



Article from

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# Trees That Feed

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**A**fter retirement from a long and rewarding actuarial career, there could be many years before your  $q_x=1.00$ . Many highly motivated workers, especially men, are so focused on work, career, and profession, that they have little room for other interests. When they retire, on the first Monday morning in retirement, these folks have nothing to do. Maybe they start the day with a cup of coffee and the morning news ... which takes them to 8:00 am ... and, “OK, so now what do I do for the rest of the day!?”

There are several years of this, potentially.  $e_{65}$  could be 20 years or more! That’s a long time. Your grandchildren will grow up and soon enough you won’t have to pick them up from day care anymore. What are you going to do then!? This is a real challenge for the unprepared.

## THE IDEA

In my case, my lovely bride of 40-plus years had the answer. A few years ago, around the middle of 2007, she woke up one morning and said, “you know we’ve been fortunate ... the actuarial profession has treated us well ... we should be giving something back to others. Not necessarily just to actuaries, though.” Mary had always been a bit of an environmentalist, so we decided to plant trees. Not just any trees, but fruit trees. If planting a tree is good for the environment, then a fruit tree is even better, because now you can feed people as well. On a larger scale, ultimately, you’ll be creating jobs. So instead of complaining about what’s wrong with the world, we realized that each of us can make a difference.

That was the genesis of the Trees That Feed Foundation. Despite the occasional discouraging word, we formed a corporation. After a few letters exchanged with the nice people at the



Internal Revenue Service, we gained our tax exempt status as a 501(c)(3) organization. TTFF, as we affectionately call it, became a legal public charity, which means that donations to TTFF are tax deductible for U.S. taxpayers. We planted some seed money (get it?) and embarked on our mission.

## THE FACTS

Our mission is planting fruit trees to feed people, create jobs and benefit the environment. We donate fruit trees, we also give or subsidize the equipment necessary for processing into post-harvest products, and we educate. We get requests for trees from farmers and various other organizations in Haiti, Jamaica, other Caribbean countries and other mostly tropical countries. Requests vary. Individuals or small groups such as those led by Peace Corps volunteers may request eight or 10 trees. Other large groups including certain religious or governmental groups may request 4,000 trees. We’ve built a network of suppliers in the U.S. and in each local country, and TTFF pays for the trees when they are delivered.

As the operation has grown and as we’ve gotten smarter, we’re focusing more on local suppliers. In 2010 we contacted a small nursery in Jamaica and asked if he could supply us with fruit trees. He was willing, and he estimated that he could propagate

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about 300 breadfruit trees per year. “OK,” I said, “we’ll buy them all.” That was 2010. We are now buying more than 15,000 trees per year from this same nurseryman. He has expanded operations, leased land and hired a number of employees, really quite a success story for a small business in Jamaica.

## FINANCE

A key part of the job is fundraising. Mary and I are leading contributors although by no means the main support. We have been lucky enough to attract a number of corporate sponsors and charitable foundation grants. We also appeal to individual donors through personal meetings, garden clubs, Rotary clubs and social media. We’ve received contributions from hundreds of individual donors, in amounts ranging from small to large.

One of my favorite stories goes back a few years. We were given a booth at the Chicago Flower & Garden Show at Navy Pier. We arrived the day before to set up our exhibits, including business cards, posters, potted plants and of course a donation box. As we set up our display a gentleman came up and asked what we were selling. We weren’t selling anything, but we told the story of planting trees and the benefits to be gained. He was silent for a moment, then he pulled out his wallet and put a \$20 bill in our donation box, our first donation in the show. So who was this gentleman? He was the janitor.

The first few months after planting a small fruit tree are critical. The plants need to be carefully tended until they reach a robust, drought and animal-resistant size. That concern led to an actuarial project.

## A TYPICAL DAY

A typical day starts with a short commute to a small local office near home. The landlord knew what we were planning and gave us a good deal on the rent. We have our own website, [www.treesthatfeed.org](http://www.treesthatfeed.org), attorneys, an accounting firm, a small army of volunteers and now a bit of money in the bank. Mary and I work closely together, spending about 50 percent of our working time on TTFF. Right now we’re an all-volunteer organization, except for one part-time person.

We get perhaps 50 emails a day dealing with the myriad of details involved even in a modest-sized charitable organization such as we have. When a request comes in for fruit trees to be

donated, we ask for enough information to vet the request. We look for ways to say “yes,” but we want to be sure the recipient will take care of the trees so that they reach fruiting maturity. We don’t want to merely deliver trees. If the person requesting is inexperienced, we start them off with a modest number of trees initially. We issue them a coupon which they sign, to authorize collection from the nursery. We ask for photos to show survival before donating more. We track all coupons and deliveries, and we periodically monitor survival counts.

Many emails are calling for help and advice in other areas, such as which fruit trees grow in certain areas, or how to obtain equipment, or how to create a complete program to help a local community help itself. We can answer most of the questions now, but if not, we refer the inquiry to one of our local experts.

## HANDS-ON

In a small organization you need to be versatile. You can’t stick to a narrow job description. As we advised folks to process fruit into flour, a very high-value post-harvest product, we learned ourselves about the many types of equipment that might be needed, including peelers, processors, dryers, grinders and packaging equipment. We call the set of equipment needed for processing our “factory in a box.”

As we learned more about the process we discovered that drying fruit isn’t as simple as laying it out in the sun. Although the tropical areas we work in (Haiti, Jamaica, other Caribbean countries) are all relatively warm climates, issues such as food quality and production metrics come into play. Here’s where non-actuarial skills once again were called on.

I built a hybrid solar dryer of a cabinet style design, using plywood, sheet metal and acrylic plastic sheets. This took a few weekends and a quick refresher on safe use of power tools! The dryer collects solar heat and funnels it up through a cabinet. Fruit is shredded or sliced and placed on mesh racks. The warm air flows through and around the fruit and dries it. The dried fruit has a much longer shelf life than fresh fruit. Excess fruit when preserved this way is a significant increase in available food.

The design for the dryer is being improved based on testing the prototype, and a new dryer is now being built in Jamaica and soon in Haiti.

Using a hammer and saw isn’t quite the same as applying stochastic actuarial models ... but it’s also a lot of fun!

## ACTUARIAL MATTERS

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We were offered volunteer effort from University of Minnesota, one of our partnering organizations. Their Master's degree students obtained funding for a summer project in Jamaica. Two students traveled to more than 45 locations where we had provided trees, and conducted a study ... yes, a mortality study ... on fruit trees. Overall we found over 75 percent survival over those first few critical years. As with humans, infant mortality can be high, but then  $p_x$  improves and stays low for many years. Finally, after a century or so, the trees reach the end of the actuarial table.

### THE ROLE OF ACTUARIES

Trees That Feed Foundation would not be successful if not for the assistance of actuaries. When we initially applied to the IRS for tax exempt status, my wife and I and her brother named ourselves board members. The IRS found fault with that. A public charity cannot be controlled by family members. With just a few days left to the filing deadline, we suddenly needed four non-family directors. Cathy Lyn, in Jamaica, and Lee Smith, my former partner, both actuaries, agreed on short notice to serve, for which we continue to feel grateful. Cathy in particular is on location in Jamaica and can execute locally on our initiatives.

TTFF wanted to expand operations in Haiti. Caribbean Actuary #2 (there's a back story there) Franz Alcindor, after a brief bout of skepticism, enthusiastically supported our efforts. He introduced us to senior government leaders in Haiti, arranged meetings and served as interpreter. After hearing our spiel at a couple of meetings, Franz led us into the next meeting and he said, "Leave this one to me." And he conducted a flawless meeting.

My role in the profession internationally has allowed me to make contacts in many countries relevant to our work. We're now looking to expand into Surinam, and we're relying in part on our Dutch actuary friends to make introductions. And last, but not least, many of my fellow actuaries have contributed financially.

### CONTINUING EDUCATION

We've learned a lot about agriculture, botany, farming, food testing, and more. It's been extremely interesting, and actually we've learned enough to teach. For our work to sustain itself, it has to be taken over by others, especially local people in each country. We conduct seminars in each country, passing along knowledge of tree propagation, orchard planting, tree care including pruning, reaping, post-harvest production, and marketing and sales. Of course we continue to rely on the real experts, so we bring them in for teaching sessions, both theory and practice.

One of our most successful training ventures involved taking seven Haitian farmers and agronomists to Jamaica for advanced training in tree propagation and care. After various skirmishes with visa authorities, airlines, currency exchanges and bus rental organizations, everything came together nicely. The group learned about root culture, air layering, orchard layout, food

processing and much more. We worked in cooperation with Hope Botanic Garden and the College of Agriculture in Jamaica. And our seven participants are passing along their acquired knowledge to their colleagues back in Haiti.

### IN OTHER NEWS

Personally, TTFF isn't quite a full-time job. I have many other interests where I make a difference, at least in a modest way. I still am an active volunteer for the Society of Actuaries, the IAA and The Actuarial Foundation, and I sit on a major company board of directors. It's busy. I'm not quite ready for the rocking chair. Like so many others in semi-retirement, I joke that retirement is so busy, I wonder how I found the time for work!

### CONCLUSION

Trees That Feed Foundation has now delivered more than 85,000 fruit trees to farmers and other groups in Haiti, Jamaica, and eight other countries in the Caribbean area and sub-Saharan Africa.

We've donated many pieces of equipment such as shredders and grinders, to allow the fruit to be processed and preserved. One of our favorite trees is the breadfruit, a nutritious carbohydrate fruit, which can be converted into a delicious, gluten-free flour. We're building both the supply and demand sides of the local markets in Jamaica and Haiti, and eventually points beyond.

Trees That Feed Foundation wants to pass along the knowledge needed to continue the process, so that eventually our beneficiaries will be independent and able to sustain themselves profitably. We think that's the best type of charity ... giving such that no dependency is created. We are growing and will need more help soon, but there is no plan to build an empire. But it's tremendously gratifying.

### POSTSCRIPT

I wrote this article from my current perspective as a retired professional. Let me hasten to add that actuaries, during their working careers, can also make a difference. I only wanted to emphasize that roles unrelated to actuarial work also can be highly rewarding. In fact my best advice to working actuaries who wish to be successful is that you should be involved in at least one other unrelated activity, for example volunteer charitable activity. You will gain as much benefit as you give, if not more.

For more information visit [www.treesthatfeed.org](http://www.treesthatfeed.org). ■



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