A Message from the President

In the year 2050, a gathering will take place at the Mpirigiti Rural Training Centre in the Kamuli District of Uganda. The purpose of the assembled group will be to open a time capsule from the year 2018.

The time capsule was sealed this past July when I was honored to be present to help dedicate the new training center for the Center for Sustainable Rural Livelihoods. For nearly 15 years, we have worked hand-in-hand with the people of the Kamuli District to make their lives better and their prospects brighter through agriculture and education.

The Mpirigiti Rural Training Centre epitomizes what is possible when the support of nearly 100 donors and Iowa State’s land-grant mission unite through a passionate, compassionate vision for change and progress.

Inside the time capsule is a letter I wrote. I’d like to share my letter that will be read by that gathering in 2050:

Dear People of the Year 2050:

Greetings from the year 2018! This year we dedicated the Mpirigiti Rural Training Centre. It is a wonderful new facility. We trust the passing years have made the Mpirigiti center a hopeful destination for many thousands of people — those who have come eager to learn, those who have come willing to serve, and those who have been blessed by working together to pursue a happier, hope-filled future.

In our current world of 2018, we often talk about “2050” as an important year — a time for which we must direct our energies now to ensure that expanding world populations have enough nourishing food to eat and are able to lead healthy, satisfying lives. “Food is the moral right of all who are born into this world” — That’s what Norman Borlaug, a famous Iowan, agricultural scientist and Nobel Prize laureate, once said. We hope 2050 finds that all people have attained this moral right.

Here are the main messages I’d like to share with you:

To the people of the Kamuli District in 2050: Sustain our friendship and partnership many years into the future. Let us make a better world for all our children and grandchildren. Let us end hunger, but let us never stop hungering for knowledge.

To the students of Iowa State University and Makerere University in 2050: Believe in the power of a science-based education in agriculture, food, and natural resources. Believe your hard work will positively transform the tomorrows of people worldwide.

To the faculty and staff of Iowa State University in 2050: Be true to Iowa State’s land-grant ideals, no matter where your work takes you. Make the mentoring of young people part of your legacy — and ISU’s legacy for all its 192 years of existence in 2050.

To the benefactors of Iowa State’s Center for Sustainable Rural Livelihoods in 2050: You stand on the shoulders of giants, who gave so generously to see progress made to benefit the world’s poor. Through this intersection of public and private interests, we can reach even greater heights. Let’s work together to bring closer the day we put hunger and poverty permanently in the past.

Wendy Wintersteen
President, Iowa State University
HOLY COW!

When Chuck and Margo Wood arrived in Kamuli last July for the dedication of the new Mpirigiti Rural Training Centre, they went on a walking tour of the livestock demonstration area with Max Rothschild, CSRL’s associate director for livestock programs.

The first stop on the tour was a cattle pen containing a single heifer. It turns out the animal was “on loan” from a local farmer. The new demonstration site had a pig and chickens, but no cow of its own.

Chuck’s eyes lit up. “Margo and I looked at each other and winked,” he says.

Both had immediately called up a 60-year-old memory.

In 1958, a 17-year-old Chuck had shown the grand champion steer at the International Livestock Exposition in Chicago — a remarkable achievement, reported the story in the Des Moines Register, for an “Iowa farm boy doubly afflicted with an asthmatic attack and a broken leg.”

“It was a bit dramatic,” Chuck recalls, “but also a big deal. The International was the Olympics for livestock competition. I’d broken my leg wrestling and competed in a walking cast.”

Chuck’s champion was named Holy Cow, “an attractive, flashy steer,” the judge noted in 1958.

Standing next to the loaner cow at Mpirigiti, Chuck decided to provide a gift to CSRL to get its own heifer — as a memorial to his grand champion. A bred heifer was purchased to become Mpirigiti’s own. In October, the new Holy Cow delivered its first calf.

Chuck and Margo’s gift is only the latest example of how they’ve supported CSRL through the years.

A special footnote: “I used the proceeds from selling Holy Cow to send me through college at Iowa State, with change to spare,” says Chuck. “When we got married, we bought a small home with a down payment made possible by Holy Cow.”
“We are providing knowledge, skills, resources and, most importantly, hope — hope to people who are working to overcome some of the most challenging conditions life can offer. The new training center means we have even more hope to share through expanded programs and more space to serve an even greater number of students and Kamuli District citizens.”

— Wendy Wintersteent, ISU President
The training center is yet another milestone in the history of CSRL, which has become a model for international university agricultural education programs and for inspiring students from Iowa State and Makerere University to address global hunger and poverty.

The $2.7 million Mpirigiti Rural Training Centre will serve as an educational and training focal point for ISU-Uganda Program staff as they reach out to farmers, teachers, community leaders and students.

Nearly 100 donors made the new facility possible, as well as support from Iowa State’s Senior Vice President and Provost’s Office.

“This was a team effort, with every dollar raised reflecting a shared belief in the importance and value of this project,” said ISU President Wendy Wintersteen. “We are providing knowledge, skills, resources and, most importantly, hope — hope to people who are working to overcome some of the most challenging conditions life can offer.”

Gerald Kolschowsky, who with his wife Karen are the founding benefactors of CSRL and the new Mpirigiti facility, said, “The new training center is already making a difference. It is raising the profile of CSRL in the eyes of Ugandans and strengthening our relationships with local communities and the Ugandan government.”

The 22,000-square foot training center sits on 13 acres that includes a main building with offices for the 20 ISU-Uganda Program field staff. The ISU Courtyard is central to the main complex. Students eat meals and hold meetings in the multipurpose Winterhof Commons. They gather informally to study, reflect and get to know each other better in the Wintersteen Lounge and Waggoner Terrace. Miller Hall is a 48-bed student dormitory — and now the first time that service-

AN IMPORTANT NEW CHAPTER FOR THE CENTER FOR SUSTAINABLE RURAL LIVELIHOODS BEGAN IN 2018 WITH THE DEDICATION OF THE MPIRIGITI RURAL TRAINING CENTRE IN THE KAMULI DISTRICT.
learning students can live together rather than the widely scattered (and sometimes sketchy) housing previously known. Barkema Hall serves as a guesthouse for visiting faculty and guests. The Khurshid Training Pavilion is a demonstration area for livestock and grain storage research. Bywater Field is a soccer site that’s become a popular destination for the local community. Joining it will soon be the Hoiberg Family Basketball Court. There also is a library and other crop and agroforestry demonstration areas.

The facility was built using local architects, engineers, contractors and labor. Local materials were used, including 30,000 compressed earth blocks and locally sourced furniture and furnishings. The design was guided by green principles to reduce its carbon footprint. The training center collects and uses rainwater. Wastewater is recycled using an anaerobic biodigester and constructed wetlands. A water purification system reduces the need for bottled water. Solar water heaters provide hot water and photovoltaic panels generate power. Natural ventilation, ceiling fans and shade trees help keep the rooms cool. Gardens and orchards supply fresh produce for meals.

The Mpirigiti Rural Training Centre officially opened in March 2018 with a ceremony involving 500 people, featuring guest of honor William Wilberforce Gabula Nadiope IV, the king of Busoga, the region that includes Kamuli.
What is a mpirigiti?

In the Lusoga language, “mpirigiti” is the word for a native tree highly prized for its healing and medicinal properties.

At July’s dedication of the Mpirigiti Rural Training Centre, Gideon Nadiope, national director of ISU-Uganda Program, led a round of applause for the mpirigiti tree and its many uses that make it special to Ugandans — medicine, forage, source of dyes and firewood, protein-rich leaves for livestock, environmental benefits and much more.

“We pray that we make our projects as useful as this tree,” said Nadiope.

When Ugandans see and hear the name of the training center, it conveys the concepts of health and well-being, both high priorities for the work of CSRL.

Last year, service-learning students successfully dug up and moved a 25-foot-tall mpirigiti tree in the path of construction. The tree survived and today shows new shoots and leaves. The transplanted tree now has company. A young mpirigiti was planted near the main building to honor Associate Dean for Academic and Global Programs David Acker’s tireless efforts and dedication in bringing the training center to completion.
What is grain amaranth?

Visitors to rural parts of Kamuli District notice small patches of a crop that nearly seem to be part of a homestead’s landscape design. The crop is amaranth, an ancient grain originally grown by the Aztecs.

Grain amaranth is high in nutrients and is one of the ingredients used in the nutrient-dense porridge provided to NEC clients. Since 2006, farmers in Kamuli have grown grain amaranth. Mothers and caregivers at the NECs receive amaranth seeds, which they grow and use to prepare porridge at home.

Nakanda Salama, a 24-year-old mother of two, has been a beneficiary of grain amaranth production. In 2016, Salama was enrolled at Naluwoli NEC when her three-year-old daughter Kafuko Leticia was suffering from malnutrition. After two weeks of attending the NEC, Salama’s husband prevented her from going back. By then, Salama was two months pregnant, and Leticia’s condition was worsening because of severe malnutrition. In 2017, her husband allowed her to return to the NEC after he saw the benefits of the center for a neighbor’s children. Leticia recovered in 2017, and Salama still attends, as the mother of a newborn.

Salama’s family owns about 3.5 acres of land that she uses for crop production. She received training and seeds, and planted grain amaranth, millet and soybeans. From the seed she received, she harvested 33 pounds of grain amaranth and has now planted half an acre using slightly more than a pound of seeds from her harvest. She plans to produce more grain amaranth for sale and for feeding her family.

Salama is benefiting not just from the grain amaranth seeds provided by Iowa State University, but also from the knowledge gleaned from the CSRL ISU-Uganda Program. She is now able to feed her family with nutrient-dense foods, stave off malnutrition and earn an income from the harvested products.
IT WAS THE DOWNSIDE OF SUCCESS.

The staff at Namasagali Health Center III referred malnourished children and their mothers from five neighboring villages to the Bususwa Nutritional Education Center, located more than two miles away. Because of the distance, mothers stopped coming once their children began to recover and became too heavy to carry on the two-mile journey.

To fulfill its vision of ending hunger and malnutrition to promote healthy future generations, the NEC’s Nutrition Education Program knew something had to change. They needed an additional center.

After a successful fundraising effort, the ninth NEC opened on July 2, 2018, at a home in Kisaikye A village. The center serves 93 clients, including 29 breastfeeding mothers, 12 pregnant women, 41 breastfeeding children, and 11 malnourished children.

“This NEC was opened in response to demand, which was confirmed through a rapid appraisal carried out in October 2017,” said Dorothy Masinde, associate director of nutrition education for CSRL. “This center now has clients from seven villages, all of which are within one mile of the new NEC.”

The Nutrition Education Program provides maternal and child nutrition and health services in rural communities of Kamuli district. It brings maternal and child nutrition services closer to clients by establishing nutrition education centers in communities experiencing high incidences of malnutrition.
Dennis Lutwama: 
The quiet force behind CSRL’s gardens

In 2010, Dennis Lutwama joined the ISU-Uganda Program as a research assistant working on a grain amaranth research project in the Kamuli District. Today, he is the service learning and school garden projects officer.

Dennis’s official duties include planning for school gardens, creating work plans and budgets and marketing produce from the school gardens. He helps implement joint projects and is a leader in establishing school gardens as outdoor learning laboratories and a force for rural development and food security.

But Dennis’ efforts go far beyond official duties. In some ways, he serves as a guardian angel.

As a highly respected and well-known community member, he looks out for the children of Kamuli. “Some students completed school because he helped to pay school fees from resources made possible by the gardens,” said Dorothy Masinde, associate director of nutrition education for CSRL.

Gail Nonnecke, associate director for education programs for CSRL, agrees. “Looking across the incredible gardens at the primary schools, I realize all of the hard work, integration and effort put into the gardens by the ISU-UP staff, including Dennis Lutwama. The gardens, poultry and their programs have transformed the schools and demonstrate new ideas.”
INCOME PROGRAM SUSTAINS FAMILIES AND COMMUNITIES

Visit Eseza Babirye’s home in the village of Naluwoli, and you will be met by a modest brick house with an adjacent bathroom and other improvements in progress. Eseza — a 28-year-old mother of three — is proud that she owns her home, and she credits her involvement with the CSRL Community Income Generation Innovations program for making that possible.

By helping mothers create sustainable sources of income, the Community Income Generation Innovations program enables women to ensure their own livelihoods and improve nutrition and health for their children. Craft production, sewing projects and soap-making are some of the program’s income-generating activities.

Eseza joined the youth entrepreneurship program in 2015 at the urging of Moureen Mbeiza, CSRL’s agronomist and land use coordinator. Eseza began growing and selling eggplants and tomatoes and then received two piglets, the offspring from which she was able to give to other community members.

In 2016, she learned about the crafts team at Naluwoli. “I decided to go and learn how to make baskets and other items like necklaces, tablecloths and bags,” Eseza said. “I have used money from my craft business to buy a plot of land, build a house and buy a bicycle.”

Community Income Generation Innovations is just one way that CSRL’s ISU-Uganda Program impacts communities. Poultry keeping is taught at the primary schools, with the eggs used for school lunches. Animal husbandry is taught across all programs. Craft programs for Nutrition Education Centers mothers are open to in-school and out-of-school youth and other community members, building sources of income and self-confidence.

One young girl who had made craft baskets for sale subsequently attended the Youth Entrepreneurship Training Workshop and was later named the goalie of her team during a soccer match after the workshop.

Eseza plans to buy three more lots and construct rental houses, pay school fees for her children and start a business. “Without ISU-UP, I wouldn’t have taken care of my family’s needs or achieved my goals,” she said. “Thank you for loving us.”

WHAT YOU MADE POSSIBLE IN 2018

- Expansion of craft programs to benefit students, youth and community members
- Poultry-keeping instruction, benefitting the community and the school lunch program
- NEC programs on nutrition, health, and sanitation were taught to youth in the entrepreneurship program
- Primary school gardens helped support the school lunch program
- New ideas such as leguminous cover crop rotation were taught in the garden program
- The gardens provided an outdoor laboratory for students
- Gardens provided entrepreneurial and ag enterprises for participating youth

WITH YOUR CONTINUED SUPPORT

- Continue to teach young mothers about sustainable income sources
- Help young women provide better health and nutrition for their families
- Continue to expand the reach of craft and other entrepreneurial programs
- Increase garden production, thereby increase income and support for the school lunch program
- Increase educational opportunities through the gardens and livestock programs
- Increase community stability by educating and supporting its members
Livestock Multiplies Reach

Livestock production is growing, thanks to CSRL

- Eleven farmers received piglets and training in 2016, and in 2018, the project was extended to include 10 additional farmers.

- In 2017, 130 Kuroiler chickens were distributed among 15 Nutrition Education Center mothers.

- In 2017, 10 Mubende goat bucks — each mating with 10 female goats per month — were distributed in Kiconco.

- In 2017, 11 school children each received three ducks. In 2018, two female ducks from their offspring were given to two additional students.

“If a woman farmer just raises corn, she is in serious trouble when there is a drought. But if she has livestock, she can use it to pay for food, medicine and other necessities.”

— Max Rothschild, CSRL livestock programs associate director
Livestock continues to make a real difference in people’s lives in the Kamuli District.

A consistent source of both nutrition and income, livestock plays a critical role in advancing the quality of life for Kamuli District families. CSRL’s livestock program leverages Iowa State’s expertise in animal husbandry, agribusiness and extension to help the region’s poorest farmers — mostly women — start and run successful livestock enterprises.

“Livestock provides income, animal-source protein and manure for fertilizer, and are agricultural banks that provide real resilience,” said Max Rothschild, the associate director for livestock programs for CSRL.

While most farmers in developing countries grow crops, livestock is what really moves communities toward long-term food security. Collaborating with experts from Iowa State and Makerere University, CSRL has successfully integrated poultry, pigs, and goats into the region’s farming and school activities. Diversity in farming is the key to sustainability in the Kamuli district.

“If a woman farmer just raises corn, she is in serious trouble when there is a drought. But if she has livestock, she can use it to pay for food, medicine and other necessities,” Rothschild said.

Florence Onyango, a mother from Kiconco, received five hens and two cocks, which have produced many eggs plus 40 additional chickens. Florence has been able to feed eggs to her family and has sold some of the chickens to pay school fees for her children. She’s also been able to buy a goat, and is hoping to increase her goat herd.

Saida Nakiyimba, also from Kiconco, has been keeping goats since 2010. While at the Kiconco Nutrition Education Center, she received livestock training. In 2017, she received a Mubende buck, chosen because of its tolerance to tick diseases and for its high rate of siring twins and triplets. Saida’s buck has so far produced seven kids. She has sold seven goats and used the income to support her household and to buy a heifer.

While at Namasagali Primary School, Nawaigulo Bayani received three ducks. Now 17, Nawaigulo has sold half of the ducks hatched from her original trio, and, with the help of her parents, purchased a female goat.

In Kisaikye village, Michael Malikwe and his wife Bamwete Doreen received piglets, some materials for construction of a piggery house and a three-month supply of pig feed. Their sow farrowed seven piglets, and by selling some, they were able to buy materials to upgrade their facilities. Because of the distance between their house and a water source, Michael received and installed a 6,000-liter above-ground water tank. Michael’s experience is demonstrating to his neighbors the advantages of this kind of watering system, which, in turn, strengthens and helps sustain their community.

What you made possible in 2018

- The number of CSRL-trained pig farmers nearly doubled, from 11 farmers in 2016 to 21 farmers in 2018.
- Two additional students received ducks from offspring distributed in 2017.
- Continued support through livestock training, treatment and vaccinations.

With your continued support

- Continue to distribute livestock from farmers supported by CSRL’s livestock program.
- Continue to train Kamuli residents in sustainable livestock procedures.
- Continue to identify and train new livestock producers in the district.

Photo: Brian Nonnecke
ISU is implementing a storage system that uses 55-gallon, hermetically sealed plastic containers, which eliminate oxygen and asphyxiate weevils. The system is 100% effective in controlling weevils.
Imagine Losing Half of All the Crops You Harvest

That can be the reality for many small farmers in the Kamuli District. Up to 50 percent of the grain harvest — including maize — can be lost in storage because of mold and insect infestation. Aflatoxin produced by molds can make maize unsafe.

“Often, farmers don’t have a good way to dry their maize, they don’t have a good way to tell when the grain is dry enough to store and they don’t have a good way to store it,” said Tom Brumm, an associate director for CSRL.

Not having safe, reliable storage methods means that many farmers are forced to sell maize immediately after harvest; often for low prices. According to Brumm, these losses can be the difference between having the funds to pay their children’s school fees or going hungry.

In response, ISU is implementing a storage system to increase the safety of the grain. Fifty-five gallon, hermetically sealed plastic containers eliminate oxygen and asphyxiate weevils. ISU results demonstrate 100 percent effectiveness of weevil control in the sealed barrels. ISU also has preliminary results for strategies to control mold, and the next step is to discover ways to fund and conduct trials in Uganda.

In 2018, ISU-UP launched a postharvest outreach program. This program includes postharvest practices training for farmers, a microfinance program to help farmers purchase storage containers and sourcing safe maize to ensure that infants and children in Nutrition Education Centers and schools receive uncontaminated food.

To help create, guide and implement the program, ISU-UP hired Thomas Buyinza as a postharvest technology specialist. Buyinza oversees grain storage and safety, implementing strategies and working with smallholder farmers to reduce postharvest losses.

“Maize serves as a staple crop globally and as a means of food security for many communities, including Kamuli,” said Rachael Barnes, an ISU student who helped conduct postharvest loss research in 2017. “By focusing on the community’s perception of mold and aflatoxins in maize, the ISU-Uganda Program can enhance the district’s health and well-being.”
Creating Ag Entrepreneurs

When the Youth Entrepreneurship Program (YEP) began in 2013, the very first program was raising broiler chickens.

The skills acquired from this program were a source of livelihood for some students, including Kipwapwa Derrick, who was not able to continue his education. Derrick used the skills he obtained working with broilers at Namasagali College into a job at a large poultry farm in Wakiso; even without a certificate in poultry management. Derrick parlayed that job into an opportunity to manage a wholesale business in Rubaga, Kampala.

Now Derrick has saved up enough money to start his own business selling shoes. Thanks to the efforts of students like Derrick, YEP’s impact extends far beyond the communities it serves.


The Youth Entrepreneurship Program trains Ugandan youth to be agricultural entrepreneurs. Gaining practical skills in crop and livestock management, marketing and leadership, participants become more self-reliant, which sets the stage for future economic opportunities.

The purpose of the 2018 Youth Institute was to focus that mission both inward and outward: improving collaboration with participating schools by inviting them to research and present perspectives on four challenges in the district.

Eight schools from subcounties of Namasagali, Butansi and the Kamuli Municipality were selected to participate. Each school prepared its students to discuss four topics: the role of cooperatives in agricultural development; how to grow agribusiness beyond local communities; information and communications technology in agriculture decision-making; and how to grow from subsistence to commercial farming.

Before the Youth Institute, two mentoring sessions were held at each of the schools, with each session averaging 20 students. Students were instructed on how to conduct online research, how to use relevant case studies to discuss a topic and how to make a visual presentation.

In July 2018, 50 students and teachers attended the first Youth Institute at the new Mpirigiti Rural Training Centre. They took part in interpersonal reflection sessions, bonding, open discussions and inspirational story-telling. Twenty-four students from ISU and Makerere served as mentors to the schools during the event. The local students’ presentations were observed and scored, and awards were made at the end of the day. The day concluded with a soccer match between the schools and their ISU-UP mentors.

The effects of the Institute continue to be felt even after the last goal was scored. Participating schools requested continued collaboration and extended mentoring, and are eager to participate in future events.

“It made me realize our impact goes beyond the communities in which we work,” said Dorothy Masinde, associate director of CSRL.
WHAT YOU MADE POSSIBLE IN 2018

• The first-ever Youth Institute held in the newly opened Mpirigiti Rural Training Centre
• 50 students and teachers from eight schools researching, discussing, and networking
• Improved collaboration among participating schools
• Increased mentoring opportunities
• Training in crop and livestock management skills

WITH YOUR CONTINUED SUPPORT

• A 2019 Youth Institute
• Continued opportunities for collaboration and mentoring
• The creation of similar events and opportunities
• Continued training in practical agricultural skills
Broadening Students’ Vision

“They’ve charted a new path for themselves; one that didn’t exist before participating in the service learning program”
— Tom Brumm, a CSRL associate director
With CSRL’s guidance, students work on major development projects in agriculture, agroforestry, irrigation, sanitation and other areas, learn meaningful life lessons and acquire intercultural knowledge and competence. The program provides university students and pupils from the Kamuli District’s primary schools the opportunity to learn through hands-on experiences.

“Numerous times, while working with the Makerere and ISU students, I’ve seen an awakening in them,” said Tom Brumm, an associate director for CSRL. “They realize that their careers can be more than just a way to make a living. They come to understand the gifts they’ve been given and assume an obligation to make the world a better place. While they don’t yet know how to fulfill that obligation, they’ve charted a new path for themselves; one that didn’t exist before participating in the service learning program.”

Experiential learning is the main approach of CSRL’s service learning program, with participants “learning by doing” while providing a service to the community through the schools.

2018 marked the first time that semester-long service learning opportunities were offered. Previously, service-learning programs were six to eight weeks, depending on the roles of the students. The new program allows students to learn about development programs across an entire semester, while providing a service and earning credits toward graduation, according to Gail Nonnecke, CSRL’s associate director for education programs.

And the efforts benefit everyone involved.

The head teacher at Nakanyonyi Primary School reports that 100 percent of students passed the national exam in 2017, making them eligible for the next level of schooling. When CSRL first began working with the school, the pass rate was close to zero.

“School kitchens at primary schools with school garden programs were built or enhanced by service learning students,” says Nonnecke. “There are four primary schools — so there is a lot of need for the kitchen structures, equipment and supplies.”

“While the teachers and pupils deserve much of the credit,” Brumm adds, “our work there laid the groundwork, including the school health and sanitation improvements, the school feeding program and solar lights for evening studying.”

WHAT YOU MADE POSSIBLE IN 2018

- The pass rate at Nakanyonyi Primary School was 100%
- The first semester-long service learning programs
- Opportunities for students to collaborate on solutions that change communities
- Primary school kitchens built or enhanced

WITH YOUR CONTINUED SUPPORT

- Ability to accommodate more ISU students in the program
- Expand and diversify the service learning program and its projects
- In-community research opportunities to collaborate and ensure best solutions for each challenge
The Center for Sustainable Rural Livelihoods envisions thriving rural communities that benefit from food and financial security, quality education and healthcare, civic participation, social inclusion, environmental stewardship and overall sustainable livelihoods.

*Thank you for helping this vision become reality.*