moisture and the electric current have become economically important devices for expanding the volume

of food and of other agricultural raw materials for consumption from one season to another, and, indeed, throughout a succession of seasons.

Let us consider another field of activity. It has been charged against the stations that they have over emphasized research on production and conservation, and that they have ignored, by the same token, the pressing problems of marketing and distribution. A glance at the imposing list of agricultural economics research projects maintained by the stations and the Department of Agriculture will show that this criticism is not deserved. Not content with the mere study of farm management and cost accounting, our stations have sought for the truth wherever they could find it and have not stopped at state and national boundaries. In their efforts to create a better understanding of the entire structure of rural economy they have studied taxation, transportation, grades and standards, farm credit, banking, insurance, cooperation, tariffs and all sorts of distribution and merchandising problems. To be sure, agricultural economics is one of the newer fields of station research, none the less, the findings in this field are voluminous, valid and thought-provoking. They furnish a body of facts destined to enter into the remaking of our agriculture, and, for that matter, of our entire economic household.

Passing on to still another type of station activity, we find that they have not forgotten that "man does not live by bread alone." There may be no longer, such a thing as "rural civilization" certainly not without systems of intercommunication and mobility. But there are, for all that, currents of thought and feeling that seem to flow from the soil itself. Rural sociology is a legitimate field of station research. This research has already borne fruit. Men of the earth have molded the thinking of all ages and times and we cannot, if we will, filter this thinking out of our sub-conscious life. The riches of the farm are the riches of all the people, but the greatest gift of the soil is the reservoir of men and women who build and rule the cities. And so rural society and its thinking, its religion, its philosophy, its institutions and its hopes cannot be divorced from the life of the Nation. But it can be studied to the end that it may be better understood and better integrated into a progressive society.

The experiment stations have considered the esthetics of the country-side, the planning of its landscapes, the creation of enticing vistas, the lining of our roadways with majestic trees and the fashioning of aisles of green restful to the eye and the spirit. The stations have brought greater beauty to our lawns, greater variety and color to our ornamental plantings, greater joy to those who love nature's art.

The band wagon of economy is, at the moment, a popular vehicle. With zeal, often prompted by feeding rather than logic, the riders

strike with vigor at everything within sight. Some of them are asking whether the work of the stations is not done. They have a **right to a fair answer**. Here is a group of institutions motivated by the highest ideals, manned by technicians loyal to science as a tool of human welfare, uncovering ten problems where they solve one, is their work really done? Let those who will find the answer. At this time and in this place we must give thought to something else. Ours is a mood of humility and thankfulness. We are gathered to dedicate a building which, as long as it stands, will bear the name of one whose life and service were a great gift to our Nation. Just as Edward Hopkins Jenkins lived, and loved and labored within the limits of his capacity, so will the men and women who are to occupy this building dedicate themselves to high thinking, plain living and loyal service. We can trust them and many hundreds of other station workers who are the body and the spirit of agricultural science to serve and to build and to lighten the burden of those who must make bread out of stones.

## EDWARD HOPKINS JENKINS—THE MAN AND THE PUBLIC SERVANT

EDWARD M. EAST

My friends: It is a real privilege for me to be permitted to pay a tribute to Dr. Jenkins. I met him first nearly thirty years ago, shortly after I had wandered out through the college portals in pursuit of what seemed, at the time, to be chivalrous adventure, although to-day I should be inclined to describe the quest in more prosaic terms. My soul demanded, as the souls of youthful enthusiasts so often do, the symbol of a Chevalier Bayard to be set in its proper niche both as a pattern and as profitable company. The image of Dr. Jenkins filled this niche. He inspired me with intense admiration for the quality of leadership displayed in his chosen work and for the high standards of thought and conduct to which he clung tenaciously, even when in contact with the sordidness of the world of practical affairs. And he aroused deep affection in the dual role of counselor and comrade by his tolerant geniality and his never-failing kindness.

In the three decades that have passed since then, much disillusionment has come. Those of you who have passed over the same milestones know that such experience is inevitable. We could not avoid it if we would; and we would not if we could; for we like to think that, with the bleaching of our rose-colored glasses, we see more eye to eye with Koshchei and view things as they are. But it follows that the ideals and enthusiasms of youth which remain to us in maturity are nearer and dearer. It means a great deal, therefore, to be able to say, without any mental reservation, that Dr. Jenkins is just as much my ideal among men to-day as he was thirty long years ago. In the course of an after-dinner conversation during this last summer, a lady was twitting me on my inability to define the term "gentleman." "You are right," I replied, "I can not describe the true gentleman properly in words; but I knew one once; his name was E. H. Jenkins."

I feel that there is no impropriety in thus announcing my personal feelings toward Dr. Jenkins on the occasion when we meet together for the formal dedication of the laboratory which is to bear his name. Each of us who has had contact with him has come to regard him lovingly because of that association. He means much to each of us because of the sum total of our experiences with him, and not because of any abstract greatness as scientist or experiment station director. For this reason, what I have just said for the pleasure of paying individual homage to Dr. Jenkins' memory,



becomes a generalization. Dr. Jenkins *was* a scientist of distinction. He was also an able director of scientific research. On either count this building might become the Jenkins Memorial Laboratory. But we all know that such reasons are satisfactory neither to our emotions nor to our intellects. The Jenkins Memorial Laboratory is so named because Dr. Jenkins was able to influence his fellow-men—as naturally as the sun influences the flowers—to the end that what his co-workers have produced in the past and what his followers will produce in the future, has been, and will continue to be, the material embodiment of his inspiration.

The Connecticut Agricultural Experiment Station was established in 1875, the first of the state agricultural stations. Thus it has been in existence for nearly 60 years. And during this period it has been a recognized leader among all such institutions, both in fundamental contributions to knowledge and in the application of this knowledge to the art of agriculture. It is but simple justice to say that its record has seldom been equalled and never surpassed. The state may well be proud of its achievements. I once heard it proclaimed in one of the legislative halls of the Commonwealth, at the time when such things are most often mentioned—i.e., when appropriations are being considered—that “the State of Connecticut has acted very, very generously toward its Agricultural Experiment Station.” The tones were those of the querulous philanthropist who thinks that he is not receiving a full measure of gratitude from his beneficiaries. But this was not, I think, a common feeling. There was more agreement, I imagine, with the gentleman who replied to the speaker in private: “Generous! What nonsense! Is it generous to invest money where the return is a thousandfold? ‘Shrewd’ is the word! We are still Connecticut Yankees!”

It should be a matter for thankful appreciation by the people of the state that they should have had at their command, for so many years, a distinguished staff of trained men, who kept watchful eyes on the quality of the food and drink exposed for sale; who investigated the requirements of the various soils; who made certain that full value was obtained for the money expended for fertilizers, sprays, and other necessary farm equipment; who warned them, in advance, of the approach of epidemics of plant diseases and of infestations with insect parasites; who applied relief measures whenever these were necessary; who were ever ready, in short, to give thoughtful advice on the thousand-and-one problems that confronted their constituents.

But in a wider sense the state, through this Experiment Station, has been generous. The ascertained knowledge resulting from fundamental scientific research has a usefulness in furthering civilization which is not to be confined within state limits or national boundaries. And in this department of work the Station has been

especially preëminent. I need only mention the early work with the calorimeter, which gave precise knowledge of the energy requirements of the human body; the discoveries in plant physiology, which taught us so much about "how plants feed" and "how plants grow"; the initial discoveries in soil chemistry, which helped to bring into being a new subdivision of science; the long-continued researches on the composition of the vegetable proteins, which showed us how these essential products of living matter are put together, and in the end gave us a wholly new concept of nutritional chemistry; the numerous painstaking contributions on methods for the proper identification of food adulterations; the detailed studies of the life histories of annoying fungi and noxious insects, without which their control is impossible; and the contributions to the laws of genetics which, as a by-product, have brought about a radical change in the accepted methods of breeding Indian corn and other plants.

Now Dr. Jenkins was personally responsible for certain important investigations in agricultural chemistry and in agronomy, as you have heard; but his own special researches were intentionally avoided in compiling this imposing list. His preëminence does not depend on what he accomplished in his own laboratory. His most brilliant success was as director of this station. In this capacity his work was so distinctive that he deserves, and is accorded, a collaborator's share in its entire output of scientific work. It does not matter that others furnished the intellectual germs of many of these researches and, having spent their lives in their development, are thus deserving of honor and esteem. Without Edward Hopkins Jenkins many of these germs would have produced no growth, or, had they sprouted and flowered, would have proved sterile. He it was who saw to it that they obtained a hospitable environment. He it was who gave the young plants careful cultivation. He it was who trained them in the proper direction, and who pruned them when he found it necessary. He it was who screened and selected the fruit, that the harvest might be good.

The qualities which enabled Dr. Jenkins to do these things made him an admirable pilot for the experiment station staff. They also gave him a sincere and zealous following among the citizens of the state, where he was trusted and admired to a degree not often accorded a public servant. No other interpretation of his successful career appears possible, for Jenkins—although he had a rare gift for explaining the teachings of science in familiar terms, and although he was fond of describing himself as a "horny-handed son of soil"—had had no youthful training as a farmer and might easily have failed utterly by bringing upon himself the damning epithet "highbrow."

It therefore is of some importance to inquire into the qualities which Dr. Jenkins possessed, both for the benefit of the souls of

other directors of scientific work and for the profit of learning in general. Such an inquiry is the more worth while since, as I see them, the outstanding virtues of Dr. Jenkins' character were not the legendary attributes of the superman; they were traits which the ordinary individual possesses, in some degree, and which he is able to develop more highly when convinced of their ultimate importance.

Dr. Jenkins had naturally a fine mind, in which a ground-work of training was laid at Yale and at Leipzig. To this ground-work he added continuously, for his taste was catholic and his intellectual curiosity unquenchable. History, biography, philosophy, and polite letters, were as familiar to him as chemistry and biology. They were all grist for his mill. Yet this mental equipment, taken by itself, does not satisfactorily account for his development as scientist and as teacher,—to say nothing, for the moment, of his record as administrator. He was a true scientist, we may remark in passing, because he was able to make use of his knowledge by straight thinking. He was a successful teacher because he had found that the inner secret of pedagogy is teaching others to reflect carefully and to reason clearly. This is shown in his address nine-teen years ago, before the Association of Land Grant Colleges and Stations, where he said: "If extension work simply teaches the bare art of farming—a series of facts, receipts for treating land and crops and cattle—it fails of its chief value and opportunity. That opportunity lies in teaching the farmer to think."

No! Dr. Jenkins was much more than an intelligent man, fitted by training for teaching and research. We must add new lines to our portrait.

In character, Dr. Jenkins was the personification of honor, uprightness, and truth. He was incapable of meanness of spirit. Tolerant as he was of ordinary frailties in others, he abhorred the inconsiderate man, the snob, the boaster, the poseur. To him such a man was a cad. He used the term but seldom, but it was his most devastating epithet.

In taste, Dr. Jenkins was discriminating. He loved the truly beautiful, in nature and in art. He was fond of the birds and the flowers, and knew them well. He thrilled emotionally to fine paintings and to flowing verses, to well-proportioned architectural lines, and to exquisite furnishings. He was, in fact, an artist in his own right,—a literary artist. He could write ably, interestingly, humorously, and with style, both for the reader and for the listener, which, as Havelock Ellis notes, are two distinct accomplishments.

In personality, Dr. Jenkins was a very noble gentleman. He was always courteous, always full of a genial yet dignified humor, always kindly. One never heard him speak in anger.

Our description would not be recognized by the one who inspired it, for his modesty was proverbial. It does indeed contain an

impressive list of virtues to be ascribed to one single fellow creature, molded from the common clay, though it does not overstate the case by a single jot or tittle, as all my listeners will agree. Yet this characterization, extraordinary as it is, does not, in my opinion, probe the secret of Dr. Jenkins' success as director of this station. It notes the traits prerequisite for admission to the Valhalla of Nature's noblemen, where Jenkins surely belongs, but where he joins a smallish company of his peers. That which made him a unique figure in his chosen field was his active unselfishness, his ability to put himself in the other fellow's place, his willingness to renounce personal ambition for the general good. This is that rare form of charity which he had and which most men in his position lack, thereby becoming, despite their other virtues, as so much sounding brass and tinkling cymbals.

It has been said that the superior executive is one who employs the best men available, and then lets them alone. This is too simple a prescription. It leaves the chief nothing to do between the intermittent exercise of his powers of selection. Jenkins certainly did not follow this rule. Doubtless he endeavored to see that the members of his staff were qualified to do their work and exhibited no especial marks of degeneracy, but beyond this degree of selection I suspect that he found it inadvisable, and perhaps impossible, to go. He did indeed leave his men alone in the sense that he never gave orders; but he did not leave them lonely and alone, groping hesitatingly about in the midst of their own special cosmos. On the contrary, he was an exceedingly active agent in the business of getting results from each and every member of the staff. This activity went beyond the mere perpetuation of the traditions of hard work and of scholarly visions which had been inherited from Atwater and Johnson. It transcended the ordinary idea of beneficent coöperation through being genial and courteous and generally helpful.

Using his own particular formula he succeeded in permeating the whole environment with his own hopeful enthusiasm. The mind of each staff member was conditioned with an expectant optimism toward his own labors. And each learned to play the game of the moment with confidence and with the spirit of a sportsman—with no undue elation if he won and no extended disheartenment if he lost. It was the method of the behaviorist, though practiced effectively long before the principle was announced in the psychological textbooks.

I well remember, during my own short connection with the work here, how expectantly I looked forward to the almost daily visit of the director. Perhaps I may be pardoned for again becoming personal, for I have learned that my experience was the common experience of all. He entered with a cheery hail, put matters on a friendly footing at once with a jovial quip, a sym-

pathetic inquiry, or a humorous allusion, and then got about the business of the day. The business of the day was always to make me feel that the only station problems important at the moment were my own, and that the primary aim of the director's life was to smooth out all difficulties that might stand in the way of solving them. Under the pretense of his own ignorance, Jenkins would encourage me to talk over my tentative plans of work, well knowing that the opportunity of airing them would help to bring a little clarity into my befogged notions. During the process there were keen questions. Pertinent suggestions were inserted, painlessly and somewhat apologetically. Afterwards, financial needs were taken up; and if the needs were real, there was always "a little money down cellar in a teacup" for them—to use his own phrase. Then came the discussion of the work in hand. Here he was especially helpful. One was not encouraged to take himself *too* seriously if things went right, and was not led into self-pity if things went wrong. Instead, one was subtly persuaded that the game itself was the important matter, and that whatever happened was right. And finally, if the director's visit was on one of those rare occasions when a piece of work was finished and ready for publication, his own tasks were abandoned at once in order that he might go over the manuscript with care and give it some semblance of unity and style. This editorial work he did somewhat hesitatingly, as if afraid that any suggested change would hurt the author's feelings; but he always went through with it, and the custom had a marked influence on the quality of the station's output of published reports.

If I have expressed but feebly the debt which the people of the State of Connecticut, and especially the members of the staff of the Connecticut Agricultural Experiment Station, owe to Dr. Jenkins, it is because of my inability to do him justice. He was one of the great men of our generation. And his success, I am convinced, while built upon a solid ability in science, an exceptional gift of expression, an understanding mind, and a sympathetic personality, was more definitely due to his willingness to sublimate his own personal ambitions, and to bend his whole energy toward smoothing the way for his staff members and making them happy and contented in their work. He put himself last in his own estimation, and by so doing, made himself first in the estimation of those who knew him. This may seem to be a simple characteristic upon which to build a legend of greatness. But, after all, the gods and demigods that we have created after our own image have usually been endowed with attributes that are sometimes despicable, often fantastic, and always unreal. Is it not just as well to have a little hero worship for that rare type of individual, the unselfish comrade who never lets you down?



IN MEMORY OF

EDWARD HOPKINS JENKINS

1850-1931

SCHOLAR SCIENTIST ADMINISTRATOR

CHEMIST TO THE STATION 1876-1900

DIRECTOR 1900-1923 DIRECTOR EMERITUS 1923-1931

A LEADER IN THE CAUSE OF SCIENTIFIC AGRICULTURE AND IN  
RELATED PUBLIC SERVICE OF THE STATE AND THE NATION  
A GENTLEMAN WHOSE RARE QUALITIES OF MIND AND HEART  
MADE HIM BELOVED OF MEN IN APPRECIATION OF HIM

THIS TABLET IS ERECTED BY  
HIS ASSOCIATES ON THE STATION STAFF

JENKINS MEMORIAL TABLET

## PRESENTATION OF JENKINS MEMORIAL TABLET

E. MONROE BAILEY

My place on the program today is to perform a duty that marks the fulfillment of a plan conceived of, and carried out by, the Station staff.

It is gratifying to us all to know that Dr. Jenkins knew of the decision of the Board of Control of this Station to name in his honor the building that we are dedicating today. The characteristic modesty of the man did not permit him to approve of this action of the Board but he yielded to its wishes and we may be sure that he did not fail to appreciate the distinction and honor bestowed upon him by its official act.

Following his death the Station staff, among other actions taken, voted to erect a tablet in his memory, the tablet to be placed in the laboratory which was to bear his name, and to be paid for by voluntary contributions of present and former members of the staff. Former members were accordingly notified of the plan and it received their hearty approval and their generous support. The staff was happy to include also Mrs. Elizabeth Osborne, who not only took an active interest in the project on her own account, but who expressed the wish to contribute to the tablet fund as her late husband Dr. Thomas Osborne, friend and colleague of ours for many years, would have wished to do. This memorial then is a personal appreciation on the part of all those who were associated with Dr. Jenkins in carrying on the Station work.

There is another circumstance in connection with this memorial that is of more than passing interest. The committee which was appointed to take charge of the tablet project was so much impressed with the beauty and general excellence of a memorial tablet in the college chapel at Wesleyan University in Middletown, that it chose an adaptation of that memorial as the basic idea for this one. It will be remembered that Dr. Jenkins first became identified with this Station before it became a State institution and while it was still situated at Wesleyan University. It seems singularly appropriate that the suggestion for his memorial should be found in one almost within the shadow of the laboratory where he began his career as an agricultural chemist.

Now, Governor Cross, it is my privilege to present to the Station, through you as president of its Board of Control, this tablet in memory of Edward Hopkins Jenkins; and I present it on behalf of those men and women, present and former members of the Station staff, who counted it a privilege, a pleasure, and inspiration to work with him.