THE IF UPDATE

IN THIS ISSUE

PICTURED ABOVE: FARMERS HARVESTING PEPPERS
ABOVE RIGHT: LEONVIL LAGREDELLE, FARMER BENEFICIARY

DRIP IRRIGATION

A PROMISING FUTURE FOR IF FOUNDATION'S BENEFICIARY FARMERS

Whatever one's opinion of climate science, the effects of global warming are directly impacting Haitian farmers in a negative way. For the past three years, we have experienced long periods of drought even during seasons that have never known an issue with rainfall. In an ironic coincidence, the period of drought began in 2013 when the iF Foundation started its agricultural program in Northern Haiti. Having access to credit, better seed, land preparation and technical support was serendipitous for our farmers during this time of extreme hardship as these factors mitigated the impact of the sustained drought. However, reimbursement rates for the loans suffered as farmer success depends on weather conditions as well as crop choice and market conditions.

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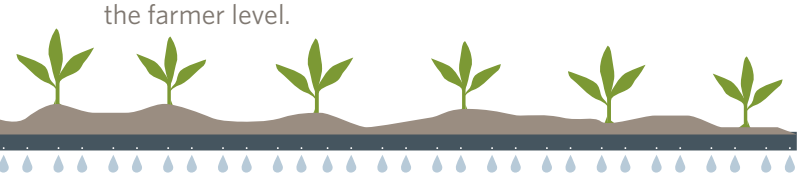
Access to water is the primary contributor to agricultural success as this determines which crops farmers will be able to grow and how much their land will produce. As rainfall becomes less predictable (or absent), farmers cannot make informed crop choices and must fall back on traditional planting calendars. This increases risk factors in an already risky venture. In our catchment area, 75% of crop loss was directly attributable to drought conditions.

The iF Foundation understands the challenges facing our beneficiary farmers and has been evaluating alternative strategies to de-risk farmers' operation and make them less vulnerable to the effects of climate change. We have conducted a series of trials to assess the potential of alternative and drought tolerant crops but the key to minimizing the risk depends on addressing water management. A successful approach must consider irrigation ("water in") and drainage ("water out").

In March 2016, we started discussions with Eduardo Mendias, the Senior Product Manager for Toro Micro-Irrigation, about the potential of using drip irrigation as part of our water management strategy in Haiti. We purchased our first drip irrigation kit from Toro and hosted a visit by Eduardo at our technical center in Coronel. He provided hands-on training to iF Foundation's employees, the technical staff from Meds for Food and Kids (MFK) and the Sacred Heart Hospital in Milot. His task list included installing the first drip irrigation system in our region.

The initial phase involved a series of pilot projects with vegetables such as bell peppers and row crops including peanut and corn. The results were very promising as high-value vegetables could be successfully cultivated in our area for the first time. Even a drought-tolerant crop such as peanuts saw significant gains in yield (81%) when using drip. The next step in the process required us to validate the approach both from an implementation standpoint i.e., can Haitian farmers use and maintain the system, and financially i.e., does it pay for itself. This required additional funds to build the infrastructure necessary to extend the research to the farmer level.



PICTURED ABOVE: LEONVIL LAGREDELLE HARVESTING PEPPERS

In late 2016 FOKAL, the Haitian arm of the New York-based Open Society Institute allocated $30,000 to conduct the second phase. This larger pilot provides the opportunity to determine the potential of drip irrigation under "real world" conditions. Three different water delivery systems are being assessed as part of the trial. The project design also created the platform to quantitatively evaluate other interventions such as soil augmentation, improved seed and the use of vermicompost (rich organic fertilizer produced using earthworms). The project is currently in its full implementation phase and is being done with six participating farmers and two control fields managed by the iF Foundation.

Our project manager, Dabel Ismith, is collecting data to determine cost effectiveness for each variable as well as basic field performance data (moisture content, plant chlorophyll levels, etc.). Our laboratory tested all fields being used in the trial prior to rollout to calculate soil macronutrients, microbial populations, pH, conductivity and percentage of organic matter. They are repeating the analysis at various time points during the trial. We are calculating the relative costs of water delivery when using solar pumps, electric pumps or delivery via truck. Startup required a lot of planning and coordination as it involved land preparation, establishment of nurseries for tomato, bell pepper and hot pepper, installation of the drip systems, well digging and planting. The trial should be completed by the end of April

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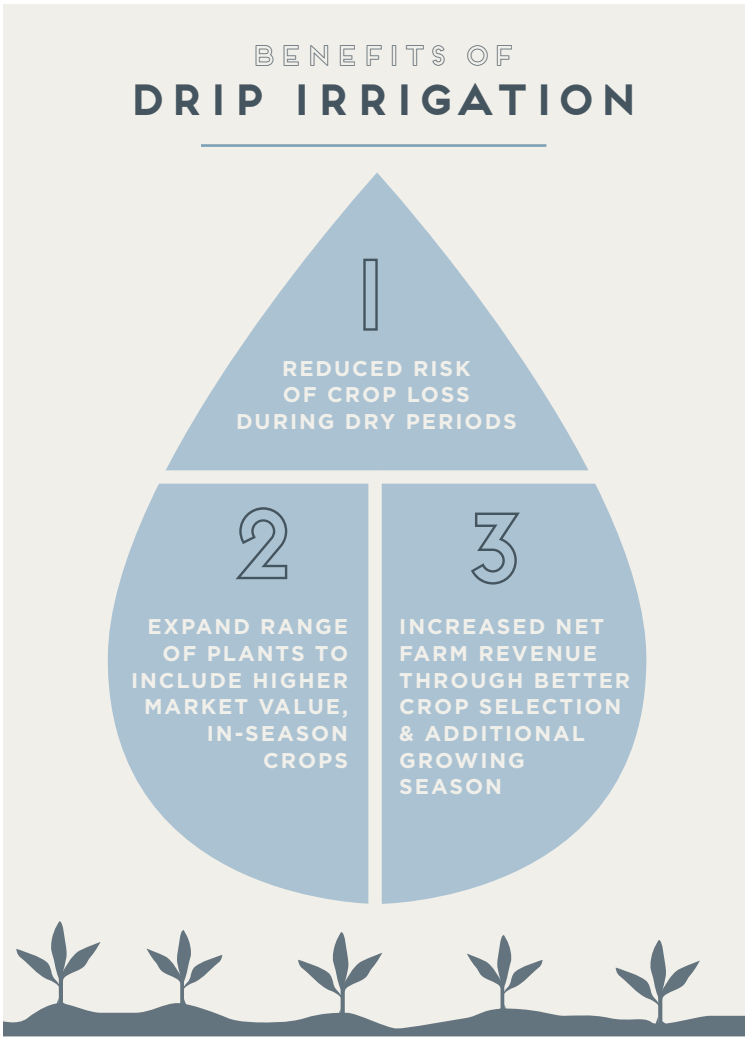
with data analysis and submission of the final report scheduled for the end of May. Indications at the ¾ mark are extremely encouraging and will determine how we proceed with planning and fundraising for expansion in 2018.

Increasing access to drip irrigation will benefit local farmers in substantive, measurable ways and improve reimbursement rates for the farm credit program.

Among the many positives of drip:

- Reduced risk of crop loss during dry periods
- Farmers can expand the range of what they plant and choose varieties with higher market value rather than low-value staple crops and and grow them in the season when demand is greatest; a water management project in Kothapally, India saw the number of different crops under cultivation increase from four to twenty-eight
- Increased net farm family revenue through better crop selection and the addition of one growing season as the result of having a reliable water supply

Everyone on the iF Foundation team is dedicated to helping Haitian farmers succeed. We can only achieve this goal by focusing on alternatives that address the issues that lower agricultural potential and increase risk of failure. Drip irrigation combined with self-evident elements such as access to better seed allows farmers to become more productive and profitable. This is a durable solution to the seminal challenge of water. The Toro irrigation material has a 15-year use life thus represents a long-term approach to solving a universal problem. Drip irrigation can be life changing for Haitian farmers.



Addressing the Immediate Need of POOR CHILDHOOD NUTRITION

Launched in 2012, the Breakfast Program began by serving breakfast to 310 children two days a week at Saint Joseph's School in Dubre. Today, thanks to your support, **the Program serves breakfast to 2,335 children at eleven schools, five days a week, during the school year**. The Program is the philanthropic arm of the organization's work in Haiti and meets the immediate need of poor childhood nutrition. Many of the children who are beneficiaries of the program don't have enough to eat at home. In addition, many of them must walk long distances to get to school. By the time they arrive at school, they are tired and unable to focus on their schoolwork. The Breakfast Program provides at least one nutritious meal a day and has helped to increase attendance at school too. The most critical need for the Program is to raise continued operating support. It cost $100 to support one child for an entire school year. Your donation goes directly to help the beneficiaries of this important program. For more information on ways to support the Breakfast Program contact Eileen Spencer 914.924.9704 or espencer@if-foundation.org

DONATE TODAY

PHOTO BY EMMANUEL ANDRE, COLOR BY MIMI PLANGE

IMPROVING FOOD SAFETY IN HAITI

WHAT ARE AFLATOXINS AND WHY SHOULD WE CARE? IF CORN, PEANUTS AND SORGHUM ARE PART OF YOUR DIET, AFLATOXIN LEVELS ARE IMPORTANT TO YOU.

Aflatoxins are poisonous and cancer-causing metabolic byproducts of Aspergillus mold. When contaminated food is processed, they enter the food supply. Children are particularly affected by aflatoxin exposure, which leads to stunted growth, delayed development, liver damage, and liver cancer.

The United States, Canada and Europe have strict standards on aflatoxin levels for both human and animal consumption. Acceptable limits range from 10 parts per billion (ppb) to 20ppb depending on the jurisdiction. In 2006, Dr. Dan Brown of Cornell University performed the first aflatoxin testing in Haiti and found contamination levels as high as 350 parts per million. That is 58,000 times the acceptable limit in the U.S.

The iF Foundation started working with twelve Haitian peanut farmers in early 2014. Local farmers had stopped cultivating peanuts years before

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PHOTO BY EMMANUEL ANDRE, COLOR BY MIMI PLANGE

for a variety of technical and financial reasons. Successive crop failures and poor access to markets made it an unattractive crop despite peanuts having good drought tolerance during a period of rapidly changing weather patterns. Working with Cornell University and support from the Phytotoxin and Mycotoxin Innovation Laboratory (PMIL) at the University of Georgia, we have reestablished peanut as a major crop in our catchment area addressing varieties, market access and food safety. We now have more than 400 farmers cultivating peanuts as part of our farm credit program. The Foundation tests all harvested nuts for aflatoxin contamination in our laboratory and consolidates small shareholder yields for sale to commercial buyers in quantities as large as 10 metric tons. Because continued access to farm credit and markets are tied to an aflatoxin standard of 10ppb or less, farmers are compliant with harvest and post-harvest guidelines intended to minimize contamination. On average, less than 10% of our farmers fail to meet this standard.

However, peanuts that exceed the 10ppb limit still enter the food chain through private sales to local small merchants. There is no way to decontaminate the peanuts and farmers will not dispose of their harvest if it can be sold. Since there are no guidelines or laws for food safety in Haiti, there is no mechanism for keeping harmful products out of the market. Ergo, while we have "solved" the problem for 90% of our farmers, we have not resolved the issue of aflatoxin consumption in the local population.

In 2016, we began discussions about aflatoxin in Haiti with Dr. Patrice Dion at Laval University in Quebec City, Canada. Patrice is on the faculty there but also runs a non-government organization (NGO) in St. Marc, Haiti focused on nutrition and economic empowerment of women. He had been trying to get the Canadian government to support research into ways of improving food safety in Haiti for many years. The technical capacity of the iF Foundation and access to >1000 farmers provided the critical mass to move the project forward. Two other NGOs, Meds for Food and Kids in Quartier Morin and CHIBAS in Port-au-Prince, add critical pieces to create a comprehensive platform for evaluating different approaches to controlling aflatoxin contamination and increasing food safety in Haiti. The Canadian government through the International Development and Research Center (IDRC) has agreed to provide CDN $1.1M for this project.

IDRC was established by an act of Canada's parliament in 1970 with a mandate "to initiate, encourage, support, and conduct research into the problems of the developing regions of the world and into the means for applying and adapting scientific, technical, and other knowledge to the economic and social advancement of those regions."

This 30-month project will begin in May of 2017. The Foundation's role will be to work with 600 farmers to evaluate drying and storage options that will eliminate the conditions that allow the Aspergillus mold to thrive. Laboratory testing will be expanded during the research phase to track the onset of any contamination, identify the root cause and implement corrective measures. Farmers will receive additional training on how to avoid mold during cultivation, harvest, drying, storage and processing. The overall goal of our component is to develop guidelines and protocols that can be used by Haitian farmers throughout the country. This will increase the market value of their harvest while protecting consumers from ingesting cancer-causing toxins.

BENEFICIARY SPOTLIGHT
SAMUEL MYRTIL

PHOTO BY EMMANUEL ANDRE, COLOR DESIGN MIMI PLANGE

Samuel Myrtil is one of the most successful farmers in the Agricultural Program. He grows beans, corn, rice, peanuts and more. He has been with the Program since it's inception, providing his land for iF pilot programs and continuing on to become a loan beneficiary. He first grew beans and is now a peanut farmer. Samuel had the highest bean yield in an extreme drought season and is also among the farmers with the highest peanut yield in the Program. "I have never made as much money farming as I do now with the support of the iF foundation". For him, the hardest part of farming is manually preparing land. However, he feels that agriculture is the only hope for Haiti.

CALL TO ACTION

Your partnership with the iF Foundation can play a key role in creating job opportunity for families living in rural Haiti. The iF Foundation develops partnerships to meet the goals of each corporate donor while also meeting our mission of creating sustainable economic opportunities for the farmers in rural Haiti. We are extending our reach in Haiti—improving the lives of more families through an innovative mutli-year agricultural program. We rely on you, our corporate partners to achieve this goal. 100% of every dollar goes directly to support our economic development work, so your company investment in the iF Foundation impacts families who would otherwise not have the chance to build a brighter future. Corporate partnerships are diverse; ranging from an outright gift to underwriting a component of our work, a matching gift campaign, an employee driven campaign and even in-kind donations. For more information on how your company can become involved please contact Eileen Spencer at 914.924.9704 or **espencer@if-foundation.org**. On behalf of our community partners in northern Haiti, thank you for your generous support and commitment to improving the lives of others.

MISSION STATEMENT

The iF Foundation seeks to improve and enable the health and well-being of families living in the farming regions of the North Department of Haiti through the development and support of sustainable solutions aimed at poverty alleviation, education and economic development.

OPERATING STATEMENT

The iF Foundation will focus its resources on reducing food insecurity for families through agricultural development; nourishment of children and the promotion and education of healthy lifestyles. The Foundation will implement its interventions in partnership with the community and invest in building local capacity and the evaluation of all its activities.

WANT TO KNOW MORE ABOUT OUR PROGRAMS?

VISIT WWW.IF-FOUNDATION.ORG AND FOLLOW US ON FACEBOOK AND TWITTER!

JOIN THE CONVERSATION

We need you to help us expand our reach in Haiti. By engaging your circle of friends in our work you can help us expand our on-line community creating a greater awareness of our mission. Connect with us on Facebook, follow us on Twitter. Sharing and connecting information with your friends and family is the surest way you can show support to our partners in the developing world.

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