

JOHN HENRY REED'S SPEECH  
PROPOSING ESTABLISHMENT OF AN  
EXPERIMENT STATION IN RIVERSIDE

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CITRUS STATION  
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Importance of Local Government Experiments  
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Able Presentation of Matter Before Farmers Institute by J. H. Reed  
of Riverside

That agriculture has been developed to a higher degree in the United States than in any other country is generally admitted, but those who have not had the opportunity to carefully observe the implements, methods and results in foreign lands, can scarcely realize how far our country has outstripped even the most advanced of the old world-agricultural districts. While we usually credit the high general condition to which the science and practice of agriculture has attained here, to the intelligence and enterprise of our people, to our rich soils and favorable climate, there is another factor which has been potent in bringing it about, which I think is quite too little understood and appreciated; that is the aid which has come from State and Federal governments. With their unlimited resources they have been able to use the best trained talent in carrying on investigations under the most favorable conditions. Those investigations, absolutely impossible to private enterprise, individual or combined, have resulted in vast benefits to all departments of agriculture. Not only have they saved millions of value from destruction by disease and other enemies to the farm and orchard, but to securing rapid development of improved animals and plants, as well as better farm methods, have added to the agricultural values of the country a thousand fold, all their cost.

Of all the departments of agriculture, horticulture has engaged the best minds, and has attained a high degree of proficiency. I venture the assertion that nowhere else in the world has horticulture been carried so far toward scientific and practical perfection, through private enterprise,



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as in the citrus fruit growing districts of Southern California. But with all our success we have found limitations. We have met difficulties that have baffled the most thorough investigations of our best orchardists. Some of them are most serious and far reaching in their mischief. Some of these obstacles, now standing in the way of our best progress and threatening vast damage to our orchard interests in the near future, have proven themselves beyond our power of removal; hence we now ask Federal aid in overcoming them, thus warding off irreparable injury to our great citrus fruit industry.

Just here it is proper to say that the greatest obstacle in the way of securing what we ask will probably be found in the fact that the real need is not appreciated by those most interested as fully as it should be, and the request may not be made with urgency and ultimately the necessary demands. The reason for this is not far to seek. We naturally hide our physical and moral defects from the public, which is very proper - so long as no hidden disease or moral delinquency menaces the well-being of our neighbor. There it becomes a crime. For like reasons, we do not exhibit the diseased or infected trees in our orchards, nor do we care to have their existence generally known or discussed. This tendency to cover up orchard defects has serious results. Ten years ago few localities or individuals acknowledged the presence of scale in their orchards while the fact was that it existed in many, and in some to an alarming extent. Had it been possible then to have had some conception of the aggregate loss to the crops in Southern California, and the vast sums spent in fighting those pests during these years, the pride of growers of the few orchards then infested, as well as the general local pride and selfish interests would have been laid aside, the public would have recognized the danger and the fight would have been made before the enemy gained the foothold it soon did. The result would have been if not extermination of the pests, a greatly reduced area infected by them, and a saving of a vast annual expenditure to our orange districts. The secret policy of fighting our orchard enemies, so long held by many, and yet insisted upon by some, seems to me utterly wrong, and the most perilous obstacle in the way of accomplishing their abatement.



The present special and most urgent need of expert assistance from the Department of Agriculture is found in the loathsome scale bark gum disease that has lurked for many eons in the older orchards. For reasons that have been indicated, little has been said, hence little known, in a general way, about it. A few years ago a member of our club brought the matter up, insisting that something should be done. Having had only to do with young orchards I was sure he was overstating the seriousness of the disease. He invited me to go with him to several orchards. I was utterly astounded at what I saw. It seemed to me not only utterly anomalous, but alarming that such a condition of things could exist in our valley and so little be said or known about it. We found magnificent trees with their lives seemingly being eaten out of them, with but a little sickly foilage and no fruit. In other trees the disease had not sapped much of their vitality and they were comparatively thrifty. In some cases expert service had been employed and every means used to overcome the disease, but without avail.

Not long after the discussion of the matter in our club, inquiries began to come in from other localities, as to what was being done about the gum disease, and we soon found that so far as we could learn, the same trouble existed in all localities in Southern California where older orchards existed.

While the loss of product from individual trees effected is considerable, it seems too trifling to be noticed, compared with the jeopardy in which they constantly place their neighbors and the adjoining orchards. The question of the disease being contagious has been much discussed, but I am unable to find anyone who has watched it carefully, who is not convinced that it is, though some claim that the disease is not seriously increasing. The little that is said about the matter readily accounts for such opinions on the part of those not giving the matter careful attention. Orchard inspectors tell me that they have found a very considerable increase from year to year, till now there is scarcely an old orchard in which cases do not exist.



After diligent inquiry I have been unable to learn of <sup>any</sup> ~~why~~ authentic cases of the scaly bark gum disease being permanently cured. By heroic treatment with the knife and other means, the disease has been checked in some instances, and apparently held in abeyance for a time, but sooner or later always reappears. It does not immediately endanger the life of the tree, like the foot-rot, but drains the vigor and partially, or entirely destroys profitable fruiting. Its seriousness is acknowledged by the best authorities we have. Our county horticultural commissioner tells me that while showing our State horticultural commissioner, Mr. Crow, over our valley recently he called his attention to several new cases of this disease that greatly interested him. "But", <sup>W</sup> said Mr. Crow, "I'm sorry that I have no suggestions to make. I know no remedy." Prof. Cook, one of our best equipped and most careful and studious investigators of the enemies of our fruit trees, while recognizing the seriousness of the disease, has expressed the same inability to suggest remedy. Mr. Galloway, at the head of the Division of Vegetable Physiology and Pathology at Washington, visiting our valley recently had time to make but little investigation, but was greatly interested, and expressed himself then, as well as in more recent correspondence, as being decidedly in favor of having the department <sup>to</sup> send an expert to study the disease. C

Mr. Swingle, the traveling representative of the same division of the department, while on his recent visit to this coast, visited Riverside, at Mr. Galloway's request, for the purpose of making some investigations as to the disease. He said he was greatly surprised at the healthfulness of our orchards, but considered this disease a most serious matter, needing prompt and vigorous attention, and will so report on his return to Washington. I refer to the condition in Riverside specially, <sup>Y</sup> simple because I am personally familiar with the orchards there. So far as I ~~can~~ learn, it is the same in other districts where the orange has been grown for considerable time. The only difficulty in the way of sending an expert here suggested by Mr. Galloway, is the lack of means to establish and carry on this work. Those anyway familiar with the workings of the department, know that this is the usual plan. They also know that when there is made known a worthy object, and it is urged with intelligence and zeal, the means are usually forthcoming. I believe the orange growers of Southern California have a valid claim, and that its acceptance awaits only intelligent and persistent presentation.



Besides this special need for a citrus experiment station, there are other diseases that call for investigation. We need aid in developing new varieties of citrus fruits and testing untried citrus fruit trees brought from abroad. While we are now probably producing the best orange that has ever been grown, because of its susceptibility to injury by low temperature, its profitable production is limited to small areas. Hence, we need a hardier variety of like quality. Again, the great markets begin to call for oranges maturing at other seasons of the year than that when the navel is not its best, as well for a greater variety of strictly first class excellence. The developing of these needed new varieties, because of time, expense and expert work required, it is not practicable for individuals or for private means.

The department is continually doing for other lines of agriculture the kind of assistance we ask for. An expert from the Division of Vegetable Pathology has recently been sent to Michigan to study on the ground a new disease of the peach. One of their ablest men has been sent to the south to investigate a fungus disease effecting the new inland cotton. Another to the tobacco districts of Virginia for expert work in curing tobacco.

Much of the department work such as studying the pear blight, and other diseases not confined to special localities, also special subjects requiring only laboratory work, such as the production of pure yeast now going on, for converting apple cores., pearings and cheap apples into fruit wines at home, instead of sending the raw materials abroad for foreigners to manipulate and send back to us in the manufactured product, are carried on at the home department. But, where conditions make necessary, as in the investigations for which we ask, the expert is sent to the locality directly interested.

Another thing that seems to me should have weight with us, and I think would commend the consideration of the department, is a secondary value that would most probably result from the establishment of such special experiment work in Southern California. There are several unsolved problems connected with our industry, concerning which the lack of definite information is annually entailing a tremendous tax upon orange growers. For instance, few will question, I think, that from 25 to 50 per cent of the enormous cost of fertilizers now used, could be saved by more



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definite knowledge within our reach, by continuous, practical field experimenting with reliable records.

The cause and remedy of the split orange, which will probably deduct from \$30,000 to \$50,000 from the receipts in Southern California this season, may be found out.

So long as one orchardist manipulates water and soil so as to make two inches of water serve the same purpose as others require three inches for, soil and conditions being the same, with water worth from \$1000 to \$2000 per inch, it is evident that we need less general talk on irrigation, and more careful, thorough, definite and exhaustive exper-<sup>tr</sup>imenting, with trained experts in our midst, systematically investigating the diseases of our trees, and other matters which we are not able to carry on. I think it but reasonable to expect that it may lead to combined, systematic investigation by local men and means, that will solve these and other problems requiring less intricate, expert work, though of vast importance to us.

After thorough study of this matter, I am more than ever persuaded that the citrus fruit interests are sufficiently important in Southern California and the necessity sufficiently urgent, to demand the establishment of a special expert station here by the Federal government as soon as practicable, and further am persuaded that with a united and earnest request it will be granted us.