FOR THE RECORD
Overfishing—know the facts

ANIMALS ARE THE KEY
Windy Wilkins of the Gates Foundation

COWBOY ROUNDUP
Tales of adventure, romance and motion sickness

ZIMBABWE REFRESH
Dairy farmers share success

HEIFER ECUADOR
Defending the Mangroves

PLUS

FOR THE RECORD
Overfishing—know the facts
Celebrating 70 Years of Family Farming

This year marks both the 70th anniversary of Heifer International and the United Nations proclamation of 2014 as the International Year of Family Farming. Family farmers have long been the foundation of thriving communities and societies. We believe it is no different today: they hold the solution to ending hunger and poverty. With 870 million people around the world struggling with hunger, there is still much work to accomplish and Heifer wants YOU, our donors, volunteers, advocates and supporters to help create Communities of Change so that we can all see an end to hunger.

Please join us at one of our Beyond Hunger: Communities of Change events as we mark 70 years of work with family farmers.

Together, we can change the world.

*Milford, Ind. - Sept. 13
Dallas, Texas - Sept. 18
Seattle, Wash. - Sept. 20
Portland, Maine - Sept. 27
Chicago, Ill. - Oct. 1

Perryville, Ark. - Oct. 4
Atlanta, Ga. - Oct. 4
Westfield, N.J. - Oct. 5
Los Angeles, Calif. - Oct. 11
Sacramento, Calif. - Oct. 18

Houston, Texas - Oct. 18
*Manheim, Pa. - Oct. 25
Orange County, Calif. - Nov. 1
Boston, Mass. - Nov. 2

*Pierre Ferrari, President and CEO of Heifer International, will be guest speaker in Milford, Indiana, and Manheim, Pennsylvania.

For more information or to register today, go to www.heifer.org/communities or call 877.243.4337 (877.A.HEIFER) #beyondbhunger
Dear Fellow Activists,

Autumn is a nice time to reflect on our hard work and anticipate the bounties we will harvest. It is a great satisfaction to us at Heifer International that the millions of smallholder farmers with whom we work will have bigger returns than ever before. In keeping with our mission, we also take pride in helping farmers increase their yields while improving, rather than diminishing, the environment.

While in Kenya earlier this year, I had the opportunity to visit a Heifer Farmer Field School in action. Hundreds of smallholder farmers were present, and for good reason. As the weather patterns they have always known change—and they are changing, with rainy and dry seasons coming at different times and with greater intensity than before—their families will struggle with food sufficiency, depending on if they plant correctly and protect the topsoil.

To do our work well, we must maintain and distribute a portfolio of agroecological approaches and technologies that can take into account the uncertainty: terracing, organic farming, trench planting, mandala gardens, rapid composting, etc. Before, these practices were done to improve production and soil fertility. Now, smallholder farmers must adopt these practices with growing intensity because their fields are washing away, cutting into food stores for their families and leaving even less for sale to generate income. Agroecology, applied by rural communities working together, will end hunger and poverty while caring for the Earth.

From Kenyan smallholder farmers setting up terraces, to cattle farmers using manure to fertilize their crops, to Ecuadorian crab hunters protecting mangroves to preserve their livelihoods, Heifer’s project participants know the key to lasting success is to work with the environment. Often overlooked are the so-called ecosystem services, by which humankind reaps benefits such as pollination, decomposition of waste matter and recreation. It is imperative we do what is within our power to protect and improve them.

I hope you enjoy this issue of World Ark, and I encourage you to bookmark your favorite article and pass it along to a friend or family member who might not yet know of our work. The more people working toward our mission, the faster we will accomplish it.

Yours for a better world,

Pierre U. Ferrari, President and CEO
If you’re looking for a way to show your students what life is like in another’s shoes, look no further than Heifer International’s Learning Centers. By spending the night in Heifer’s Global Village, young participants will understand the complications of hunger and poverty and realize nothing should be taken for granted.

Take a trip around the world at Heifer Ranch
Heifer Ranch, just one hour from Little Rock, Ark., offers visitors a one-of-a-kind experience with a firsthand look at the challenges surrounding hunger and poverty. We offer a number of day or multi-night programs suitable for all ages. Come on out to the Ranch!

Enjoy a day or night at Heifer Farm
Heifer Farm is just outside Boston, Mass., and doubles as an education facility and model farm. The Farm offers programs that range from two hours to up to five nights. Book your field trip to Heifer Farm today!

Learn more about programming at Heifer Ranch and Heifer Farm at www.heifer.org/what-you-can-do

For more reservation information contact 855-3HEIFER (855.343.4337)
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COVER
Estefania Cotera Chasin rests near a stream on her property in Bunche, Ecuador.

Cover photo by Dave Anderson
BEE MORE CAREFUL
As a longtime Heifer supporter, I always enjoy receiving World Ark and learning about current programs. As a biologist who spent her research years studying insect feeding behavior, I was especially drawn to the article “Sweet Relief.” It amused me to see that the very lovely photo you chose to accompany the short article was not of a honeybee at all, but rather a hoverfly! The particular one in your photo is of the genus Helophilus, and probably species fasciatus. These flies are believed to be important pollinators, but they do not make honey.

MARY CAROLINE HENRY
Northfield, Minn.

YOU ARE WHAT YOU EAT
I just could not resist writing after reading your article “The Other White Coat,” mostly because of my own recent and ongoing experience.

Nearly two years ago I went from walking three miles at dawn each day, a high energy, physically active person with a variety of interests, to zero energy, no leg strength, extreme fatigue, no interest in life. What was happening? After numerous tests there was not agreement, but I was diagnosed with lupus at the age of nearly 80. All agreed it a rarity.

After months of adhering to a vegan diet recommended by an acupuncturist, my energy, strength and interest in life began a slow, yet discernable improvement. It did require a major shift in my thinking about eating, cooking, food selection and preparation. It required lots of experimenting because my body does not tolerate many of the veggies, spices or flavors in most all vegan and vegetarian diets. It has been and continues to be an interesting journey, easier with time and much more satisfying than I could have imagined.

Several months ago my diagnosis was changed from lupus to mixed connective tissue disease. Whatever it is called, the challenge continues to be learning to accept with gratitude the limitations of my physical body, while at the same time stretching those limits bit by bit. As the acupuncturist reiterated each week, you are what you eat. You become what you think.

People in the park sometimes refer to me as a “walking miracle.” I am enjoying walking about half a mile now with only one short rest. However, when they ask what helped and I mention diet, the reply is nearly always, “Oh, I could never do that! I enjoy eating what I like!”

And that sentiment brings us back to the comment on Page 34 in the article: “that is why they are my patients.” Best wishes, Meenakshi Budhraja, I applaud you! Continue this newly formed partnership between medical and chef professionals. Together they can be a major influence for change to improve health and well-being.

EMILY MUMMA
Lorida, Fla.

Q&A FALL
Tell us your favorite Heifer story (as a donor, gift recipient or reader of World Ark magazine or blog) as we celebrate Heifer’s 70th anniversary.
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JOIN THE CONVERSATION
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Building Toilets in India

A clear safety and wellness issue, lack of access to toilets also has an economic impact. India’s shortage costs the country more than $50 billion a year, mostly through premature deaths and hygiene-related diseases, according a 2010 World Bank study. About 626 million Indians defecate in the open, compared with 14 million in China, the World Health Organization said in a 2012 report. Half of India’s 1.2 billion people currently defecate in the open, the highest number in the world.

Heifer International works to help communities learn and adopt healthier practices, said Rebecca Alderfer, Asia program officer. “We are addressing this issue in all of our projects as part of the human nutrition, hygiene and sanitation trainings, linking the families to government agencies or other NGOs that provide the toilets or microfinancing for toilets.”

About 1,700 toilets have been constructed with the support of Heifer and our partners, including the Indian government, in nine projects in the three states of Bihar, Orissa and Rajasthan. Many more families have built their own.

“If you find it in your heart to care for somebody else, you will have succeeded.”
—Maya Angelou (1928-2014)

Invest in Women

If women had access to resources, on-farm yields could INCREASE BY 20-30%.

This extra output could reduce the number of hungry people in the world by 12-17%.

Source: FAO, 2011

Big Facts
ccafs.cgiar.org/bigfacts
Fish and marine life populations are in danger as our appetite for seafood grows.

The year 2048 is the prediction by the journal Science that all the world's fisheries will have collapsed if fishing continues at its current rate.

More than 1,000,000,000 people rely on fish as their primary source of protein.

70% of the fish population is fully used up or threatened.

Industrial fishing has reduced the number of large ocean fish—sharks, tuna, swordfish and marlin—by 90% since 1947.

More than a third of the world's mangroves have been lost in recent decades as the forest is knocked down to make way for shrimp farms, harbors, tourism and other development.

Shrimp is the most traded seafood, accounting for 15% of the total value of internationally traded fish products in 2011.

Bycatch is unwanted fish and other marine life caught by fishing vessels, with 8-25% of the total global catch being bycatch, which includes birds, turtles, dolphins, whales, and shrimp.

Overfishing isn't the only threat to marine life. Reduced stock is also caused by climate change, pollution, habitat loss, and industrial fishing.

Sources:
1. FAO
2. The journal Science
3. The journal Nature
4. Design by FFCTN.COM
Now a wholesome symbol of home and Americana, the apple has long shaken its seedy reputation. It’s easy to forget that the seemingly innocent fruit once tempted Adam and Eve to set off the downfall of mankind. Carrie Nation didn’t forget, though. That most vehement of temperance leaders, Nation once sharpened her ax on apple trees to stanch the flow of hard cider and applejack.

Advertising and public relations efforts recast apples as healthy and pure around the beginning of the 20th century, when proponents coined the popular phrase “An apple a day keeps the doctor away.” With their reputation finally clear, apples became a popular treat for teachers in frontier schools where parents were often responsible for teachers’ room and board. Bing Crosby canonized apples as a classroom favor in 1939 when he sang, “An apple for the teacher will always do the trick when you don’t know your lesson in arithmetic.”

Order a gift of tree seedlings from Heifer’s gift catalog to share with a family in need. Each gift of a tree:
- Yields nutritious fruits and nuts that improve health
- Provides firewood and fodder
- Enriches the soil and purifies the air

Season’s Eatings

Eating foods in season is easy-peasy in spring and summer when fruits and vegetables are plentiful and inexpensive. The bleaker months present much more of a challenge.

So here’s your reminder: If you hurry, there’s still time to freeze, can, dry, pickle and otherwise lay in for the winter. And if you’re a carnivore, know that winter is prime time for beef. Pastured cows fatten themselves up in the fall in preparation for the cold. Eggs are best in the spring, when chickens naturally lay more.

For the Birds

Our feathered friends eat insects, spread seeds and sing us beautiful songs all summer long, so maybe it’s time to repay the favor. The chilly months are tough on birds. You can help them weather the winter by offering them fatty, calorie-rich foods like sunflower seeds, nuts and suet. Install birdhouses to provide shelter from the wind. And if you’re feeling especially generous, a heated birdbath kept filled with fresh water saves the birdies from having to waste precious calories melting snow and ice to stay hydrated.
Preparing Your Garden for Winter

By Katie Kilpatrick, World Ark contributor

Who better to help you bundle up your garden beds for the cold than a seasoned field hand? Katie Kilpatrick is the farm manager at St. Joseph Farm, an organic farm and education center in North Little Rock, Arkansas, that’s partnering with Heifer International to help small-scale farmers get off to a strong start. Kilpatrick is an expert on keeping soil healthy so that it’s ready to yield bumper crops next year.

Many people forget all about their garden in the winter—it’s too cold for anything to grow, right? While it’s a bit frigid for most plants, there are still microorganisms in the soil. Bacteria and mycorrhizae fungi live through the winter and are vital for your crops. They help root hairs absorb water and minerals by increasing surface area, and some types can fix nitrogen from the air for plants to use. Microbes are also vital to creating soil structure. Keeping the microorganisms alive year-round is a must for plant health. Adding organic matter to the soil through composting and cover cropping is one of the best ways to do this.

Winter is a great time to compost all the crop residues from summer and fall. When you add compost to soil, you are adding organic matter, which is food for microbes. Build a compost pile by layering fresh, green materials with dead, brown materials. This will balance the carbon and nitrogen in your pile. Green materials, such as dying pepper and okra plants, have an abundance of nitrogen. Brown materials, such as fallen leaves and long-dead plants you never got around to pulling out in the middle of the summer, have lots of carbon. A balance of carbon and nitrogen will allow the pile to heat up quickly and break down all winter. The heat speeds up the decomposition and kills pests and diseases that may be on plants you have in the pile. Just remember to turn it occasionally.

While that’s going on, don’t forget about the soil and microbes already in your garden. Instead of letting the soil sit fallow all winter, plant a fall/winter cover crop. A favorite mix is crimson clover, hairy vetch and rye. All three contribute nitrogen to the soil. Rye has allelopathic properties, meaning it keeps other seeds nearby from germinating—like weed seeds. Fall cover cropping can shade out weeds and keep the soil from eroding, as well as tie up nutrients in their roots that otherwise might wash away with rain or snow melt. In the dead of winter, the crops will die, but they are still helpful. The dead plants will fall down on the soil and hold it in place, while also breaking down and becoming food for microorganisms. Plus, you can use the plants as mulch for your early spring planting.

When you focus your winter months on building soil life for the next growing season, you’re really building an army of helpers who will be ready to help you come spring.

To learn more, go to www.heifer.org/seedsofchange.
As a program officer at the Bill & Melinda Gates Foundation, Windy Wilkins aims to maximize the benefits livestock can bring to people struggling to pull themselves out of poverty. Heifer International is proud to work with Wilkins and the Gates Foundation on the East Africa Dairy Development (EADD) program. Now in its second phase, EADD links small-scale dairy producers in Kenya, Uganda and Tanzania with the equipment, customers, marketing strategies and training they need to grow their businesses and strengthen their communities.

In this interview, Wilkins shares what we’ve learned so far and delineates the goals we’re still striving to reach.

WORLD ARK: When did you start with the Bill & Melinda Gates Foundation, and what attracted you to working there?

WILKINS: I have been with the Foundation full-time since April 2011. What drew me was the potential to really create transformative change and the chance to tackle some of the world’s hardest problems.

Growing up I had family living in Central America, so I was able to visit them and see at a young age how life is different in developing countries. I grew up on an island outside Seattle, and we had a sister island in Nicaragua. In high school I lived with a host family there for two weeks. It opened my eyes to just some of the inequalities of this world, and I saw that I—growing up in the U.S.—was quite privileged. The experience instilled in me a desire to try to create change in some of these communities.

What do you see as the role of livestock in development?

We’ve been deepening our understanding of the fact that when we talk about smallholder farmers, we can’t talk about a maize farmer and cattle farmer. It’s usually the same person. A huge number of smallholder farmers raise livestock. Nearly a billion of the world’s poor living on less than two dollars a day own livestock and depend on those animals for their livelihood.

We also look at the role livestock plays in the lives of a poor family. Selling milk can bring a regular cash flow, and milk and eggs are extremely nutritious, particularly for women and children. Animals also provide manure and draft power, so there are a lot of different roles animals can play on a farm.

Our work focuses on animal health, animal genetics and making sure farmers have access to the inputs they need to increase production and sell the surplus into the market.

What work are you most excited about?

I’m very excited that we are increasing our investment in livestock. This has been a very underfunded area for a long time, yet it is an area of significant potential impact for smallholder farmers.

I’m also excited about the work we do to put female farmers at the core. There’s evidence
Dairy Development Program

How do you address concerns about livestock’s potentially negative impact on the environment?
While there are environmental concerns associated with raising livestock, there are also ways to abate livestock’s footprint. Within our grant making, we evaluate and plan for potential environmental impacts and develop interventions to mitigate the negative impacts and enhance the positive impacts. We are focused on helping smallholder farmers increase the productivity of their livestock and farms while protecting the environment for future generations.

What are the qualities the Bill & Melinda Gates Foundation looks for in grantees?
For me, the number one quality is the ability to achieve significant impact on the ground for smallholder farmers. We have ambitious goals, and we want partners who can drive impact. In order to do this, we look for grantees who have a really strong understanding of the communities in which they’re operating.

Heifer has now begun Phase II of the East Africa Dairy Development program. What were the most important things we learned during the first phase?
The main accomplishment from the first phase has been in refining what we’re now calling the dairy hub approach. We went into EADD Phase I with a prescriptive view around how you set up a dairy hub with a chilling plant. One of the big successes of Phase I was to tailor the dairy hub concept to be more adaptive to local conditions in a specific country, including the stage of industry development.

In Phase II, we are now using a refined hub approach we call Hub 2.0, which emphasizes taking an evolutionary approach to hub development with a clear exit strategy defined, focusing more on productivity growth for farmers, and ensuring strong management and governance from the beginning. Our hope is that this approach will get hubs to sustainability faster and deliver more impact to farmers.
The other thing I would say is we have some evidence that there are a lot of spillover benefits around the dairy hubs, and that these hubs can be economic engines in the communities in which they operate. We’re still trying to understand and measure what that looks like. Phase II will include a strong evaluation and learning component to help us understand this better.

Third, I’m very encouraged by the potential EADD has to develop an approach that can be replicated by other parties. EADD has had some successes with this already, with the governments of Rwanda and Uganda incorporating the hub approach into their national dairy strategies. However, there is more to be done to prove this approach so it can be scaled by private sector and government partners.

**What are some of the goals for Phase II?**
There are four primary outcomes we’re driving toward. We’re focused on the sustainability of dairy hubs, and we’re expecting these businesses will be on a path to operating successfully on their own. Two, we’re looking at farmer sustainability. We want to double the dairy productivity and income of smallholders. We also have some goals around gender, including engaging more women in dairy hub businesses, and increasing women’s participation in decision making and control over productive assets, going back to the role women play in agriculture. Finally, we’re interested in scale and replication, getting others to learn about and adopt the hub model so it can be scaled beyond what EADD can accomplish on its own.

**What are the biggest challenges with EADD?**
There are many challenges. A big one is that EADD is just a very complex project. It’s a consortium with multiple partners in three different countries, so a lot of challenges fall around ensuring all of the people are aligned and moving in the same direction and executing on the ground.

Two is that we need to implement a better monitoring, learning and evaluation system to better understand and respond to challenges on the ground. We are working in complex environments, and we need to have adaptive management to allow us to adjust and redirect programs as appropriate.

Third is deeper engagement with the private sector. Cultivating relationships with private sector processors is key to the success of Phase II and to replication, and is an area we need to deepen in Phase II.

**Is there one person you met who embodies your hopes for EADD?**
I’ll speak to one woman I met in Tanzania, Deborah Njombe. It’s really impressive to see what she has been able to do. She started with one cow, then increased productivity and started growing fodder to sell in her community. Njombe’s story really shows the power an animal can have in growing a family’s livelihood. She was able to increase what she was doing with her dairy business but also diversify into other businesses as well, and had a number of thriving businesses—very inspiring.

Learn more at www.heifer.org/EADD
SOMETIMES IT’S GOOD TO SEE DOUBLE

Have you made a gift to Heifer in the past year? You could double it with the help of your employer! Thousands of companies will match their employees’ gifts to Heifer...even gifts given months ago. Many companies even match retirees’ gifts.

Go to WWW.HEIFER.ORG/MATCHING to find out if your employer has a matching gifts program. Just type the company’s name in the search field and follow the instructions from your employer.

If you don’t find your employer, please check with your human resources department. Together we can Pass on the Gift and make a big difference in the lives of men, women and children all over the world.
With its 70th birthday celebrations this year, Heifer International called the cowboys home to honor their immeasurable contributions and collect their memories for posterity.
BY AUSTIN BAILEY, WORLD ARK SENIOR EDITOR
PHOTOS BY LACEY WEST, VIDEO PRODUCER
At the close of World War II, herds of young men and a few women crossed oceans with shipments of livestock for families whose livelihoods were obliterated during the fighting. We credit those seagoing cowboys with cementing the foundation of Heifer International, which grew into a global nonprofit that’s now 70 years strong.

The all-expenses-paid trip overseas came with a number of caveats. The animals had to be fed and their stalls mucked multiple times a day. Seasickness was practically a given on the utilitarian ships that shuttled livestock and other aid to postwar countries. And there was no getting around it, the poignant stench from mounds of manure would be inescapable.

For the young men eager to earn their credentials as seagoing cowboys, there was no waffling. This was a plum chance to do important work and sample a taste of freedom, all while setting out into the wider world for the first time.

Teams of boys as young as 15 caught trains or hitched rides from heartland farming communities to the ocean ports where they would set sail. Those boys are in their 70s, 80s and 90s today, but their stories of adventures on board and ashore are as vibrant as ever.

Nearly 7,000 young men took to the high seas to deliver livestock on Heifer’s behalf after World War II. The deliveries came about through a partnership between the United Nations Relief and Rehabilitation Administration (UNRRA) and the Brethren Service Committee of the Church of the Brethren. Heifer still gives animals to families around the world, although today most of those animals are purchased in the regions where they’re given. Alas, the golden era of the seagoing cowboy is past.

But with its 70th birthday celebrations this year, Heifer International called the cowboys home to honor their immeasurable contributions and collect their memories for posterity. Some wrote in with their stories, a few called. And much to our delight, a handful of cowboys showed up in person and agreed to an interview. Following are highlights from a few of our favorites.
It’s high time to chronicle the cowboy legacy, said Peggy Reiff Miller, an author, historian and archivist who’s interviewing as many cowboys as she can find for two books she has in the works, as well as for her website, seagoingcowboys.com. Miller and a crew of her beloved cowboys came to Heifer headquarters in Little Rock, Ark., in March 2014 to share their stories at a celebration of Heifer’s 70th anniversary.

Miller didn’t aspire to become the expert on all things cowboy when she set out to learn about her grandfather, who traveled to Poland as a young man. But as she flipped through old photos and learned about the early days of Heifer, she quickly realized her grandfather’s story was only a tiny thread of a rich history that remains largely uncaptured.

“It didn’t take long for me to realize, here’s a history that’s hiding away in people’s drawers, in people’s attics,” she said. “I realized, too, as I interviewed these men, how much it meant to them. This was a very formative time in their lives.”

So what started out as a personal quest turned into a full-time job for Miller, now established as the go-to expert not only on the cowboys, but also on the early days of the organization that has grown strong on the foundation those cowboys built.

“If you like to feed dusty hay to confused cows who are sliding around on a layer of fresh manure that has greased a floor that is rocking four ways at once from 40-foot North Atlantic waves, while you are so seasick there’s nothing left in your stomach to throw up and you almost wish you were dead, and you almost wish you had stayed home on the farm instead of volunteering to be completely miserable, then welcome,” retired minister Merle Crouse told his audience at Heifer headquarters in March. “Welcome to the experience of being a seagoing cowboy.” Crouse and a few other cowboys from Heifer’s earliest days headlined a 70th birthday celebration for Heifer International that brought together longtime supporters and new recruits in the mission to end poverty.

Like many other cowboys, Crouse was following in the footsteps of a family member when he signed on for his overseas adventure. His father went to Poland to deliver animals when Crouse was in high school, so when he graduated from college, Crouse left the family farm in Maryland bound for Bremerhaven, Germany, to deliver 63 heifers. He was assigned to a merchant ship departing New York in November, when cold temperatures and choppy waters make for a tumultuous crossing.

“The North Atlantic gets pretty raucous,” Crouse remembered. He and other crew members
locked hatches and windows and spent most of their time huddling below deck. At mealtimes, the cowboys had the choice of losing their food when rough waters sent everything flying off the table, or holding on to their plates and losing the meals later, over the side of the ship.

“So it wasn’t all fun,” Crouse said.

His plans to spend two years in Germany for the Brethren Volunteer Service shifted when he was called to work in Istanbul, Turkey, instead. That’s where he met his wife. When they returned to the United States, the couple went to Ecuador, where three of their four children were born.

Crouse kept up with Heifer International throughout his life but was still surprised in March when he got the chance to meet with Heifer staff and see how far-reaching Heifer became thanks to the early contributions of cowboys like himself.

“I did not realize how elaborate and developed Heifer has become until we got here,” he said.

Younger brothers tend to follow their older brothers’ leads, and so it was that young Howard Lord boarded a ship bound for Greece in 1947. He was working on the family’s farm in Grinnell, Iowa, deferred from the war as a conscientious objector for his Quaker beliefs, when he got a letter from his brother urging him to hop the next cattle boat. The trip would require him to leave his fiancee, Wilma Russell, but she didn’t object. She had some things to do, herself.

“I made my wedding dress while he was gone,” she explained.

So Lord promised his dad he would be back in time for spring planting and took off for Greece as a seagoing cowboy. The trans-Atlantic leg was only the first part of his trip. Lord left Greece for Djibouti to deliver cattle, sheep, mules, horses and chickens. The poverty he witnessed in both Athens and Africa rattled him. Seeing grass shacks sagging in the shadows of grand palaces and meeting people with the distended bellies and red hair that are surefire marks of severe malnutrition left him questioning his plan to farm.

“It was a total change of life; I was never the same,” he said. “I became so much more socially conscious ... it was almost like starting life all over again.”

Once back in the United States and married, Howard Lord entered seminary. Wilma Russell Lord gracefully donned the role of pastor’s wife and supported them during the seminary years by sewing and baking pies.
At 17 years old, Richard Reiste was antsy to get out of Iowa. Having ventured beyond state borders only twice before, to Chicago and Kansas, Reiste was jumping to leave his family’s farm and explore more of the world. “So going abroad was something really big for me,” he said.

Heading across an ocean to deliver animals sounded so good to Reiste that he ended up signing on for two trips nearly back-to-back, one to Italy in 1946 and one to China in 1947. An exuberant traveler, Reiste made the most of both.

Reiste set out for Italy in the summer before his senior year of high school, stopping to visit family in Chicago before catching a train bound for his port of departure in New Orleans. He and about 30 other men took on the care of horses bound for Trieste, Italy.

The crossing was tough on animals, and not all of the horses survived. Reiste remembers one particular burial at sea with a grisly ending. The cowboys swung the horse’s body out on a piece of canvas and dropped it in the ocean.

“It was a beautiful day that day, really still,” he said. As the horse’s body floated away, “We saw a gigantic fin come up out of the water and the horse disappears. I wonder what kind of shark or what could handle a 1700-pound horse for breakfast. It just really makes you appreciate the variety that God has created.”

Reiste stared, amazed, as they floated past the Rock of Gibraltar and Africa’s purple mountains. In the Adriatic Sea he was taken with the clear blue water and the life he could see in it. “The jellyfish looked just like Aunt Jemima pancakes, beautiful brown pancakes here and there,” he said. Docked in Trieste, Reiste became a student of black market economics, accompanying a friend to swap cigarettes, a valuable black-market commodity, for an accordion.

Reiste made it back home at the end of September. “I was a little bit late to school, but I didn’t mind that,” he said.

Soon after, his pastor heard about the first Heifer shipment bound for China. Reiste and three of his classmates signed up, and he headed back to New Orleans on Christmas break to board the very same ship he’d taken to Italy. The crew shipped out and through the Panama Canal, then docked in Pedro, Calif., long enough for the crew to see the Rose Parade in Pasadena on New Year’s Day. Reiste and company then traversed the Pacific, arriving at Shanghai during the Chinese New Year celebrations. Alongside the fireworks, Reiste noticed the bedraggled rickshaw boys who worked for two eggs a day and a mat to sleep on.

Storms dogged the ship during a side-trip to pick up more livestock in New Zealand, and a huge wave nearly washed one cowboy overboard.

Once back home, Reiste felt changed. “I had so much more appreciation for everything. I had a sense and a desire to learn about other people,” he said. He made his home in Minburn, Iowa, and eventually slowed his pace a bit, but he still heads out of town often. He volunteers at Heifer’s information booth at the state fair in Des Moines each fall, and shows up every year at a reunion for Iowa’s seagoing cowboys. In March, Reiste was among the cowboy glitterati feted and photographed in Little Rock for the 70th celebration.
Was it his devil-may-care account of hitchhiking through New England that summer before being called up for cowboy duties that cast him as the dashing vagabond? Or was it the suspense of his last-minute race to Newport News, Va., to catch his ship bound for Italy? Maybe it was the image of him slumped in the shadows behind an outdoor opera house, exhausted from travel but determined to hear the lyrics of “Carmen” performed al fresco on a summer night.

Regardless, Donald Struchen’s enchanting, sun-dappled tales of his seagoing days brim with an infectious spirit of adventure. His photos from that summer, peopled with pretty girls in polka dot dresses and sunburned young men squinting in the bright sun, add even more glamour.

A retired Methodist minister now living in New York, Struchen shared his story via email:

“it was the summer of 1946 when I was a student at Garrett-Evangelical Seminary in Evanston, Ill. A fellow student and I thought a good way to spend the summer would be to help the farmers in Europe recover from the war by taking them some livestock. Arrangements were made and we were told to report to the Carroll Victory ship in Newport News, Va. We began hitchhiking from Evanston to Virginia only to be told when we arrived the ship was not ready. My friend was interested in a girl who was in Buzzards Bay, Mass., for the summer so we hitchhiked up there. Since we didn’t know how long it would be before sailing, we got dishwashing jobs in a restaurant, but before we could begin work for even one day we received word to report to the ship in three days. So it was back on the highway with thumbs in the air and hope that we could make it over the July Fourth holiday before the ship sailed.

“We did get there and watched them load 900 horses, which were going to Trieste. We were happy about this, for most ships were going to Poland and we thought this would be different. My partner and I were assigned to caring for 50 horses in the front hold in the bow of the ship. We watered and fed them regularly every day. We kept them standing the whole time. We helped the vet care for them if they needed care. ... The manure piled up higher and higher every day, so the smells were pretty powerful along with the heat down in the hold and the seasickness that hit us as we rolled out into the ocean. I recall lying on a bale of hay and asking myself if I regretted my decision to make this trip. The answer was NO. It was a great adventure and wonderful summer even though I was bitten in the arm by one of the horses.

“It took two weeks to get to Trieste but along the way I had a lot of time to read. I was reading Ben Hur about a slave who was rowing on a slave ship. On the day that our ship went through the Straits of Messina I read that Ben Hur was rowing through the Straits of Messina. Talk about coincidence!

“We had three days ashore before we were to head home. One night we found an outdoor opera house, and I recall standing along a wall at the back listening to “Carmen” and fighting sleep, for we were exhausted. I bought a beautiful carved wooden horse about 4x6 inches in size as a remembrance. It still stands on a shelf in my house. We met two
A doctor and author of *Life, Love, Llamas, and Laughs: My Story*, Arthur Kennel wrote in his memoir that his trip to Poland at age 16 was “a defining experience in my life.” He took in the human toll of warfare and recommitted himself to nonviolence. He watched porpoises glisten and leap alongside the bow of the ship, and he marveled at the strength of the Polish women at the port in Gdynia who unloaded 130-pound hay bales without any assistance.

Kennel encountered other marvels, less endearing but undoubtedly eye-opening for a 16-year-old Mennonite boy from Pennsylvania. For instance, Kennel quickly realized the pitching and weaving that was making him so seasick was also provoking the crowded horses, which were becoming surlier by the day. “The horses were almost constantly nipping at each other and some of them tried to bite a piece out of their caregiver. Horse bites could be quite serious,” he wrote.

Safely docked in Poland, Kennel got a lesson in port city economics. “There was the usual contingent of women of ill repute, often brokered by a little brother. The going rate was a pack of cigarettes or a chocolate bar.” Kennel was also taken aback by all the drinking, especially when a Russian soldier got handsy. “One of them was so ebullient on meeting us that he insisted on kissing each one of us,” Kennel wrote.

In the end, Kennel was proud to be a part of Heifer’s efforts with his fellow cowboys to lift up people who had been knocked down by war.

“I derived some satisfaction to know that I had been permitted to do my bit, however small, toward restoring the people smited by repeated ravishes of fighting.”
MUISNE, ECUADOR—
There’s not much to planting a mangrove tree. Wait for a propagule, which is a special seed that looks like a giant green bean, to bob in with the tide. Plunk it into the silt, and you’re done.

Mangrove trees are famously tough and can usually take care of themselves from there. But the mangroves’ celebrated self-defenses have their limits. Developers’ bulldozers knock down in minutes those thick tangles of trees that can otherwise withstand decades of salt and storms. And then there’s the slower desecration wrought by pollution. Along the mouth of Ecuador’s Muisne River, mangroves spared by dozers are left to stew in mysterious effluvia gushing from shrimp farm drainage pipes.

So as large-scale shrimp farmers flatten forests and steep those left standing in waste, shellfish gatherer and mother of three Carmen Obando quietly moonlights as a serial sower of mangroves. Obando is one of an army of self-appointed bodyguards who step in to preserve the mangroves when the laws aimed at protecting them fail.

“When they clear them, we plant it back,” she said. “It’s a tough situation. They cut, we replace, back and forth.”

Commercial shrimp farmers dug their first ponds in Ecuador in 1969. By the turn of the century, the country had lost more than half of its mangroves to development, most of that being large-scale shrimp farming to feed growing...
markets in the United States and Europe. Around the busy coastal town of Muisne in the province of Esmeraldas, the 50,000 acres of mangroves that stood along the coast a few decades ago is down to only 7,500 acres today, said Frank Navarrete, an organizer with Heifer International partner organization FUNDECOL.

Esmeraldas is one of the regions where FUNDECOL and Heifer International help people like Obando nurse the mangroves back to health and build the political influence and legal know-how to fight wealthy and powerful industrial fish farmers. Meanwhile, families here flounder for new ways to make a living as the mangroves, a source of food, shelter and income for generations, disappear.

“IT’S A TOUGH SITUATION. THEY CUT, WE REPLACE, BACK AND FORTH.”
—CARMEN OBANDO

THE SECRET LIFE OF MANGROVES
At first glance the mangroves of Esmeraldas are not particularly stunning, just a gangly ribbon of roots stretching up from brackish water around the mouth of the Muisne River. Slender trunks spill into the water like an overturned bowl of spaghetti, sprawled out in clumps and strands.

Not much excitement on the surface, but in the water and among the branches teem an abundance of birds, fish, crabs and other species that make mangroves one of the most diverse and productive ecosystems on Earth. Beyond providing habitat, mangroves stand firm against sea swells and storms, protecting the inland. They also clean salt from marine breezes, filter salt from brackish water and prevent erosion by holding soil in place with their roots.

For centuries, people living along the coast in Esmeraldas found just about everything they needed in the mangroves. The region is poor and populated largely by Afro-Ecuadorians whose ancestors arrived in South America aboard Spanish slave ships. Racism left over from the Spanish colonial era endures. Independence
and self-reliance are hardwired into this culture founded by people who escaped lives of servitude. Here, they found that for anyone willing to throw a fishing net or dig shellfish, the mangrove would provide.

So it was 16 years ago when Flora Gomez came from Esmeraldas City to the tiny island of Las Manchas as a new bride. Her new house lined up with the others in this village small enough to fit inside a minor league baseball stadium. Houses on Las Manchas stand on stilts to avoid the high tide that washes across the island every day, leaving a fresh blanket of seaweed and shells. A brace of boats waits in the crescent-shaped harbor to carry men out to fish and women out to collect shellfish and crabs. With little trouble to get into and nowhere to hide, dogs and children have free rein.

“It’s a peaceful place, not like the city with its cars and crime,” Gomez said. The ocean offered plenty of fish and shrimp for everyone to eat, and rooftop rainwater collection systems provided enough to drink. For the rest, shops in Muisne were half an hour away by motorboat.

For the women of Las Manchas, the traditional work of gathering conchas, or shellfish, yielded plenty of food for the family, plus enough to sell in order to buy other necessities. Gomez embraced the life of a conchera, wading into the mangroves and brazenly reaching elbow-deep or more into the mud to pluck shellfish from among the roots. Working in teams, the women could gather hundreds in a few hours. Until recently, the mangroves were fruitful enough to support dozens of families living this way in their tall wooden houses on Las Manchas.

But Gomez has watched the bounty of her early days on Las Manchas dry up as mangrove forests are sacrificed for fish farming. With the network of mangroves fractured, marine life in the remaining forests dwindles. Coin-sized crabs still scramble up mangrove trunks, and lots of birds still fish in the water. But concheras like Gomez say the mussels that once provided them a solid living are disappearing fast.

“We search more and end up with less,” she said. Her own harvests are down at least 50 percent, and most of her neighbors moved away when they could no longer collect enough shellfish to make a

At left, Flora Gomez hunts shellfish in the mangrove forest near her home on Las Manchas Island.

Above, the coastal city of Muisne and much of the province of Esmeraldas are populated largely by Ecuadorians of African descent.
When she moved here, 60 families lived on the island. Today, Gomez, her husband and their three children are among a handful of families remaining on Las Manchas.

A FORCED MIGRATION

Of the shrimp farming operations carved through the mangroves in Esmeraldas, some of the developers bought their land, while others just showed up and started clearing. People already living in the mangroves and relying on them for their livelihoods had little protection, said Rosa Rodriguez, director of Heifer Ecuador. Shrimp farm owners “have been very close to power,” she said. Armed with money and influence, they were able to move in with little to no red tape or oversight.

That doesn’t mean there was no opposition. People who rely on the mangroves tried to keep the forests intact. “Defending the mangrove is defending their way of life,” Rodriguez said. But what could they do in the face of developers’ bulldozers and teams of armed security guards?

Those guards routinely patrol the perimeters of the shrimp ponds, which makes conchera Yoca Obando-Ordoñez nervous. “Sometimes you have to be careful and hide when you look for shellfish because the security might fire at you,” she said. The guards’ presence makes her indignant, too. Instead of hiring locals to work security and other
jobs on the shrimp farms, operators routinely bring in employees from elsewhere. "They destroy our livelihood, and on top of that they bring other people in, they don’t hire local people," she said.

It’s frustrating to see people cut off from what was once a rich source of food and income, Rodriguez said. “The mangrove used to be the livelihood for all of us. Now, it’s just for a couple of people who work there.”

Obando-Ordoñez still goes into the mangroves to collect shellfish, but not every day. Like so many others, she left her home on Las Manchas to move into Muisne, where she and other displaced concheras now make money preparing and selling food. Obando-Ordoñez is president of a 16-member group, which works out of an open-air, grass-thatched restaurant built by one of the member’s husbands. Some of the funding to get the restaurant and catering business started came from Heifer and FUNDECOL.

Obando-Ordoñez spends most of her working time in the kitchen or out in the streets selling her fresh-cooked meals. During her weekly trips into the mangroves to collect shellfish she wears rubber gloves, which is a new development. The mud never used to bother her before the shrimp farms moved in. Now, she says, it gives her an itchy rash.

Still, she prefers her old life of collecting shellfish over living in the city and cooking for a living. So far, she hasn’t been able to make as much money in the restaurant business as she once could selling shellfish. And she misses Las Manchas. "Wouldn’t it be great if all the people who moved away came back and we could put our village together again?"

HEADING FOR THE HILLS
Heading inland from Muisne, it takes only a few minutes before the elevation begins to climb and the scrubby grass and brush from the coast
Estefania Cotera Chasin makes the lengthy commute from her home in the village of Bunche to her 15-acre farm in the jungle.

morphs into an electric green carpet that almost makes eyes water. Deforestation left the region prone to flooding and mudslides, so many houses tower high on wooden stilts.

Estefania Cotera Chasin, 68, lives up a steep flight of stairs in Bunche, a village set between ocean and hills. Mother of 12, grandmother of 28, great grandmother of 16, Cotera is also a businesswoman whose prescience would likely make millions on Wall Street. When shellfish populations dropped, Cotera knew it was time to diversify. Now she thrives as a farmer.

Cotera’s children were young when she noticed the shellfish she depended on for her only source of income were starting to dwindle. So she started putting money aside for a different future. All of the children went out with her to the mangroves, and they would routinely bring back lucrative hauls. “Sometimes we could get a thousand shellfish. That’s how we saved up to buy land,” Cotera said.

Twelve years ago she started buying acreage where she could graze cattle and plant crops. She now owns almost 15 acres, and she makes the trip out of town to manage them every day. Cotera has to wear galoshes for the 90-minute commute up and down boot-sucking mud paths, across a bamboo bridge and over levees separating the pools of a shrimp farm. Her land climbs up steep hills and is bisected by a river she sometimes canoes in on when she’s harvesting bananas to bring back to Bunche. Papaya, orange, plantain and other fruit trees grow on Cotera’s farm, along with manioc and cacao. She also grows tagua, a tree that produces a hard seed known as vegetable ivory that’s popular for carving and button making.

Someone hiking through the forests near Bunche might not notice much difference when he steps on Cotera’s farm. There’s no row cropping or extensive irrigation system. Instead, the farm is a diverse system designed to function naturally, without the need for too much labor or capital. Hillsides are delicate and prone to erosion, so Cotera is careful to let them rest and regenerate when needed. The know-how for managing the land...
Estefania Cotera Chasin bought land years ago when she realized the shellfish she relied on for income were disappearing. Now she is a successful farmer, raising fruit, cacao and pigs.

came from Cotera’s mother, who also farmed.

Cotera is divorced, and most of her children are busy with their own work, but she hires people to help her on the farm with money from selling piglets that are offspring from a pig Heifer gave her almost six years ago. She’s also taken out a loan from Concheras de Bunche, the 17-member women’s group she’s part of that partners with Heifer. Heifer helped them set up a revolving fund, which Cotera used to buy land and barbed wire to pen her animals. She was able to pay the loan back quickly by selling piglets and cacao.

The mangroves still beckon, and Cotera wades out two or three times a week to collect shellfish for her beloved shellfish soup. But she’s grateful she doesn’t have to depend on the mangroves as her only source of income anymore. With just a little bit of help, Cotera mapped out a new career that keeps her comfortable and helps her provide for her big family.

“I’m taking advantage of what I’ve been given,” she said.
MILKING

BY ELIZABETH ELANGO BINTLIFF, VICE PRESIDENT FOR AFRICA PROGRAM

PHOTOS BY TAPIWA MAPINGIRE
RTUNITY IN ZIMBABWE
CHIKOMBA DISTRICT, ZIMBABWE—It is the middle of the rainy season and many roads have been washed away, making the drive to the village longer than usual. The four-wheel drive dips dangerously into crested streams, the water rising above the wheels. At times it loses traction in the mud, slipping and sliding, this way and that way. On either side of the road there are large boulders, many of them piled on top of each other. Zimbabwe is home to boulders that would give Stonehenge a run for its money.

When we arrive at the Shona community, men are seated under a large tree, shading themselves from the midday sun. Women dance and sing loudly in a merry group. There is clapping, ululation and hugging; a palpable joyfulness fills the air.

In this community, families are organized into homesteads. A small cluster of homes shows the intertwining of the past and the future. Concrete, tin-roof houses are interspersed with round mud homes topped with thatch. Small boys are seated under the shade of trees in the distance, herding cattle. Dogs walk about absentmindedly, and two large turkeys fight in the yard.

Several dozen cows lounge in a pen a few hundred feet away, the ground muddied from the last few days of heavy rainfall. Esther Sibanda, a small, wise lady in a brown African dress and bright paisley scarf, is standing beside her son, Facewell Siyakalangelana. She points proudly to the 25 cows she owns.

In 2007, Sibanda received 11 cows from a Heifer dairy project that started that same year. She remembers the exact date the animals came. “It was July 4, 2007,” she said. Since then, she has passed on 11 cows to other neighbors in need, sold some and added to her herd.

“Dan West has done good things for us,” Sibanda said, referring to Heifer’s founder as if he was a personal friend. She talks freely of the benefits the cows have brought to her life: milk, manure and money.
Women celebrate the arrival of Heifer staff to their village in Chikomba, Zimbabwe.
When her husband passed away in 1975, she was afraid for her future. In keeping with tradition, his estate went to his birth family; they took all his assets. “I was left with two cows,” she said, holding up two fingers to her face. “Then one died,” she added, and for a moment there was a deep sadness behind her eyes.

But the cows she received from Heifer, in addition to the one she already had, made a big difference to her and the 15 members of her family—some of them orphaned grandchildren—whom she supports. “God gave me large spoons so I can stretch them and feed others,” she said, speaking in her native Shona, which is lyrical and peppered with the clicks that some southern African languages are known for.

Sibanda’s story is not unlike many of her neighbors’; Simon Ramaboea, who also received cows through the same project, shares her sentiments, if not her dreams. Pointing to his cows, he tells his dream of one day becoming a breeder. Holding a cane and speaking in a booming voice, he said he plans to sell offspring from his herd to a breeder and expand this species of cow within the area. The indigenous Nguni cattle are highly valued but difficult to acquire. While they sell for $600 to $800 in his area, buying them from neighboring South Africa can cost as much as $3,000.

For Zimbabwe’s smallholder farmers, increasing their ability to grow their own foods and expand their own markets means they become less dependent on imported food and increasingly food secure, Heifer’s ultimate goal for the country.

And, fortunately for Zimbabwe’s rural farmers, large land parcels allow them to grow their herds. When the country became independent in 1980, the government redistributed land that had been previously held by Zimbabwe’s minority white population. Heifer provided larger than usual numbers
Since 2007, Esther Sibanda has passed on the gift of 11 cows to neighbors in need.
of animals to farmers, which allowed them to increase the livestock populations more quickly while preserving the highly valued indigenous breeds of animals. However, in recent years the country became increasingly poor. With poverty came food insecurity.

Food security means people have access to safe and nutritious food throughout the year. A complex concept, it has to do not just with access to food, but availability and utilization of resources. Unfortunately, the dimensions of food security are many, as the causes can be both environmental and political. Poor soil quality and poor livestock breeds are only a small part of the reason why Zimbabwe is unable to feed its growing population. When compounded with inappropriate agricultural and economic policies, the problem only becomes worse.

Nearly 870 million people in the world, or 12 percent of the global population, are undernourished, according to the Food and Agriculture Organization of the United Nations. In Zimbabwe, that number jumps to 30.5 percent, or 4 million out of 13 million people.

In 2009, following a period of gross hyper-inflation, the Zimbabwean dollar, which had been the country’s currency since 1980, lost all of its value, forcing the country to abandon it in favor of the U.S. dollar, which is now the operating legal tender. At its worst, the Zimbabwean dollar had a denomination of a 100 trillion dollar bill, which was equivalent to about $300. Operating on the U.S. dollar means the cost of living for the average Zimbabwean has become very high. Everyday items, especially food, are unaffordable for many, making it even more important that people grow their own food and increase local production in order to reduce dependence on imports.

William Munemo, a farmer who received cows from Heifer in 2007, illustrates the point. He recalls a time when he worked in the city as a clerk for the government but was forced to leave that job and move to his village to care for his ailing parents. When land was redistributed in Zimbabwe, his family received 28 acres. The animals that Heifer
On Feb. 6, 2014, Heifer International re-launched its programs in Zimbabwe, making a renewed commitment to continuing work that has slowed over the past few years. The launch followed the relocation of Heifer’s offices from the remote village of Gweru to the capital city of Harare, which will allow staff to interact more with other development, government and private sector entities. The move also will open the organization to greater opportunities.

Over the last few years, the changing environment in Zimbabwe created uncertainty about Heifer’s ability to continue work in the country, and the scale of programs has diminished significantly. Now, with a new lease on life, the program is planning to make new investments in the lives of dairy farmers. The dairy farmers in the Chikomba District, for example, are slated to receive additional support.

Over the last five years, their growing herds began to produce increasing volumes of milk, creating a need to expand their markets beyond the local community. Of their own initiative they acquired an old, concrete building that they intend to turn into a milk collection center, creating a market for their milk. The group has asked Heifer International for training and other support.

Their dream is to one day grow the center into a chilling plant to sell milk to an even larger market, eliminating the need to import milk from long distances or even neighboring South Africa, increasing income and food security in the community.
Can we have hope in the face of a global climate catastrophe? In his new book Grass, Soil, Hope, Courtney White says that we should. The situation that serves as the backdrop of the book doesn’t seem to be a hopeful one. Climate scientists believe that 350 parts per million (ppm) is a safe level of CO2. At that level, the trash can of the atmosphere is full, but not overflowing. Unfortunately, we’ve gone far past that point with CO2 now at 397.8 ppm and rising. The trash can of carbon is spilling over and attracting pests—rising sea levels, drought, and increased weather catastrophes. In the face of all of that, how can White tell us that there is hope?

In his book, White takes us on a tour of the work that is reversing those big numbers of temperature and parts per million. It is work that is creating new possibilities for abundance, resilience and affluence. The surprising thing is that White doesn’t take us to some new hydrogen fuel cell factory or a field full of silicon solar panels. Instead he wants us to find our hope in grass, soil microbes and the farming techniques that build both in abundance. It is a book that, as Michael Pollan says in the preface, “asks us to reconsider our pessimism about the human engagement with the rest of nature.”

In his hope, White is a contrarian, but he is familiar with the role. An archaeologist by training, he was a Sierra Club activist who worked to save wilderness and protect ecosystems from loggers and ranchers. It was a time when he says, “no one was winning; everyone and everything was losing, especially the land.” In response White decided, “It was time to give peace-making a chance.” He brought environmentalists and ranchers together, and they discovered that they could do amazing things like restore native grassland ecosystems and raise healthier cattle. The organization White founded to facilitate this work is called the Quivira Coalition, which takes as its motto a quote from Wendell Berry: “We cannot save the land apart from the people; to save either, you must save both.”

“This is a story about carbon and hope” begins the first of White’s stories, case studies of an emerging solution to our carbon problem. That story centers on the promising combination of two things. First, when we have an abundance of excess carbon we have to have trash cans in which to throw it away. The question is how much capacity each can has. The four cans are the atmosphere, oceans, forests and soils. “The first three are becoming problematic,” writes White. The first two are overflowing or nearly so. Forests are good, but “can’t provide long-term storage due to their habit of burning up and dying, releasing the gas back into the air.” That leaves soils, and that is where White finds the promise of a reversal of our climate fortunes.

White quotes research showing that “a mere 2 percent increase in the organic content of the planet’s soils, particularly in its grasslands,
Finding Signs of Hope

could soak up all the excess carbon dioxide in the atmosphere within a decade’. The problem is putting the CO2 into the soil and not letting it out. Tilling the soil releases carbon, so many forms of large-scale agriculture that rely on plowing are detrimental. The best agriculture is then farming that doesn’t require tilling and encourages good microbial life to help move CO2 from the atmosphere into the ground.

White travels the country, profiling the ranchers and entrepreneurs who are doing this kind of farming and creating the networks to encourage it. He goes to the semi-arid hills of California where a rancher is rotating cattle in a way that encourages native plants and lush ground cover, leaving a scene that looks more like Ireland. In New Hampshire, he visits an ex-Wall Street trader turned “greenhorn” farmer who is pioneering no-till vegetable cultivation. In Colorado, White finds a hairdresser who champions the ability of beavers to restore resilience to dying ecosystems, capturing runoff and slowing erosion. Not all of the characters White visits even believe in “the crisis-that-shall-not-be-named.” But for many of these ranchers “it’s not necessary to bring up the topic at all … healing the carbon cycle is what they do for a living.” Good grassland management works whether you believe it is just to raise cattle with good forage or you believe it is healing the planet.

It is that kind of pragmatic, non-ideological frame of mind that has made White a successful peacemaker. It is also that kind of openness that allows him to see hope in strange places—among cowboy boots, giant river rodents, and Wall Street dropouts. It is hard not to join him in his hope that the healing of the land will come from those working closest to it. You’ll walk away from the book wanting to cook up a grass-fed beef steak, turn your compost pile and reimagine whatever piece of ground you have as your place to heal the Earth.

NEW AND NOTEWORTHY

The Tyranny of Experts: Economists, Dictators, and the Forgotten Rights of the Poor
By William Easterly

Three Favorites on: Marine Conservation

Read about how Heifer International supports families in Ecuador who make their living from fishing and collecting shellfish on Pages 22-29 in this issue. Review titles below for more insight on related ocean conservation issues.

Four Fish: The Future of the Last Wild Food
By Paul Greenberg

The Ocean of Life: The Fate of Man and the Sea
By Callum Roberts

Shrimp: The Endless Quest for Pink Gold
By Jack Rudloe and Anne Rudloe
HELP FEED THE WORLD
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GREENFIELD, Ind.—Elanco celebrated World Hunger Day on May 28 by announcing a $500,000 commitment to Heifer International’s East Africa Dairy Development Project (EADD), continuing the company’s long-term partnership aimed at breaking the cycle of hunger for those most in need.

EADD aims to provide sustainable livelihoods for 1 million people in Uganda, Tanzania, and Kenya by 2018. Initiated in 2008, the EADD project has provided extensive training on dairy husbandry, business practices and operations as well as the marketing of dairy products for 179,000 farming families in the region. EADD has grown to be one of the leading market-oriented development initiatives in eastern Africa, earning the farming families more than $131 million.

The next phase will employ new technologies and practices around feed production, alternative energy sources and milk transport systems. The project will prioritize social capital and gender equity to increase impact, and will reach 136,000 primary beneficiaries. Elanco’s commitment includes the donation of product to help dairy farmers improve the health of their cows, the talents of Elanco employees to provide on-site training in cow health, value-chain and policy engagement, and financial support through 2018, including $500,000 this year.

Since 2007, Elanco has contributed more than $3 million to Heifer, providing the gift of training and animals to break the cycle of hunger for families in Indonesia, Zambia and China. Elanco is currently active in efforts to break the cycle in nearly 40 communities around the world.

“Heifer International is very excited about this generous contribution to support the important work in Phase II of our East Africa Dairy Development project,” said Pierre Ferrari, Heifer president and CEO. “More than 1 million people will have better access to food, jobs, income, education, financial and medical service, breaking the cycle of extreme poverty throughout the region. With this gift, Elanco will have a hand in the success of these dairy farmers, and for that we are grateful.”

“We’re particularly excited about the EADD project because it represents an evolution in sustainable development,” said Jeff Simmons, president of Elanco. “Moving beyond individual gifts of animals to offering connections to technology and marketplaces can deliver social, economic and environmental benefits that will build stronger communities throughout the entire region. Not only will we help provide better diets with access to animal protein, but greater human potential will be realized as we improve livelihoods.”
HAWNEE, Kan.—When hundreds of students, teachers, school board and community members pour into a school gym to celebrate a joint victory, you know it’s for something big.

Prairie Ridge Elementary School in Shawnee set out to do an “all-building” activity to work together toward a common goal, said Michelle Hite, principal of the school. Most activities are classroom-based, but Heifer’s Read to Feed program engaged all students, kindergarten through fifth grades. “It’s an attractive program for student participation because of the dual purpose achieved through love of reading and service to the global community,” Hite said.

That big thing they were all celebrating turned out to be a very large check for $10,205.45 that representatives presented to Cindy Sellers Roach, community engagement manager for Heifer International. They expected to raise about $1,500 in the 30-day campaign, Hite said. So they were understandably excited and proud of their students for raising so much to help others in need.

Hite credited Candace Luschen, the school’s media specialist, with identifying and organizing the program. Most importantly, Luschen inspired the students and got them excited about reading by telling them about the effect their donations would have on families in need around the world.

“Showing students how education sends ripples of positive change through the world is one of the highest callings teachers have in leaving lasting imprints on the lives of those in their care,” Hite said.

Luschen added, “Each class decided on the amount that they wanted to raise. The students were the driving force behind the success of this fundraiser, and I give them all of the credit. I just organized the paperwork for it.”

With Read to Feed, students get sponsors for the amount they read. Their gift of farm animals and training helps families around the world begin a life
Raise Read to Feed

Students share their favorite Read to Feed books

“I’ve read the first four Harry Potter books already, and after I read each book I watch the movies. I think the fourth one is the best so far. I read about 30 minutes every night. At the beginning, I was reading the fourth book and now I’m reading *Harry Potter and the Order of the Phoenix.*”
—Cassie Frias, third grade, Ms. Leggett

“My favorite book is *Abe Lincoln at Last* by Mary Pope Osborne. I liked that they go back in time to meet Abe Lincoln, and he jokes them into thinking he’s a kid. I think I read about three hours; I raised $100. My favorite part is that we raised money for other kids to get things they need.”
—Luke Wood, second grade, Ms. Dolan

of hope and opportunity. For teachers in need of innovative, creative ways to meet multiple education standards and improve literacy skills, Read to Feed helps meet Common Core and other standards and inspires global citizenship among students.

The impact, Sellers Roach noted, is significant. “What these students and their teachers have done is incredible. Through Heifer’s model of Passing on the Gift, this donation will quite literally help hundreds of families move out of hunger and poverty and towards a sustainable livelihood. Other children will eat better and be able to go to school themselves. Whole communities will be impacted by the livestock and training this donation provides. Prairie Ridge Elementary has a lot to be proud of in these young people!”

For details on Read to Feed, or to order materials, please visit [www.readtofeed.org](http://www.readtofeed.org), call 877-275-READ (7323) or email info@heifer.org.
Honoring a Lifetime of Generosity

Longtime donor Suzanne Awalt creates Heifer Foundation endowment in memory of her husband, Roy

If life were a sport, we’d all want Suzanne Awalt on our team. In her life and extensive roles supporting Heifer International, she’s passionate, disciplined, considerate, inquisitive, structured, positive and committed. Awalt is a longtime Heifer volunteer, donor and former board member.

A curiosity about the world led Awalt, at the age of 26, to enlist in the Air Force as a commissioned officer. While stationed at Travis Air Force Base in Fairfield, California, Suzanne was introduced to Heifer International through her husband, Roy, and his church.

The commitment of the congregation to raise money through local produce and flower sales for complete strangers halfway around the world resonated with her. From one global citizen to another, the congregants offered the gift of animals, trees, seeds and training to those in need.

The Awalts settled in a suburb of Sacramento following her retirement from the service and immediately got involved in the Sacramento Hunger Happening with proceeds benefiting Heifer. From there, her focus was volunteering with Heifer’s former learning center in California giving farm tours and assisting with a children’s camp. What Awalt remembers most from her time there were the committed staff and fellow volunteers with whom she worked. The Becks, Quinleys, Millers and Marvel Lund were all her mentors and became close friends.

In 1998, Bill Beck nominated Awalt to be an at-large member of Heifer’s Board of Directors. Being on Heifer’s Board brought a new dimension to her volunteer efforts: spokesperson. Awalt took her first field visit to Peru and Bolivia and found the connecting link to her volunteer efforts. Meeting the farm families was a joyful, transformative experience for her. Seeing the project families’ trust in Heifer’s training program and their willingness to learn, not only sustainable agricultural practices but also how to work as a family and a community more effectively, gave Awalt the stories about Heifer’s work she wanted to share.

Awalt led a Heifer tour to Albania and Kosovo in 2006 where one noteworthy project focused on war widows. She met...
a teacher who had helped the widows escape from Kosovo to Albania by walking them across the mountains to safety. Their houses had been bombed, their husbands and teenage sons were killed and all their farm animals killed as well. When the war was over, the teacher helped in the community’s rebuilding efforts and introduced the women to Heifer, where they began to rebuild their agricultural lives and homes.

Awalt also credits her husband, Roy, with their involvement with the Heifer Foundation. He saw the opportunity to donate the proceeds from the sale of a condominium as a perfect way to contribute financially to the organization. A charitable remainder trust was established and funded with the proceeds from the sale. When he passed away in 2006, Suzanne established the Awalt Family Endowment to honor Roy’s memory through the Heifer Foundation.

Awalt says her three decades of involvement with Heifer transformed her life and have given it meaning. Meeting the project families around the world and sharing their stories has been a bonus to her work with Heifer. She has seen tremendous growth since the ’70s through Heifer’s agroecological methods of farming as well as marketing and value-chain development to bring small business entrepreneurship to the farmers. She is proud of Heifer’s role as a world leader in hunger and poverty alleviation and plans to continue to support Heifer’s country programs as a donor and passionate volunteer.
WOODEN HEIFER ORNAMENT | $10
Support Heifer this holiday season with this one of a kind ornament. Made from fully matured trees in Wisconsin to encourage the natural prosperity of the forest. Made by Timber Green Woods.
NTGWOODORN

HEIFER INCOME LADIES TEE | $18
Help other women around the world improve their income by wearing this shirt. Available in ladies sizes S-XXL, sangria color.
NINCLADY

EMBROIDERED BALL CAP | $17 EACH
Show your Heifer spirit with one of our embroidered ball caps, perfect for a fun day out with the family. Available in maroon and green colors, one size fits all.
NCAPMAROON maroon
NCAPGREEN green

HEIFER EDUCATION MEN’S TEE | $18
What better way to give to families and educate others about Heifer’s message than wearing this shirt? Available in men’s sizes S-XXL; burnt orange color.
NEDUMEN

JUMPING COW THERMAL SHIRT | $25
When the temperature drops, there is no better way to keep warm and show your support than to curl up by the fire in one of these shirts. Available in men’s sizes S-XXL; navy blue color.
NTERMALBL

SIMPLE MATH YOUTH HOODIE | $28
Heifer + your gift = education. Math has never been so simple. Front features Heifer logo, back features main design. Youth sizes S-XL; dark green color.
NHOODIEYTH

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ANIMAL ORNAMENTS | $13 EACH
Adorn your home with these handcrafted animal ornaments representing animals Heifer gives to families around the world.
NC0023CML Camel
NC0017GOAT Goat
NC0014SHP Sheep
NC0022RBT Rabbit
NC0015LMA Llama
NC0021BUF Water Buffalo
NC0016PIG Pig
NC0020COW Cow
NC0019CHK Chick

KNITTED ANIMAL ORNAMENTS | $8 EACH
100% alpaca wool. Hand-knitted by a women’s group from Peru. Comes in a variety of colors.
NLKNITORNOWN Cow
NLKNITORNGOAT Goat
NLKNITORNLMA Llama
NLKNITORNSHP Sheep

SEASON’S GREETING CARDS
VARIETY PACK | $10
This year, spread the joy of Heifer with these cards. Featuring animals like cows and goats with holiday messages for friends and family. 20 cards and 22 envelopes.
NSEASGR2013

ARK GIFT CARD | $12
There is no better way to share the joy of the holidays and Heifer’s message than with this custom card showcasing artwork from Stephano Vitale. 20 cards and 22 envelopes.
NVITALE14

HEIFER GOURD ORNAMENT | $10 EACH
Trim the tree with these unique, handcrafted Heifer ornaments made from gourds. Gourds are naturally grown so ornaments come in a variety of shapes and sizes.
NLGOURD

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WINTER IN SONGMING | $10
Follow a boy taking his first step into manhood while his village takes a step toward self-sufficiency. For 3rd and 4th grades.
NB07180HB Hardcover

GIVE A GOAT | $5
The true story of how one 5th grade class was inspired by Beatrice’s Goat and raised money to send even more animals to struggling families around the world.
NBGAGPB Paperback

THE CHICKEN AND THE WORM | $10
Introduces the idea that even the smallest creatures can work together to care for the Earth. Pre-K and K.
NB07070HB Hardcover

FAITH THE COW | $10
Chronicles the first shipment of Heifer cows to Puerto Rico. For ages 4 to 6.
NB0705000 Hardcover

ONE COW AND COUNTING | $10
A creative, quirky and humorous children’s book that illuminates the wondrous benefits of cows, goats, water buffalo and more. For 3rd grade and older.
NBCOWHB Hardcover

ONCE THERE WAS AND WAS NOT: A MODERN DAY FOLKTALE FROM ARMENIA | $10
A true story of three boys who joined a Heifer International-sponsored youth group in Armenia and learned to raise cows. For 5th and 6th grades.
NB07090HB Hardcover

HEIFER BAMBOO UTENSIL SET | $15 EACH
Take these handy bamboo utensil sets everywhere you go and never use plastic utensils again. Cases come in indigo, avocado and merlot with carabiner clip.
NTOGOIND Indigo
NTOGOAVO Avocado
NTOGOMER Merlot

HEIFER WINDOW DECAL | $1
Show your support and spark conversation with this attractive, weather-resistant vinyl decal. White color, 5 inches x 3.5 inches.
ND0005
GLOBAL BARNYARD PLUSH ANIMALS I $7 EACH
These plush animals are the perfect companion to your alternative gift of goats, heifers, bees and more to a family in need. Choose from nine different gift animals. Seven inches tall.

N01000CHK Chick
N01410LLA Llama
N01800LMB Lamb
N01002GOT Goat
N01001RAB Rabbit
N01800CML Camel
N01800COW Cow
N01003BEE Bee
N01800PIG Pig

STAINLESS STEEL TRAVEL MUG I $15
Care for the Earth and save on cups with this 16 oz. stainless steel travel mug. Textured grip, thumb-slide lid, foam-insulated, double-wall construction.

NWATR2010

HEIFER WATER BOTTLE I $9
Help keep trash to a minimum when you choose to carry this 16 oz. aluminum water bottle with carabiner top featuring Heifer’s logo.

LUGGAGE TAG, COW I $3
Identify yourself as a supporter of Heifer’s work around the world when you’re traveling the globe.

MARKET TOTE | $16 EACH
A heavy-duty, 100% cotton canvas bag. 14 inches x 17 inches x 13 inches. Available in grape, charcoal, green and orange.

NM0602 Grape
NM0601 Charcoal
NM0603 Green
NM0604 Orange

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Quench your thirst while caring for the Earth. Twist-on lid with straw. Clear plastic. 16 oz.

NTUMBLER2013

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**PRICES GOOD THROUGH DECEMBER 31, 2014**

**PAYMENT METHODS**
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- [ ] VISA
- [ ] MASTERCARD
- [ ] MONEY ORDER
- [ ] DISCOVER
- [ ] AMERICAN EXPRESS

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**UPS GROUND DELIVERY (3-5 DAYS)**

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  - $100.00 AND ABOVE... FREE

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  - Call for quote.

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

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**NAME AS IT APPEARS ON CARD**

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Howard Lord was 22 years old and engaged to be married when he decided to cross the Atlantic to deliver livestock to Greece and Ethiopia in 1947. He left his farm work and his fiancée in Grinell, Iowa, with plans to marry and continue farming upon his return. But the distended bellies and reddened hair that he saw on his trip, certain signs of severe malnutrition, altered Lord’s course. “I’m fairly sure I might not have been a minister had I not gone on the trip,” he said.

“It was a total change of life. I was never the same.”

—Howard Lord, Seagoing Cowboy

“I made my wedding dress while he was gone.”

—Wilma Russell Lord
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