

DOUBLE-ROW TECHNOLOGY HELPS NICARAGUAN FARMERS

By William Edwards, PhD, Self-Help Board Member, Nicaragua Committee Chair

EVER SINCE SELF-HELP INTERNATIONAL BEGAN WORKING TO ALLEVIATE HUNGER and malnutrition in Nicaragua, promoting the production of high-protein corn has been a high priority. Corn is a staple crop in Nicaragua, and the majority is used for human consumption. Many people suffer from protein deficiency. Introducing corn varieties that are higher in the amino acids lysine and tryptophan than the traditional varieties – known as “Quality Protein Maize” (QPM) – is an effective and affordable way of improving diets.

IMPROVED SEED

Foundation QPM seed was obtained from the International Center for Improvement of Corn and Wheat (CIMMYT) near Mexico City, where Dr. Norman Borlaug did much of his work that resulted in the Green Revolution. From the original foundation seed, Self-Help produced registered seed on its test plots. The registered seed is then sold to leading farmers in the community who produce certified seed, under strict protocols overseen by the Nicaraguan government. This certified seed is sold to agricultural input dealers who in turn sell it to small-holder farmers. The farmers’ production is used for family consumption, and the excess is sold in local markets for other families to utilize.

BETTER TECHNOLOGY

Improved seed is only one piece of the puzzle, however. QPM not only has higher protein content than traditional corn varieties planted in Nicaragua, it has increased yield potential, as well. However, farmers must adopt improved production practices to unlock this potential. Between 2016 and 2020, *(continued on page 3)*

Double-row planting increases yields.



A MESSAGE FROM THE EXECUTIVE DIRECTOR

Dear Friends,

For a long time, Self-Help International has been powered by a small group of people dedicated to changing the world, and it was your steady support and partnership that brought our mission to fruition yet again despite the unknowns and uncertainties of 2020.

In the face of the global pandemic, so many people joined together to alleviate hunger, from our locally-led teams in Ghana and Nicaragua who responded quickly and flexibly to changing needs of partner communities; to community leaders who found innovative ways to continue programming despite restrictions on travel and group gatherings; to farmers and small business owners who found safe ways to contribute to food security; to volunteers and advisors who shared their time and talents during unexpected free time; to the individuals, families, and civic and church groups who donated to finance this work. Together, this collective support allowed Self-Help's team of essential workers to:

- **Disseminate reliable information** from trusted health sources to rural community partners, sharing facts about COVID-19, debunking myths, and supporting households and communities to establish handwashing stations called "tippy taps."
- **Work with 10 partner communities** to distribute meals to children during country-wide lockdowns and school closures to ensure that those who rely on the school feeding program for daily meals were still able to access nutritious meals.
- **Establish a new peer-mentoring structure** through the Teen Girls Clubs in 5 communities in rural Ghana, whereby Senior High School girls mentored Junior High students in reading and other skills in small groups to support ongoing literacy efforts while schools were closed.
- **Support hundreds of small business owners** with more flexible micro-loan terms and risk management training as supply chains were disrupted and markets closed.
- **Extend clean water** to 3,000 more people living in six communities in Nicaragua.
- **Facilitate specific trainings** on household gardens, promoting the cultivation of diverse, readily available, nutrient-rich foods such as greens, squash varieties, and orange-fleshed sweet potato to enhance food security, nutrition and health.
- **Distribute more than 1,710 pounds** of beans fortified with iron and zinc to more than 200 families living in 12 communities across Nicaragua to enhance community food and nutrition security, in partnership with HarvestPlus.
- **Continue to train farmers** in improved practices such as double-row planting, and supporting farmers' access to improved seed and increased capital, resulting in increased yields and net profit per acre so that families had more food to consume at home, more nutritious crops to sell in the community, and additional income.



Thank you for joining us on the journey of 2020. We wish you a healthy, happy and prosperous year ahead.

A handwritten signature in black ink that reads "Nora Tobin".

Nora Tobin, Executive Director

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(continued from page 1) Self-Help presented more than 108 workshops on corn production to an average of 14 farmers per training. In addition, small bags of seed are donated to farmers who are willing to plant demonstration plots so that their neighbors can observe the results from QPM genetics first-hand.

Self-Help's trainings help farmers take advantage of the superior QPM genetics by increasing plant population on the same amount of land they typically cultivate. Traditionally, farmers in Nicaragua plant about 12,000 kernels per acre. For QPM seed the goal is 36,000 seeds per acre, or triple the density of the native varieties. To achieve this higher plant population, farmers learn "double-row" technology during Self-Help training workshops. Instead of planting single rows of seed roughly a meter (39 inches) apart, two rows are planted about 4 inches apart, then two more rows are planted with a one-meter gap in between. The one-meter gap is necessary to allow a person to walk between the rows for planting, weeding, applying pesticides, and harvesting. Seeds are also planted closer together within the rows.

More plants require more nutrients. Farmers who adopt double-row technology apply fertilizer at roughly double the rate used for the traditional single-row technology. Other inputs are applied at about the same rates. The table on this page compares the total costs for each technology, including land, labor and purchased inputs. The estimated cost per acre for double-row technology is \$453, compared to only \$273 for the single-row option. However, the double-row corn conservatively yields twice as much grain and double the gross income. Profit per acre is estimated at \$138 per acre, versus \$22 per acre for the single-row technology. Of course, if families provide their own labor and own their own land, the budgeted costs for those resources go back into their pockets, as well, leaving them extra income for improving

their diets in other ways, investing in home improvements, and paying for their children's education.

ACCESS TO CAPITAL

In order to pay for the higher input costs, farmers need access to capital. Self-Help maintains a revolving fund from which farmers can borrow enough to pay for seed, fertilizer, pesticides and land preparation, or about 43% of their total costs. Loans are repaid after harvest, about six months later, plus interest at a rate of one percent per month. Repayment rates are at or near 100 percent.

By providing a complete package: improved seed, better technology and access to capital, Self-Help International is able to support farmers in Nicaragua to improve their livelihoods while at the same time alleviating hunger and improving nutrition in their communities and beyond. In 2021 Self-Help hopes to finance about 70 farmers. Your donations can help expand our revolving funds and make it possible to serve even more producers in the future.

*Bushels = bu.

Data provided by Jorge Campos, Self-Help Nicaragua Country Director



QPM ears are larger than ears from traditional varieties.

COSTS AND RETURNS OF QUALITY PROTEIN MAIZE ONE ACRE, US\$		
	SINGLE ROW	DOUBLE ROW
INCOME		
YIELD, BU./ACRE*	36.76 bu.*	73.53 bu.*
PRICE PER BU.*	\$8.03	\$8.03
GROSS INCOME	\$295.22	\$590.44
COSTS	SINGLE ROW	DOUBLE ROW
LAND RENT	\$33.75	\$33.75
LABOR		
PRE-HARVEST	\$93.65	\$149.34
HARVEST	\$27.84	\$48.09
MACHINERY (LAND PREP)	\$27.00	\$34.59
SEED	\$9.28	\$27.84
FERTILIZER	\$33.75	\$85.21
INSECTICIDE	\$10.63	\$10.63
HERBICIDE	\$10.12	\$15.19
SHELLING	\$20.67	\$41.34
INPUT TRANSPORT	\$6.58	\$6.58
TOTAL COSTS	\$273.28	\$452.57
NET PROFIT PER ACRE	\$21.94	\$137.87

TEEN GIRLS CLUB MEMBERS HARNESS THE POWER OF COMMUNITY ACTION

By Grace Marfo, Teen Girls Club Program Officer

Members of Self-Help International's Teen Girls Club (TGC) in their final year of junior high school celebrated their graduation in 2020 in a new and exciting way. Girls were asked to examine their communities, identify issues the community faces, and work with their peers to develop possible solutions. These service projects allowed girls to practice the leadership, civic engagement, and critical thinking skills they learned in their time with the Teen Girls Club program.

A gift of \$20 to the Teen Girls Club can help provide the resources for this project in 2021.

Make a gift at www.selfhelpinternational.org/donate



BEDAABOUR, GHANA

The small community of Bedaabour, Ghana has one of the most active Teen Girls Clubs working with Self-Help International. The community is committed to helping all young girls and boys who are motivated and dedicated to go to school. Education is the right of every Ghanaian child; however, there are some educational challenges in the community, especially in regards to ensuring adequate facilities and appropriate materials for teaching.

One of the most pressing issues students in Bedaabour face is traveling from smaller nearby communities to study at the school in Bedaabour. Bedaabour is surrounded by the Offin River, which makes traveling between the smaller surrounding communities very difficult. The only sure way to cross the river is by using a canoe.

The community doesn't own a canoe, so some local farmers made an effort to provide two of their personal

canoes to help students cross the river to get to school. While the community was grateful for the farmers' offer, it was hard for students to ensure regular access to the canoes for crossing.

As part of the Self-Help Teen Girls Clubs' community service projects, the club coordinators in Bedaabour encouraged the girls to identify a challenge in their community and guided the girls through the

KUKUBUSO, GHANA

In the village of Kukubuso there were no public toilets available in the community. While a few community members have private toilets in their houses, there wasn't access for the community at large. The TGC members noticed the lack of public and accessible toilet facilities and said it was a great challenge they faced as young girls in the community; they decided to tackle the problem.

Public toilets play a role in community health and individual wellbeing by helping to ensure proper sanitation and preventing community members from having to walk long distances for the restroom. When public toilets are available, people can

enjoy being out in the community.

The girls first started by contacting community elders and leaders. They discussed with them how they felt about this situation in the community. The community's opinion leaders also saw the importance of the girls' idea and saw the need to act on it. They mobilized volunteers in the community to dig a pit and used resources available in the community to lessen the cost of the project. The girls helped the volunteers by fetching water and supporting their work.

Through their partnership with community leaders, the TGC members

were able to get public toilets built for members of their community. They saw how powerful community mobilization can be in getting things done and improving the lives of everyone in Kukubuso.

The Teen Girls Club participants in Kukubuso saw the need to help the community solve this problem and used their skills in civic engagement to mobilize community members and government entities to support their project. This community project is going to be of help to everyone in the community, including visitors, and it will help their community be healthier and cleaner.



process of developing a solution. Final year students in Bedaabour couldn't overlook how Offin River had hindered their movement, especially for girls living beyond the river trying to attend school. The club members identified this problem to Self-Help staff and club coordinators, and the staff worked with the girls through the processes involved in problem solving: consulting community stakeholders; mobilizing resources; and working together to complete their project.

Through the immense effort of the girls at every stage of the project, and in collaboration with the community coordinators and Self-Help staff, the dreams of the girls became a reality – they were able to build a canoe.

In 2020, graduates and club members in Bedaabour celebrated graduation and officially commissioned the canoe. Community coordinators, parents, village elders and other community members were present to acknowledge

the effort of the final year students and other Teen Girls Club members, celebrate their achievement of graduating from Junior High School, and recognize their commitment to their community service project. With this community canoe, students that live across the river will no longer have to worry about getting to school, leaving them more time for their studies.

MEMORIAL GIFTS

In honor of Akua Adu-Boahene
By Helen Tandoh

In honor of all past and present Self-Help Board and Staff
By Pete and Mary Jo Hall

In loving memory of Dorah Asamoah
By Afua Asenso

In loving memory of Paul and Doris Beetz
By Richard and Leslie Althaus

In loving memory of William Bunker
By David and Merry Fredrick

In honor of Stacey Burke
By Lisa Kenworthy

In honor of Chris and Kristin Caspar-Riggs
By Pam and Ken Riggs

In loving memory of Philip Clark
By Joan Clark

In loving memory of Bob Coonradt
By Delores Coonradt

In loving memory of Gene L. Davis
By Frieda Davis

In loving memory of Barb Dinnen
By Steve Dinnen

In honor of Stacie, Angie, and Gabi Dressel
By Dave and Jan Dressel

In honor of Merry Fredrick
By Norman and Mary Alice Schlesener

In loving memory of Mary Fran Gilleran
By Marge Polys

In loving memory of Harol and Edith Gronstal
By Laura and Gary Buehner

In loving memory of Alfred Happel
By the Central College Softball Team

In loving memory of Laura Hemmes
By Bill Hemmes

In loving memory of Roger Hubbard
By David and Merry Fredrick

In honor of Bob Jolly
By Barbara Ann Peterson

In loving memory of John W. Kidd
By Eunice and Bruce Bassler

In loving memory of Dave "Lags" Lageschulte
By Cordell Lageschulte
By Donna and Ken Speake

In loving memory of Kathy Aileen Leichty
By Clarence and Julie Leichty

In honor of Tim Lenning
By Leota Lenning

In honor of Fran and Howard Mueller
By Steve and Jackie Mueller
By Carol and Lyle Rasmussen

In honor of Richard Neal
By Andrea and Bobby Compton

In loving memory of Ruth and Gilbert Neal
By Tom and Patricia Neal

In honor of Tyson Neukirch
By Paul Neukirch

In loving memory of Mary Jean Nicholas
By David and Merry Fredrick

In honor of Mary Jane Oakland
By Julianne Allaway
By Thomas Phillips
By Dot and Steve Prater
By Sheryl Readout
By David and Sharon Wieland

In loving memory of Marv Ott
By David and Merry Fredrick

In loving memory of our parents
By Carol and Lyle Rasmussen

In loving memory of Walter Phelps
By Margaret Phelps

In honor of Warren and Nancy Prawl
By David and Merry Fredrick

In honor of Patty and David Ressler
By Carol and Bob Smith

In loving memory of Mark David Ribich
By Trish and Fred Ribich

In loving memory of Art Rinz
By Patricia Rinz

In honor of Paul Schickler
By Bob Kurtz

In loving memory of J.T. Scott
By Sue Scott

In honor of Barb Smith and Rod Hoffman
By Carol and Bob Smith

In honor of Brian, Ann and Bridget Smith and Ann Thye
By Carol and Bob Smith

In honor of Carol and Bob Smith
By Barb Smith and Rod Hoffman

In honor of Doug, Kate, Megan and Lindsay Smith
By Carol and Bob Smith

In honor of Gail Stelmacher
By Jo Kay Boyle
By Dr. Richard Deming

In loving memory of Fred Strohehn
By Bert Schou

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By Marjorie Sutter

In loving memory of Thomas Sutter
By Marjorie Sutter

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By Emily Saveraid

In honor of Grace Swanson
By Lucille Taylor

In loving memory of Jo Swanson
By Lori and Robert Mitchell

In honor of Keith and Nancy Swanson
By Sue Glasnapp
By Mary and Bill Holtze

In loving memory of Gil Taiber
By Jonathan Taiber
By Sue and Tom Taiber

In honor of Mary Tobin
By Kim Ryan

In honor of Maura Tobin
By Fr. Chuck Tobin

In honor of Nora Tobin
By Elizabeth Beck

In honor of the Tobin Family
By Katherine and David Sircy

In honor of World's Window
By the Revs. Maureen Doherty and Joan Farstad

In honor of Janice Welper
By Don and Leona Amdahl

Self-Help International staff and board were saddened to hear that Emeritus Board Member, Gene Novak, passed away on Friday, Jan. 8, 2021. Gene will be remembered for his incredible generosity and passion for gardening.

In memory of Gene Novak
By Fran and Howard Mueller
By Esther Legg

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Benjamin Antwi
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Richard Opoku
Caretaker

COUNTRY DIRECTORS RECEIVE MERRY FREDRICK LEADERSHIP AWARD



*Nicaragua Country Director,
Jorge Campos*



*Ghana Country Director,
Benjamin Kusi*

The 2020 Merry Fredrick Leadership Award was awarded jointly to Self-Help Ghana Country Director, Benjamin Kusi, and Nicaragua Country Director, Jorge Campos, for demonstrating incredible leadership in the face of enormous obstacles during the COVID-19 pandemic. The award was established by the Board of Directors in 2013 to recognize, initiate, or promote leadership based on merit and fulfillment of the mission of Self-Help International, and named in honor of retired Executive Director Merry Fredrick.

“During my 15 years with Self-Help International, I quickly became aware of the significance of quality staff, and their growth potential,”

said Merry Fredrick. “During this challenging year faced with the COVID-19 virus, the outstanding leadership skills demonstrated by Benjamin and Jorge allowed Self-Help International’s programs to continue to perform successfully, and to expand. Their

steady guidance to staff and the beneficiaries has been exemplary.”

“Everyone is a good leader because they have good followers. I have a team made up of hardworking and dedicated staff, and this award couldn’t have been possible without their help and they also have every reason to be happy. I dedicate this award to the entire Ghana team,” said Benjamin Kusi. “Let’s continue to work together to empower the people we serve.”

“I am extremely grateful for this recognition, which I want to share with my colleagues,” Jorge Campos said. “A true leader goes ahead and recognizes the strengths and weaknesses of his team and has a clear horizon to see where their work is going. I believe that we made the best of our personal and collective talents to tackle the challenges we faced in 2020.”

“Jorge and Benjamin are so talented and dedicated. Witnessing the ways they both rose to the new challenges in 2020 was both unsurprising and inspiring,” said Executive Director, Nora Tobin. “It is an honor to be their partner in leading this incredible organization.”



We're on social media!



SelfHelpIntl



@selfhelpinternational



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Save the Date!

FOR A VIRTUAL WEEK TO ALLEVIATE HUNGER

Full details are available at www.selfhelpinternational.org. Look for it on the front page under "Upcoming Events."

Want to make sure you don't miss any updates? Join Self-Help e-newsletter list to make sure you are staying up-to-date. Email megan@selfhelpinternational.org or call 319-352-4040 to sign up.

THE WEEK OF MARCH 22, 2021 INCLUDING:

- A SPECIAL BREAKFAST-HOUR PROGRAM ON THURSDAY, MAR. 25
- A BRIEF EVENING PROGRAM UPDATE ON THURSDAY, MAR. 25
- AN ONLINE MARKETPLACE OPEN THE WEEK OF MAR. 15
- A GIFT MATCH OPPORTUNITY TO MAXIMIZE YOUR IMPACT