

The Future of Citrus Growing in Central America

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A visit to Central America is an interesting experience for one who has spent considerable time in the citrus industry of Florida. The language is Spanish to that extent it is difficult for a novice who has yet not gone beyond the bare borders of his native English; yet there are many Central Americans who speak English fluently and who are most gracious in acting as interpreters. A point, though, that is immediately impressed upon the visitor, is the fact that the thinking of the citrus grower in Central America is not very different from that of the citrus grower in Florida.

This point of similarity, centering around the love of plants, must be a universal attribute of citrus growers throughout the world. The growers talk about their soils, their climates, their rootstocks and scion varieties, and their markets. In Central America, a person can forget momentarily the particular location of his presence and simply recognize the brotherhood of plantmen. The nurseryman talks about his approaches to propagation methods and their advantages and disadvantages; the grower about his particular variety with its exceptional qualities, even though he mentions some of its adverse characters.

The strength of the individual in applying himself to the problems of the industry is the strength of the industry. His interest and foresight are the determinants of the future of the industry. The fact that these values obtain in Central America can be shown in the many areas and countries of the region, and they most certainly become a highly valuable resource.

Citrus growing is not new in Central America. With the coming of the Spaniards, the plants of the citrus group were introduced into the various parts of the region. Today, a citrus tree is often the central plant in the dooryard of Spanish and Indian homes alike.

But more than dooryard plantings are the beginnings of commercial enterprises as can be seen in many areas. There are five factors which would indicate a healthy growth in this endeavor, even though the ultimate total expansion will be dictated by many others which are still in the unknown future. These factors include a favorable environment, a supply of stocks and scions, a vigorous grower group, an active young organization of researchers, and a market in urban settlements.

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With a young industry it is possible to point to some direction in which the activities must progress. It is well-known, due to world-wide research, that the very foundation of any agricultural pursuit must be dependent, aside from favorable environment, upon freedom from systemic problems. Therefore, selection of plant materials must be zealously guarded to assure that virus diseases are not accidentally introduced which will cut down the returns of the grower just when the fruits of his activities should be expected. In this connection, the nurseryman is a most vital cog. To him must go the responsibility to see that all selections of propagative material are free of every known systemic problem. Even though it places a further strain on him, it would be well that the lineage of the plants, both as regards stock and scion, be carefully recorded. To place monetary gain and expediency ahead of permanent values can only lead to problems which will take the growers years to overcome. Since some organisms, such as the burrowing nematode, are carried on the roots of plants from place to place, there is the added urgency to maintain freedom from such in the nursery plots and to further insure that accidental spread is prevented. There is much world-wide literature which will outline the proper steps to be taken, and there is man-power, in the young scientist, to interpret the information for the commercial industry.

While it remains most important to propagate disease-free material, it is nonetheless important to select stock and scion material carefully with regard to their various qualities. In Central America is a wealth of material, some of which is of recent introduction, from which selections might be made, and there can always be further introductions under proper precautions.

No one is able in a limited time to point to the selections which should be chosen. This is a long, arduous task for those who can regularly observe the reactions of the plants in the field. It is even recognized that, after a few years of records by a scientist, the final test is in the field after a score or more of years under growing conditions. This point is worth consideration since an industry may advance twenty or more years overnight by simply recognizing the values of types which have a long history of field culture in the area under survey.

There appears no reason for considering any but a budded tree as the general approach to the commercial culture of citrus, even though under certain circumstances a seedling type might be worthwhile. This forces one to consider not only the values of the scion variety but also those of the stock variety. Guidelines can be set down which might aid in the selection of types.

Rootstocks do not produce a single marketable fruit and, in fact, as seedlings may produce fruit which is undesirable. They become of value because of their influence upon the production of scion fruit of marketable quality. A nurseryman, recognizing that any member of the citrus plant group might be used as rootstock, is apt to consider a vigorous, fast-growing type the best, since it allows quicker turnover of nursery stock. Although ease of handling in the nursery is a highly desired character, this quality must not be pursued to the extent that one overlooks the more permanent values of the stock throughout the

life of the budling. The rootstock should be chosen for its ability to grow well under the soil, climatic, and biotic conditions of the environment, and for its influence in bringing out the best qualities of the scion variety.

The scion variety claims its immediate popularity because of the market qualities and sizes of its fruit. It must, however, be suitable to the climatic and biotic environment, recognizing that the soil environment will be met by the stock, and should possess good qualities of growth, vigor, productivity, and longevity. Season and length of season of maturity of its fruit with respect to market opportunities, demands, and prices are of economic importance. Furthermore, because of the very nature of tree fruit culture, one is interested in its possibilities of maintaining consumer response over a long period of time.

In each country in Central America one hears of certain varieties which are known for certain superior qualities and which are often called by particular names. These should certainly be investigated for future expansions of citrus, if for no other reason than that it is poor practice to overlook a fruit which has gained so much, even if local, attention. However, some locally-prominent varieties may be relegated to secondary position when better varieties are found.

In some parts of Central America are today to be found selections of both stocks and scions which are being studied by grower and scientist alike. This type of study should be encouraged and the records should be standardized. As soon as a particular "line" indicates some special values, it might be well to distribute some of the plants to interested growers in order that information might be obtained, synchronously, under varying environmental conditions. Furthermore, growers should be encouraged to visit such experimental plantings to awaken an interest in the need for good selections. Communication between scientist and grower becomes a two-way avenue for mutual benefit.

In conclusion, every step must be taken to see that the best possible selections of stock and scion are made, that known systemic problems are eliminated, and that good "lines" are established and maintained true to type by vigilance on the part of nurseryman and grower. By these means the possibility of success of the enterprise is vastly increased.