LUTHER BURBANK

A SHORT REVIEW OF HIS WORK IN
PLANT HYBRIDIZATION AND BRIEF
COMPARISON WITH OTHER
HYBRIDIZERS.

By PATRICK O'MARA

JERSEY CITY, N. J.

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By PATRICK O'MARA, JERSEY CITY, N. J.

FOLLOWING my visit to Santa Rosa, California, and a short trip on the Pacific Coast, in the summer of 1905, I very briefly alluded to the work of Mr. Luther Burbank as a plant breeder before a meeting of the New York Florists' Club, taking the ground that his achievements in that line did not warrant the fulsome and extravagant praises bestowed on him by certain writers in the magazines and current newspapers. The few remarks I made were generally sustained by writers in the horticultural press in the United States and abroad. At the request of many who are interested in the subject I have undertaken to amplify what I said then and incorporate some of what has been written on the subject since that time.

As a fair start, so to speak, be it remembered, that the climatic conditions existing on the Pacific Slope are diametrically opposite to those encountered here. Many plants which succeed there fail here. A plant that will thrive here is in all likelihood going to thrive there. A notable example is the European grape vine, which does admirably on the Pacific Slope and will not thrive here. As a further example I would cite Fuchsias and Ivy Geraniums, they will not flourish here as they do on the Pacific Coast.

Practical men have therefore looked for many years with some suspicion on varieties which occur on the Pacific Slope, and when they come heralded with all manner of praise—such praise as only the Golden West can bestow upon its products—we do not accept them with all the praise that the Golden West puts upon them. We go cautiously. We say we will try them here first. Many of the plants that have come out of the Golden West have been sad failures in the Leaden East, if I may so dub it. I have a very distinct recollection when the Oregon ever-bearing strawberry was launched upon an unsuspecting public. I pricked up my ears and said to the man who urged it upon me, "I am rather inclined to believe that we require the soil and particularly the climate of the Pacific Coast to get out of that variety all that you get out of it there." What I feared was the result. The Oregon ever-bearing strawberry was tried extensively in the East and it failed and disappeared completely. Sometime after this the name of Burbank loomed up on the horticultural horizon, and it came to us in a very peculiar way, through a very modest little booklet, his catalogue, modest in

appearance but not very modest in its title. It found its way East and it was dubbed "The Creations of Mr. Burbank." Many are rather inclined to believe that there is only one Creator and once a week at least we bend in reverence to Him. The position which I took in relation to that title when I made my first public utterance upon it has been questioned by very good friends of mine. I still believe that when Luther Burbank assumed the title of a "creator" of new plants, he filed a presumptuous claim, and that he has no more right to claim the title of "creator" of new plants than he has to apply it to the bee that flits from flower to flower and carries the pollen; that he has no more right to claim it than the insects, or the winds. However, it gave an index as to what might be expected from such a source, and many were very wary of everything emanating from it. That weariness, up to the present time, has been fully justified by the results. I will not go over the entire list of "creations" but beginning with the potato which Mr. Burbank "created" in Massachusetts, and which was a "volunteer" seedling of the Early Rose not hybridized by him. It was a good potato, but it has outlived its usefulness in the East at all events. It is still I understand cultivated in the West; and it is said to be peculiarly adapted to the climate of the Pacific Coast, where there is a considerable precipitation of rain.

But there have been other men working on the potato, such as Mr. E. L. Coy, who has raised many good potatoes, and I want to say that the Early Rose, which the Burbank was supposed to supercede, is still grown here, while the Burbank has almost disappeared. Mr. Coy also raised the various Hebron varieties, the Beauty of Hebron and so forth. Mr. E. F. Carman, late editor of The Rural New Yorker, is also responsible for several excellent varieties of the various "Rural" potatoes, such as the Rural New Yorker, Rural Blush, Carman Nos. 1, 2, and 3; they are all potatoes which have superseded and outlived the Burbank. So much for that particular part of Mr. Burbank's achievements. There are three views of Mr. Burbank at the present time; one is the view of the magazine writer, although I can hardly class Mr. Wickson of the University of California in that category, notwithstanding he has written for the Sunset Magazine—contributing splendid articles in relation to Mr. Burbank and his work. These articles were subsequently issued in book form under the title: "Luther Burbank, An Appreciation." Many friends and admirers of Mr. Burbank contend that he is not responsible for the extravagant claims made for him in that publication; but it is well to bear in mind that he helped to circulate it and therefore gave a semblance of sanction to its contents.

When I visited Mr. Burbank's gardens at Santa Rosa, I did not see anything startling in the place, and I want to say it fearlessly and candidly, and without prejudice, to warrant the reputation given to Mr. Burbank in the magazines, either by Mr. Wickson or Mr. Harwood. When I returned to New York I was interviewed by the editor of the Florists' Exchange as to my trip. I didn't intend to initiate a controversy, but dropped the remark that I did not see anything on the place to show me that Mr. Burbank was entitled to the reputation he had received from the magazines. That remark called for the reply by Mr. Burpee of Philadelphia, trying to show me the light, but I could not see the

light, and at a subsequent meeting of the New York Florists' Club, I enlarged on the subject, and thus my name became connected with "Burbankitis," as it is called.

Mr. Burbank unquestionably says things very well; at least I think so. He has a happy knack of saying things. A good many of them are somewhat involved, but nevertheless, a thing that one cannot quite understand appeals to us sometimes as being very wise. But he says some things that appear easy to understand, and one of them is this: "Heredity is the sum of all past environment." Now if heredity is the sum of all past environment, it is a foregone conclusion that a plant produced in the climate of California and raised in that climate will have to dissociate itself from its environment when it is brought East, and therefore it is heavily handicapped before it can achieve distinction in commerce in this section of the country. This is from "An Appreciation," by Mr. Wickson: "For such a gifted seer neither weird altar fires nor incense cloud nor ecstatic state could add to insight. He could hear the 'still small voice' without preparatory earthquake or whirlwind. Like David of old, he could do his work with smooth pebbles from the brook and he cast aside the elaborate armament of his scientific brethren lest it should impede his movements."

There is a desperate attempt being made to make a scientific man out of Mr. Burbank; that is, to put him amongst the scientists, or rather, to make him first among equals, or even to put him above the scientist; in fact above the men whom we florists have come to regard as scientists, such as the men in charge of experiment stations and the United States Department of Agriculture.

I want to remark parenthetically, from having read what Mr. Burbank has written, and from Mr. Harwood in the magazines—also from what I have gleaned from his little books of "creations," that I am rather inclined to think his (Mr. Burbank's) science is somewhat of the Mary Baker Eddy or Helen Wilmans order.

The next quotation is: "Plant development is one of the phases of civilization, and it makes new conquests as they are needed in the onward rush of mankind. We are now at the beginning of an epoch of accelerated motion in this direction. Burbank is the prophet of this epoch. Obeying the command of the infinite he is carrying the gates of Gaza. Let not the Delilah of modern organization shear him of his God-given strength and make him like other men."

Then he reaches out and gets the \$100,000.

The other day we had Professor Ostwald of Leipsic lecturing at Columbia University. I do not believe the Professor ever met Mr. Burbank, and therefore he must have drawn his inspiration from the published accounts. He believes "that science is able to produce a piece of protoplasm and command it in the first step of evolution; that man has control of vegetable life, taking it out of the slow hands of nature and hastening its evolution from one form to another. The man Burbank, for instance, has so assisted nature in this work that she is almost out of a job. By combination and evolution, he produces new forms at will, and endows them with economic values that nature left undeveloped. We call him a

great horticulturist. He is one of the greatest biologists in the use of existing forms to produce others that nature did not make until shown the way."

The great poet said: "The art itself is nature."

In Burbank's "Creations" for 1901, his foreword in the little booklet reads as follows: "Education and selection are the two greatest forces used in the production of all these fruits and flowers. Not knowing the facts, and because some of them happen to be crossed, people often jump to the conclusion that they are summarily produced by crossing, and with about as little science or ceremony as a wizard would appear to do it with his magic wand."

Cross fertilization is the only process that will produce new varieties, except mutations from buds, these are the only ways in which new varieties are produced. When anyone speaks about "educating" a plant to be a new variety, I think he is mistaken, and that is why I thought that Mr. Burbank's science was of the Mary Baker Eddy or Helen Wilmans order. Others have boldly come out and said that by mental processes exercised on a certain plant they can change its character.

Mr. Burbank says about "educating" a plant: "We do not fill this catalogue with testimonials of the value of these new fruits and flowers, though we have enough to fill one twenty times as large. The best way to judge of the value of any novelty is to look to its source, and the fruits and flowers which have been bred and *educated* on Burbank's Experimental Farms and now growing all around the world are the very best testimony which can be given."

Further on in the same book he says: "During the past few years when Shasta Daisies were being bred and *educated* up to their state." I wish to say, and make it as emphatic as possible, that in my opinion no exercise of the human mind by way of suggestive thought directed upon a plant can change one cell or filament of it.

Now, let me say a word about the Shasta Daisy. When the magazines and the daily newspapers issued side by side pictures of an ordinary daisy and of a Shasta Daisy, my suspicions were allayed at once. I said, "if anybody can produce from an ordinary daisy growing in that climate a flower of this size it will not deteriorate in the East. Therefore, I thought we were safe in taking that. We obtained some Shasta Daisy seed. We raised enough plants to fill two frames, and when they bloomed, we sent a man up there with a hoe and he hoed them all out and threw them over the fence, because they were hardly any better than the ordinary field daisy, which grows in the fields of the East. It is only fair to say that I believe the Shasta Daisy has been very much improved since that time and is now generally recognized as an acquisition.

On the front of the catalogue for 1901 of the "Creations" of Burbank, there is a picture of a plum tree known as the Burbank Plum. The Burbank Plum is an importation pure and simple; he got it from Japan and he never produced it at all. In Burbank's catalogue for that year occurs the following, copied from the Santa Rosa "Republican." The first line says: "The Creation of the Horticultural Wizard are so wonderful that even science has to be convinced."

A great many of his friends say that he does not want to be called a wizard and that what is said of him is said without his knowledge and consent, but in this

particular matter that somewhat offensive word occurs. The article continues:

"An amusing incident in the visit of the Associated Agricultural Colleges and Experiment Stations of America to the Sebastopol grounds gives a fair illustration. When the party had traversed but a small portion of the grounds and tested but a few of the fruits therein, one of the professors called a halt, requesting from his brethren their brief attention. Calling upon Mr. Burbank to step forward so that all might the better view him, the producer of the wonders, he delivered the following: 'Gentlemen, in the presence of you all I wish to make known that one of my objects in coming to this Coast was to expose Mr. Burbank's fraud. I have read that man's catalogue annually and I have long considered him about the biggest liar in the United States. I now retract all that and declare that Mr. Burbank has never told one-half the marvels that he might. Gentlemen, hats off to the wizard before you.' The motion needed no second." This needs no comment from me.

This I quote from Mr. Harwood. Mr. Burbank is supposed to say: "We say to Miss Golden Cup, or Miss Eschscholtzia as the bon-ton call her, this beautiful dress of bright golden hue which you have always worn on all occasions is very becoming to you, and exceedingly appropriate to this land of perpetual sunshine, but, Miss Queen Golden Cup, if you will sometimes adorn yourself with a dress of white, pale cream, pink or crimson, we could love you still better than we do. Now, Miss Eschscholtzia, though having her family tastes and characteristics very thoroughly fixed, still belongs to the great Papaver race, which has often shown itself willing to adapt itself to the discipline of new conditions, even at first distasteful in the extreme. So, taking Miss Golden Cup into our gardens and constantly making these suggestions to her, she hesitatingly consents to don a dress a shade lighter in color, and then lighter still, until now we have her not only in dresses of gold but in deepest orange, light and dark shades of cream, purest snowy white, or all these combined, and by constant selection and various educational influence in this line, she will adorn herself in a dress of almost any color which may be desirable and at the same time seems to take the greatest pleasure in improving herself in every grace of form and feature."

This particular flower, as is well known, is the flower of California which grows all over the fields, making them golden. In Mr. Harwood's book he tells very touchingly of how Mr. Burbank going over a field one evening, noticed a delicate stain of red in one of the flowers. His eagle glance caught it and he saved that particular plant. After four or five years, I have forgotten which, he was able to put upon the market a beautiful crimson Eschscholtzia, which is offered by a Philadelphia seed house this year. That is an achievement in itself without question. But look at another side of it. Over in England twenty years ago Carter of London who had been devoting some attention to Miss Eschscholtzia or Golden Cup, produced the variety "Mandarin," a distinct break from the yellow, an orange colored one. About seven years ago or thereabouts they produced the Rose Cardinal, a rose colored one. This year they offer the Crimson King. I have not seen the variety, but the color plate, contrasted with Burbank's shows that Carter's variety is by all odds the better of the two. I merely

mention that to show that without any great flourish of trumpets, but simply by the ordinary processes of fertilization, selection and propagation, as to this particular flower, others are accomplishing what is said to be a marvellous achievement by Mr. Burbank.

The English people, particularly the Kew authorities, attracted by the noise and furor in the magazines, and seeing that the American people were not sufficiently appreciative of Burbank and that the great catalogue houses were rather chary of offering these wonders, and thinking that perhaps it was the old story of the prophet without honor in his own country, wrote to Burbank and asked him if he would sell or exchange some of these various marvels which he was supposed to have. I quote his letter in reply:

"May 8, 1905.

My dear sir:—Your esteemed note of April 10th received. I am sorry to say that the Press has gotten hold of my work a little too soon. I have a great number of hybrid thornless cactus, but it takes time and thought to select the ones which are to be winners, and I have been obliged to make an invariable rule never to send out anything until it is properly finished."

Then I thought of the Shasta Daisies that we hoed out:

"The perpetual poppy and fragrant Dahlia will probably be sent out by a Chicago firm next season. The 'Pomato' will not be ready for a year or two."

This "Pomato," is a cross between the potato and the tomato, they belong to the same family and so will cross; it has been done before; I think it is just sixteen years ago last summer since E. S. Carman, in a paper read before the Society of American Florists in Boston, told how he had effected this cross. It was of no particular use. Of course, Mr. Burbank may make use of it, but as an achievement it is nothing.

"The coreless-apple fraud is none of my work; I must add that it is no doubt worthless; though I have known it for forty years.

"I shall be pleased to exchange with you when I have these ready for introduction."

My object in injecting this letter is to show that while these things are probably in existence, yet as far as being of any economic value or being on the market, as most of us were led to believe, they were not available at that particular time.

The cactus is mentioned there. If there is any one plant attributed to Mr. Burbank that has seemed to catch the popular fancy more than another, it is the Spineless Cactus. I think I have heard more of that than anything else—to think that a man could by manipulation take that miserable thing, that you could not even look at without feeling hurt, and breed all those thorns off of it, so that you might sit down on it if you wanted to. I never crossed the desert myself except on a railroad train, but I can imagine that if a man is crossing the desert and wants to sit down, how handy it would be to have one of these thornless cacti handy. I want to say in all seriousness that so far as I know, the original plant which Burbank had was given to him right straight out of the Department of Agriculture. Harwood in these magazine articles distinctly credits Burbank with

having "created" it, and during the months which intervened between the publication of these articles in the Century Magazine and the publication of Harwood's book, that statement was never contradicted by Burbank. I realize that he is a very busy man; but it does seem to me that in a matter of that kind somebody representing him at all events should issue a statement saying: "No, I did not 'create' that, but I am breeding from it and I expect to improve it." That's a fair statement. Now, there is hardly a botanical garden in the world that you cannot go in to-day and find a thornless cactus. In an exhibition that we had down at Herald Square Hall, here in New York, given by the American Institute, they exhibited three of these thornless cacti, just to show that such things could be had outside of Santa Rosa. And yet Harwood goes on to say that this is the plant that is going to turn arid deserts into populous plains, and that it will be in a certain sense the vine and fig tree of the desert. Bulletin No. 74, Dept. of Agriculture, is devoted exclusively to cacti as food for stock. It relates in detail how they are utilized at present and states further: "In this connection it may be remarked that were it not for the spines on this class of plants they would probably have been exterminated long ago and there is some doubt whether there would be any use for spineless forms in the future. One poet sung of Mr. Burbank as follows:

"He touched the spiculed desert—cacti cursed—
And turned its thorns to figs; its thistles fruit.
He nodded to the daisy half immersed
In dwarfing dust, and lo! a lily mute
Rose from the weeds—a perfume with a flute."

That's the way it affects the poet. They say when a poet gets after a man he is done for. Here is another "poem" that occurs to me. This man was a florist, and he is supposed to be one of the "knockers:"

"O, Mr. Burbank, won't you try and do some
things for me?
A wizard clever as you are can do them
easily.
A man who turns a cactus plant into a
feather bed
Should have no trouble putting brains into
a cabbage head."

One of the first new "creations" in flowers that rivetted the attention of the people of the East was the Burbank Canna. That was produced probably by the same parentage as a similar variety produced in Italy. Unfortunately for Mr. Burbank, others were working along the same lines as he without his knowledge, and the year that he was ready to send out his canna we received from Europe two varieties, known as the Austria and the Italia. The Italia was such a glorious canna that it eclipsed the Austria completely, and the Austria and the Burbank were identical. It shows how, with the ocean between men working along the same lines, they will arrive at the same results. I could cite dozens of instances where that has occurred. The Austria had the priority of claim, and so it remains

to-day the recognized variety. I cite this as showing what the plain, ordinary hybridizer over in Italy can do as against a wizard.

The White Blackberry. I take issue with Mr. Burbank again in this matter. The magazine writer undoubtedly leads the public to believe that Burbank was the first one to produce white blackberries. He said that that it is a fruit which he "created;" he does not say that he had anything at all to work on, while for sixty years or more we have had white blackberries. Fifteen or twenty years ago the trade generally gave up selling them. They had their little day and they drifted out. The old Chrystal White was the last one that we offered, and when Jackson and Perkins, who have a California place, came to us and wanted us to push this "Iceberg" blackberry, we said, "Nonsense, people don't want a white blackberry; they want a black blackberry." But the phenomenal "Iceberg" was issued with a great flourish of trumpets—Wickson states that is a feather in the cap of Burbank.

They say that with his psychological instinct he reaches out and gets two species together (the raspberry and blackberry) that had never been gotten together before, and he produced an absolutely new species, and nature was out of a job. This was achieved not only by Mr. Carman, but also by Professor Sanders of Canada about eighteen years ago. As to these gentlemen who exploit Burbank in this way, I think if they knew the truth they ought to tell it, and if they do not know they ought to ask somebody who does know.

The *Aquilegia Clematidea*; that is a spurless *aquilegia*. Burbank it is alleged bred the spurs off the *aquilegia* and it is heralded as an achievement, but two hundred years ago there were spurless *aquilegias*. Henderson's Handbook of Plants, shows *aquilegias*, some with spurs and some without. Now, the beauty of an *aquilegia* is really its spurs. Without them the flower is characterless, and so the spurless *aquilegia* gradually drifted out altogether. Nobody cultivated them for years until Burbank produced or found them. There is also a variety in Japan, *Aquilegia ecalcarata*, which can be bought from European seedmen, which, placed alongside the spurless *aquilegia* produced by Burbank proves to be exactly the same. The supposition is natural enough in some minds that possibly the seed came from Japan.

I want to call attention to the Bartlett pear plum. In the published matter relating to that it is stated that it is a plum with the flavor of a Bartlett pear, as showing how much can be accomplished by Burbank. It does not say whether that plum is as big or as heavy as a Bartlett pear, but by taste it is a pear; and Harwood tells a story of an expert, a man who had been all over the world, he was blindfolded and a plum was handed to him and he was told to bite it and tell what it was; he immediately pronounced it a pear, but it was a plum. It strikes many that the man who doesn't know a plum from a Bartlett pear when he takes it in his hand is not much of an expert.

The plumcot we have all heard of, it is a crossing of two species, which may or may not be of value.

Much is made of Mr. Burbank's lilies in magazine articles, but I only want to say that anyone who has ever done anything at all with lilies can get exactly

the same results as shown in the published articles on Burbank's achievements in lilies. W. A. Manda is unquestionably a man of some attainments in horticulture, and he told me that he hybridized lilies extensively and got such results. That was confirmed by my own experience of twenty odd years ago.

The article states: "Lily growers from all over the world have stood dazed, intoxicated with the marvels of beauty and the perfumes of this acreage of new lilies in full bloom." Some of the dealers in the East have tried them. I asked one man, and he shook his head sadly and said that he would not try any more of them.

It is told in the magazines how one pleasant evening Burbank was walking along a field by some verbenas and he detected an odor which he traced back to the plant from which it emanated. He saved it and bred scented verbenas. When I was down in the seed fields of C. C. Morse & Company at Gilroy, at the end of the Santa Clara Valley, California, I said to Mr. Landrum, the principal there, as we were driving along: "By the way, have you got any scented verbenas?" He said, "I don't know, I never bothered about them." I said, "In my young days the Sylph type was always fragrant in the whites; that I am certain of." We jumped out of the wagon and we hadn't gone ten feet before I stooped down and picked up a white one. It had fragrance.

One other matter is about the blue rose. Now, if there is one thing that horticulturists have dreamed over for many years it is to obtain a blue rose. There is an axiom that there are three colors not found in varieties of one species, namely, a true blue, a true yellow and a true scarlet. You will get them to a certain extent in the asters, and to a certain extent in hyacinths, but nothing like a true scarlet, a blue or a yellow in varieties of any one species. We have yellow in the rose and a red that is nearly scarlet, so that all we want now to complete the trinity of colors is a blue. In one of these talks Harwood asks Burbank: "Did you ever consider the producing of a blue rose?" "Oh, yes," he said. "Do you think it is possible?" and he said, "Oh, it is a very simple matter, from what I have learned"—or words to that effect. From his investigations he thought it was a very simple matter, but, he said: "My time has been taken up with more important matters, and I have not paid any attention to it." Now, judging from the output that has come from the garden at Santa Rosa, I am certain that Burbank was engaged in matters somewhat trivial, as compared with the production of a blue rose. If it is possible for him to do it, and if he wants to "square" himself with the florists, all he has to do is to produce a good blue rose and they will say: "Come back, everything is forgiven."

"The lost flower—the tragedy in plant life. A tiny pinkish white blossom upon a brilliant green vine. But one morning a workman discovered that in the night every plant had died. The flower could never be recovered because the conditions under which it had been created would never occur again."

There is a prophet; if he had said they never could occur again, it would show that he had some well grounded reason for it in his mind, but he said that they would never occur again, which is a very different thing as I view it. But the description recalls the *Dolichos Lignosus* or Australian Pea Vine which is one

of the most beautiful things in the California country. I think somebody must have been handing out a joke to Mr. Harwood and he didn't know it.

Another thing: "He took a French plum, unknown in America, and grafted it upon a Japanese plum. The graft bore no bloom, but the tree was recreated if you will; its seedlings took on a wholly new life and became hybrids, its vital essence was changed through the medium of the graft."

I do not say that Mr. Burbank is responsible for this except by indirection. It is an old theory since men began to think of the influence of the graft upon the stock. It is useless to thresh it out here and I have no intentions of doing it, but I merely want to show the kind of mental pabulum that has been handed out from Santa Rosa to the body politic and the horticultural public at large.

It would not be fitting, I think, after all I have stated, to close without paying my tribute to Mr. Burbank, as far as I can honestly do it. I believe that Mr. Burbank is a sublime enthusiast. I believe that he has sacrificed much in his efforts to improve plant species. I want to say that I doubt if there is anyone who takes more comfort in the fact that he has been provided with the wherewithal to carry on his researches than I do. All that the professional florist ask is that the truth be known and nothing but the truth, and we say: "We are perfectly satisfied to have you go on as you are going, but don't let matters get out which are discrediting you and us, and which only result eventually in making American horticulture a laughing stock for everyone who stops to think of it." So much has been said about scientists that I am going to close by quoting a letter which I have received on the subject. It is but one of several which I have received from the Experimental Stations. I also want to say that from men in the trade, both in this country and abroad since I lifted my voice in this matter I have received many complimentary letters, saying to me that they were glad I took the stand which I did and that they coincided with my views; so much has been said about the scientists and the ordinary rag-tag and bobtail of the florists that I will reproduce the following letter without disclosing who was the writer of it:

"I have just been reading your article in Florists' Exchange on Burbank, and I want to compliment you on your honest, temperate and straightforward statement of the case. The situation is fast becoming intolerable. The things that are claimed for Burbank are ridiculous—they go beyond hysteria and arrive at lunacy. If any man raises a word of protest the Burbank rooters immediately call him a sore head and say he is jealous of the marvelous achievements of the Master. We poor scientists, in particular, (if I may class myself in that category) are discounted in advance. The public is told that the scientists have always been against Burbank and are all jealous of his achievements. The very opposite is true. To my personal knowledge every scientist who has ever said anything of Burbank has gone out of his way to pay him a compliment, and has nearly always rated him higher in print than his actual merits deserve.

"But the thing which most makes me want to fight is the vicious and false comparison always made or inferred between Burbank and other plant breeders. From the magazines you would think Burbank has done more than all the rest

of the world put together, when the fact is that there are and have been hundreds of men who have done more for the improvement of economic plants than Burbank has ever done, or, in my opinion, ever will do.

"Any man who has the backbone to stand up and fight this infernal nonsense deserves public thanks, and for my part I want to assure you that you have struck a chord that will find more than one response among the horticulturists of America."

The fairest test of a man's ability is a comparison with others in the same sphere of work. One of Mr. Burbank's eulogists said: "Luther Burbank has done more for the human race than all other horticulturists." We florists and nurserymen do not endorse that statement, it is derided by every horticultural publication which has spoken on the subject. I even venture to say, from the test of comparison of products, that he is not the superior even of hybridizers in California. The Logan berry, introduced by Judge Logan is better than any of his productions. The Phillips cling peach is of more value to California in my opinion than any fruit which he has produced, and sad to relate, the man who produced it is in the Yuba Co. almshouse, so announced in the Pacific Rural Press of Jan. 6th last.

The contributions to the fruits of the country by Mr. Burbank are not as valuable for instance as the Concord grape of Ephraim W. Bull, the Wealthy apple by Peter M. Gideon, the hybrid grapes by Rogers, Jacob Moore and T. V. Munson, not to mention others. In the realm of flowers he is hopelessly outclassed in this country by John Cook, E. G. Hill, Dr. W. Van Fleet and others in roses; and by Alex. Dickson, Notting, Lambert, Levavasseur and others in Europe. In carnations he is again outclassed, eclipsed I may say, by Fred Dorner, C. W. Ward, Peter Fisher and others. In Cannas Antoine Wintzer outclasses him here, and in this connection I must pay a passing tribute to Mons. Crozy who was the originator of the present race of Cannas. I also wish to mention the work of Mr. Groff in gladioli, superior to that of Mr. Burbank in its results. As a general improver of flowering plants he is again impressively behind Lemoine of France, whose work in shrubs and soft wooded plants actually borders on the marvelous. In sweet peas Henry Eckford of England stands supreme. But I will not give a catalogue of illustrious men in plant hybridization, sufficient has been said I trust to show the extravagant claims for the superiority of Mr. Burbank in his chosen field. It is further claimed for him as a great achievement in the cause of science that he produces and destroys acres of worthless plants. The really expert plant hybridizer does not do it and would hardly file a claim for fame on that score. Rather by close study of prospective results he aims at improvement by the most direct and least expensive method.