

What is Zero-Grazing? | 6

WorldArk

THE MAGAZINE OF HEIFER INTERNATIONAL © SUMMER 2011

HEIFER SENEGAL

**Pushing
Back the
Desert | 20**

Brain Drain | 12

**A Cure for
Unhealthy
Teens | 30**

We have a common legacy in the Earth.



Make it a place worth inheriting.



Sylvia and Leonard Kratzke

Heather
DePaolo-
Johnny

became a firefighter so that the world would be a “better place for her having been here.” That’s why her mother and step-father decided to set up a memorial endowment through Heifer Foundation when she died in an engine rollover. By setting up an endowment through Heifer Foundation, you can make a life-altering difference for people, year after year, even after you are gone.

Watch a video interview with the Kratzkes and learn more about planned giving here.

www.heiferfoundation.org/kratzke



Dear Fellow Activists,

MY FIRST PASS ON THE GIFT CEREMONY, in Shaktikhor, Nepal, counts as one of the most powerful emotional experiences of my life. Watching these women go from recipients to donors captures everything that makes Heifer's model not just life changing but potentially world changing.



PHOTO BY GEOFF OLIVER BUGBEE

Heifer International CEO Pierre Ferrari takes part in a Passing on the Gift ceremony in Nepal.

The recipient's reward comes not on the day she first takes a healthy goat in her arms, but months or years later, in taking full advantage of the opportunity created by that gift. Heifer's founder, Dan West, captured this core Heifer principle in a quote he borrowed from St. Louis businessman and philanthropist Samuel Cupples:

"The only gift one man has a right to offer another is opportunity, since opportunity demands on the recipient's part an expenditure of energy corresponding to that represented by the gift itself."

Many of the women I met in Nepal had formed larger businesses from smaller Heifer groups. They opened stores, started organic fertilizer businesses, created large poultry and dairy operations.

One woman, Tika Neupane, of the Panchawati Social Entrepreneurs Women's Cooperative, pooled her income from Heifer goats with a group loan and invested in a tractor. She makes a profit of \$2,000 a month from renting it in her

community and loans it for free to members of her group. I was proud to congratulate her on her achievements.

Our partners and participants in Nepal describe with such clarity their plans for the future: They want to reach more people in need more quickly, to share our model through projects that reach thousands of families, not just hundreds. It's critical we find the best way to scale up Heifer's impact around the world, quickly, to allow those we invest in with such confidence and love to fully spread their wings as entrepreneurs.

So how does it work? How do we end hunger and poverty on a larger scale, building on the foundation of the small-holder farmers we serve?

It's all about helping those who are ready to help themselves. Once communities form a self-help group and start a savings program, Heifer provides not just animals but training in Heifer's 12 Cornerstones. Participants learn how to work with one another, share resources, raise better crops and healthier animals, empower women and fulfill a promise to help others in kind.

Our work is complete when their food supply is stable in quantity and quality. Participants' own innovations and investments from the original Heifer gifts create an economic engine that drives their communities and many more beyond. They don't need us anymore.

You and I, as donors, are investors in human capital. Our participants take those gifts and transform them in astonishing ways. We owe it to all those we support to scale up our model from life changing to world changing. That is how Heifer works. We invest in training and livestock; those we entrust with those gifts end hunger and poverty.

Sincerely,

Pierre U. Ferrari

CEO Pierre U. Ferrari



Your boss wants you to have a cow ... or a goat or a flock of chicks or a beehive ...

Find out if your employer is one of more than 13,000 companies across the country who will match your contributions to Heifer International. If so, then your gift will go twice as far in providing livestock and training to hungry and impoverished people so they can live a life of dignity, hope, increased income and enough to eat. Simply log on to heifer.org/matching.



www.heifer.org | 800.422.0474



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*Cover: Siga Diouf poses with the sheep she named "Heifer."
 Cover and top photos by Geoff Oliver Bugbee*

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ZERO-GRAZING CONCERNS

Marian and I have been observers of the Heifer project since the end of World War II when our brother-in-law, Charles Webb of Goshen, Ind., a friend of Dan West, recounted to us his adventures in chaperoning a shipload of pregnant heifers to Europe to initiate the program. We have observed and in a small way participated in your innovative methods of reducing hunger, here and abroad.

On Page 7 of the spring edition of *World Ark*, there is a definition of zero-grazing which could perhaps be interpreted as an endorsement of “feedlots.” There are other activists in the field of world nutrition who do not agree that this is a good idea.

We endorse the entire concept of self-help to prevent malnutrition. Keep up the good work.

JOHN E. AND
MARIAN C. HAMPTON
Washington, N.J.

You’d better try to explain “zero-grazing” to those of us who oppose crowded quarters for animals.

Yes, it’s convenient. Yes, it’s easier on the ecosystem. No, it’s not good for the animals! That’s like saying that high-density city populations can be as healthy as their “free-grazing” rural cousins. People in cities can go to gyms to exercise. Zero-grazing cattle ... how do they exercise?

JEANNE MATTALE
Honeydew, Calif.

Editor’s Note: Zero-grazing is different in many ways from feedlots. In rural villages, simple sheds made out of local materials pro-

vide a place for animals to be fed and protected from predators and theft, and where manure can easily be collected for gardens and crops. Outdoor exercise and sunlight are part of the healthy management of these animals, while cut-and-carry feeding reduces the energy farmers spend managing them. Finding the right balance is part of the training Heifer provides. For an illustration further explaining the zero-grazing method, turn to Page 6 in this issue.

BOOK RECOMMENDATION

I just read a fascinating, though disturbing, book called *Waste*, by Tristram Stuart.

According to Stuart, some poor farmers inadvertently waste a lot of what they produce because they don’t have proper harvesting techniques that minimize damage to the produce (bruised or cut produce goes bad faster). Even more significant, many don’t have proper storage. Grain gets eaten by vermin, or develops mold. Milk spoils for lack of refrigeration; fruit rots. Finally, without proper bins for transporting delicate produce, much of it ends up mush before it reaches the market.

Stuart thinks farmers in developing countries could significantly increase their profits and/or better feed their families if they had resources to help them reduce waste. What is Heifer doing to help its participating families reduce food waste during harvesting, processing and marketing, etc.?

Thank you for your dedication to helping feed the people of the world.

ANNIE CAPESTANY
Walla Walla, Wash.

Editor’s Note: Heifer seeks to build sustainable communities and addresses waste on many levels. We know that on average, more than 33 percent of harvested food is wasted. There is huge potential for improvement, and we are working on it, farmer by farmer. We teach low-tech techniques to protect crops from spoilage and rodent/insect infestation. Manure is used to create biogas for cleaner cookstoves and as organic fertilizer for crops and gardens. Chilling facilities have been built to reduce milk spoilage. Heifer also trains participants in more efficient methods and helps to bolster local markets so that excess produce can be sold locally.

Q&A SPRING

Is eating locally grown foods a priority for you? Why, or why not?

Eating local is a priority for my family. We have a garden and fruit trees in our backyard and hope to raise chickens next year. Our city allows up to four birds per family. Currently I buy grass-fed beef, free-range chickens and eggs and honey from local farmers. I like knowing the people who grow or raise our food and how they do it.

My kids and I “cow-sat” for my friend and about a year later got to purchase some of the beef. I told my kids that the meat was from an animal they helped take care of. At first they kind of freaked out, but then I asked them if they’d rather eat meat from an animal that they did not know how it was raised or meat from an animal that they helped take care of. We really don’t know what we are getting from the store—not sure the USDA label means what it used to anymore. I much prefer paying more and knowing what I am getting and have that money go directly to the farmer.

MERRIE SCHAMBERGER
Neenah, Wis.

Since 2008 our family has been committed to eating locally grown food. My

We want to hear from you! Please send your comments to worldark@list.heifer.org. Include your name, city and a telephone number or e-mail address. Letters may be edited for length and clarity, and may be published online as well as in print. Because of the volume of mail we receive, we cannot respond to all letters.

Text HEIFER to 56500 to receive our mobile alerts (message and data rates may apply).

Mother's Day gift to myself in May 2007 was a copy of Barbara Kingsolver's excellent book *Animal, Vegetable, Miracle*. This book inspired me to visit more farmers markets, host an all-Missouri potluck in the summer of 2007, and join a new CSA in our area, Fair Shares, in early 2008.

We are fortunate to be subscribers of Fair Shares, a CSA that provides shares for its 300-plus member households 48 weeks a year. With more than 70 local producers contributing to the CSA, we receive a wide variety of meat, cheese, eggs, produce and other goodies like fresh pasta, bread, nut butters, dried beans, jam and honey each week. We love supporting our small, local family farms, as well as cooking and eating the delicious food together. It's been a wonderful adventure, and I encourage everyone to try it.

JOANNE McANDREWS
St. Louis, Mo.

I started my attempt to eat locally after reading Barbara Kingsolver's book. It's difficult being a locavore in Michigan, where we have a very short growing season. I occasionally verge on tantrum-like behavior when I'm in the local grocery store and find that all the fresh produce is not only not local but imported. There's this huge emphasis on buying American products, but we continue to eat tomatoes from Mexico.

Michigan State University, formerly Michigan Agricultural College, has a CSA and I was able to join for one summer, although there is a year-round program. This area also has high unemployment so people are more likely to get groceries at Walmart. The local food movement makes so much sense considering fuel costs, nutrition-related health problems, unemployment and urban flight, not to mention that local food is fresher and therefore tastes better.

GRETCHEN KIRBY
Lansing, Mich.

I have lived in small towns and rural areas for more than 35 years. I try and support local people in their business endeavors, whether they be merchants, farmers, bankers or grocers. It makes sense to me to spend my money locally to help keep my community healthy.

Having owned a 5-acre truck farm myself, I truly appreciate the work that goes into growing and producing food. However, in my current location, rural north-central Florida, there are no farmers markets or vegetable stands. I must make the choice between driving 35 to 40 miles to purchase fresh, "local" foods or buying trucked-in, commercially produced foods from my small town's grocery store. Do I reduce my carbon footprint by driving 80 miles round-trip to purchase a week's worth of groceries as opposed to a 20-mile round-trip to purchase groceries that are trucked in? For many, eating locally produced foods is a catch-22 situation.

DOTTI HYDUE
Morriston, Fla.

Q&A SUMMER

Should educated, skilled workers in the developing world leave their home countries to find better opportunities for themselves, or stay put and try to build a better world for their neighbors? Why?

E-mail your answers to
worldark@list.heifer.org. Please
limit your answer to 250 words or fewer.
We reserve the right to edit responses
for length, clarity and grammar.



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Since 1944, Heifer has helped 13.6 million families in more than 125 countries move toward greater self-reliance through the gift of livestock and training in environmentally sound agriculture.

Heifer International is a member of InterAction, the largest alliance of U.S.-based international development and humanitarian non-governmental organizations, and of Global Impact. Federal and state employees may designate gifts to Heifer through payroll deduction by entering CFC #12079.

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THE ZERO-GRAZING METHOD

Zero-grazing is a way to raise livestock in small spaces, by keeping them mostly in pens or other sturdy shelters.

Food, like grains and grasses, is brought to the animals...

Shelters are made from available materials: wood, mud, concrete. Partly open structures let sun and fresh air in, and keep bad weather out.

A fenced area outdoors gives animals room to stretch and exercise.

...and manure is removed, to be sold or used as fertilizer.

Zero-grazing protects livestock from pests and disease...

...theft...

...and predators...

...and keeps animals from harming farmland and vegetation.

cough, cough

It prevents unwanted breeding...

...and lets land be used for crops instead of grazing.

Zero-grazing can be used for animals as small as chickens and rabbits,

and as large as water buffalo.

Invasivores

If you can't beat 'em, eat 'em. That could be the motto for "invasivores," followers of the fledgling food trend that promotes eating invasive species. Kudzu taking over your yard? Steam up the leaves and make the blossoms into jelly. Asian carp clogging your local waterways? You can try to change the name to something more enticing, like "silverfin." Or follow Chicago's lead and ask local chefs to do their best with the "trash fish." With invasivores, what was once a nuisance is now dinner. For recipes and more information, go to invasivore.org. Now, about those pigeons



Hives and Hive-Nots

Which countries produce the most honey each year? Funny you should ask, I just happen to have that information right here:

1. China	403,941 tons
2. Turkey	89,500 tons
3. Argentina	89,100 tons
4. Ukraine	82,390 tons
5. United States	81,663 tons

Source: FAO Stat

51

The number of suicides in India as of March 2011 allegedly linked to questionable, at times coercive microfinance practices.

Source: Associated Press

Urban Orchards

Where does an apple come from? The answer for most of us, especially if we live in a large city, is, "the grocery store." But fruit-tree orchards are popping up in cities across the U.S. Chicago Rarities Orchard Project, or CROP, is using reclaimed lots in the Windy City to plant rare fruits. And in Austin, Texas, the Urban Orchard Project has been going for more than a decade. Philadelphia, St. Louis, Boston and San Francisco have joined in. The list is growing faster than a fig tree in summer.



Jargon

BRAIN DRAIN:

The departure of educated or professional people from one country, economic sector, or field for another usually for better pay or living conditions; also known as "human capital flight." Read more on P. 12.

Source: merriam-webster.com



Harvest

Early Peas

Gardeners impatient to get their hands on the first harvest of summer were likely busy this spring planting garden peas. Also called English peas, these cool-season legumes are happy in cooler soil and can tolerate a late frost. The pods of those first plantings of the year plump up in late May and June, meaning the peas inside are at their sweetest. Like sweet corn, peas lose their sweetness quickly once they're picked, so get them from the garden to the kitchen quickly.

French Peas

3 tablespoons olive oil
¼ cup finely chopped romaine lettuce
1 ½ pounds shelled fresh peas or frozen tiny peas, thawed
¼ cup minced shallots or the white part of green onions
1 large whole sprig of parsley
2 teaspoons sugar
1 teaspoon salt
⅛ teaspoon white pepper

Heat oil in a 3-quart saucepan. Place lettuce on top of the oil. Add peas, shallots, parsley, sugar, salt and pepper. Cover and simmer 10-15 minutes, stirring occasionally, until peas are just tender. Remove the parsley before serving. Makes six servings.

Recipe courtesy of the University of Illinois Extension

CSAs: The Next Generation

City dwellers, have you thought about joining a community-supported agriculture program (CSA), but couldn't find one in your area, or wanted more variety than the usual bushels of tomatoes and cukes? A new model of CSA could be coming soon to an apartment near you. Last summer, a farm in southern Vermont and a condominium in New York City teamed up to bring produce, dairy, eggs and even maple syrup and bacon to building residents. Participants made their selections via email, which helped reduce the amount of unused and leftover produce. And the farm, which made deliveries weekly, bought from other farms along the drive to supplement its own harvest. It's a lot like a delivery service from a grocery store, except better—fresh, full of variety and practically homegrown.

Start Your Own Worm Farm

There's a trick to feeding your plants without using chemicals, and it's not nearly as gross as it sounds. Compost worms digest food scraps and turn them into excellent plant food, all with minimal work from you. Your worm composting operation shouldn't be smelly at all if you do it right, so it's fine to keep your composting operation indoors.

First, put your worm farm together by stacking two plastic, wooden, rubber or metal bins on top of each other. About one square foot of space is required for each pound of worms. The top bin should have holes punched into the bottom to allow liquid to escape to the bin below. Put a layer of bedding—shredded paper, cardboard or hay—in the top bin, cover the bedding with dirt, moisten it and wait a day. Then top it off with a half-pound or so of worms and cover them up with a lid to keep the light out and the moisture in.

The worms you choose for your farm are important. Be sure to get Red Wigglers or other worms suitable for composting, not the kind you can find under a log. The Internet or a local garden club are both good sources. Your new worms can eat roughly their own weight each day, so feed them your leftovers. They love coffee grounds, tea bags, vegetable scraps and eggshells. Also remember to sprinkle the surface with water every other day. Add new bedding once a month, or as needed.

Wait a few months to make your first harvest of castings, the rich worm waste that you can scatter directly around your plants. And the liquid that collects in the lower bin is a great fertilizer, too.

CORNERSTONES IN ACTION

For more than 65 years, families and communities around the globe have used the principles of Heifer's Cornerstones to build successful projects and become self-reliant. What exactly are these principles, and how can they help strengthen and enrich our own lives? *World Ark* is featuring a different Cornerstone in each issue, along with suggestions on how to put them into practice.

The 12 Cornerstones form the acronym PASSING GIFTS. This month: **Sharing and Caring**



HOW IT WORKS: Cooperation and friendship are key components of all Heifer projects. Recipients of animals and trainings are expected to share what they learn with their neighbors. It's not uncommon for Heifer project recipients to share their animals' bounty, too. Families who receive draft animals often help till neighbors' fields, and people with chickens often share eggs.

IN ACTION: Most of us have lots to share. Making a donation is an easy thing to do. Volunteering your time to help a nonprofit organization is great, too. But there are smaller ways to share and care that are also meaningful. Taking a meal to an elderly neighbor, offering an afternoon of babysitting to a tired parent or even just picking up litter so the park is nicer for everyone else are excellent ways to show you care.

College Students Take On Real Food Challenge



American colleges and universities spend \$5 billion a year on school food. Four years ago, a group of college students started thinking about the impact of those food purchases. They had a hunch that if they created a network to support and educate students to shift some of those billions toward food that is actually healthy for consumers, fair for workers and sound for the planet, students would flock to it. And they have. Today, the Real Food Challenge, as the network is known, boasts more than 5,000 student members at 350 schools and has shifted more than \$32 million in school purchases toward sustainable and fair food.

Katie Blanchard is a 23-year-old graduate of Carleton College in Northfield, Minn., and a Real Food Challenge alum.

Interview by Anna Lappé, *World Ark* contributor

WorldArk: *How do you describe the Real Food Challenge?*

KATIE BLANCHARD: Real Food Challenge is a student movement to change the purchasing policies of campus corporate food service away from an industrial, chemical food system toward a food system that truly nourishes consumers, producers, communities and the Earth.

Have you always been curious about where your food comes from?

I wasn't raised in a farming family, but we grew up in an agricultural area on the coast of Lake Michigan, so I was surrounded by farms. My parents also made an effort to expose my sister and me to the rest of the world through food. Whenever we traveled, we had

to go to the most unusual restaurant; we had to eat the weirdest food on the menu.

How did you first get involved with food-systems change?

When I was a junior in high school, I read a little article in the local paper about an area farm that was part of the national resurgence of sustainable farming. I noticed the address was just a few blocks from my house! At the time, I was working retail, but I knew what I really wanted to do: Be outside and get my hands in the dirt. So I talked with the farmer, and pretty soon I was helping pick peas and lettuce, selling at the markets and working with the small catering business. I fell in love. It felt like a spiritual experience to sell people food I had planted

and grown and harvested. It was so wonderful to be that connected.

What specific accomplishments did you help achieve as a student at Carleton College?

Industrial corn and soy fields surrounded the campus. On a good day at Carleton, you smelled the Malt-O-Meal factory down the road churning out Cocoa Puffs; on a bad day, you smelled the animal factory farms. We decided to focus on showing students a different kind of agriculture. Having had that really beautiful experience of growing my own food in high school, I wanted students to have that experience, too. So I helped to resurrect the student farm that had been operational through the 1960s, but had become a bedraggled plot. Now, we sell all of

the farm's produce—and it's literally tons of tomatoes and basil, winter squash and herbs—to dining services.

We're also helping the campus adopt the "Real Food Calculator," a tool that helps schools assess what percentage of their food is "real"—indicators like fair trade, local, humane meat—and to help them move in that direction.

From your vantage point, working with Real Food Challenge alumni, and having just returned from a road trip to eight campuses in the Midwest, what is the most inspiring aspect of this work?

What we're really about is placing trust in students themselves to make large changes. We are confronting big contracts and big money. We are saying that students have the power to challenge those who control our food system.

What are you trying to transform in terms of school-food purchases?

Real Food Challenge focuses on where most of our food dollars go. Because contracts are typically going to the three largest corporate dining services—Sodexo, Aramark, Compass—it means corporations dealing with corporations. Unless we push for it, that means small producers are overlooked, local sources are bypassed, fair-trade products and humane meat—it's all just a blip on the screen. We are saying we want to change all that; we want a system that supports better food and the workers bringing it to us. So in addition to concerns about the food, we are also concerned about the workers in our cafeterias. We want high labor standards for food workers, too.



PHOTO BY JAN SENN, CARLETON COLLEGE VOICE

Katie Blanchard (right) and friend Emily LeGrand show off the bounty of the Carleton Student Garden in 2008. To learn more about the Real Food Challenge, go to realfoodchallenge.org.

Why do you think the organization has been spreading so rapidly?

Writers who I admire, like Wendell Berry and Wes Jackson, often talk about the need to have an education system that connects people to a place, to the land, to real work, so that students are more inspired and engaged in a valuable education. We are helping do just that: We're connecting students to their communities, the food system, the dirt itself.

How does the organization's work extend beyond college campuses?

As the coordinator of our new alumni network, I'm seeing how many of our alumni are going on to do amazing work. There's Sue DeBlieck who just launched a new youth farm program in Ames, Iowa. Another alum is organizing high school students in Alaska to protect wild salmon in the state. I'm working with the Rural Enterprise

Center in southeastern Minnesota to help empower Latino day laborers and food workers to become food producers as a pathway out of poverty.

What can those of us who aren't students do to support your network?

We love to partner with community organizations and community members, especially to bridge our youthful energy with the wisdom of those who have been doing this for a long time. We are deeply rooted in our communities and love to find other partners to join us.

Anna Lappé is an author, sustainable food advocate and co-founder of the Small Planet Institute and Small Planet Fund. Her most recent book is *Diet for a Hot Planet: The Climate Crisis at the End of Your Fork and What You Can Do About It* (Bloomsbury USA).



Brain Drain

Developing countries lose more of their highly skilled and educated young people each year. The usual reasons for leaving—better opportunities and higher income in the West. Is this always a negative for developing countries, or could the movement of the world’s best and brightest serve to bridge cultures and help those who remain at home?

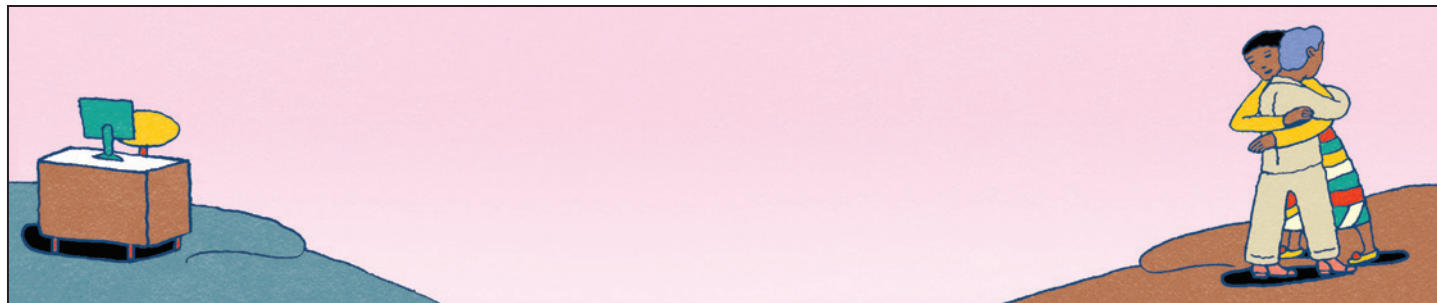
BY LAUREN WILCOX, WORLD ARK CONTRIBUTOR

ILLUSTRATIONS BY MARCELO CIPIS

IN 1997, A YOUNG CAMEROONIAN named Christel Ebenson took a job as an editor at *L'Effort Camerounais*, one of the country's independent, national newspapers. Ebenson, who had grown up in the tiny village of Ombe, was a journalism major whose mother worked as a midwife to put her through college. The newspaper job was an opportunity for Ebenson to realize her deeply held belief in, as she said, "the power of the media to change people's lives."

Instead, she discovered a very different kind of power. Freedom of the press isn't a protected right in Cameroon, and Ebenson said that she often felt harassed, even frightened, by attempts to intimidate the newspapers. "It's a treacherous place to be a journalist," she said. "It got a little hairy for me." After two years, she had had enough. Perhaps, she thought, opportunities would be better in America.

Ebenson was able to secure a visa, and in 1999 she left her family and moved to Houston,



a place she chose in part because it was warm like Cameroon and she wouldn't have to spend money on winter clothes. She had only \$1,200 with her, and no immediate prospects for work, but that seemed a fair deal in exchange for the freedom to do what she chose.

Upon Ebenson's arrival in Houston, she took a job at a grocery store. "You come over here and nobody really cares what degree you have or where you're from," Ebenson said. "I said, 'You know, I'm just going to start over.' I needed work, and that was the only work I could get." Nonetheless, she found the work environment a vast improvement over the paper in Cameroon. "I stayed on; I kept moving up," she said. "I learned to like it. It was a great place to work—people took an interest in you and your development."

Eleven years later, Ebenson still works there, now as a store manager. She found a close-knit community of Cameroonians in Houston, and her job allowed her to put two of her younger siblings through college there; her brother graduated with a degree in chemical engineering and her sister hopes to make films in Hollywood.

Does she miss Cameroon? "I miss it every day," she said. Like her friends who also left, she says she would return "in a heartbeat" if things changed. But she sees her time in the States as worth it. Putting her brother and sister through school "eases my parents' burden a little bit," she said. "My mom always used to dream of making sure all her kids went to school." As for herself, "My basic thing was, our lives have to be better than hers," she said of her mother. "My life is better than my mother's. That's enough for me."

Ebenson's story is unique in its particulars,

*Perhaps, she thought,
opportunities would
be better in America.*

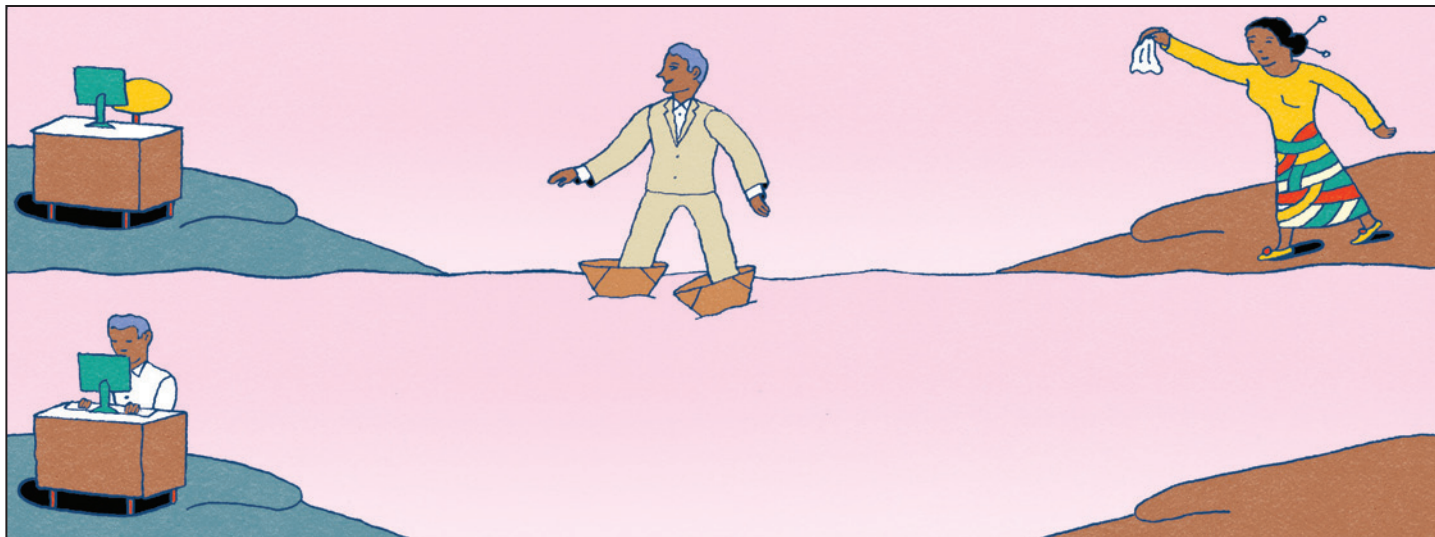
but in its broad strokes it is the story of millions. Over the last few decades, the number of highly skilled and educated people like

Ebenson who have left their homes in developing countries in search of better job and school opportunities abroad has been increasing worldwide. By the year 2000, there were twice as many highly educated people from developing countries living in developed countries as there had been in 1990, scholars Frederic Docquier and Abdeslam Marfouk found.

And the numbers continue to grow. Today, between 25 and 50 percent of college-educated people from many African countries live in developed countries. That number is more than a third for El Salvadorans, more than a quarter for Sri Lankans, and a staggering 80 percent for Jamaicans. Some, like Ebenson, are seeking intellectual freedom; some come for the comparatively high wages or top-notch research opportunities; all are searching for something their own countries can't provide.

UPSIDES, DOWNSIDES

The difficulty of this skilled-worker emigration, often called "brain drain," is that the countries they are leaving would seem to be the ones that need them the most. These are countries plagued by a long list of the developing world's ills: poverty, poor infrastructure, civil wars, corruption, crippling natural disasters. It has long been the conventional wisdom that the exodus of a poor nation's best and brightest was a disaster equal in magnitude to any of these, depleting a country of the brainpower it needs to grow and prosper. And yet although that assumption



Over the last few decades, the number of highly skilled and educated people who have left their homes in developing countries in search of better job and school opportunities abroad has been increasing worldwide.

might seem self-evident, it may not be true. In fact this phenomenon affects recipient countries and home countries, as well as emigrants themselves, in complex and sometimes surprising ways.

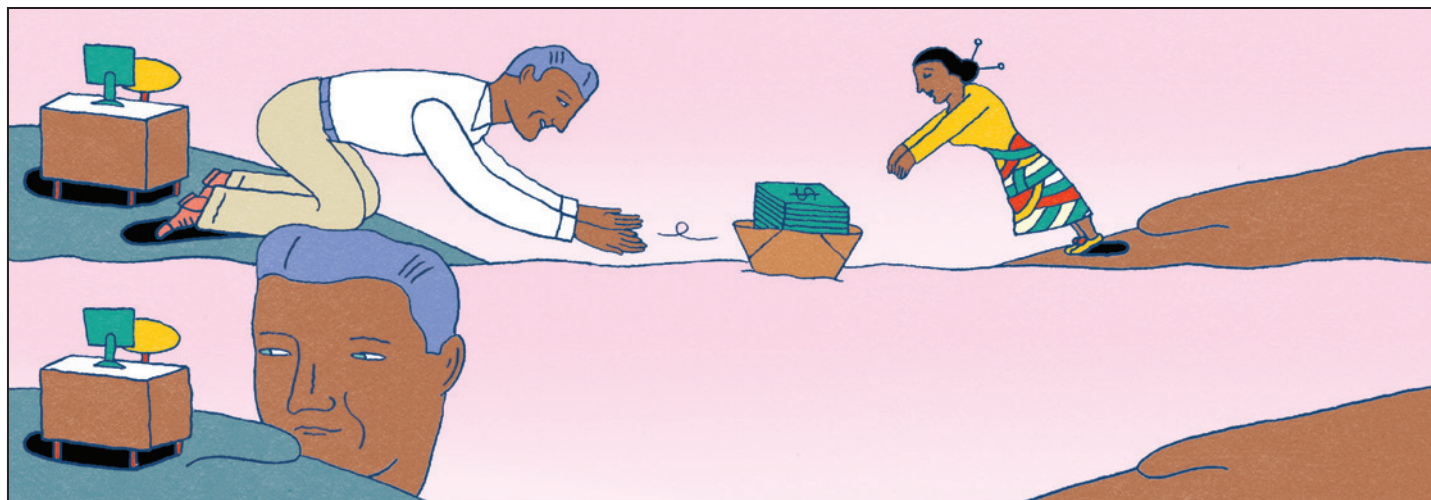
It's difficult to know whether Ebenson's departure from Cameroon, along with the departure of so many of her well-educated peers, left her home country poorer than it would be if they all stayed home. While economic studies have shown that brain drain is correlated with poor conditions in home countries—that is, people tend to leave because of wars, civil unrest, periods of economic hardship and government upheaval—very few studies have been able to show that it causes poor conditions. But economists most often agree that skilled-worker emigration probably weakens a country's ability to build its institutions, such as hospitals, schools and courts.

Along with these negatives, there are benefits to brain drain, too. One is remittances, or the money that emigrants send back home to their families. This is a significant flow of funds: The World Bank estimates that in 2009, remittances sent to developing countries alone totaled \$307 billion. Most of that money, however, seems to

be spent on immediate personal and household needs—important, certainly, but not as useful for long-term development as investments or building businesses. And remittances are inefficient—as much as 20 percent may be lost to taxes and exchange rates when they are sent—and critics contend that the system creates dependency in the recipients. On the positive side, remittances do act as a kind of buffer, insulating families from a country's economic crises or other disasters.

One unexpected benefit of skilled-worker emigration is that in some cases, it can actually increase a country's education level. The most dramatic example of this is the Philippines: More of the nurses working abroad come from the Philippines than from any other country. This has led to a substantial increase in the number of people trained as nurses there, whether or not they emigrate; the reason seems to be that the prospect of work abroad compels people to pursue the necessary education.

Perhaps the most widely cited benefit of skilled-worker emigration is that when (and if) people who study and work abroad return to their countries, they bring with them skills, experience and



Some are seeking intellectual freedom; some come for the comparatively high wages or top-notch research opportunities; all are searching for something their own countries can't provide.

business connections that they would not have been able to acquire at home. The recent technology boom in Bangalore and other parts of India is often attributed to emigrants who worked in California's Silicon Valley in the 1990s and then returned to India to set up their own businesses. Still, this is probably the exception to the norm. While data on return emigration is very limited and varies widely by country and discipline, it appears that only a small percentage of skilled-worker emigrants return. For example, in 2010, economist Patrick Gaule surveyed nearly 2,000 foreign-born chemists working in the U.S. and found that since 1993, only 4.5 percent have returned home to stay. The cost of returning may be prohibitive, immigration policies are often rigid, and as emigrants put down roots and become successful in their new countries, it becomes harder to leave.

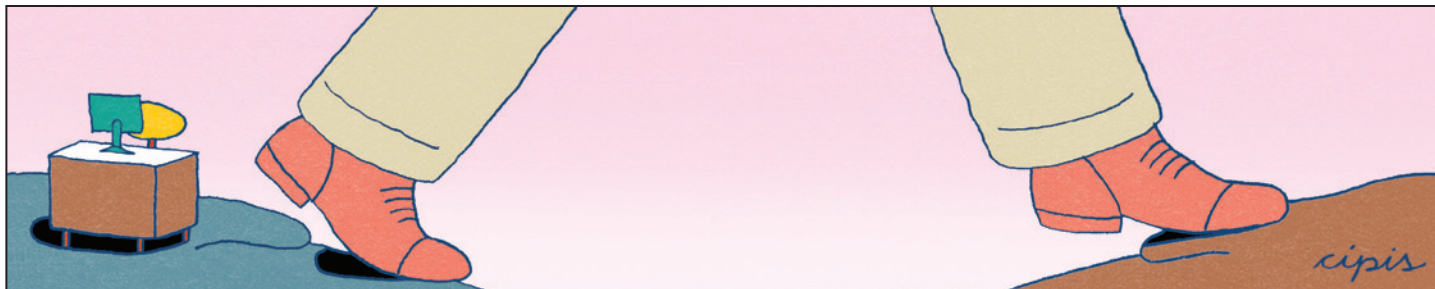
HEADING HOME

As the global market for talent intensifies, skilled-worker emigration can seem like a tug-of-war between rich countries, who are accused of "poaching" poor countries' valuable human resources, and poor countries, which are often

tempted to limit their emigration policies to prevent those resources from leaving. What options do countries both rich and poor have in trying to make the most of the movement of skilled workers?

One popular notion holds that limiting emigration opportunities, and effectively forcing people in developing countries to find jobs at home, will help develop those countries. Critics, however, say measures like these are almost certainly not the answer. This is partly because it is not clear that limiting immigration actually helps anything, but perhaps most importantly because to limit these opportunities is to encroach on human freedoms. Refusing to allow a doctor in, say, Ghana, to emigrate is no more appropriate than "trapping smart black kids in inner-city neighborhoods," said Michael Clemens, a fellow at the Center for Global Development, a Washington, D.C.-based nonprofit research organization that aims to make the globalization phenomenon work for the poor.

Some developing countries with the means have been able to convince their talent to stay put or come back home. In 2009, China instituted a program it calls "Thousand Talents," creating



Some developing countries with the means have been able to convince their talent to stay put or come back home.

well-paid and prestigious job opportunities to entice professors at U.S. and European universities back to China. And more broadly, in recent years it has worked to nurture its own scientific talent and provide an appealing work environment to draw back those scientists who left.

Haidong Kan, a professor of environmental health sciences at Fudan University in Shanghai, came to the U.S. in 2005 to complete his post-doctorate work on the health effects of air pollution. “The reason I came to the U.S. was very simple,” he said. “The U.S. universities and government agencies—for example, the National Institute of Environmental Health Sciences—provide the best research opportunities in the world.”

When it came time to take a job, however, Kan returned to China. He wanted to be with his parents and his brothers, who still lived there. He also wanted to help China, which, he notes, has some of the worst air pollution in the world. The job in Shanghai allowed him to do both. “In recent years the Chinese government has invested a lot on scientific research and development, so China has provided a very good opportunity to conduct research there,” he said.

Kan is philosophical about his choice to return. “Of course, every decision has advantages and disadvantages. The research level in China cannot be compared with that in the U.S. But I think things are improving, and the scientific community in China will have a better future.”

As for his own work, he believes that China is the best place for it. “Generally, the air pollution level in China currently is the same as that in developed countries 40 to 50 years ago. So China needs to work hard to improve its air quality. I think my expertise will contribute to this process.”

Countries without the economic resources of China can still take measures to keep their most promising scholars and professionals home. In his research with the Center for Global Development, Michael Clemens found that in countries where rural areas are the poorest and most underserved, medical students who are originally from those areas are the most willing to return there to work. He suggests that poor countries’ medical schools weight admissions from underserved areas, and that governments offer more incentives for graduates willing to work in those areas.

Schools may also be able to increase their effectiveness, Clemens said, by teaching what will be helpful locally. He gives the example of medical schools in sub-Saharan Africa that, rather than focusing solely on high-tech equipment and procedures, adopted “a locally relevant curriculum.” They teach special procedures for scarcity conditions, drug usage in the absence of refrigeration, and sophisticated diagnostic techniques using only a stethoscope.

On an international level, recent discussion among policymakers has focused on the idea

“As long as I am using what I know, my skills, to help other people, it doesn’t matter where I am in the world.”

of temporary migration—designing visas and immigration policies that will encourage skilled workers to spend time working in wealthier countries and then return home. The prevailing argument, said Dr. Lindsay Lowell, director of policy studies at the Institute for the Study of International Migration, is that “temporary migration maximizes the number of people in the developing world who get experience in a Western economy and have at least a period of time where they have better earnings. They take these skills and experiences back with them.”



CITIZENS IN BETWEEN

Some of the most interesting effects returning emigrants may have on a country are less concrete, like changes in political ideology or social customs. Umit Shrestha, who grew up in Kathmandu, Nepal, is currently a graduate student in sociology at South Dakota State University. His degree will be in community development, which he plans to put to use at a nonprofit organization in Nepal when he graduates.

Shrestha is frank about how his time in the States has changed him. “Things that were okay to me while growing up in Nepal are not acceptable to me right now,” he said. He gives as an example the caste system, a traditional hierarchical social system in Nepal. “Even though there have been significant improvements in society,” he said, “it still lingers. So, spending most of my adult life here in the U.S. and interacting with people from different backgrounds, I think I would not tolerate the present caste system.” When he returns, he plans to speak out against it, beginning at the school he attended from the first through 10th grades.

People like Shrestha, whose experiences as

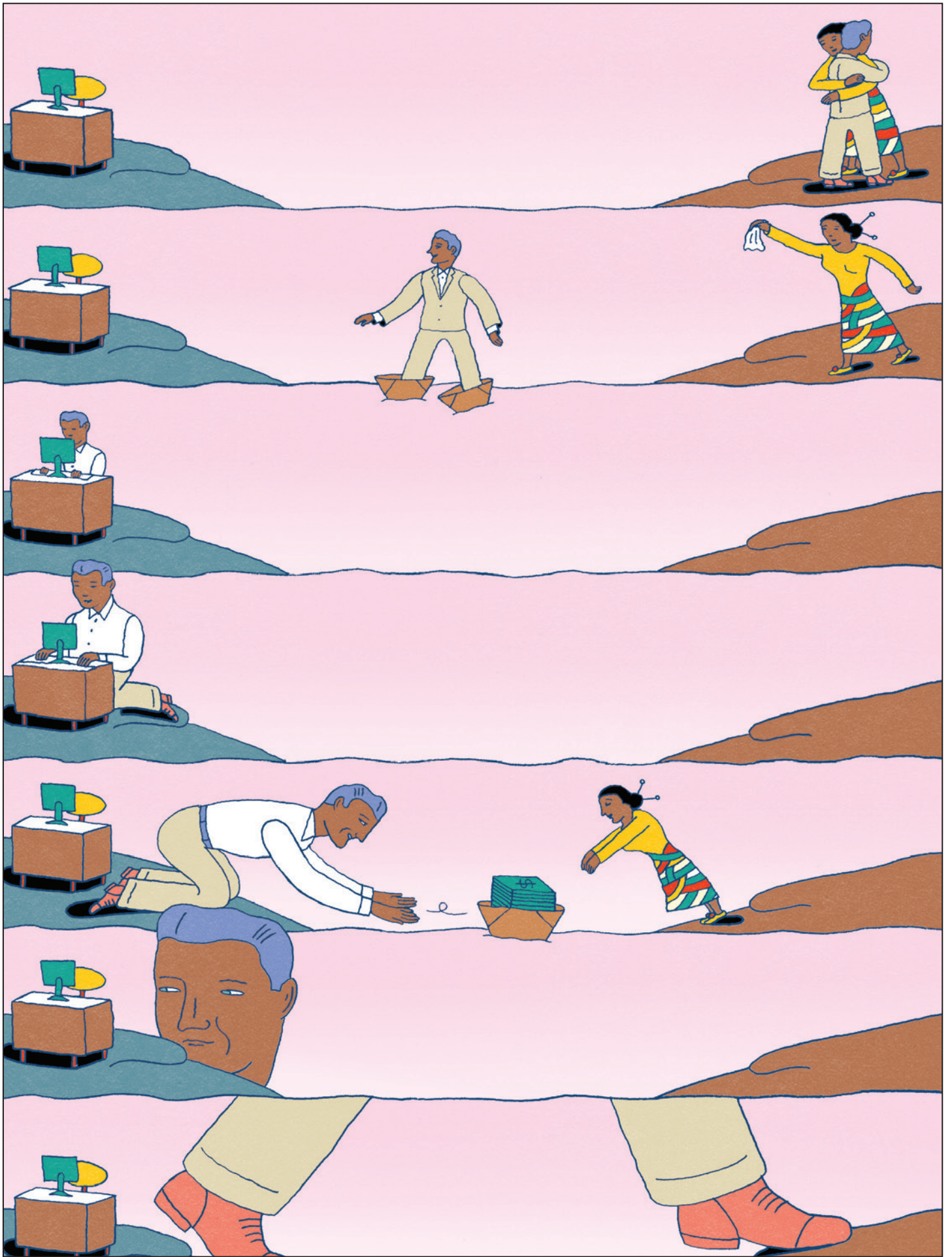
emigrants affect them deeply, highlight an important point: The real change that happens when people emigrate, happens to the emigrants themselves. And while some of this, like increases in income, is measured in economic terms and fought over in the international marketplace, much of it

takes place in the realm of ideas and identity, as though emigrants have become citizens of a third, nameless country, one that is influenced by their old and new homes but is not exactly like either.

Sometimes, this change comes at a price. “I sometimes fear that when I go back, I might be alienated from my own people,” Shrestha said. “I have developed my own perspective on life, and I don’t know if that will match with traditional Nepalese culture, which has a very strong influence among the people back in Nepal.”

But sometimes, it brings great possibilities. Pinar Ceyhan, who grew up in Turkey, has lived in the U.S. for eight years; she is currently studying game design and education for a doctoral degree at Columbia University. In addition to pursuing an academic career, she hopes to collaborate on educational projects with nonprofits and social-change organizations. There was a time, Ceyhan said, that she felt she should return to work in Turkey to make a difference in the place where she grew up, but she feels differently today.

“When you ask me, I say I’m Turkish because that’s where I was raised, that’s where I was born,” she said. “But in general I feel like I should do something good for other people in need, and that doesn’t necessarily have to be the people in Turkey, or the U.S. As long as I am using what I know, my skills, to help other people, it doesn’t matter where I am in the world.” ■



Pushing Back



the Desert



The Sahel region of Senegal was never as lush as the tropical forests to the south, but deforestation and overuse of the soil are making dry conditions tougher. Heifer is helping people in this parched region by providing hearty sheep, fast-growing pigs and improved seeds that can stand up to the withering sun.

by **Austin Bailey**,
World Ark senior editor

Photography by Geoff Oliver Bugbee



(Above) Horse-drawn carts are a means of transport in rural Senegal. (Right) Aliou Thiaw, president of the community association in Baback, walks the dry fields that miraculously become fertile during the short rainy season.

DIARRERE, Senegal—Blazing winds race across the ground like they just escaped from a hot oven, and sand somehow seeps through clamped lips to grate between teeth. A donkey pulling a cart loaded with people and sacks of rice stumbles under the hot sun and crashes in the dust. Goats cluster under a lonely acacia tree to claim the precious shade.

It's the end of the dry season in Senegal's arid central region, and things are getting desperate. No rain for eight months now. Temperatures above 100 degrees every day. With few trees to block its path, the sandy wind never stops blowing. It's difficult to imagine anything growing here.

But the sky is turning a hazy white, hinting that the storms will soon begin. At the first drop, men, women and children will scamper to the fields to plant peanuts, millet and sorghum. If the rains last until October, perhaps the harvest will be enough to get them through until next year's wet season. But if the rain is sparse and falls for a shorter period, which is the case more often than not, the people of Diarrere can't grow enough food.

The farmers here look defeated when you ask them about this drought that reduced healthy forests to virtual deserts and decimated crop yields. Ask them how long the

drought has lasted, and they'll tell you 50 years. That's a very long drought.

Graphs tracking rainfall in the region over the past century bounce up and down like an EKG, with clusters of wet years followed by a plunge back to thirsty fields and desperation. But even in its wettest stints, Senegal is a country of the Sahel, the desiccated strip of sand and soil that wraps Africa's northern half like a cracked leather belt. Named after the Arabic word for "shore," the semi-arid Sahel laps at the Sahara and acts as a buffer zone between the desert and the humid rainforests to the south.

Climate scientists can't agree on whether the region will become wetter or drier in the future, but Heifer International is helping the families who live here prepare for the worst. Heifer opened up shop in Senegal in 2007 and now operates three projects that are equipping participants with more productive sheep, goats and pigs, and seeds that can thrive even in the parched and sizzling Sahel soil. Heifer participants are also picking up new strategies to reinvigorate the soil's fertility for the next generation of farmers. And at every project site, participants are nurturing the future by planting trees that provide food for both people and animals, a nutrient boost for the soil and some much-welcomed shade for everyone.



Ask them how long the drought has lasted, and they'll tell you 50 years.

Coming and Going in Diarrere

Fatou Dione, wife and mother of four, lives on the edge of Diarrere, inside a courtyard wrapped by a stick fence that helps keep out some of the sand. Four mud-and-thatch houses anchor the barren patch, which is also home to Dione's father-in-law and two mothers-in-law (it's common here for men to have two wives). Looking out from her gate, Dione sees only miles of sand punctuated by a handful of brushy acacias and fat, lonely baobab trees.



Fatou Dione walks to the well to get water for her husband and four children in Diarrere, Senegal. It's the dry season and both water and food are running low.

Each morning before 6, Dione leaves the bed she shares with her daughter and steps out into the courtyard to pound millet for a breakfast porridge that her children will scoop up with their hands from a communal pot. Then she grabs a bucket and slips out of the rickety gate to fetch water from the wells 100 yards away across a field of blowing dust. This is the first of many trips each day to the village wells, three square holes dug in the ground and covered with a lattice of sticks to keep children and goats from falling in. The rest of Dione's day goes to washing, cooking, watering and feeding the family's sheep and trekking for hours to scavenge firewood. The hunt for fuel in this denuded region spans miles and usually takes about three hours. It seems that every chore takes much longer than it would if water wasn't so scarce.

The "women's work" is hard, not something Dione wishes for her daughter, who she believes will fare better in a city where water comes from the tap and food comes from a store. "If I'd finished school, I would not stay here. I would go out to work and get a salary," Dione said through a translator. "Right now, everyone prefers the city because life in the village is getting tougher and tougher."

It's been particularly tough for Dione lately. Her family's food stores from last year's harvest ran out in the beginning of May, and the next harvest won't be ready until the end of August. So the family is relying on a brother-in-law working in Dakar to send enough money to buy rice to get them through.

Dione hopes her reliance on that brother-in-law will taper off soon, now that she has Heifer sheep to sell in lean times. These aren't the woolly sheep we're used to in the United States, but a sinewy short-haired breed that thrives in the African heat. Senegal is 95 percent Muslim, and sheep are usually slaughtered during religious holidays and celebrations of births and weddings. A ram can fetch hundreds of dollars, enough to keep a family fed for months, and to pay the school fees that could be the younger generation's way out of the village and into the city.

Of course, not everyone thinks life in the city is better. Mame Penda Ndong, one of the founding members of the Heifer project in Diarrere, left the village to find work in the nearby city of Tataguine. She comes back on most weekends to help her parents and in-laws with their animals, and said she wants the Heifer project in Diarrere to succeed because

then perhaps she could make a living in Diarrere and bring her three children back home for good. She also wants her husband, who is working in the United States, to return.

Living in the Sand in Fandene

"They call this the forest of Thies," Heifer Senegal Country Director Francis Bouba said, laughing, as the vehicle leaves the paved road leading away from the city of Thies and toward the tiny villages of palm-thatched huts. Everyone else in the car laughs, too. Outside, thorn bushes snag the plastic grocery sacks that wouldn't burn with the rest of the garbage and instead blew away in the breeze. Palm trees and lizards seem to thrive; not much else survives.

The village of Fandene borders this scruffy patch of nature, its fences sinking in drifts of sand. Inside the fences people have planted shade trees and are going to great lengths to make sure they survive. Even the tiniest sapling is fortified with a ring of wire mesh, briars or cement blocks to keep munching animals away.

A patch of peppers is similarly well guarded but still fails in the broiling heat. People in Fandene think the coming year will be different, thanks to new seeds developed by the government of Senegal's own agriculture department specifically to suit the country's unique conditions. People here usually save seeds from each harvest to plant the next year because buying the improved seeds is too expensive, but this

Women Taking the Floor

The seating arrangement at a Heifer training session in Fandene on a hot May day is fairly typical for this rural region of a strongly Muslim country: men in the front, women in the back. Mame Penda Ndong, though, scoots her chair forward and sits boldly in the front row, keeping her eyes straight ahead so she doesn't catch any of the disapproving glances cast her way.

"In Senegal, we don't like women sitting in the front row, displaying themselves," a male translator explained.

There are other things about Ndong that set her apart, too. Her hair is uncovered and embellished with shiny synthetic coils. In her lap she clutches a hot-pink leather purse, and a sassy purple bra strap peeks out from the neck of her anango, a traditional dress.

Ndong, 35, who grew up in Fandene, was lucky to get a much better education than most of her peers. She nearly finished high school, and her schooling earned her a job in the nearby city of Tataguine, away from the hot and sandy days of sun-up to sundown manual work, which the women who stayed in Fandene take on.

But Ndong clearly didn't flee to the city, never to return. She comes home

almost every weekend to help monitor the Heifer project she helped start. She brings along her two sons and one daughter, but her husband is far away, working in the United States. She'd like to bring the entire family home to Diarrere to stay if the Heifer sheep thrive, the improved seeds produce healthier yields and the project becomes successful enough to support more people.

After living and working in a city for years, Ndong doesn't hesitate to speak up or claim a chair for herself while the other women sit on the ground to leave

the better seats for the men. Do the men deserve such respect and special treatment? It's part of the Senegalese culture, but it's a part that might be changing, she said. Encouraging other women to sit in the front row and take on leadership positions is taking some time, but Ndong said she'll press on.

"Men speak a lot, but they don't act much," she said, nodding toward a cluster of men smoking and drinking tea nearby. Women are different. "You don't see them speaking a lot, but you see them working a lot. If you look at the project here, you'll see the women do more. If they don't take the floor, they'll be working on things they don't decide."



Mame Penda Ndong says she'll continue to press women to take leadership positions.



Suzanne Ndione of Fandene says all of her children go to school: "Anybody who doesn't go to school, they are lost forever."

year Heifer International pitched in to help. Barrels of the special seeds sit in a storage building, waiting for the rains to begin.

Edouard Demba Ndione and his family have some big barrels, too, but by May they're almost empty. The supplies of peanuts, millet and beans from last year are mostly gone. In years past Ndione would dedicate this time of year simply to drinking hot, sweet tea and waiting for planting time. This year, however, he stays fairly busy making sure his neighbors' animals are faring well. When Heifer first started working in Fandene, Ndione signed on as a specially trained community animal health worker who visits all of the Heifer animals in Fandene weekly to administer vaccinations, treat wounds

and make sure shelter and food are satisfactory.

Ndione's charges are mostly sheep, but lots of the Heifer project participants in Fandene also have something somewhat rare for Senegal: pigs. Part of the Fandene community is Christian and therefore doesn't follow the Muslim prohibition on eating pork that governs most of Senegal's population. The Large Whites Heifer provided thrive in their shady cement pens, growing plump and reproducing far more quickly than native varieties.

Remembering the Forest in Baback

More than 100 sheep scratch and scamper in a makeshift pen in the village of Baback, a sandy outpost in the Diourbel



region southeast of Fandene and about 90 miles east of Dakar. The sheep arrived the day before and are waiting only for good reports from a veterinary exam before moving in with their new families, all of whom have built sturdy pens with metal roofs to keep the sheep cool and confined. In the meantime, they cluster together to munch on food that a group of men rode their horses 20 miles to fetch. The Heifer project families in Baback have plans to plant their own fodder when the rains begin and the ailing soil is more fertile, but for now, nothing green is growing. Families ration dwindling stores of beans and millet baking inside repurposed oil drums, stretching supplies so that hopefully everyone can have at least one meal every day or two between now and harvest time. Until the rainy season begins, the fields will be sandy, empty plains punctuated with occasional baobab trees and thorn bushes.

The smell of saltwater that rides the breeze 20 miles in from the coast gives way here to hot winds that throw around nostril-stinging dust. Leaders of Gie Jubo Ligué, the community group partnering with Heifer on the sheep project, pull chairs into a mud house to escape the wind so they can talk about how their fields turned to dust.



Parents hope for more opportunities for their children.



Women in Diarrere share a meal of millet porridge.

Adiouma Diaw, at 73 the oldest person in the village of nearly 2,000, shakes his head when asked if the land has always been so dry. “This place used to be dark because of the trees,” he said. “There used to be a forest of trees, many varieties.” Tamarind trees grew, along with jujube, cashew and mango trees. Crops were easy to grow in the rainy season, and yields were large enough to last the year, he said. But as the population grew, more trees came down to make way for fields. Charcoal makers took down more trees. And the village of Baback wasn’t unique: As the population swelled in the village and throughout the region, the need for food increased, leading people to fell trees for cropland and fuel.

When the rainy seasons became shorter and the days got hotter, that dark forest Diaw remembers withered away. The

“This place used to be dark because of the trees. There used to be a forest of trees, many varieties.” —Adiouma Diaw, age 73

antelopes, hyenas and monkeys left, too. “It was very frightening,” he said. But the people of Baback didn’t connect the tree-chopping with the gradual loss of soil fertility. “We didn’t know about science,” Diaw said. They thought the drying up of their fields and forests was a natural process, the will of God.

Today, a typical harvest lasts one to four months. The rest of the year, the people of Baback pick and sell wild fruits or head for the city to find work. Siga Diouf, 44, is among those who stay behind. Her husband and his second wife both work in Dakar, returning home once a month. Diouf herself also used to work as a maid in the city, but “I have cut my legs,” she said, using a Senegalese saying that means from

now on she plans to stay put.

While her husband and his wife are away, Diouf tends the family’s children and animals, three Heifer-provided sheep she keeps pristinely clean and well-fed. Mondays are bath days for the animals, but on a Wednesday visit we catch her just putting away the washing buckets. They get touch-ups whenever they need it, she explains. The sheep pen, a cement enclosure with a sturdy tin roof, sits inside the family compound with two huts that house 14 people. Diouf admits it can get crowded, and she hopes someday to be able to sell a sheep or two so she can build a new house. “I would dance for that,” she said.

For the animals to thrive, Diouf and other sheep owners

One tree at a time

By Elizabeth Bintliff, Heifer regional director for West Africa

Senegal is a tough place to be a tree. Sitting precariously in the Sahel, with the Sahara desert fast encroaching from the North, Senegal is a dry country with rain falling for only a few months each year. When it does rain, the bare



earth erodes, unable to absorb the abundance. And because soil is often 95 percent sand, water quickly drains away beyond the root zone.

So trees must resist drought, but they are also under siege from people. Fifty-seven percent of fuel needs are met by firewood and

charcoal. So scarce is wood in Senegal that a lot of the furni-

ture, even in the fanciest hotels, is made of metal.

Arboriculture, the cultivation of trees, shrubs, vines and other woody plants, is an important source of income for families in the villages where Heifer started working in 2007. In the village of Fandene, for example, the royal palm tree and leaves of Kinkéliba, a local tea, have been exploited for years. Here and at other villages, Heifer offers training on grafting and other techniques to improve and increase yields of existing fruit-tree varieties. Heifer Senegal is also partnering with the Regional Services for Water and Forestry, an agency of the government, to plant new trees.

Partnering with Senegal’s Ministry of Agriculture, Heifer has provided training for 100 participants on forestry nursery preparation. Graduates of the trainings now run thriving nurseries offering both trees for reforestation and fruit trees for personal use and for sale. Some of the trees provide shade, fuel wood or forage for livestock. Others serve as windbreakers and boost soil quality by reducing erosion and fixing nitrogen into the soil.

But the efforts to reverse effects of deforestation cannot focus on tree planting alone. After all, trees take time to mature. Reversing the trend requires a change in the way the scarce firewood now available is used. That’s why Heifer is helping project participants build energy-efficient stoves that can reduce fuel consumption by 65 percent.



Kady Sarr is eager for the chance to make enough money from the sheep to have savings and plenty of food to eat.

must be able to grow fresh fodder, which is a huge challenge in the granular soil that's already taxed to the max growing food for people. It will take at least three years to fertilize the fields back to health, said Doug Achen, an agriculture expert who works with Heifer Senegal. His plan calls for spreading manure in the fields, a hard sell since manure is often used as cooking fuel here because firewood is so rare. Achen will also oversee the planting of hearty acacia trees as part of the project in every field to provide shade and help the soil hold water and not blow away.

It's unlikely that lions will ever again prowl below lush canopies, or that giraffes will compete to nibble the best leaves from bushy trees in Baback. But the soil can be regenerated and the fields revived as long as farmers across the region embrace planting trees, Achen said.

"What's going to make the projects successful is to have trees in the soil in every field," he said. "It will catch on when we're successful, and others will do the same." ■

Heifer Senegal to Expand Work with USAID Grant

One million people in Senegal will have better food and nutrition thanks to a \$40 million grant from USAID. Heifer Senegal is one of four organizations tasked with using the grant money to boost participants' income by 250 percent and reduce the number of underweight children by 35 percent.

Known as the Yaajeende Agricultural Development Program, this project will affect 100,000 households in 60 communities. ("Yaajeende" means abundance or prosperity in Pular, a Senegalese language.) For its part of the project, Heifer will place poultry, sheep and goats with 5,500 households. Through Passing on the Gift, 14,000 additional households will receive animals over five years.

FIELD OF TEENS

If You Pay Them, They Will Come

**In North Carolina, a rural community garden
grows into something unexpected:
A cure for the unhealthy teenager.**

BY FRED BAHNSON, *World Ark* contributor

Photos by Chris Carmichael





Amea Holley (above) prepares compost to plant a seaberry bush. Manos crew members (opposite page, from left to right) Amea Holley, Hannah Alison, Joseph Rangell and Garden Manager David Hamilton share some turf time.

IN 2005, ANATHOTH COMMUNITY GARDEN was just an empty field, a group of strangers and an idea. Church and community leaders in Cedar Grove, N.C., wanted to start a community garden as a way to strengthen their rural community, but didn't have a firm plan for how to get started. I was the eager new garden manager who the local Methodist church hired to get it all going, a transplant to this one-stoplight hamlet. Not content to start small and expand slowly, I decided we needed to dig an entire acre-and-a-half of raised vegetable beds. By hand. Our members were initially enthusiastic. But many were aging, obese or suffering from mental illness. If I was going to get this garden built, I needed strong backs. That's when I discovered the endless source of free labor known as community service volunteers.

I had no trouble teaching teens how to plant gardens and eat what they produced, but I struggled with the peacemaking part. My patience was stretched by youngsters like Mohammed, who enjoyed shocking himself on our electric deer fence.

The teens who arrived each Saturday morning had been charged with various minor offenses: shoplifting, drug possession, carrying a knife to school. Our work with them was part of Anathoth's mission, which came from the book of Jeremiah: "plant

gardens and eat what they produce ... and seek the peace of the place to which you are sent.” I had no trouble teaching teens how to plant gardens and eat what they produced, but I struggled with the peace-making part. My patience was stretched by youngsters like Mohammed, who enjoyed shocking himself on our electric deer fence; or the three boys who snuck off to the woods to smoke an illegal substance; or Bassie, the young man who played in a punk band (“it’s basically a wall of sound coming at you with offensive song titles”) and who told his mother before coming to work with us, “I don’t care if they’re curing cancer out there—I’m not working at Anathoth!”

Over the next three years, kids like them slowly built up our garden. But with so few teens returning once we’d signed their time sheets, I wondered if our garden was doing enough to build them up as well.

It’s a myth that most rural Americans know how to grow food. As a result of poor eating habits and lack of exercise, childhood obesity was skyrocketing in rural and urban areas alike.

The teens who came to us had grown up eating from convenience stores rather than gardens. It’s a myth that most rural Americans know how to grow food. As a result of poor eating habits and lack of exercise, childhood obesity was skyrocketing in rural and urban areas alike. The Center for Disease Control has estimated that, of all the children born in the U.S. after 2000, one in three will develop type 2 diabetes.

If increased exercise and healthful eating was the medicine to cure such food-related illnesses, then Anathoth Community Garden was the hospital. We wanted to inject the gardening antivirus into the teens’ young bodies in hopes of curing them. Perhaps they might even become farmers some day. But for the cure to take place, we needed to keep them longer.

So we hired them. In February of 2009, with a three-year grant from Heifer International, we started Manos Abiertas (Spanish for “open hands”), or simply “Manos.” Our 10 new employees were as diverse as Anathoth’s older members: a healthy blend



David Benfield of Bountiful Backyards helps Hannah Alison and Amea Holley properly position a seaberry bush.

of ethnicities, attitudes and social classes. I was tentatively hopeful. Toward the end of the program’s first year, however, my wife and I moved back to the North Carolina mountains to be closer to family. Since then another year had passed, and I returned to see whether or not the cure was working.

*

ON NOVEMBER 20, 2010, the final workday of the season for the Manos teens, Hannah Alison, 17, and Amea Holley, 14, were planting a seaberry bush. Or trying to. Hannah and Amea had spent the previous nine months learning the ins and outs of planting organic vegetables. During the school year they worked four hours a week; in summer they worked 20, earning \$1 more per hour than minimum wage. If they finished the season they would receive a scholarship for college. A small portion of the program funding was generated by the teens themselves through produce sales in their community supported agriculture enterprise. And best of all, the program supplied a massive wood-fired oven with which the teens hosted Friday night pizza parties, where they proudly claimed that they themselves had grown the pizza ingredients.



Though Hannah and Amea were well-versed at growing vegetables, this was the first time either of them had planted a perennial. The Siberian seaberry bush, featuring a fruit that packs 10 times the vitamin C of oranges, was part of Anathoth's new one-acre edible forest garden, and the girls wanted to get it right.

While Amea wrested the three-gallon plant from its container, Hannah stood poised with a shovel, casting a worried look. "This is going to be the only plant in the whole forest garden that doesn't live," she said.

Assisting the Manos crew that day were Keith Shaljian and Ishmael Dennis, members of a local permaculture cooperative called Bountiful Backyards. Permaculture, the teens learned, is a sort of uber-organics whereby the local ecosystem, in this case the Eastern deciduous forest, becomes a model for creating an edible landscape. "Our goal here is to mimic what happens in the forest," Shaljian said. In addition to the standard orchard trees—apples, plums, pears, cherries—the teens were also planting more unusual fruit like seaberries, goumis, hardy kiwis, juneberries, persimmons and pawpaws.

Marsis Daye, 15, another Manos teen, sauntered over to where the girls were working. "Whoa, that's not how you do it," he said, and made a show of grabbing the plant. Then Dennis stepped in. He reminded

them of the process: loosen the planting hole with a mattock; add organic soil amendments like compost, rock phosphate and greensand; spread the plant roots over a mound of earth inside the planting hole.

"Look!" Amea said, "I was doing it right!"

Shaljian emphasized the importance of soil. "Our soils," he said, "are called Ultisols—the second oldest soils in the world after Australia. They don't have many nutrients, so we amend them. Be careful, though. If you make the soil in the planting hole too rich the roots will never leave the womb. We want them to be adventurous and push out into the harder soil beyond."

Shaljian's talk on soil and roots could well have described the teens of Manos Abiertas. By joining a program focused on food justice, gardening and neighborliness, they were being challenged to leave the comfortable womb of peer groups, shopping malls and Facebook—the trappings of American teenage life—and push out into harder soil.

*

WE WERE STANDING in a future forest garden, but it suddenly felt more like high school debate class. The topic: industrial versus organic agriculture. Emmett Hobgood, 15, a Manos team member, sat on a wheelbarrow and sang the praises of industrial food. Emmett liked working at Anathoth Community Garden, but believed that people who thought organic agriculture could really feed the world were hippies. People like his teammates, for instance, who mostly ignored Emmett's gadfly efforts and who persisted in practicing "The Organic Way." When Emmett began to extol the benefits of cheap corn and high-fructose corn syrup, Hannah interjected.

"We need to be growing more fruits and vegetables, not corn," she said. Hannah and Amea were nearly finished planting their seaberry.

"What's wrong with corn?" Emmett asked.

"It's grown with pesticides which are bad for the soil. And high-fructose corn syrup is bad for us. That's one cause of diabetes and obesity."

"I just want my food cheap and plentiful, which is why I support industrial agriculture." Emmett concluded, leaning back on the wheelbarrow.

Ishmael Dennis jumped in. "Hey, that dollar meal at McDonald's is cool and everything—until you're obese and your liver breaks down at age 45."

Anathoth volunteers Jim Burton (left) and Tommy Scott give teen gardeners a hand on planting day.



David Hamilton, the garden manager, asked Emmett to get off the wheelbarrow and get back to work. “I want you to plant a tree all by yourself, Emmett.”

“Do you expect me to change my mind about industrial food?”

“I don’t expect you to change your mind about anything,” Hamilton said, giving Emmett a pat on the back. “I just want you to plant a tree. And I want you to kiss it when you’re done.”

Later, when I asked Hannah where she learned so much about health and sustainable agriculture, she credited the Manos program. In addition to the hands-on work of fruit tree planting, she had learned about biointensive gardening, mushroom cultivation and beekeeping. Manos teens also learn about food and spirituality. Workdays open with a reading from the Psalms, perhaps, or a poem by Mary Oliver. They learn about food justice, how income disparities affect food access in rural areas, and how food affects health. For Hannah, these subjects are new worlds to explore, and the garden has become a portal. Or, to use Hannah’s metaphor, the garden is “the blank canvas on which we get to paint.”

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I ASKED NORMAN WIRZBA, research professor of theology, ecology, and rural life at nearby Duke Divinity School, why it was important for teenagers to work in a garden like Anathoth. “Because they learn through their hands, taste buds and stomachs, the connections that join people to the earth. Growing food together builds community. Teens learn that communities

don’t just happen. They need nurture and protection just like a garden does.”

Manos Abiertas is one of many similar programs that have sprung up across the country in recent years. I asked Anim Steel, director of national programs at The Food Project in Boston and a leader in the burgeoning youth food movement, what made the Manos program unique. “Its rural character, for one thing. The majority of such programs are taking place in cities or quasi-urban areas.”

Steel also found the intergenerational connections at Anathoth important. Working alongside the teens that Saturday in November were two retired gentlemen in their 70s. In addition to interacting with volunteers on Anathoth’s Saturday workdays, the Manos teens also connect with elderly community members each week when they make free vegetable deliveries. This multigenerational emphasis is another one of Manos’ strengths, Steel said, because teens benefit from the elders’ wisdom.

There are important parallels, Steel said, between the youth food movement and the Civil Rights movement. “Instead of the sit-ins of the ’60s we have dig-ins. Young people now are committing their bodies to the work of growing food, just as young people then committed their bodies to protesting racial injustice. That bodily act gives youth an experiential and moral base from which to develop their voice, and that’s coming from places like Manos Abiertas.”

*

ON THE LONG DRIVE back to the mountains after



Keith Shaljian of Bountiful Backyards (in hat), teaches teens about gardening techniques.

that November day with the Manos teens, I reflected on the things I'd seen. Clearly Anathoth's focus on planting gardens and seeking peace had resulted in a fine crop of teen farmers. But the economic downturn has taken its toll on non-profits like Anathoth, and there was a question if a well-developed program like Manos could continue without outside support. At the time, David told me they had yet to secure more funding after the Heifer grant ends in 2011.

I worried for them. Then, as I neared the mountains and home, I had a crazy thought: Even if the Manos project and Anathoth Community Garden were abandoned tomorrow, even if the collards withered in their rows, the pizza oven crumbled and the new forest garden became an untamed haven for deer and wild turkeys, it will have been worth it. In fact, I wondered if programs like Manos Abiertas should think of themselves less like institutions, which in their quest for preservation can too easily become calcified parodies of their younger selves, but instead imagine themselves to be more like a field of wildflowers. Something that blossoms for a time, spreads beauty and abundance all around, then returns to the soil from which it came. Only to spring up again someplace new.

A crazy thought, I know. I hope Anathoth will continue to grow and develop and open its hands to others for many years to come. What I do know for certain is this: among a small core of teens, the cure has already taken hold. Hannah, Amea, Marsis and even Emmett, who doesn't know it yet, have all been injected with the gardening antiviral. It's only a matter of time until they inoculate someone else. ■



Heifer USA

Scales Up Program to Reach More in Need

A visit to a small town, a potential Heifer project site, revealed tiny house after tiny house, bending and collapsing in on themselves. Barefoot children ran in and out of ramshackle doorways and leapt from porches into what appeared to be raw sewage. It was the kind of squalor most of us associate with developing countries, said Perry Jones, Heifer USA country director.

"But this wasn't some remote part of Africa or South America," Jones said. "This was eastern Arkansas, less than 15 miles off Interstate 40, where I'd driven a thousand times, not knowing what was just beyond those 10,000-acre rice fields. Quite honestly, I never saw need that rivals this throughout my travels and work in South America."

Heifer USA, which currently has 23 projects in 12 states plus Washington, D.C., will work in a new way starting this year. It will continue to offer training and support for small farmers, but will now also work with partners to build other parts of the producer-to-consumer chain—processing, distribution and access to markets. This will create farm and non-farm jobs in all areas of the system, resulting in a new, sustainable, local-food economy.

WHAT: Heifer provides an initial investment of seed capital, training in Heifer's values-based model and technical expertise. Heifer will also offer financial support for at least five years through the implementation phase as the community works to build capacity and stability.

WHERE: The redesigned Heifer USA program will begin in the Arkansas Delta and Appalachia regions this year. An expansion into the Southwest and across the country to work with indigenous and immigrant communities is also planned.

WHO: To create the necessary infrastructure, Heifer will partner with other organizations—federal and local governments, the health care industry, local banks and credit unions, and grocery retailers, to name a few. Universities and farm groups will provide technical assistance.

HOW: True to Heifer's model promoting self-reliance, participants will evaluate their needs and decide which crops to plant, process, distribute and market. They will invest their own money and sweat equity to develop local food economies on the foundation of healthful, locally grown produce.

LEARN MORE: To learn more about the Heifer USA program or to inquire about partnerships and assistance, e-mail info-usa@list.heifer.org.

REVIEW

Lost in Translation

By Jaman Matthews, *World Ark* senior editor

Don't get the wrong idea: I think Muhammad Yunus is remarkable; I think Grameen Bank—microlender to the world's poor—is remarkable; I think they both deserve every accolade they have received, including the Nobel Peace Prize. But I was asked to review the movie, not the man or the institution. And the movie is entirely unremarkable.

To Catch a Dollar played in theaters around the country for one showing on March 31. Even then, the 250-seat theater where I watched it had only seven other people in attendance. (Public relations for the movie didn't have actual numbers, but claimed that several cities—Seattle, D.C., San Francisco—sold out.)

The film was prefaced by the director standing at a lectern asking us to, "Please enjoy the film and become inspired." I wanted to do both, but one nagging question—what is the purpose of this movie—wouldn't allow it. Was it a biopic about Nobel Prize winner Muhammad Yunus? A documentary about Grameen America? An appeal for money? After two hours, it was still unclear.

The film opens on a pensive Yunus, staring out at the New York City skyline as he is driven across a bridge into the city. Outside his window, stock tickers and McDonald's signs roll by. At a chaotic news conference in Queens, he announces the arrival of Grameen America.

And so we have the film's two themes: Muhammad Yunus himself and the founding of Grameen America. But the two themes are only loosely interwoven, like twisting two strings together and calling it a rope.

The biopic string follows Yunus as he pops up around the world, from Norway to Zambia, from villages to panel discussions (but always with a bevy of cameras), where he glad-hands with everyone from Bill Clinton and the Dalai Lama to the heads of Google and Intel (and, I kid you not, Michael Milken).

The other string, documenting the early days of Grameen America, is mostly handheld camera work in moving



To Catch a Dollar: Muhammad Yunus Banks on America
Gayle Ferraro, director
85 minutes, 2011

cars or bland offices. The filmmakers did follow a few of Grameen America's earliest borrowers, like the lady (Grameen lends only to women) who took out a loan to expand her hairdressing business. But the filmmaker tends to give short shrift to their difficulties, lending the movie the feel of an ad more than a documentary. More time should have been spent on these women, perfect or not. They are the reason to care about the movie.

As the movie drags on, the Grameen model appears to be failing in this urban land of easy credit. ("Grameen," after all, means "rural" in Bengali.) At the obscured climax, Yunus is flown back to New York, where the staff stumbles around to inform him that Grameen America is not working.

The film skips over the fix, leaving the watcher to assume that Yunus miraculously righted the ship. By way of proof that everything is better, the statistic of a 99.53 percent repayment rate for Grameen America is thrown

around. Miraculously, all is well, and Grameen America is now expanding to Omaha.

As if an unfocused documentary weren't enough, the filmmaker tacked a panel discussion onto the end. The cameras shift to an empty, nondescript stage with four chairs and a large video screen behind them. It's disconcerting when Robert De Niro suddenly walks to the lectern. He introduces the panelists in a monotone, mispronouncing names, before quickly exiting, never once having lifted his eyes in the direction of the audience or cameras. It is easily the worst use of De Niro since *Little Fockers*.

Maria Bartiromo, anchor of CNBC's "Closing Bell," comes onto the stage to act as moderator. With her are the head of Grameen America, the founder of kiva.org, and "financial powerhouse" Suze Orman. But where is Yunus? His head pops up on the oversized screen behind the other panelists. He is videoconferencing in from Bangladesh.

Never, in either the documentary or the discussion, is it mentioned that Yunus has been aswirl with allegations since late 2010. The Bangladeshi government is reviewing Grameen Bank's practices and in March 2011 fired Yunus as the bank's managing director. Many feel that Yunus was unfairly targeted, but regardless, the omission of any mention in either the movie or the panel discussion is glaring.

As painful as the panel discussion was to watch, at least it offered one last opportunity to explain the point of the preceding documentary. And finally, Yunus does. In still-vague language, he seems to say that the movie is an appeal for money for Grameen America.

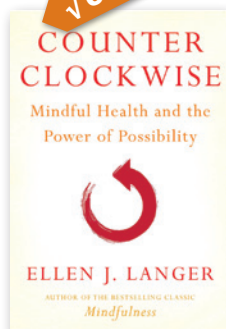
Public relations for the movie later told me: "The movie was made to bring awareness of Grameen America and microlending to the U.S." Yet instead of releasing it on the Web where it might actually do that, I was told there were unspecified plans to release the movie again in theaters. I think I will sit that one out.

NEW AND NOTEWORTHY

✓ CEO Pick

Counterclockwise: Mindful Health and the Power of Possibility
by Ellen J. Langer
Ballantine, 2009

What if we saw the world as possibilities instead of limitations? Langer, a Harvard psychology professor, says we'd be on the road to better health and happiness at any age. Even if the world around you doesn't change, altering your beliefs and perception of it may be enough to bring about measurable positive results. It may sound hokey, but she presents the experiments and evidence to back it up.



FIVE FAVORITES ON:

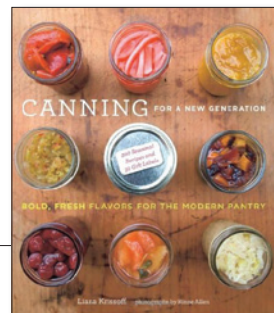
Preserving Produce

It's summertime. For many of us, that means we'll soon be deluged by more fresh vegetables than we can possibly eat. What to do with the surplus? Can it, pickle it or otherwise preserve it. You'll thank us next winter.



Ball Complete Book of Home Preserving
by Judi Kingry and Lauren Devine

Canning for a New Generation: Bold, Fresh Flavors for the Modern Pantry Through Time
by Liana Krissoff



The Complete Book of Pickling: 250 Recipes from Pickles and Relishes to Chutneys and Salsas
by Jennifer Mackenzie

Jam It, Pickle It, Cure It: And Other Cooking Projects
by Karen Solomon



Wild Fermentation: The Flavor, Nutrition, and Craft of Live-Culture Foods
by Sandor Ellix Katz



IN THE QUEST TO END HUNGER, KISSING A PIG IS THE EASY PART.

HEIFER CHALLENGE is a new program for groups looking for a fun and easy way to help struggling families around the world. For decades, Heifer has received photos of supporters across the country kissing furry critters or even shaving their heads as a fundraiser for Heifer. Turns out people love to take on a dare to help us end hunger and poverty. That's why we've created Heifer Challenge, and now your group can get in on the action.

For more information or to order The Heifer Challenge Leader's Guide, call **800-422-0474** or go to www.heifer.org/challenge.



Heifers and Houses

Heifer, Fuller Center for Housing Team Up in Armenia



"I am so thankful for this project," Susanna Grigoryan said of the Heifer project, a partnership with the Fuller Center, in her village of Khachik, Armenia.

Khachik is a small Armenian village along the border with Azerbaijan. It has been a dead-end town since the border was closed 20 years ago. Many people have left Khachik, seeking a better life in the capital city, Yerevan, or even outside the country.

The Grigoryan family—Varazdat, Susanna and their three children—did not want to leave their native village, but they were desperate. Susanna's small salary as a nurse and the temporary work Varazdat could find were not enough to raise three children. Then, in 2009, Heifer Armenia came to Khachik, in a partnership with the Fuller Center for Housing Armenia.

The Fuller Center for Housing is an international non-profit begun by Millard Fuller, who also founded Habitat for Humanity International. According to Anahit Ghazanchyan, Heifer Armenia country director, the Fuller Center provides housing loans at zero interest to the rural families and Heifer supports the families with resources to build a household economy, to generate income to be able to pay for the loan.

"I can't describe what I felt when we found out that we were also included in the Heifer Armenia project. Everything changed at once," Susanna Grigoryan said. The family received a cow, which has already calved.

For the Grigoryans, the Heifer project is a family affair. Their older son, Zaven, enjoys taking care of the cows. "The animals recognize me. I always speak to them, and I know they understand me," he said. He takes this responsibility seriously. "I attend the trainings organized by Heifer Armenia and get a lot of new information on animal husbandry. We will take good care of the cow and the calf, so that we pass the best and the healthiest calf to another needy family."

The Grigoryans will soon pass on their first calf to another needy family in their village. But they won't have to wait long for another calf of their own; their cow is already pregnant again.

"I am so thankful to this project," said Susanna Grigoryan. "This is a great help for our family. It gives us strength and hope for a better future in our village. This type of project encourages families like ours to stay in our homeland and not migrate to other countries to make money."

"Fresh milk and cheese are the main ingredients in our meals," she continued, "and as a nurse, I know how important that is for the health of my children. We know what it means not to have enough food and to be unable to meet the daily needs of the family. When Heifer came, everything changed in the blink of an eye."

"Instead of giving cash money, Heifer gave us ready resources and knowledge to use them wisely," Susanna Grigoryan said. "And this is why I love the project most: we will still help another family that is in need. We are indeed happy to pass the offspring of our cow to another family and also watch other families growing—and step by step become self-reliant, just like us."

Reporting by Emma Sargsyan, Heifer Armenia resource development manager, and Lilit Makaryan, Fuller Center for Housing Armenia.

Facts & Evaluations

New And Improved!

A farmer-led experiment in Nepal produces healthier, heavier goats.

How to get goats to market weight more quickly, and thereby increase profits? That was the question that drove a Heifer Nepal experiment.

From Feb. 2010 until Jan. 2011, 27 women from a project in Shaktikhor participated in the Improved Goat Management Farmers Field School. They divided themselves into five groups, each receiving a pair of similar goat kids. (Three groups had female kids, two had males.)

First, a survey was carried out to learn the existing practices of goat rearing in the community. The survey revealed, among other things, that farmers needed at least 18 months to produce a goat weighing 55-75 pounds. Then, the field school came up with a list of improvements to present practices, which included rain-proofing goat pens, supplementing fodder with concentrated feed, vaccinating on a schedule and improving breeding practices.

Then the experiment began. Each of the five groups raised its two goats—one raised using the standard method and one using the new, improved method.



PHOTO BY JONATHAN LANTZ

Members of a Heifer project in Nepal conducted a goat-raising experiment. The results will help them raise healthier goats that are ready for market sooner.

Comparative trials are commonplace with agricultural crops. The Shaktikhor field school, under the leadership of Dr. Peetambar Kushwaha, adapted these existing methods to use with livestock and developed the Goat Ecological System Analysis, or GESA. GESA has the farmers regularly record the weight, temperature and body condition of their goats. Shed conditions, hygiene, feeding programs and surrounding environment are also recorded in detail for GESA.

The five groups met once a month to share their observations and discuss the trial. Completing the GESA form was tedious business for rural women who had only recently started to read and write, and could take as long as two days. In those early days, the farmers were not convinced the project was worth it. But they became motivated once they saw the outcomes.

And the outcomes were staggering. Using the improved method, farmers were able to produce goats weighing 55 pounds in only 7 months, instead of the 18 months required before. The average weight after a year was twice as high using the new method, and the average time from birth to both mating and kidding was reduced by more than 100 days. That meant more generations and larger goats in less time, which translates into higher profits for the farmers.

Heifer CEO Pierre Ferrari, who recently visited the Shaktikhor project, was impressed by the farmer field school. “The project involved the farmers in the work and the reporting,” Ferrari said. “The work was meticulous. It was scientific in that it took a hypothesis and studied it, with clear data collection and reporting.”

Ferrari also noted that the work is relevant to other farmers in the area, evidenced by the fact that Shaktikhor is already becoming a resource village for goat farming. And it is scalable, with the potential to be mainstreamed in all projects.

“Patient experimentation is another example of deep community work for which Heifer is well known,” Ferrari said.

Compiled by Jaman Matthews, World Ark senior editor.



Goats raised using the improved methods described in the article **weighed TWICE as much** on average after about a year as those raised using the old method.

49 pounds

Average weight of does at six months, using improved methods, versus **21 pounds** using the old methods.

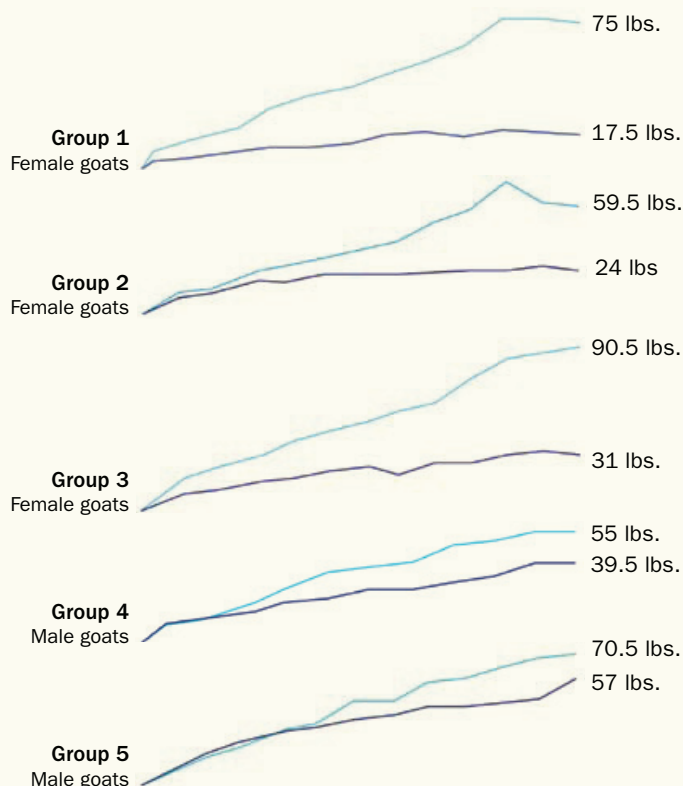
42 pounds

Average weight of bucks at six months, using improved methods, versus **31 pounds** using the old methods.

322 days

Average age at first kidding for does raised using the improved methods, versus **433 days** using the old method.

WEIGHT GAIN OF GOATS OVER THE FIRST YEAR
for each of the five groups taking part in the trial.





Volunteer for Heifer

Join more than 1,000 others to spread the word about your favorite nonprofit.

By Jaman Matthews, *World Ark* senior editor

Maybe you've seen them, people in Heifer T-shirts manning a booth at a local fair, farmers market or church event. And maybe you've asked yourself, who are these people? Why are they doing this? Or even, how can I get that job?

"These people" are Heifer volunteers. They're people just like you—people of all ages, all professional backgrounds, and from all corners of the country. As for why they do it, it's because they all share a passion for Heifer International's mission. But don't take our word for it.

Rose Alleman knew about Heifer long before she became a volunteer. After all, her mother coordinated Heifer activities at their church in Hampton Roads, Va. But, according to Alleman, two factors converged to urge her into volunteering: "The persuasive power of Mom, and a desire to be part of a group making a positive difference."

For Alleman, a full-time bookkeeper, being a Heifer volunteer is all about sharing—Passing on the Gift. "It's a privilege to share Heifer's vision with the public," she said. "People are very receptive to Passing on the Gift. Kids get it right away; it's the sharing factor. Adults like the 'cow not a cup' concept, combined with the train-

ing, sustainability and eco-friendly aspects of Heifer's programs."

Alleman describes herself and other volunteers as "Heifer's regional cheerleaders." They recruit new members, serve as guest speakers, give presentations about Heifer and support fundraising groups. The Hampton Roads group that Alleman belongs to has set up booths at local universities, the state United Methodist conference, the state fair and other venues, all to share their passion for Heifer with others.

"Once you have experienced the joy of giving and knowing the profound impact Heifer's programs have worldwide," Alleman said, "you want that feeling every day."

Nine hundred miles to the west, in Conway, Ark., Alleman has a compatriot in Wanda Eason. Eason, a retired teacher, is an education volunteer at Heifer Ranch in Perryville, Ark., but she is also the area volunteer coordinator, or AVC, for the Conway area. "My work with Heifer," she said, "has enriched my life."

Eason coordinates the six volunteers in the group, who, like the group in Virginia, speak to community, school and church groups, and man booths at farmers



PHOTO BY JONATHAN LANTZ

Wanda Eason of Conway, Ark., with Heifer Area Volunteer Coordinators (AVC) from around the country.

markets and festivals.

"I feel that I am a part of Heifer's work by educating people about world hunger and Heifer's mission," Eason said. "I especially love to see the responses as people understand the importance and the success of Heifer's work around the world."

Carleen Denovchek, from Tucson, Ariz., related her variation on the theme of how she became a Heifer volunteer.

"After attending a Heifer presentation, I knew I had to get more involved," Denovchek said. So she participated in two volunteer training programs, and then she met Catherine Scott, Heifer's CVC in the Southwest at the time. "The next thing I knew, I was asked to be Tucson's

area volunteer coordinator (AVC)," she said. "I was in the right place at the right time. Yes, it was meant to be."

Denovchek has already brokered agreements to have booths at local farmers markets and worked with 4-H clubs to teach children about Heifer, and she has now approached a local Girl Scouts troop and the University of Arizona department of agriculture.

But at the end of it all, it's about connecting people to Heifer's mission, especially younger generations. "The best part of being a Heifer volunteer," Denovchek said, "is watching children express great joy in learning about people all over the world. They show concern and are anxious to help."



PHOTO BY KALENA LANUZA

Carleen and Paul Denovchek of Tucson, Ariz., started volunteering after attending a Heifer presentation.

How Can I Become a Volunteer?

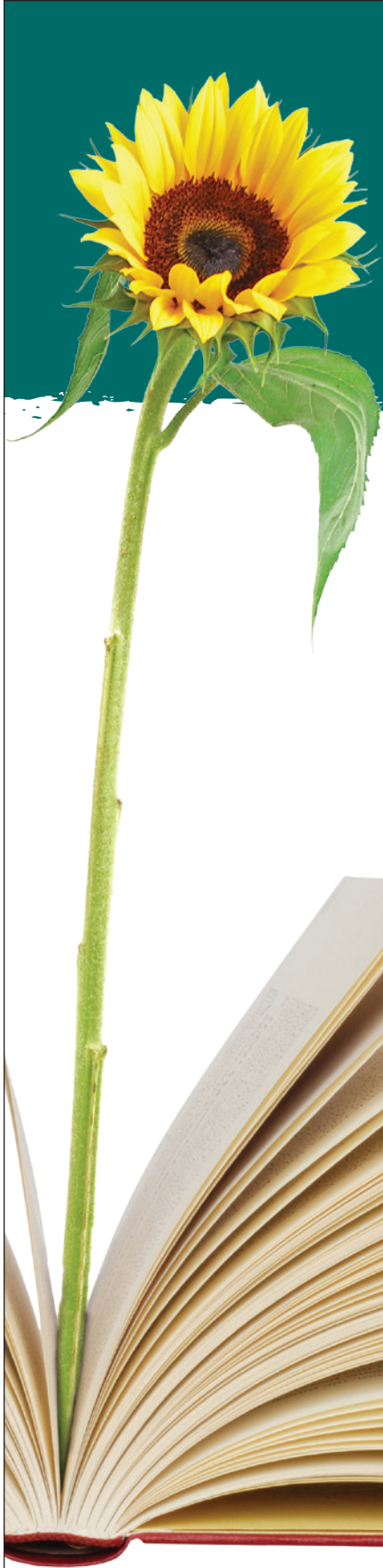
Now, as for how you can become a Heifer volunteer, it's simple.

First, go to the website (www.heifer.org/volunteer) and fill out the application. Once your application is accepted, the AVC for your area will contact you and set up a time for your orientation and training.

Don't worry if you're not a great public speaker or don't have a lot of time. Heifer volunteers come in all shapes, sizes and commitment levels. The one thing they all share is a belief in Heifer's mission to end hunger and poverty.

"Our Heifer volunteers are wonderful people who are passionate about making a difference in the world," said Pat Keay, Heifer's national community volunteer manager. "Some have great speaking skills, others are good at inspiring young people, still others enjoy setting up Heifer displays at the local farmers market or extending thanks to donors in their communities. Heifer invites people of all ages and all skills to help us fulfill our mission. So if you're a creative self-starter, you'd probably make a great Heifer community volunteer."

You'll be joining 1,291 other active volunteers across the country. Not enough of a perk for you? "The best perk," said Keay, "is being part of the solution to end hunger and poverty in the world, and to do it with others in your own community."



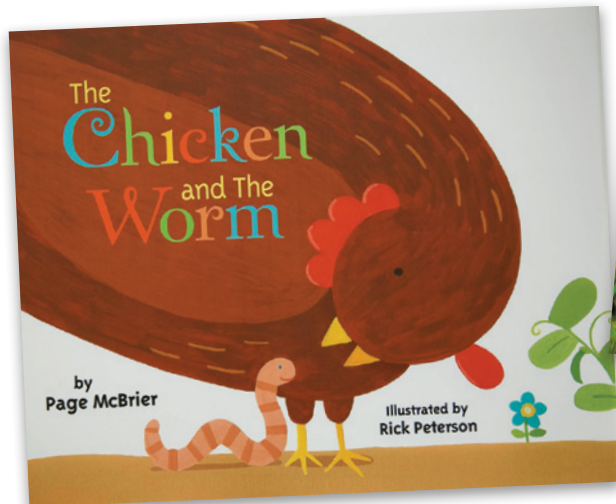
You'll be surprised at what can come out of our resources

Make Heifer International your partner in inspiring your students to take action to end hunger and poverty and care for the Earth. Our educational resources will help you teach about the world's pressing problems in a way that will engage and excite your students. Options range from our free national standards-based lesson plans to field trip and professional development opportunities.

Visit **www.heifer.org/instructor** for more information and to order free lesson plans or learn about our other resources.

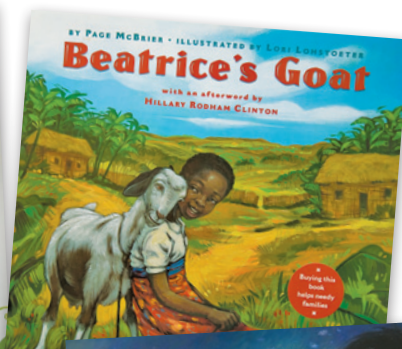


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THE CHICKEN AND THE WORM

Introduces the idea that even the smallest creatures can work together to care for the Earth. Pre-K and K. Hardcover. **NB07070HB \$16**



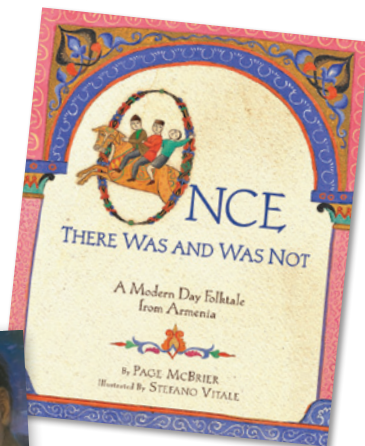
BEATRICE'S GOAT

The true story of how one goat changed the life of a Ugandan girl. For 1st and 2nd grades. **NB0700000 \$17.99 hardcover**
NB0700S00 \$7.99 paperback



WINTER IN SONGMING

A coming of age story set in China. For 3rd and 4th grades. Hardcover. **NB07180HB \$16**



ONCE THERE WAS AND WAS NOT: A MODERN DAY FOLKTALE FROM ARMENIA

A true story of three boys who joined a Heifer International-sponsored youth group. For 5th and 6th grades. Hardcover. **NB07090HB \$16**



HEIFER MAGNETIC DRESS-UP DOLLS

Dress your doll in the traditional clothing of four countries where Heifer works. **NPGM0101 \$15**



YOUTH WHO'S YOUR LLAMA T-SHIRT

These 90% cotton, 10% polyester tees are a sure way to get attention. Child sizes XS-XL. **NYL \$12**



YOUTH JUMPING COW T-SHIRT

This 100% cotton tee is a great way to show your support. Child sizes XS-XL. **NYCO \$12**



TO ORDER, CALL (800) 422-0474 OR VISIT SHOP.HEIFER.ORG

GLOBAL BARNYARD PLUSH ANIMALS

These stuffed animals aren't just cuddly; their custom hang tags explain the benefits they bring to impoverished families.

NPWR0WB - Water Buffalo \$15

NPWR0C - Cow \$15

NPWR0S - Sheep \$15

NPWR0G - Goat \$15

NPWR0P - Pig \$15

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COW TAGS

Identify yourself as someone dedicated to ending hunger with Heifer's cow tags.

NA0025 Red \$8 Pass on the Gift

NA0026 Pink \$8 Udderly Fantastic

NA0027 Blue \$8 Who's Your Llama

NA0028 Black \$8 Chicks Dig it

LUGGAGE TAG, COW

Identify yourself as a supporter of Heifer's work around the world when you're traveling the globe.

NLUGC0000 \$3



MARKET TOTE

A heavy-duty, 100% cotton canvas bag. 14 x 17 x 13. Available in grape, charcoal, green and orange.

NM0602 Grape \$16

NM0601 Charcoal \$16

NM0603 Green \$16

NM0604 Orange \$16



BARREL MUG

A 16-ounce matte finish barrel mug perfect for sipping your favorite beverage. The mug features a white logo on two sides.

NMUGB2000 Black/blue \$8

NMUGN1000 Black/orange \$8

NM0407000 Black/white \$8

NMUGR0000 Black/green \$8



HEIFER LICENSE PLATE AND PLATE FRAME

A standard size license plate and plate frame feature the Heifer logo and mission.

NP0027 Frame \$3

NP0017 Plate \$5

TO ORDER, CALL (800) 422-0474 OR VISIT SHOP.HEIFER.ORG



END WORLD HUNGER TOUR T-SHIRT
Rock a shirt that shows where Heifer worked during 2010-2011. Adult sizes M-XXL.
NTOUR \$15



HEART T-SHIRT
This tee features a fun message that's sure to get attention. Adult sizes S-XXL.
NUHEART \$15



END HUNGER T-SHIRT
Help make the world a better place when you buy this 100% cotton "end hunger" shirt. Adult sizes S-XXL.
NUEND \$15



HEIFER POLO SHIRT
The Heifer polo shirt shows your support for an organization that in its 65 years of work, has helped more than 13 million families through the gift of livestock.
S-XXL Women M-XXXL Men
Navy NWPNV \$36 Navy NMPNV \$36
White NWPWH \$36 White NMPWH \$36



JUMPING COW T-SHIRT
Show off Heifer's logo in these 90% cotton, 10% polyester tees. Adult sizes S-XXL.
NMTS Unisex \$12



EXECUTIVE SHIRT
These button-down shirts feature the Heifer logo above the pocket. 55% cotton, 45% polyester. Made in Vietnam. Available in clove or khaki.
S-XXL Women
Clove NWOXC \$35 Khaki NWOXC \$35
M-XXL Men
Clove NMOXC \$35 Khaki NMOXC \$35



PEACE HONEY
Packaged by Heifer partner Savannah Bee Company, this honey provides a market for Heifer beekeeping participants in Honduras.
NH0009 \$15



"TODAY IS YOUR DAY" MAGNET SET
Acrylic magnet set containing 53 inspirational phrases including Heifer's message of Pass on the Gift.
NA0018 \$8.99





HEIFER BALL CAPS

Sport your support for Heifer in one of these adjustable ball caps.

NS4001SS0 Stone \$12

NS4002AK0 Khaki \$12

NCAPB2000 Black \$12

NCAPW3000 White \$12

NCAPR1000 Red \$12



HEIFER BUTTON

Wear your support with this 2 1/2 inch pin-back button.

NA0022 \$1



HEIFER BOTTLE

Help keep trash to a minimum when you choose to carry this 16-ounce aluminum water bottle with carabiner top featuring Heifer's logo.

NWATR2010 \$9



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CITY STATE ZIP

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\$20.01 - \$30.00 \$7.00
\$30.01 - \$50.00 \$8.00
\$50.01 - \$80.00 \$10.00
OVER \$80.00 \$14.00

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Add applicable sales tax for orders shipped to: AR 6%; CA 6%; GA 4%; IN 7%; MA 6.25%; MN 6.875%; PA 6%; VA 5%; WA 6.5%.

CANADA

Flat rate \$21

A portion of the proceeds received in connection with your purchase will support the entire mission of Heifer International.

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Subtotal

Shipping

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TOTAL

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☐ DISCOVER ☐ AMERICAN EXPRESS

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IN THE FIGHT FOR WORLD PEACE, WE HAVE A SECRET WEAPON.



Many of the problems of the world would disappear if people had enough food.
A goat or cow or other farm animal from Heifer International—and training in
Earth-friendly agriculture—gives struggling families nutrition, income, dignity... and peace.
Learn more at Heifer.org/secretweapon



EDUCATION HIGHLIGHTS

Summer 2011



Heifer Agriculture Education

Heifer Ranch and Overlook Farm
Spring and Fall

Agricultural education programs at Heifer Learning Centers offer an exciting, hands-on look at the sustainable agricultural methods used by Heifer around the world and provide a unique learning experience for those interested in living more sustainably at home. Programs vary by location and cover both livestock and gardening, with participants learning more about both Heifer's work and their own choices. One popular

program, Harvest Time, provides a chance to follow food from the field to the kitchen while learning about livestock, gardening, cooking, food preservation and community building.

Learn more at www.heifer.org/farmprograms or call Overlook Farm at (508) 886-5124 or Heifer Ranch at (501) 889-5124.

EDUCATION HIGHLIGHTS

Summer 2011



PHOTO BY MATT BRADLEY

HEIFER U

Heifer U blends discussions and hands-on activities to further participants' understanding of various aspects of Heifer's work. Participants learn in a workshop/conference setting from peers, Heifer staff and other content experts. Register online at www.heifer.org/heiferu or call (800) 422-1311.

HEIFER U: BRINGING THE HARVEST HOME

Study Heifer's work promoting food sovereignty and food security around the world. Participants will also gain hands-on experience in harvesting and food-preservation techniques that they can use in their homes.

Location/dates:

Hidden Villa, Los Altos Hills, Calif.; Sept. 29–Oct. 2

HEIFER U FOR COLLEGE AND UNIVERSITY STUDENTS

Learn from the experiences of other college students and Heifer staff on how to connect your class and your campus to Heifer International.

Location/dates:

Heifer Ranch, Oct. 27–30

Learning Centers

ADULT PROGRAMS

LIVESTOCK HEALTHCARE WEEK

Receive hands-on experience on how to care for livestock as you assist us with our fall livestock health checks. (18 and older)

Location/dates:

Heifer Ranch, Oct. 2–6

RAISING BEES AND HARVESTING HONEY

Learn more about bees as you participate in our honey

harvesting activities. (18 and older)

Location/dates:

Heifer Ranch, Oct. 2–6

HARVEST TIME

Immerse yourself in a course on food systems, sustainable agriculture and self-reliance techniques. (18 and older)

Location/dates:

Overlook Farm, Oct. 9–12 (co-ed), and Oct. 13–16 (women only)

WOMEN'S LAMBING

Women have an opportunity to learn about Heifer's mission, participate in educational activities and experience light farm chores during a time when lambs are being born. (18 and older)

Location/dates:

Heifer Ranch
March 22–25; March 25–30;
March 30–April 1, 2012

Overlook Farm

March 23–26; March 30–April 2;
April 4–7; April 13–16, 2012.

YOUTH PROGRAMS

GLOBAL GATEWAY

This 24-hour program offers participants firsthand experience with hunger and poverty around the world through unique programming

GLOBAL PASSPORT

Spend three nights living like small-scale farmers around the world. Tend gardens and livestock, buy supplies from the market and prepare your meals. Experience the challenge of improving your circumstances by adopting methods used by Heifer such as improved animal management. Sleep each night in representative housing, such as a Mozambican hut.

Location/dates: Heifer Ranch, July, August and October.

and a night in the Global Village. (6th grade and older, plus chaperone)

Location/dates for individuals:

Heifer Ranch, Oct. 15–16 and Nov. 19–20

Group programs:

Heifer Ranch, Overlook Farm, Shepherd's Spring and Howell Nature Center

DAY CAMP

Day Camp is packed with cultural experiences, farm chores and arts and crafts that explore hunger and poverty issues. (1st–6th grades)

Location/dates for individuals:

Overlook Farm, July and August (Monday–Friday)

GLOBAL CHALLENGE

Global Challenge combines the Global Gateway experience with team-building activities. (6th grade and older, plus chaperone)

Location/dates for individuals:

Heifer Ranch, July 8–11 and Aug. 10–13

Group programs: Heifer Ranch

SUMMER ACTION

Spend a week of your summer vacation experiencing life on a farm while learning how you can help end hunger and poverty! (6th–12th

grades, plus chaperone)

Location/dates for individuals:

Heifer Ranch, July 17–22 and Aug. 7–12

Group programs:

Heifer Ranch and Overlook Farm

Contact Information

To view all of Heifer's educational offerings, visit the web pages below.

STUDY TOURS

(800) 422-1311
studytours@heifer.org
www.heifer.org/studytours

HEIFER U

(800) 422-1311
heiferu@heifer.org
www.heifer.org/heiferu

HEIFER LEARNING CENTER AT HEIFER RANCH

Perryville, Ark.
(501) 889-5124
www.heifer.org/ranch

HEIFER LEARNING CENTER AT HEIFER VILLAGE

Little Rock, Ark.
(877) 870-2697
www.heifer.org/heifervillage

HEIFER LEARNING CENTER AT OVERLOOK FARM

Rutland, Mass.
(508) 886-2221
www.heifer.org/overlook

HEIFER GLOBAL VILLAGE AT HOWELL NATURE CENTER

Howell, Mich.
(517) 546-0249
www.heifer.org/howell

HEIFER GLOBAL VILLAGE AT SHEPHERD'S SPRING

Sharpsburg, Md.
(301) 223-8193
www.heifer.org/shepherd

Group Programs

Heifer's Learning Centers provide interactive programs and exhibits showcasing Heifer's model for global sustainable development. Programs for groups are offered throughout the year and range from a few hours up to five nights. Learn more at www.heifer.org/visit. Enrich your experience by incorporating our free school or congregational resources. View available programs at www.heifer.org/schools or www.heifer.org/congregation.



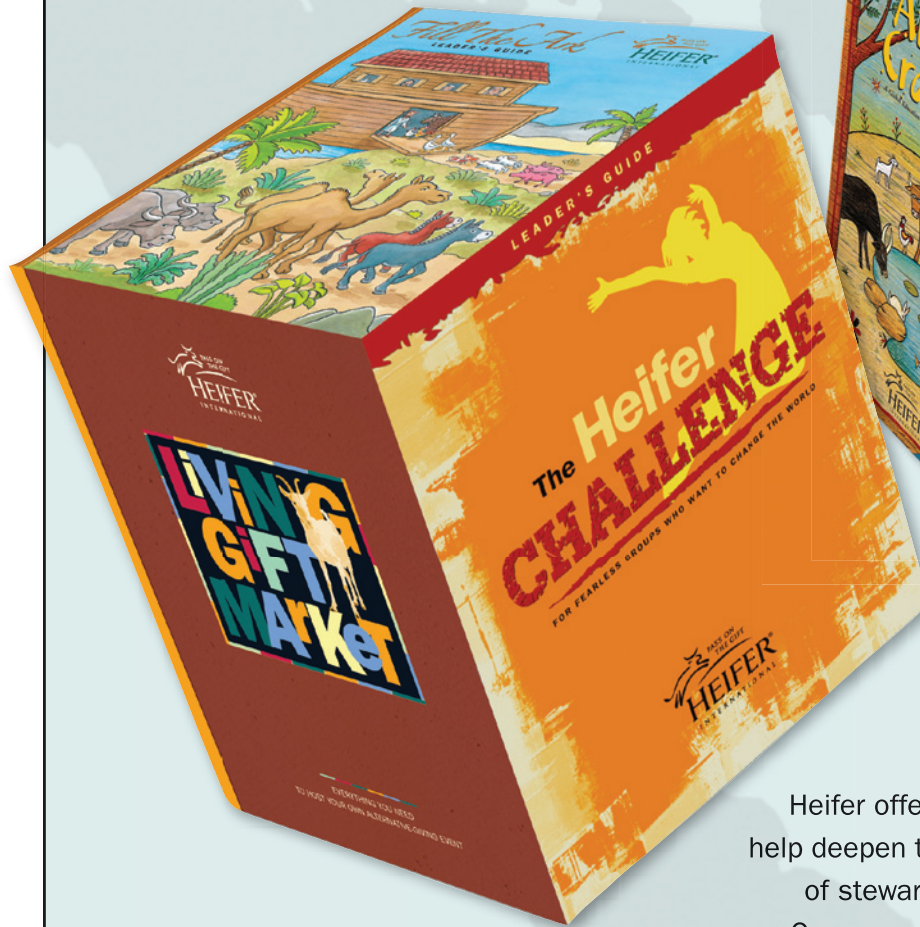
“Women always do what they say they will do.”

— MAME PENDA NDONG

Mame Penda Ndong’s high school education helped her get a job in the nearby city of Tataguine, Senegal, but she comes home to Fandene every weekend to monitor the Heifer project she helped start there. She says she’ll continue to encourage other women to take on leadership positions so they have a say in the work they do every day. Read more about her on pages 24-25.

Photo by Geoff Oliver Bugbee

World Hunger Programs³



FREE!! Congregational Resources

Heifer offers faith communities resources to help deepen their congregation's understanding of stewardship and giving to those in need. Our resources include fundraising materials, global education curricula, Christian and Jewish-centered programs, trip opportunities and volunteer programs. The resources are fun and inspirational and help liven up a congregation. You can download many of the materials instantly or call **(800) 422-0474** to order a free copy of our resource guide.

Go to **www.heifer.org/congregations** or request the **Congregational Resources Catalog** by calling **(800) 422-0474**





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IF YOU WANT TO CHANGE THE WORLD, DON'T GIVE. INVEST.

Wiktorja Gaj
with baby
chicken at
her home
in Poland.
Wiktorja's
family is
prospering
from animals
they received
from Heifer
International.

Invest just \$10 a month, and you've bought a struggling family in Nepal a goat that produces milk, income and fertilizer. Just \$30 a month purchases a flock of sheep that produces milk, wool and income for a family in Cameroon. When you become a Friend of Heifer, you ensure a steady stream of support for our work in the field. It's easy. Once you sign up, we'll automatically charge you each month, and you can stop or change your donation at any time. You'll also receive monthly updates detailing how your investment is changing the world.

BECOME A FRIEND OF HEIFER TODAY.

Call 888-5-HUNGER
(888) 548-6437
www.heifer.org/monthly



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