

## Rx for Horticultural Science in the Tropics

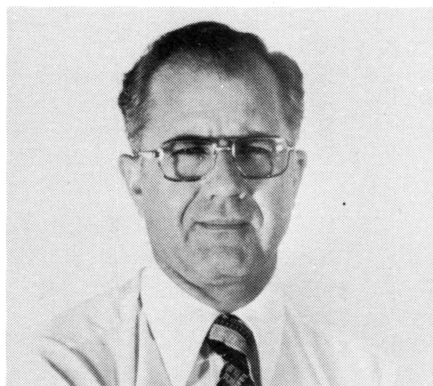
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There are many factors which slow down and hinder the wheels of scientific and academic activities in tropical countries. One of these and perhaps the most important is the lack of *continuity* in programs of research and teaching. This is particularly true with long term crops such as some tropical fruits where continuity is the indispensable element needed to reach a successful climax of research efforts. But continuity is also the crucial ingredient in any other phase of horticultural research or for that matter, any phase of biological science.

Most people are familiar with some of the grandiose schemes of developing nations, where it is believed that a bountiful agriculture can be created in a few years by virtue of a large loan and the importation of scores of experts. The normal course of events is that as soon as the government changes, constitutionally or otherwise, the whole applecart is upset and everything also changes, from the Minister of Agriculture sometimes even to the lowest institutional employee. Wheels may continue to turn for a while, albeit inefficiently, with new people in fields such as teaching and extension, but change in personnel in creative fields as research means that whatever was accomplished up to that point is largely nullified and ultimately wasted. In this fashion vital projects are seldom carried to completion unless outside institutional forces provide the funds, personnel, and the continuity. However, even large international centers cannot escape the effects of local political convulsions.

Much still has to be done in tropical countries to use local, available talent efficiently. Salaries and research funds have to be increased. Otherwise, qualified professionals will sooner or later either move up to administration, turn to moonlighting, or leave the institution or the country. Once competent scientists have succeeded away from home it is close to impossible to get them back. Young scientists returning from training abroad need understanding and remuneration commensurate with their potential and long years of study. This situation is true in the majority of developing countries, but take the case of a comparatively rich country such as Thailand.



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Here, a returnee with a PhD degree may not earn more than a second lieutenant in the army. They both work for a system that puts a premium on seniority and duration of service rather than on merit, value, or potential impact on the welfare of the nation.

The only bright spot in this rather gloomy picture has been the creation of a network of agricultural centers. Some of the needed research has already been started and thus far experience shows their performance can be impressive, although population increases have already erased much of the initial color of the "green revolution." A great deal more can be done with Title XII funds if Congress really means what it states in the language of this ambitious program.

Tropical fruits, and to a certain extent vegetables, are still orphans of international research. Their great diversity, demand, and importance is very eloquent in the markets of Bangkok, Jakarta, Mexico City or any other community, large or small, of the warm latitudes. They have not been given their deserved place as prominent items in the diet of people in the tropics. It is high time they were recognized, and their virtues as a great dietary resource investigated and refined. Avocados, for example, contain the highest food value of any other fresh fruit, with a protein content which can reach 3% or higher. The increased production of improved, low-chilling cultivars could also slow down the drain of "foreign exchange" employed to import considerable amount of peaches, apples, and

pears from Australia and North America to Southeast Asia and the American tropics.

What specifically can the U.S. do with Title XII funds that has not been done or tried already? Perhaps our most lasting and best contribution to our neighbors in tropical countries could be the creation of many agricultural colleges styled in the fashion of "Escuela Agrícola Panamericana" (EAP), a "learning-by-doing" college founded in Tegucigalpa, Honduras, by the late Wilson Popenoe, a pioneer in tropical horticulture. This is a strict discipline, 3-year institution where the student works and attends classes 11 months of the year, for a total of 33 months. This small, private American college is completely independent of the host country's government and has been able to produce internationally recognized professionals since 1946 by remaining apart from the continual local political upheavals.

What would the U.S. taxpayer get for his money? Nothing really tangible, for the fruits of education are not like the building of dams, hospitals, highways, or even the results of research. However, lets examine Escuela Agrícola Panamericana's 30-year record, 1600 graduates later, and consider its impact on the region. There have been 3 Ministers and about 8 Undersecretaries of Agriculture in about 13 Latin American countries who have come from EAP. Moreover, many large agribusinesses are either managed or owned by EAP alumni. But perhaps their greatest impact has been at the grass roots, showing people by their example how to get results and a profit if you know how to work the land.

Strategically located American colleges of this nature, funded by Title XII and administered through U. S. universities known for their broad experience in the tropics, would eventually have an enormously beneficial impact on the lives of our tropical neighbors. This effect would be more lasting and would do more to win the daily ideological struggles being fought in every rice paddy and corn "milpa" of the world, than the vast majority of the former traditional programs of foreign assistance.