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STRONG COFFEE

**Rebirth and transformation
brew in Rwanda with a 21st-century
land-grant assist from MSU**

Coffee invigorates war-torn Rwanda

MSU's land-grant effort pours new life into exports



BY SUE NICHOLS

BUTARE, Rwanda – After a long night, a good cup of coffee can feel like salvation. It's coffee that delivers a new day.

For the tiny African nation of Rwanda, coffee is salvation. And MSU is helping Rwanda usher in a new day with an innovative project that epitomizes the 21st century land-grant university at work.

Rwanda is struggling to emerge from its own long night. Rwanda's mountainous terrain and gentle climate produce bounteous coffee harvests that before the genocide ended up in pedestrian blends that brought equally average prices.

War, genocide, desperation and agricultural market collapse turned struggle into crisis. Rwandan farmers, many widows of the 1994 war and genocide, are building their futures on new ways to grow, process and export coffee – specialty coffee that's good enough to make you scour the grocery shelves for the Rwanda label.

MSU became involved in the reconstruction of the Rwandan economy with project PEARL – Partnership to Enhance Agriculture in Rwanda through Linkages. PEARL is the purest application of the land-grant tradition of partnership, practical application and research. It's a project that reaches out for knowledge – from university laboratories to industry experts to the farmers themselves – to transform an unremarkable crop into a more profitable specialty coffee.



Dan Clay, director of the Institute of International Agriculture at MSU, talks with farmers in the Butare province of Rwanda. Farmers in this province, which is connected by steep, unpaved mountain roads, recently acquired a vehicle with PEARL help, making transporting of crops more feasible.

“It is amazing seeing people taking pride in ownership,” says Dan Clay, director of the Institute of International Agriculture at MSU, who conceived and launched PEARL in 2001. “Here you can see the impact you can have with simple principles.”

In a world of complex problems, PEARL's coffee plan has an elegant simplicity:

- Help farmers organize in cooperatives and pool essential resources, especially washing stations crucial to specialty coffee;
- Disseminate strict growing procedures;
- Teach how to wash and sort the beans, a painstaking task that separates the heavenly beans from the so-so beans;
- Offer assistance in marketing and sales; and
- Instill not only quality control, but community pride, an ingredient that creates not only success, but sustainability.

“If you bring the right resources and give people a stake in it, it's amazing how the technology spreads on its own,” Clay says. “There's no reason this can't work in other places.”

Getting the most out of Rwanda's land is a matter of survival. Rwanda – land-locked in the highlands of east Africa and about the size of Massachusetts – is both one of the

most densely populated and one of the poorest nations on the continent. Families have an average of a half-acre of land – much of it on impossibly steep terrain – on which to eke out a livelihood.

Until PEARL, Rwandans grew bananas, cassava (a grain staple), beans and an average grade of coffee.

In 1991, civil war erupted in the northern province of Byumba. In April 1994, the war exploded into one of the most tragic and devastating events in modern human history. Some 800,000 Rwandans were slaughtered. Those who escaped – many of them women and children – returned to farms in shambles. In a brutal sucker punch, world coffee prices bottomed out in 2002.

Clay, an upstate New York native, began his career as a rural sociologist and demographer who spoke French (a predominant language in Rwanda, as with many African countries) and ended up devoting his life to helping rebuild and revitalize developing nations.

In 1979, he began working for MSU to get a foothold on the many challenges Rwandan farmers face in feeding their families. He and his family developed a love for Rwanda – the generous nature of the people, the beauty of the hills. Yet in 1994 he, his wife and three children left under gunfire.

For Clay, and for MSU, there was unfinished business in Rwanda.

In 2001, he joined with Emile Rwamasirabo, a progressive thinker about to become rector of the National University of Rwanda (NUR) during a time of great trauma – but also great opportunity. Some three-quarters of the faculty of agriculture had been killed or had fled in the genocide.

Clay knew universities would be a place to start – if the expertise and research there could be funneled quickly and effectively to the people who would feed the nation and create marketable products.

The Rwandan university system was steeped in a traditional European model that kept its distance from the messiness of real-world problems. Clay, a disciple of America's land-grant tradition of the solution-oriented academic mission, saw an opportunity for change.

“In Rwanda, there was the ivy tower notion that getting out and working in the community and solving problems didn't exist,” Clay says. “It was all chalk and talk.”

“Emile was a progressive thinker; he had an understanding how a university can be relevant,” Clay adds. “It's one of those things I see as especially relevant in a place like Rwanda where there are so many problems that do need to be addressed.”



Farmers carry the harvest in baskets balanced on their heads to washing stations where processing is accomplished using technologies introduced by the PEARL project.



Most of Rwanda's coffee is exported, then packaged and sold in the United States and Europe under various labels, including one produced for MSU available on www.shop.msu.edu



Coffee grown on Rwanda's steep, terraced hillsides is brought to community-based washing stations, such as this one in Karaba, developed with support from the PEARL project.



The painstaking task of washing and sorting beans is key to producing PEARL's specialty coffee.

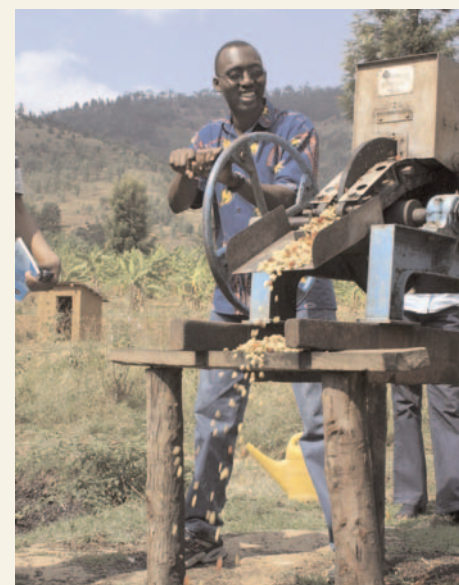
It was time, one of Clay's closest colleagues has since pointed out, to "quit holding meetings, just shut up and do it."

And thus PEARL – a revolutionary idea that approaches all aspects of an agricultural challenge, beginning with universities and completing the circle with sales and marketing expertise – was born.

The first step: bring 17 young instructors at Rwandan agricultural institutions to U.S. universities for master's degree training in agricultural sciences – along with a strong dose of outreach. The students returned home to go forth and apply research.

After two and a half years at MSU, Jean-Claude Bizimana returned to Rwanda not quite sure what he had absorbed. He had a master's degree in agricultural extension, but Rwanda seemed a long way from Michigan – and not just in the frequent-flyer miles he'd logged.

"My feeling when I returned was that I was not going to copy the system and bring it back



Jean-Claude Bizimana demonstrates a traditional hand-operated machine for removing pulp from coffee cherries. That technology has been replaced with new motorized depulpers by the PEARL project. Bizimana studied at MSU as part of the PEARL project and now applies his expertise in his homeland.

to Rwanda," he says. "The environments are too different."

Bizimana became director of the NUR outreach center. His office is not on campus – but in the PEARL office that rests on the edge of town, in easy reach of the farms and farm associations.

Soon he was out visiting farms, not only talking, but listening. It was not so different from what he did in Michigan.

"Now I see," he says. "It's exactly the same need and objective in the United States and in Rwanda: How can we access knowledge?"

His classmate and colleague, Olivia Karekezi, a professor of crop science at NUR, found a similar transformation. She says she looks at research differently now, with the farmers and their needs in mind as she reviews projects.

"This has changed the way I think, the way I work," Karekezi says. "I make my students be more oriented to rural communities in their research work. It changes my vision."

Clay rallied others to craft a new life for Rwandan agriculture. He partnered with the U.S. Agency for International Development (USAID), which brought a long and powerful history of assistance and a fierce focus on sustainable solutions. Added was the force of ACIDI/VOCA – a private, nonprofit organization that promotes broad-based economic growth and civil society in developing countries.

PEARL also brought in another land-grant university powerhouse, Texas A&M, through Tim Schilling, an agronomist with years of experience leading USAID-funded initiatives. Schilling was a natural to help burst through the years of disconnect between people in the field, academically, and people in the field, literally.

Farming in Rwanda is daunting. The mountains are as steep as they are beautiful,

and coffee is planted on these mountains. Farmers – again, many of them women – must climb the mountains to cultivate the coffee. There is virtually no automation or modern equipment. The harvest must be carried to the processing centers or to market – back down the mountain, in baskets balanced on the farmer's head.

These challenges made the cooperatives and community washing stations so essential to success. Specialty coffee is a lot like wine – sensitive to its environment and how it is treated after harvest. Unlike regular-grade coffee, specialty coffee must be washed to sort out inferior beans. Since bad coffee "cherries" float, a washing station is crucial – not just a washing station, but a washing station within the farmer's reach.



During roasting, the pale green coffee beans take on their rich aroma and dark color.

PEARL has created partnerships with industry, with professionals donating time to train the farm cooperatives to roast and to cup – that is, to evaluate by taste – the coffee.

Cupping coffee is a little like going to church. There is a reverence in the way Rwanda's first graduate class of cuppers approach the steaming glasses of freshly brewed coffee, perhaps because their reverence is that of converts. Until PEARL, Rwandans did not drink coffee. They traditionally drink tea.



Trained cuppers associated with the Maraba Coffee Cooperative judge a freshly roasted batch of coffee grown on the surrounding hills. They grade the coffee in English, identifying flavors such as caramel, chocolate and nut – all of which are foreign to their usual diet.



Stir. Sniff. Slurp. Swish. Spit.

The cuppers, who just months ago were only farmers and who years ago were victims of forces unfathomable to most of the Western world, give words to the fruits of Rwanda's healing fields. They identify chocolate, caramel or a hint of nuttiness.

These are people who never have tasted chocolate, caramel or a nut. But they've proven they can nail the cupping, match it point by point with their American teachers.

They savor the coffee, relishing its complexity and its outstanding finish.

PEARL also assists with finding markets for the coffee, and cooperatives work to meet farmers' needs beyond the crop – helping subsidize children's education and health insurance, teaching basic money management and promoting women in business.

The remarkable offshoot of PEARL is the blossoming of community, like a flourishing crop of wildflowers from the rubble of war, despair and distrust. Coffee cooperatives have become places of healing and support that foster the practical success – and then take it one step further.



Francois Habimana is director of the Maraba Coffee Cooperative. Financial gains have been the focus, but Habimana cites the blossoming of community as another benefit. He has helped establish a band, a singing group and dance troupe, all of which praise the blessings of coffee.



Some 200 members of the Maraba coffee cooperative flock to the village square. In the wake of the genocide, Maraba was one of the poorest districts in Rwanda.

Francois Habimana, director of the Maraba Coffee Cooperative, leads a celebration for PEARL visitors, including Clay.

The success is in the numbers. In 2001, there were 300 farmers in the cooperative. Now there are 1,568. The price they got for coffee

in 2001: 180 rwf (about 32 cents) per kilogram. The price now: 500 rwf (about 88 cents) per kilogram. The coffee from PEARL projects is being sold in Europe and, increasingly, in the United States.

But numbers don't tally all the profit. The joy throbs off the mountains of Rwanda under the motto "abahugamuambi ba kawa," which means "we work together for coffee"

Habimana has formed a singing group, a dance group and a rock band in the cooperative. The songs aren't conventional ones of love.

"I will sing about coffee because it makes my life better," sings a striking woman in Kinyarwanda, the native language. "Coffee has managed to let me buy a cow that gives me manure for compost. I love coffee."

"This joy is the fruit of the efforts of the cooperative," Habimana says.

Clay now is immersed in a sequel to the Rwanda story. He sees how the principles that built PEARL's success translate to other crops, other farms. There is talk now of revamping the country's entire system of extension and technology transfer in the image of U.S. universities' extension services.

It works here. And it's working there.

"MSU demonstrates in a lot of ways the whole international philosophy that has become a key part of the land-grant mission," Clay says. "International work ultimately helps us achieve the larger objective of an educated, enlightened and more prosperous world.

"Ultimately, that's what universities are about," he says. "Just as MSU was a leader in defining the land-grant mission and implementing it in the 1800s, that's what we're doing today.

"We are extending the land-grant mission around the world."

For more information, visit rwandacoffee.msu.edu ■