organized branches of agriculture are represented on this council and all legislation affecting agriculture comes before it. All misunderstandings are cleared up in this Council instead of being carried to the legislative halls. No bill affecting agriculture has much chance, unless endorsed by this Committee. Any bill, so endorsed, is practically sure of enactment. We need such a Legislative Committee to represent all branches of Florida agriculture. I have appointed a committee to study the subject. They will try to determine what organization should attempt to organize such a committee. I am sure that our members will welcome such a committee and will be glad to cooperate regardless of what organization might be asked to head it.

As fruit growers, we have made a very distinct contribution to the war effort. We have produced large amounts of one of the most important foods known today. We have been the world's foremost producers of Vitamin C and many essential minerals. We have helped to keep our huge war machine here at home functioning at peak efficiency.

Representatives of the British Government assured Governor Holland that citrus concentrates were a God-send to the mothers and children of England and that without it their health would have suffered and as a result, the morale of England's fighting men would have cracked. Now we are sending our life and health giving juices to the far reaches of the Pacific, making life there for our brave boys a little more tolerable. We can regard our accomplishments with patriotic satisfaction.

THE ORIGIN OF THE TEMPLE ORANGE

T. RALPH ROBINSON, Terra Ceia

A few months ago Professor H. H. Hume wrote to the author requesting such information as I might have regarding the origin of the Temple orange. I replied in a letter dated March 15, 1945—a letter which covers the ground fairly completely as far as my knowledge goes. The letter is here submitted for the historical record, together with some additional notes.

March 15, 1945

Dr. H. Harold Hume
University of Florida
College of Agriculture
Gainesville, Florida

Dear Dr. Hume:

With regard to the Temple orange and its origin, I have had in mind for some years the intention to put on record and publish what I had learned about it. I delayed doing so in hopes that I might find it possible to visit the place of its origin—which I believe to be Jamaica—for reasons to follow. There is little likelihood of my getting to Jamaica, so it seems there is no reason for further delay.

I believe the first intimation I had as to the Jamaican origin of the Temple came from Mr. S. O. Chase. A copy of a letter written by him in March of 1922 to Mayo Dade was furnished me, telling of his (Chase) having learned that a fruit buyer by the name of Boyce brought budwood of this orange from Jamaica—that it was first given to Parson Lawton of Oviedo. You will doubtless recall that at the time of the Horticultural Society meeting at Orlando in 1933 you took Dr. Fairchild and me over to Oviedo to hunt up a tree (or two) reported to exist there identical with the Hakes tree at Winter Park. We found such a tree and all agreed that it was the "Temple orange."
A year later (March 7, 1934) I had further corroboration in regard to the Jamaican origin from Mr. Z. Spinks of Leesburg. He stated that it was known as “Jamaican orange” in the Oviedo section; that besides Parson Lawton, at least two others, Messrs. King and Lee, had some trees of this variety; that most of them were destroyed in the ’94-95 freeze; and that no rebudding had been thought worth while after the freeze, since it had been learned that the fruit did not mature in time for the Christmas market.

A few years later when I was in Washington two fruits were sent from Hope Gardens, Jamaica, to the Department of Agriculture, with the request that the variety be determined. No information was given in regard to the fruits, which were referred to me for examination. They were greenish (as most oranges of the tropics are even when fully ripe) and I had no suspicion of their nature until I cut into one. Immediately the aroma suggested the Temple, and when I tasted the fruit there was no doubt in my mind. I wrote to the Director of Hope Gardens making this identification and at the same time asking that a pressed specimen of the foliage be sent to file in our Economic Herbarium. The specimen was never received.

A year after this incident the Assistant Director of Hope Gardens (Mr. F. E. Smith) made a visit to Florida, and I spent a day or two with him. I mentioned the incident of the oranges from Jamaica and the non-receipt of the foliage specimen. He said he could explain that—that the owner of the original tree (and a budded grove) held the variety very closely, not even granting a tree or budwood to the Hope Gardens. He agreed with me, after testing Florida-grown Temple oranges, that the Jamaican fruit was the same in character.

Altogether the evidence seems to me to be very convincing that this fruit, doubtless of hybrid origin, came from Jamaica. It has a good many characteristics in common with some of the best of the tangelos—notably the Minneola, but of course has its own distinctive flavor.

I would be glad to have your comments on the above.

Sincerely yours,
T. Ralph Robinson
Collaborator

The above letter to Dean Hume evidently proved satisfactory since in his letter of acknowledgment he offered no criticism and suggested that the information should be published and that the Proceedings of the Horticultural Society would be a proper place for publication.

Further Notes on the Temple Orange

Those of us “old timers” who were interested in citrus during the busy planting period from 1915 to 1925 recall the furor raised by the introduction of the Temple orange—“The Ten Dollar a Box Orange” as the advertisements read. A tree in the Winter Park grove of L. A. Hakes attracted the attention of D. C. Gillette of the Buckeye Nurseries and arrangements were made to propagate the orange on a large scale. The orange was named for William Chase Temple, a neighbor of Mr. Hakes, and for many years a citrus leader and President of the Florida Citrus Exchange. The beautiful color and unique flavor of the fruit aroused great enthusiasm among citrus experts generally and within a few years of its introduction in 1917 extensive groves were being planted out. By 1921 it is estimated that 10,000 acres in Florida had been planted to Temple. The “original tree” at Winter Park was a budded tree, the stock being, according to my recollection, grapefruit. Practically all the early plantings of the Temple were made with trees budded on the rough lemon rootstock. When these first plantings came into production disappointment was very great, a large percentage of the fruit being coarse and showing dry segments even before becoming ripe. So inferior was the fruit quality for several seasons that the reputation of the variety in the markets was almost ruined for all time. Many of the large plantings were cut off and budded over to other varieties; some were simply abandoned. Fortunately a few groves budded on the sour orange rootstock had been
planted in favorable locations and the fruits from these trees were found to reproduce the fine quality of fruit that had attracted the attention of citrus experts to the Hakes tree. Some of the groves on the rough lemon rootstock that were carried along gradually began producing better fruit with their greater age, and the recent use of supplementary plant food elements has brought about still further improvement. However the lesson, an expensive one, has led to the use of sour orange as the main rootstock for Temples, though Cleopatra mandarin has also given satisfactory results, especially in soils somewhat too light for the best results with the sour orange.

Speculation as to the origin of the variety, that is as to the parent varieties (if it is a hybrid), has led to a number of suggestions. To the writer it seems evident that one of the varieties involved was a member of the mandarin group, perhaps the tangerine. The other parent was probably some variety susceptible to citrus scab since the Temple is fairly susceptible. This would rule out the common sweet orange, which like the tangerine is unaffected by scab. It might be either the sour orange or grapefruit, both susceptible. The Clementine tangerine is a tangerine-sour orange hybrid yet it is a decidedly sweet fruit and ripens much earlier than either parent. It is, like the Temple, susceptible to scab. The Clementine and the Temple are both mono-embryonic, producing but a single sprout from each seed—a condition almost unique among our citrus varieties. With this character in mind as well as the susceptibility to scab shown by the Temple orange I am inclined to view the parentage as tangerine sour (or Seville) orange, with the sour orange as the female or seed parent. The tangerine has uniformly failed to produce hybrids from cross-pollinated seed regardless of the source of the pollen. The tangerine thus appears to be 100% apogamic, seedling sprouts arising from the mother tissue of the seed rather than from true embryos.

Attempts to establish parentage by the planting of seeds from self-pollinated fruits and awaiting segregation of characters in the resulting seedlings, while commonly successful with hybrids in many other groups of plants, have uniformly failed with citrus hybrids.

T. Ralph Robinson
Terra Ceia, Florida
June 15, 1945

SOIL MOISTURE RELATIONSHIPS IN SANDY SOILS PLANTED TO CITRUS IN FLORIDA

VERNON C. JAMISON
Citrus Experiment Station, Lake Alfred

Among the citrus grower's many problems, those which have to do with soil moisture are by no means of least importance. During long droughts producers of citrus fruits are especially conscious of questions related to methods of irrigation and moisture conservation. A few years ago when the groves were younger or retarded in growth by mineral deficiencies, the water requirement of most Florida citrus groves was not high. With the general use of a better balanced nutritional program trees which were thin in foliage are now profuse in growth during periods when moisture is adequate. Moisture has become