



FIGHTING HUNGER WITH HYDROPONICS

Puerto Rico Tries Soilless Farming In Effort to Increase Crop Harvest

SAN JUAN, Puerto Rico (NEA)—With tons and tons of concrete and chemicals, they're fighting this island's oldest plague—famine. And if it works, farmer, fisherman and family can thank the modern science of hydroponic farming.

Until now, hunger in Puerto Rico has been a hopeless and standard household staple. There are more than two million people here with only 237,292 tillable acres to plant for food.

But for the most part, this land has gone to the major export crops: sugar cane, tobacco, coffee and pineapples.

It remains for hydroponics—the science of growing crops with chemicals and without soil—to turn even the most barren area into fertile farm land. So far, the picture is rosy.

Visit Sy Robbins at Vega Alta. On Puerto Rico Land Authority

property this Miami, Fla., graduate plant physiologist has set up an operation to prove that "nutri-culture" has large-scale commercial value.

His farm is five acres today. But he has another 115 acres to use if he needs them. And he is busy producing 75-day miracles—tomato plants that yield heavy and luscious fruit that have never tasted soil. His per acre yield: 30 tons, about five times more than an acre of soil produces.

Closer to the farmer and consumer, however, is a field unit of Hydroponics, Inc. which has come to this Commonwealth with a working plan. Directed by Carol L. Klotzbach who once administered the U.S. Army's vast soilless farm in Japan, this organization expects to set up hundreds of nutriceulture farms.

On each half-acre plot called Family Farm Unit, they plan to construct a modest concrete house and 25 cement beds with flumes for irrigation, cisterns and pump, gravel and all necessary elements.

The company will pre-package the various nutrients, insecticides and fungicides for the farmer. In addition, trained nutriceulture technicians would be sent to service the farms.

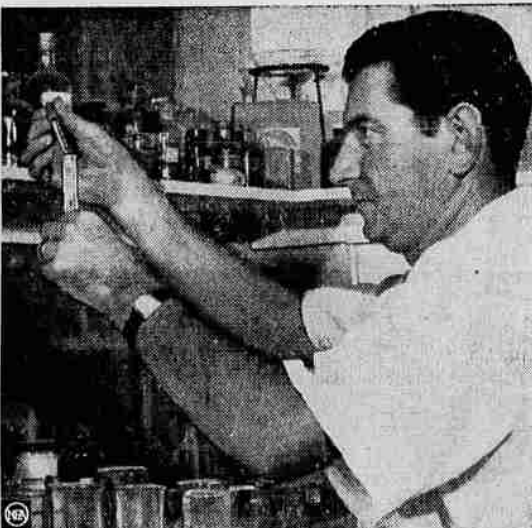
The cost to the farmer: between \$8500 and \$10,000.

Today there are 110,000 Puerto Rican farmers. More than half of them have only three acres of land which is beset by erosion, poor soil and long dry spells.

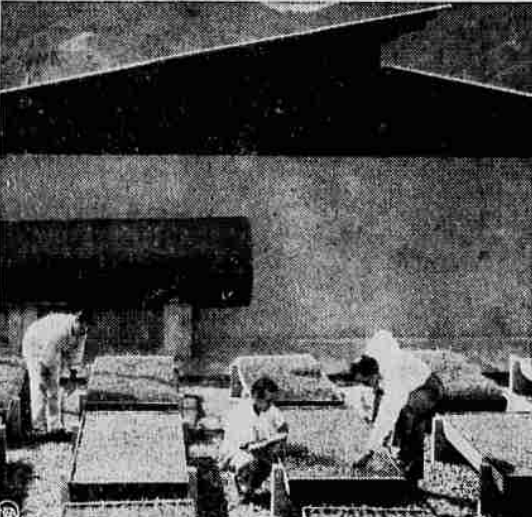
Should hydroponics work commercially, produce would depend on rainfall playing no part. Possible crops include cucumbers, lettuce, peppers, eggplant, Chinese cabbage, string beans, green onions, okra and dozens of others.

But would it give a livelihood to the farmer? Hydroponics, Inc., has asserted that a half-acre of tomatoes would yield an average of about 80,000 pounds. Average gross return on this two-crop yield: about \$10,000.

Unlisted, however, is a sizeable tax saving. Under Puerto Rican laws, qualified new industries are granted 10 years of tax-free production.



THIS IS THE FARMER in the science of hydroponics, where chemicals take the place of soil and water. Here, at his Puerto Rico farm, Sy Robbins tests nutrient feeding solution.



THIS IS THE FARM made of concrete and chemicals. Young tomato plants growing in these concrete tubs at Hydroponics, Inc., in Puerto Rico will later be transplanted to gravel beds.

DR. JORDAN SAYS:

Many Factors Condition Treatment of Local Infection

By EDWIN P. JORDAN, M. D.

Can an abscessed tooth, infected tonsils, or a sinusitis cause symptoms or inflammations in other parts of the body? This question comes up every now and then, and from an individual point of view is most difficult to answer. In medicine, it is called the problem of focal infection.

The theory that chronic infection in one part of the body could cause difficulties elsewhere is quite old. About the turn of the century work on this subject received a big push, largely through the studies and stimulating personality of the late Dr. Frank Billings of Chicago.

CAREFUL SEARCH

For a while, a number of ailments were attacked by instituting a careful search for some source of chronic infection in the body: gall bladder, tonsils, prostate, teeth or sinuses. If anything could be found, these focal areas were removed, drained, or treated in any way possible.

Then, as so often happens in medicine, a reaction set in. Some patients who had all their teeth removed showed no improvement in the condition for which the extractions had been performed. Some had serious operations or treatments for focal infections and were worse than before.

The result was that many care-

ful physicians swung away from the idea of focal infection altogether, and nearly all began to take a much more conservative attitude toward the subject.

Occasionally, someone who was almost desperate with some form of neuritis, muscular rheumatism, iritis or similar condition received relief from the removal of an infected tooth, bad tonsils, or other "focus of infection."

This cannot be ignored even though exactly how this happens is hard to figure out. At any rate, there is now a pretty wholesome attitude toward the removal or treatment of these foci. No longer are they removed wholesale, but neither do most physicians disregard really diseased and infected tissues.

NO EASY MATTER

The principles are fairly well agreed on but it is no easy matter to decide what to do in an individual case.

For example, no one can guarantee that taking out an abscessed tooth will relieve the symptoms somewhere else in the body.

Both patient and physician have to add up the arguments for and against treatment of a focus of infection and then take their chances on whether it will accomplish the desired results. There will be disappointments as well as successes.



For a trip east
you'll never forget,
travel the "magic circle" route

TORONTO • MONTREAL • QUEBEC • NEW YORK
LAKE LOUISE • SEATTLE

Swing around—and see more for the same fare! While breathtaking Canadian Rockies, prairies and Great Lakes glide past your window—enjoy Canadian Pacific's famed service and good food! Then return by any U. S. rail route—refreshed! For "Magic Circle" reservations, see your local travel agent, or

Canadian Pacific American Bank Bldg. Portland • BR 2044

WHY STARCH

More than 3 or 4 times a year!

Switch to PERMA STARCH and you won't have to starch again for months!

Just think! Perma Starch lasts through 8 to 15 washings! Dresses, shirts, curtains, linens, children's things—stay crisp for months!

Easy to Use! Easy to Iron!

Get PERMA STARCH today!