

® THE MAGAZINE OF HEIFER INTERNATIONAL

FALL 2015 || HEIFER.ORG

worldark

HEIFER NEPAL

Farmers *regroup and rebuild after earthquake*

10

DIRT POOR

The Bionutrient Food Association aims to enrich the soil

14

LAND GRABS

Poor countries are finding their arable land is in demand

30

WELCOME, FRIENDS

A family in Ecuador invites you to experience life in the mangroves

PLUS

FOR THE RECORD

Desertification 101


HEIFER
INTERNATIONAL



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. Or, call 888.5HUNGER (888.548.6437).

Together, we can make a big difference in the lives of men, women and children all over the world.





Heifer CEO Pierre Ferrari visits Dharam Shila Panday, a member of the Lakshmi Women's Group in Janakpur, Nepal.

PHOTO BY GEOFF OLIVER BUGBEE

Dear Fellow Activists,

By now, the devastation in Nepal from the April 25 and May 12 earthquakes has long faded from the headlines. For those of us at Heifer International, especially our project participants and colleagues in Nepal, the road has been long and challenging.

Immediately after the first earthquake, Heifer Nepal mobilized its staff and partners to assess the damage in our project areas. Of the 31 districts affected by the earthquake, we have worked in 17.

We are, of course, saddened by the lives lost and the thousands of homes destroyed or significantly damaged. The loss of livestock is also a difficult reality. But the hard work and dedication of our staff and participants, and the generosity of Heifer donors, has been a beacon through these months of recovery.

It is a testament to the strength of both the people of Nepal and the Heifer model that we were able to mobilize self-help groups, project management committee members, youth groups and other partners to help distribute relief packages. The chairperson from each self-help group organized members and made sure no one went unaided. Before our staff was even able to arrive in the communities, the villagers themselves had begun to organize and help each other.

As you know, our work is guided by Heifer International's 12 Cornerstones for Just and Sustainable Development.

Through the Cornerstones, we help families strengthen their communities by building more and stronger social bonds. Caring and sharing, resilience and autonomy are fostered in the places where we work in Nepal, so we know that regardless of the disaster, our families are hopeful for a better future, and they are working hard to shape it.

In this issue of *World Ark*, you will find a photo essay, collected before the earthquake, of some of the strong women of Nepal. While I cannot speak to the role each of these women has played in the ongoing recovery, I find solace in knowing we have participants so committed to their families' and communities' successes.

I have visited Heifer projects in Nepal a number of times, and while I was devastated by the news of the earthquakes, I am confident our families will recover and that we will help them continue on the road to self-reliance.

I hope you enjoy this issue of *World Ark*, and if you would like to read full coverage of the recovery efforts in Nepal, please visit us online at heifer.org.

Yours for a better world,

Pierre U. Ferrari

Pierre U. Ferrari

Order the most inspiring school supplies in the world

It's Back to School time! Now is the time to plan the most meaningful project of the year: Read to Feed®. Inspire students to read enthusiastically and raise funds to help end hunger and poverty around the world with our reading incentive program. Read to Feed meets standards in reading, math, social studies and science for grades K–6.

Foster the next generation of globally conscious youth by using Read to Feed at your school or library.

READ
---TO---
FEED®



Download our
free, updated
standards-based
resources at
www.readtofeed.org
or call **877.275.READ**
(877.275.7323).



PLAN YOUR SPRING FIELD TRIPS TODAY!

Heifer's Learning Centers offer field trip opportunities that educate your students about the world while inspiring them to become part of the solution to end hunger and poverty. Whether you visit Heifer Farm in Rutland, Mass., Heifer Ranch in Perryville, Ark., or Heifer Village in Little Rock, Ark., you'll find programs for any age group. But call soon—programs for Spring fill up fast!

★ SAVE THE DATE ★

All three of our Learning Centers will be hosting Holiday Open Houses the first two weekends of December. Visit our website for exact dates.



WWW.HEIFER.ORG/VISIT
RESERVATIONS@HEIFER.ORG
855.3HEIFER (855.343.4337)





features



COVER

Octogenarian Kushi Adhikari of Pokhara, Nepal, cuddles an orphaned goat.

Top photo: A woman carries emergency supplies from a distribution center in Dahding.

Cover photo by Lacey West.
Top photo courtesy of Heifer Nepal.

14

On the Take

As the population grows and demand for food increases, wealthy nations and corporations are snatching up land in developing countries for their own agricultural use. Some say these land grabs, which can push people from their homes, are a new form of colonialism.



20

A Steadying Hand in Nepal

The deadly earthquakes that shocked Nepal this spring claimed lives and property from the families with whom Heifer works. Heifer staff and families temporarily shifted to emergency relief efforts, but their vision and determination remain strong.



30

Mi Casa Es Su Casa

The mangroves, long a source of food, fuel and income along Ecuador's coast, are disappearing at the hands of developers and shrimp farmers. One family turns to community tourism, opening up a hostel where guests get an intimate look at island life.





HOPE SPRINGS ETERNAL

Reading the latest *World Ark* magazine, I see there is cause for hope: incomes rising in Cambodia, the Read to Feed program, happiness where there is community, and more. At a time when 6,300,000 children under 5 still die of mostly preventable causes each year, we need hope. With 289,000 women still dying from pregnancy-related causes each year, we need hope. Let us use this hope and our rights as members of a democracy to raise our voices to give hope to others. A phone call or email to our representatives will let them know these tragedies need to be ended.

WILLIE DICKERSON
Snohomish, Wash.

WE'LL ALWAYS HAVE CAMEROON

We were thrilled to read the article about Heifer's 40 years in Cameroon. I was a British volunteer in Cameroon from 1972 to 1974, when I married an American aid worker. We saw firsthand the beginnings of Heifer in Cameroon and were impressed with the program, as we are today. The photos brought back wonderful memories of the warm, welcoming and hardworking Cameroonians.

JUDE AND CHUCK SMITH
South Plymouth, N.Y.

In your summer 2015 magazine, you proudly show your African programs, including a photo of Martha Nombop watering her chickens. This is not a good way to teach sustainable farming as her flock is way overcrowded. It is too similar to our own polluted CAFO operations here in the U.S. It would be far better for several farmers to have smaller flocks, with movable pens on pasture. This particular farm is an open invitation to disease, odor and tainted meat or eggs, and should not be

an example for others in your projects to follow. I have always supported your projects, but I don't support this one.

ANNE MEURER
Sandpoint, Idaho

Editor's Note: *Thank you for your concern! The chickens in the photo have gathered in their shelter to eat, but they also have ample outdoor space to forage, lay eggs and exercise. Animal well-being is a core principle of our work.*

SO CLOSE, YET SO FAR

I spent a lot of years as a technical writer and editor, so when I read, my "proofing" reflexes are usually working full time out of habit. Page 30 of the Summer 2015 issue of *World Ark* contains a typo that completely changes the meaning of the sentence and also provokes a bit of mirth. The penultimate paragraph of "Early to Bed, Early to Rise" contains the sentence, "Her birds will move from chicken tractors to the much larger prairie schooners ... [that] require trucks and wenchers rather than muscle power to move." Of course, it should have been "winches" rather than "wenchers," but the mental picture is evocative. Yes, I immediately felt a pang of guilt about succumbing to a wide smile at the notion of a group of wenchers hauling around a chicken prairie schooner. Nice issue, by the way—very uplifting and encouraging in a world that needs an abundance of such stuff.

MORRIS KAPLOWITZ
Reston, Va.

Heifer always inspires me, as it must all your readers. In the name of reality-based articles for folks, please understand and speak to old man winter in the quest to help humanity and planet. One glaring oops was E. Joseph's recommendation for bee

plants. Year-round blooms? Not for a huge percentage of people.

MARY WELLS
Athol, Idaho



Artist Carolyn Emerson of South Windsor, Conn., expertly re-created the cover from our Spring 2015 issue in watercolor. The painting depicts Jamira Webisa Nalyaka of Bunambale, Uganda. Thank you, Carolyn, for sharing your beautiful work with us.

Q&A FALL

If you could ask a Heifer project participant one question, what would you ask?

We want to hear from you!

Please send your comments to worldark@list.heifer.org. Include your name, city, and a telephone number or email 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.



departments

04 LETTERS

Readers respond

06 FOR THE RECORD

Bananas: a history
Desertification 101

08 THE GOOD LIFE

Boosting soil health
Pumpkin perks

10 ASKED & ANSWERED

The groundwork for health

40 MIXED MEDIA

The Bright Continent

42 HEIFER BULLETIN

Celebrating success
in Zimbabwe

45 HEIFER SPIRIT

Messages of gratitude to
mothers around the world

52 FIRST PERSON

What more could you ask for?

JOIN THE CONVERSATION

Follow World Ark blog
on RSS and find Heifer
on Facebook, Twitter,
Instagram, Pinterest,
YouTube and Vimeo.



PRESIDENT AND CEO
Pierre Ferrari
PUBLISHER
Cindy Jones-Nyland

worldark

1 WORLD AVENUE
LITTLE ROCK, AR 72202, USA
EMAIL: [WORLDARK@LIST.
HEIFER.ORG](mailto:WORLDARK@LIST.HEIFER.ORG)

MANAGING EDITOR
Austin Bailey

SENIOR EDITOR
Jason Woods

WRITER
Molly Fincher

SENIOR GRAPHIC DESIGNERS
Pooi Yin Chong
John Houser

CONTRIBUTORS
Annie Bergman
Elizabeth Joseph
Erin Snow
Peyton Olsen
Erik Hoffner
Judith Schwartz

To change or remove an address,
email donorservices@heifer.org
or call toll-free 877.448.6437.

World Ark is the educational, informational and outreach publication of Heifer International. Its purpose is to further Heifer's goals to end poverty and hunger while caring for the Earth and to raise awareness of the issues involved in this work throughout the world. Heifer International is qualified as a charitable organization under Section 501(c)(3) of the Internal Revenue Code. Contributions to Heifer International are tax-deductible to the extent permitted by law.

Since 1944, Heifer has helped 22.6 million families, directly and indirectly, 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.

© 2015, Heifer International. Passing on the Gift® is a registered trademark of Heifer International.

Opinions expressed in *World Ark* are those of the authors and do not necessarily reflect the views of either the magazine or Heifer International.



The FSC® Logo identifies products which contain wood from well managed forests certified in accordance with the rules of the Forest Stewardship Council®.



BIGSTOCK.COM

Progress on the Global Poverty Line

The good news: The number of people living in extreme poverty, defined by living at or below \$1.25 a day, has been cut in half since 1990. In 1990, 1.91 billion people lived in extreme poverty. Today it is just over 1 billion.

The bad news: If you adjust the definition to living at or below \$2 a day, the number of people living in harsh poverty rises back to about 2 billion.

JARGON

NUTRIENT DENSITY:

The amount of nutrients per volume of food. Nutrient-dense foods provide lots of nutrients, generally with fewer calories. Think kale and salmon. Energy-dense foods, on the other hand, provide more calories and generally fewer nutrients. Sadly, donuts and chips fall into this category.



BIGSTOCK.COM

Bananas: A History

If you think banana-flavored candy doesn't actually taste like bananas, you're both right and wrong. Banana flavoring does taste like bananas, just not the kind we eat today.

The bananas you find at the grocery store are Cavendish bananas, a seedless variety. Until the 1960s, we ate a different kind, the Gros Michel. Gros Michels are bigger and sweeter than our Cavendish, but a blight that struck Central America in the 1940s and 1950s all but wiped them out.



BIGSTOCK.COM

Measuring Disasters

For years, scientists measured energy released by earthquakes using the Richter scale, a base-10 logarithmic scale in which an earthquake registering at a 5.0, for example, is ten times stronger than an earthquake with a 4.0 rating. The Richter rating is determined by looking at the largest wave recorded on a seismogram right after the earthquake.

But massive earthquakes that hit Chile in 1960 and Alaska in 1964 defied measurement by the Richter scale, forcing seismologists to devise a new system that takes more factors into account. They created the moment magnitude scale (MMS), which considers the slippage and size of the rupture along a fault line. The new scale more accurately measures earthquakes registering at 7.0 or higher.

DESERTIFICATION 101

WHAT? Slices of fertile land are deteriorating into desert rapidly, leaving us with less of the farmland we'll need to feed our swelling population.



WHERE?

Desertification happens primarily on grassland, which covers roughly **40 percent of the Earth's land surface**.



CAUSES



WHY CARE?



Desertified soil isn't arable, meaning it **can't support crops**.

Without trees and grass cover, **the air becomes hotter during the day and colder at night**.



Desertification **destroys ecosystems and biodiversity**.

Damaged soil **gives off more carbon, worsening climate change**.



It's happening fast. Nearly 30 million acres of land are lost to desertification each year.

WHO SUFFERS?

Desertification contributed to the **fall of several empires**, including Carthage, Greece and the Roman Empire.

2.6 billion people depend directly on agriculture for their living, but 52 percent of the land used for farming is falling prey to soil degradation.

Poverty increases the pressure to exploit land. Exploited land becomes desertified and unproductive, making **poor populations** even more desperate.

HOW TO FIGHT IT?



Reforestation

Careful water management



Intensive soil rehabilitation

Holistic planned grazing





Healthy Soil=Healthy People

By Elizabeth Joseph, garden and education coordinator at Heifer Farm



PHOTOS BY ANNA MULLEN



Imagine a vine-ripened tomato in the summertime—bright red, juicy and bursting with sweet flavor. Compare that with a bland, mealy tomato that comes off the grocery shelf in the winter. There's a big difference between the two, and it extends beyond color, flavor profile and texture; it correlates directly to nutrition.

Data from the USDA shows that the amounts of nutrients in our fruits and vegetables have been decreasing since the 1950s. Broccoli, for example, contained 130 milligrams of calcium per serving in 1950. By 2010, though, the same amount of broccoli provided only 48 milligrams of calcium.

Food scientists attribute some of the nutrient loss to industrialized farming, with its push to grow more and bigger produce faster. Selective breeding and chemical fertilizers speed growth, but they also inhibit a plant's ability to absorb nutrients.

Luckily, one solution to put the nutrients back in our food is right under our feet: the soil!

Whether you ate cereal, eggs and toast, or last night's takeout for breakfast this morning, they all share one thing in common. They all came from the soil. If those foods grew in soils that lacked fertility, then they lacked nutrition as well—vegetables, fruits, herbs, meat, dairy, you name it. And a lack of nutrition correlates to a lack of flavor (and color and texture, like the difference between those two tomatoes) since flavor comes from the sugars, essential oils, vitamins and minerals that make a plant healthy.

The food you eat is only as good as the soil in which it grew. The good news is that sustainable agriculture practices that focus on building soil fertility yield plants that are healthier for us, not to mention more delicious. Follow the flavor, and eat up!



Read more about how soil affects the flavor and nutrition of food in the interview with Dan Kittredge of the Bionutrient Food Association on Page 10.



Pumpkin Perks

This year, after you carve your jack-o-lantern or bake your pumpkin pie, don't forget to hang on to the seeds. Pumpkins are native to the Americas, and consumption of the seeds, or pepitas, can be traced as far back as the Aztecs in A.D. 1300. The Aztecs had good reason to munch on the seeds—there's quite a bit of nutritional power packed into such a little package.



BIGSTOCK.COM

Key nutrients include:

- Magnesium, which regulates blood pressure. Most people in the U.S. are magnesium deficient
- Zinc, for a functional immune system
- Protein, to build and repair tissue
- Iron, for blood production
- Potassium, which supports digestive and muscular functions (a cup of pumpkin seeds contains more potassium than a medium-sized banana)
- Tryptophan, which promotes a good night's sleep

To enjoy the nutritional benefits of pumpkin seeds at home, try tossing them in olive oil and spices, then roasting them in the oven at 300 F until golden brown.

Source: **The World's Healthiest Foods**

The Spoils of Good Soil

If you're lucky enough to have nutrient-rich, garden-fresh vegetables on hand, here's a recipe that capitalizes on their good flavor. The recipe is courtesy of the excellent chefs at Heifer Farm in Rutland, Massachusetts, who have a special knack for making the very most of their harvests.



PHOTO BY EMILY ROSE

Heifer Farm Veggie Chili

- | | |
|--------------------------------|---------------------------------|
| 1 medium onion, diced | 2 cups tomatoes, chopped |
| 1 ½ cups bell peppers, chopped | 1 ½ cups of cooked black beans* |
| 2-3 cloves of garlic, minced | 1 ½ cups of cooked pinto beans* |
| 2 tablespoons cumin | 4 cups corn |
| 2 tablespoons chili powder | 2 cups water |
| 2 tablespoons oregano | Salt and pepper, to taste |
| 1 tablespoon coriander | |

Optional additions:

- 1 pound of cooked ground beef
- 4 cups winter squash, cut into half-inch cubes
- 1-2 zucchini or summer squash, diced
- Hot peppers, to taste

*Beans can be canned or dried. If using canned, use one can of each kind. If using dried, soak ½ cup of each kind overnight. Drain the soaking water, cover with fresh water and cook approximately 90 minutes. Drain beans and add to chili.

1. Heat oil in the bottom of a large pot and sauté onions until translucent, about 5 minutes. Add bell peppers and garlic, and sauté a few minutes more.
2. Add spices.
3. Add tomatoes, corn and any other vegetables, if using.
4. Add beans and beef, if using.
5. Add water and bring to a simmer. Cook gently for 45 minutes to an hour.
6. Add salt and pepper to taste.

Serve with fresh chives, shredded cheese and sour cream.



The Groundwork for

Interview and photos by Liz Joseph, garden and education coordinator at Heifer Farm

Drive up to Kittredge Farm in central Massachusetts, and you'll find a restored farmhouse with a post-and-beam porch, long hoop houses growing an abundance of seasonal produce and a farmer feeding a herd of beef cows with the help of his 2-year-old son. It's a classic, pastoral scene of a hardworking farm family.

Stay awhile, and you'll notice a few things that are less common of a New England farm—the mineral depot in the barn, for example, where soil amendments are stacked, pallet after pallet. Or the frequent chiming of a cell phone as people call to invite the barefooted farmer for a speaking engagement or to plan a grocery store flash mob to inspire nutrition awareness.

This busy and sought-after farmer is Dan Kittredge. With roots growing up on an organic farm and being involved with the food movement for 35 years—that is, his entire life—he's founded an organization that is changing the way we think about our food, our health and, most importantly, the soil under our feet. The organization is the Bionutrient Food Association (BFA), and growing the healthiest of food on the healthiest of soils so people can be their healthiest selves is what it's all about.

WORLD ARK: What is the mission of the Bionutrient Food Association?

DAN KITTREDGE: The mission of the BFA, as we call it, is to increase quality in the food supply. There's been a dramatic decrease in the average nutrient levels of crops over the past 80 years, since the USDA [Department of Agriculture] began documenting them—anywhere from 25 to 85 percent, depending on the crop and the nutrient. Concurrently, there are epidemic levels of degenerative diseases in humans, and there are strong correlations between nutritional deficiencies in crops and degenerative diseases in humans. We can systemically address these chronic health issues in humans through good agricultural practices that build soil fertility and get real nutrition in our food.

What led you to start this organization?

I started the BFA because I wanted to be a better farmer. The crops I grew regularly succumbed to pests and diseases. A crop that gets the nutritional compounds it needs can flourish and resist pests and diseases. A crop that doesn't will get sick. If nutrients are not in the plant—because they aren't in the soil to begin with or because the plant cannot access them due to agricultural practices—then we humans aren't getting them either.

There are 65 different elements in the human body that are necessary for our bodies to function. We evolved to get these elements from our food, and our food only gets them from the soil. Most soil tests only report out about three of these elements—nitrogen, phosphorus and potassium, or NPK. The Bionutrient Food Association is helping farmers address the full spectrum of elements and





k for Health



Lifelong farmer and soil health expert Dan Kittredge walks his farm in central Massachusetts.

build a biological system in the soil, so they can grow healthier crops for healthier food.

What is a bionutrient exactly?

A bionutrient is a biologically derived nutrient, a nutritional compound that has a health-giving attribute for humans. It's different from synthetic nutrients created in a lab, which often are not easily assimilated by the body; for example, vitamin D added to a gallon of milk or flour that's been fortified with thiamine. Bionutrients are found naturally in our food when soils are healthy.

How is this different than nutrient density?

Nutrient density is a term used in food science that refers to one food having more or less average nutrition per unit calorie than another. So kale, for example, is more nutrient-dense than rice because it has, on average, more nutrients per unit calorie than rice does.

What we are interested in at the BFA is identifying which bunch of kale has more nutrients than the others bunches of kale on the shelf at the grocery store, farmer's market or wherever people get their food. It's about quality.



Tending the beef cattle is a family affair for the Kittredges.



Dan Kittredge and his daughter scoop handfuls of soil amendments.

We want to help farmers grow the bag of carrots with the most carotenoids, vitamin C, vitamin A, and so on because that's the bag that consumers will want to buy to keep them healthy. It's also the bag that is the most flavorful because nutrition and flavor go hand-in-hand.

So the flavor of food is determined by how nutritious it is, and the nutrition of food is determined by soil health?

Absolutely. Unequivocally. Does the food you eat affect your health? Does the soil that the plant eats affect its health? Yes. Categorically.

How do soils become degraded?

If you look at it historically, major agricultural civilizations rose up in river valleys, from the Tigris to the Nile. This is because river valleys have an annual remineralizing process during the spring floods. Now soils are becoming weathered because we are taking thousands of pounds of

crops off the land each year and not putting back what has been removed.

The best metaphor is understanding that a crop, say an apple, is attempting to put the best nutrition into its seed. In nature, those seeds fall to the ground randomly, and nutrients are cycled back into the soil. In modern agriculture, all those seeds, nuts, fruits and roots are harvested off the soil, and after 10, 50, 100 years, our agricultural practices are quickly, easily pulling critical elements out of the soil. We're effectively mining the soil of nutrients. North Africa is a great example—it used to be a fertile land that provided food for the armies of the Roman Empire. Now it's the Sahara Desert.

The advent of conventional agronomy has further contributed to soil degradation and demineralization because plants receive nutrients from chemical fertilizers. When you bypass the soil you get a crop that may look like a tomato, but it doesn't have the same flavor or nutrition as a tomato that is

rich in biologically derived nutrients from the soil. Chemical fertilizers also burn up organic matter in the soil to release nutrients, and when the organic matter is gone, they don't work anymore. That soil has been denuded.

What kind of agricultural practices improve soils?

Plants have evolved in a living system, a biological system. There are a number of environmental conditions that must be present for a plant to flourish.

The first piece of the puzzle is the soil life. It's the microbes in the soil—the bacteria and fungi—that primarily feed the plant, similar to the digestive tracts of humans. Agronomic practices that kill off soil life—chemical fertility management, tillage, pesticides—are systemically detrimental to crop health. Microbes need air to breathe, water to drink, food to eat. So as farmers, we need to create conditions for soil life to flourish. Maintaining hydration, aeration and organic matter levels are paramount.



The Kittredge farm includes row crops, fruit trees and livestock.

Plants also need critical minerals and elements—copper, zinc, molybdenum, cobalt, chromium, iodine, selenium and so on—just as much as we do. So soil remineralization is often needed to address mineral deficiencies present in a soil.

What are ways to address mineral deficiencies?

I'm of the opinion that between various rock dusts and seawater, we have the full spectrum of elements necessary to revitalize any soil on the planet. You can certainly also buy amendments—limestone, rock phosphate, greensand, humates, gypsum—in a bag from a supplier based on whatever is needed, which can be determined by a full-spectrum soil test.

What are other benefits of this work in addition to increasing human nutrition?

Healthy soils yield plants that are health-giving for us and indigestible to some

insects and pathogens from which many farmers suffer. Reduced pest and disease pressure means an enormous savings of time and inputs, which leads to greater economic viability for the farmer.

There's huge potential for an increase of yields as well. It's estimated that the average tomato plant in the United States produces between 5 to 8 pounds of tomatoes per year. The world record tomato plant produces more than 600 pounds. Farmers regularly can produce 20 to 50 pounds of tomatoes per plant if they are growing healthy plants.

Another exciting corollary benefit is the potential to ameliorate the effects of climate change. It's been documented by numerous researchers all over the planet on various continents that well-managed soil and healthy plants can increase soil organic matter by half a percent per acre per year. Organic matter is essentially carbon stored in the soil that was once in the atmosphere, and is made through the symbiosis between plants and microbes: the bacteria and fungi.

If we were to apply good biological management in agriculture across the planet, we could functionally sequester all the carbon that's been added to the atmosphere since the Industrial Revolution in the 1750s in just three or four years.

Are there ways for people to get involved in this work?

The BFA is designed to empower action. We have local chapters starting up all over the country. We offer free introductory lectures, we can host courses. People who want to educate themselves—local gardeners, homesteaders, farmers, chefs, eaters—can contact us to set up a workshop. Our website also contains audio recordings from past workshops and a bibliography with books that have laid out a lot of these principles.

What is your vision for the future?

I've worked in the fields in India with farmers whose crops were failing. These farmers were aching for support, knowledge and understanding of how to build their soils and grow healthier plants. If we can convey principles of biological management to farmers all over the planet who are struggling to grow crops on weak soils, if we could use local materials, local rock dusts, seawater, sea salt to systemically remineralize soils, that would be extremely empowering.

My goal is to build a functional organization that can serve people who want to grow and to access good food. At the BFA, we want to create a reality with real solutions, real options. I believe that the health of our kids, and the planet, depends on it. ■

.....
For more information on the Bionutrient Food Association, visit their website, www.bionutrient.org.





ON THE TAKE

As climate change, population growth and environmental damage shrink the amount of arable land on the planet, wealthier countries and corporations look to developing countries for land.

By **Erik Hoffner**, World Ark contributor

Illustrations by **Stefano Vitale**

On a morning four years ago, families in an Ethiopian community woke to the sound of a bulldozer leveling their farms and demolishing their crops. There had been no warning. The rumble of heavy machinery rolling in was the residents' first clue that the Ethiopian government had earmarked their land for an ambitious agricultural development funded by a foreign business planning to grow food for export.

Community members soon learned they lost their homes and farms to a company that leased 25,000 acres of farmland from the Ethiopian government to grow rice for Saudi Arabia. The people who lived on the seized land had been there for decades or even centuries, but lacked formal titles or other legal claims. Displaced by the rice-growing mega-farm, these people would be rehomed through villagization, or resettlement into areas designated by the government.

The people who lived on the seized land had been there for decades or even centuries, but lacked formal titles or other legal claims.

The Saudi Star, as the project is called, is an example of a new class of international agribusiness investments that claim vast tracts of land and natural resources all over the world. Critics of these land grabs, as they're commonly called, say this new phenomenon isn't actually new at all, but simply a fresh spin on the colonial model. Much as Belgium laid claim to the Congo and its wealth of rubber trees in the early 1900s, or as France occupied Haiti and filled it with sugar plantations in the 1700s, corporations and national governments again see great opportunities in the agricultural lands and

natural resources of nations not their own, and small-scale farmers like those in Ethiopia again face the possibility of losing their lands and resources for someone else's gain.

The difference now is the recognition that this kind of project violates core human rights principles, giving rise to the term "land grabs" to describe



the process by which a corporation, institution or nation is allowed to use land and resources it doesn't own for its own purposes. In exchange they often promise abundant, good-paying jobs, medical clinics, schools, and infrastructure to the host regions—promises that are not always kept, according to watchdog groups like the Oakland Institute.

The Oakland Institute began tracking these large-scale agricultural investments following the food crisis in 2007 and 2008 when food costs spiked around the world. They found that one contributor to this painful period was these kinds of agricultural investments that take people off their land to grow crops for export. These large farms employ far fewer people than could make a living on multiple smaller farms on the same total acreage.

Looking more deeply, the director of Oakland Institute, Anuradha Mittal, and her colleagues found many such projects being proposed as a new development paradigm at high-rolling investor

conferences like the annual Land Investment Expo, which was keynoted by Donald Trump this year. Mittal found that such projects are happening mostly in Africa, although they also happen in South America and Asia. Further, Mittal and her colleagues were surprised to see that these land grabs were really catching on. Since 2008, the institute reports the equivalent of an area nearly the size of France has come under control of private interests.

Information about land grabs is difficult to find, and is often riddled with myths and half-truths, Mittal said. One misconception she speaks of often is the belief that land grabs affect only unpopulated regions and underused land. Rather, she said, "They're happening in some of the most fertile areas, close to markets and water, where smallholder farmers and pastoralists who have traditional rights or community rights to those resources are evicted." In sub-Saharan Africa, most people lack formal titles to their land. Customary tenure rights, or claims to the land based on family history and social

In land grabs, governments bring in revenue by extending long-term leases to foreign interests eager to take advantage of low rent, low taxes and weak regulation.

custom, are the norm. But customary tenure is often not recognized by governments. Lands held under customary tenure rights are often considered public or state land, under the control and ownership of governments. In land grabs, governments reject customary tenure rights and bring in revenue by extending long-term leases to foreign interests eager to take advantage of low rent, low taxes and weak regulation.

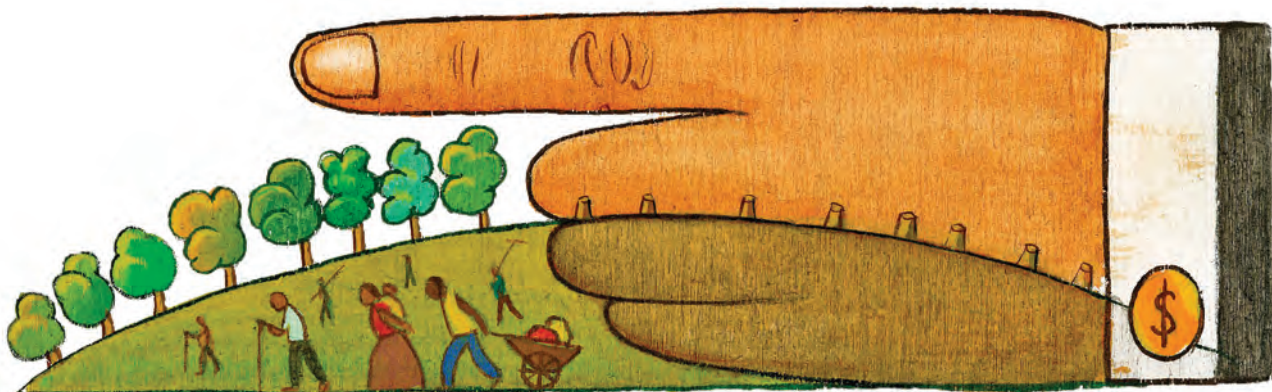
Another common misconception is that land grabs are only about farmland. Often, Mittal said, access to resources like rivers and forests changes hands, too. When forests are cleared and their lumber sold to make way for a palm oil plantation, for example, a community's source of medicine, food, building material and cultural sites is lost. And river water diverted for thirsty plantation crops is no longer available to farms, communities and ecosystems downstream.

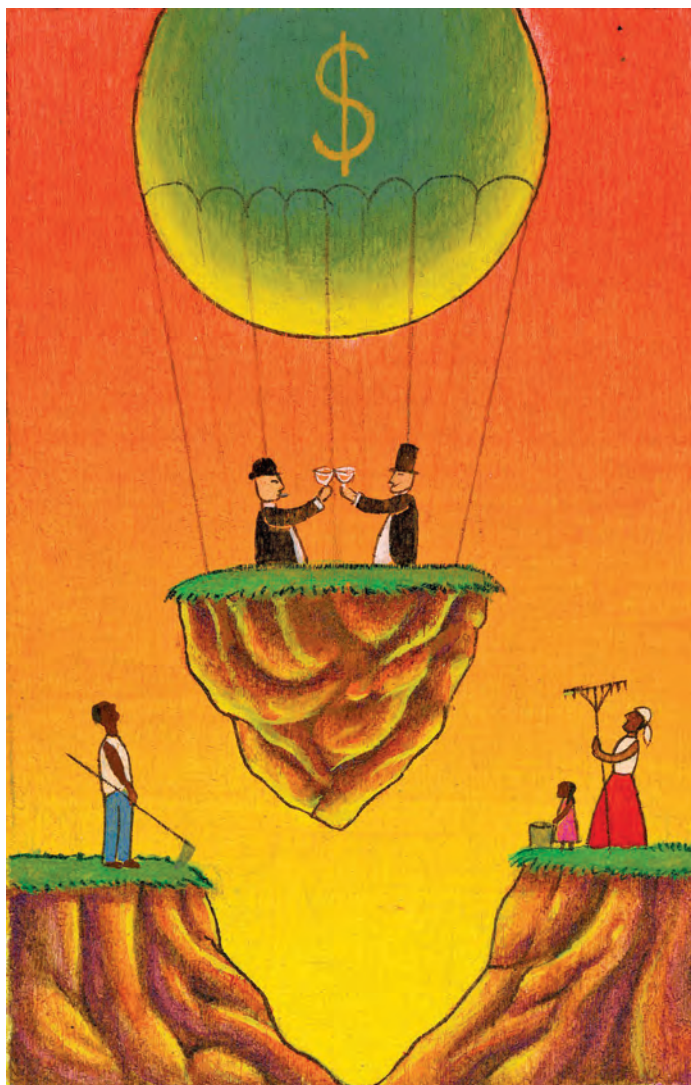
It's also important to remember, Mittal said, that peoples' ties to their land are strong, whether or not they hold official title documents. As a tribal chief in Ethiopia recently expressed to her, "'This is where my mother is buried, and I'll never move from here.' It's a story we hear everywhere, people are very clear that this is where they were born, and this is where they will die. Their relationship

with land is so different; it's not just a means of livelihood or source of food and survival."

So what are the benefits of land grabs? That's a question Mittal hears a lot. In her opinion, there's nothing good about them. "Eventually the local communities lose out, and the national economies lose, too, due to the incentives offered to the investors. According to the U.N. Food and Agriculture Organization (FAO), five acres can support a family of five in Africa," Mittal said. When large-scale farms come in, the number of people hired to work on the farms is smaller than the number of farmers displaced, creating a net loss of livelihoods.

Another drawback: land grabs can turn violent, as happened with the Saudi Star project. Resentment among the displaced people boiled over into violence, and Ethiopia's security forces cracked down on the dissent by arresting and jailing protesters. The institute investigated another land grab in Ethiopia that had fatal results in its 2014 report, *Engineering Ethnic Conflict*. Between 30 and 50 people were killed in a conflict over a proposed palm oil plantation, "which last year closed down because investors were unhappy with the quality of the land," Mittal said. It took the government many years to admit that the





**Land grabbing is the new colonization,
and developing countries are again being
strong-armed out of their natural resources.**

killings happened, all too late. "So people's lives were disrupted, displaced and ended, and the investor just picked up and moved," Mittal said.

Despite these negatives, the land grab phenomenon isn't going away, and African countries continue to find their land in high demand. Mittal warns that, "land grabs will take them more than 10 steps back. Everything that we're talking about, from sustainable development goals to climate justice, one thing that undoes it all is land grabs. I would say that the biggest threat to a program like Heifer's is this model of agricultural

investments. They can completely undo it all."

Land grabbing is the new colonization, she says, and developing countries are again being strong-armed out of their natural resources. This is why Mittal vows to continue "dragging the Draculas of land grabs into the sunlight," as she likes to describe the Oakland Institute's work on the issue. ■

.....
To track where land grabs are happening, visit www.oaklandinstitute.org and www.farmlandgrab.org.

LAND GRABS: THE BIG PICTURE

By Jason Woods

Land grabbing, or the process of wealthy nations or international private investors buying and leasing large plots of land in developing nations, is an issue that can be hard to understand. A recent publication from the Oakland Institute boils down this complicated subject into a graphic book that illustrates some of the myths and dangers of land grabs.

My Home, My Land is a artistic depiction of the impact unregulated land grabs can have on both families and the environment. It portrays the worst-case scenarios in which investors never follow through with promises of improved infrastructure, more jobs and plenty of food to go around. Instead, investors lease land at generous rates, enjoy unchecked exploitation of resources, and ignore labor and environmental laws. The land deals can ultimately drive people off their land.

The comic book-style *My Home, My Land* is illustrated by Abner Hauge, an intern scholar at the Oakland Institute. Hauge is pursuing degrees in international studies and fine arts. He wrote and illustrated his book to champion alternative development models that protect



both the environment and the livelihoods of small-scale farmers.

Based in Oakland, California, the Oakland Institute is an independent policy think tank that promotes public

participation and debate on social, environmental and economic issues. You can learn more about the Oakland Institute's work in land rights and download "My Home, My Land" for free at www.oaklandinstitute.org/land-rights-issue.

A STEADYING HAND IN

On April 25, Nepal suffered its largest earthquake in 80 years. The magnitude-7.8 temblor crippled the country's already precarious infrastructure, knocking out communication networks and toppling buildings that scattered debris across roads and villages for hundreds of miles from the epicenter in Gorkha.

By ANNIE BERGMAN AND ERIN SNOW, *World Ark* contributors



D IN NEPAL



A woman in the Dahding district of Nepal stands before a pile of debris that used to be her home.



The clean-up effort in Nepal continued weeks after the earthquakes struck.



With monsoon season on the way, tarps were in great demand.



Earthquake victims rushed to make temporary repairs.



PHOTOS BY HEIFER NEPAL STAFF

Heifer staff and project participants teamed up to distribute emergency supplies.



The powerful quake reduced many homes to rubble.

Just 16 days later, the central Asian nation was rocked again, this time by a 7.3-magnitude quake.

The damage spared little, including the homes and livelihoods of thousands of Heifer project participants in 17 districts. At least 7,500 project participants' homes collapsed, and another 4,000 Heifer families' homes were damaged. Families lost at least 1,500 animals, probably more.

Heifer staff worked closely with government agencies to get disaster relief supplies out of Kathmandu and into our communities in need. They delivered temporary housing materials including tents, tarps, foam mattress rolls and ropes

so families could craft shelters to last through the summer monsoon season.

While the photos on the following pages were taken before the earthquakes, the women captured here are the face of our work in Nepal. Many like them, even some pictured here, were affected by the disaster. And though full project work in the earthquake-affected areas isn't expected to resume for some time, project participants are pulling together to care for one another and their communities.


The earthquake damaged much, but not the spirit of our project participants. In the middle of chaos, hope remains. ■

Heifer International has worked in 41 districts throughout Nepal to help small-scale farmers and entrepreneurs thrive. Heifer's approach is an especially good fit in this South Asian country, where two-thirds of the population makes a living through subsistence agriculture. Nepal is one of the least developed countries in the world, and a third of its citizens live in poverty.

In recent months, Heifer Nepal staff have been helping our project participants recover in the aftermath of the epically destructive earthquakes that hit in April and May of this year. In ordinary times, our mainstay projects in Nepal aim to boost farmers' productivity and help them sell their products for profit.

Heifer's story in Nepal began in 1957, when it sent cattle, pigs and poultry. Heifer International Nepal officially went into action in 1997, opening a country office there. Since then, Heifer Nepal has helped more than 171,000 families with gifts of livestock and training, and by mobilizing communities to work together so all can succeed.

Photos by **LACEY WEST**

A photograph of a woman, Asha Maya Saru, in a red sari, working in a garden. She is surrounded by green plants and trees in the background.

Asha Maya Saru gets help in the garden from her husband, Nar Bahadur Saru, in Nepal's Nawalparasi district.



Krishna Maya Paudel, president of the Sundar Bagaicha self-help group in the Kaski region, treats her goats to licks on a homemade mineral block. Made with red mud, salt, eggshells and wheat flour, the blocks protect against illness and malnutrition.



The caste system is still strong in Nepal, but Khadu Maya Panta, 65, challenges the hierarchy as a member of a multi-caste group in Chitwan. Although they found it challenging at first, the members, all from vastly different social tiers, are now strongly united.



Gauri Adhikari of Nepal's Suntalabari village is a community animal health worker, meaning she spends her days teaching families how to care for goats, cows and chickens. If an animal gets sick, Gauri's neighbors trust her to make the animal better.





Through Heifer trainings, Harimaya Adhikari learned sustainable methods for growing bitter gourds, cucumbers, beans and other vegetables. Her garden produces more than her family can eat, so she sells the surplus.



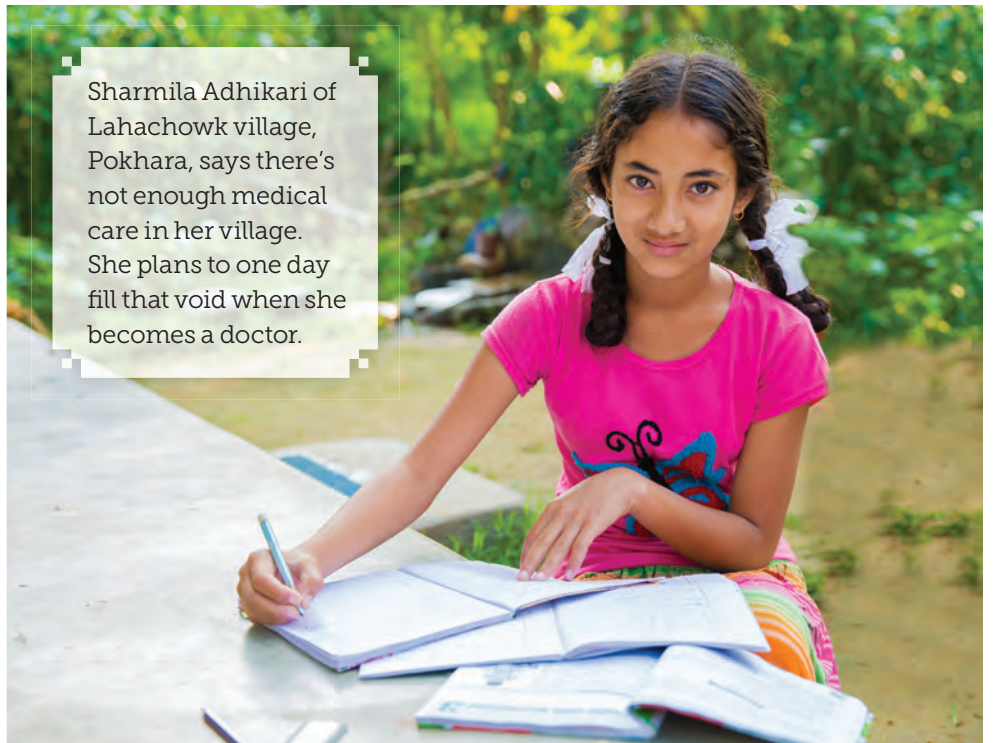
Goma Adhikari of Pokhara gathers hay with help from her husband, Bhagwan.



Passing on the Gift has become a habit for members of a self-help group in Nepal's Nawalparasi district. So far, they've shared eight generations of goats with neighbors in need.



Sharmila Adhikari of Lahachowk village, Pokhara, says there's not enough medical care in her village. She plans to one day fill that void when she becomes a doctor.





The oldest member of her family, Basandari Adhikari still likes tending to cows, goats and the garden. She knows the success of this family's business depends on every member.



Sita Adhikari of Pokhara babies her tomato garden with water, sunshine and organic compost made with manure. The garden flourishes, producing so much fruit that selling it brings in enough money for her daughter to go to school.



Maan Kumari B. Ka and Shova B. Ka package and weigh fresh beans from Lahachowk village farmers to take to sell at market.



Yamuna Kander, a member of the Bright Future youth club in Suntalabari village, said Heifer trainings about caring for the environment made a real difference. Members now organize monthly cleaning campaigns to keep their village tidy.



Sumitra Wagle of Nepal's Nawalparasi district knows she won't be able to hold her young goat kid much longer. Selective breeding has significantly increased the size and hardiness of her goats.

MI CASA ES SU CASA

Families living along Ecuador's coastline seek new livelihoods as the mangroves and the natural resources they provide dwindle. One family hinges their hopes on community tourism, opening their home to visitors wanting an authentic taste of life in the mangroves.

By AUSTIN BAILEY, *World Ark* editor
Photos by DAVE ANDERSON



Patriarch William Chila relaxes at the dining hall of his family's inn.





A two-story, dorm-style building can accommodate large groups.



Lizandro Chila takes the lead role in running the family inn.

ANYONE WILLING TO FOREGO CONVENIENCE FOR AUTHENTICITY WILL FIND A CLEAN BED AT CABAÑAS BELLA VISTA, AND THE VIEW REALLY IS NICE.

IF YOU'RE VISITING THE ISLAND TOWN OF MUISNE, Ecuador, you have only a few options for where to stay. Forget checking into a bland chain hotel; there simply are none. You could get a room in one of the barebones establishments near the town square if you don't mind the constant bustle and honking of motorcycle taxis.

Some of the beachfront hostels are nice, but they're also lonely, all clumped on the seaside, a good haul away from the buzz of town.

The Chila family would rather you come to their house, a compound on the northern end of the island with a river view to the front and jungle at the back.

SOME SELLING POINTS

- ▶ No chocolates on the pillow, but patriarch William Chila will make you some yummy *cocada* candy from the coconuts growing overhead.
- ▶ The roomy courtyard is strung with garlands of hammocks, plenty for everyone.
- ▶ The proud turkeys that have run of the place aren't as ornery as they look.

Anyone willing to forego convenience for authenticity will find a clean bed at Cabañas Bella



1954: Heifer begins work in Ecuador

OFFICIAL LANGUAGE: Spanish, although many indigenous languages are officially recognized

CAPITOL: Quito

CURRENCY: U.S. dollar

FUN FACT: Soup is traditionally the first course of every Ecuadorian meal, even breakfast.

TOPOGRAPHY: Geographically diverse, Ecuador includes beaches, rainforests, woodlands and the Andean highlands.



Guests at Bella Vista eat together in an open-air dining room in the middle of the courtyard.

DESCENDANTS OF AFRICAN PEOPLE WHO ESCAPED SPANISH SLAVERS CENTURIES AGO, TODAY'S AFRO-ECUADORIANS RETAIN DISTINCTIVE CUISINE, MUSIC AND OTHER TRADITIONS.

Vista, and the view really is nice. Even nicer are the hosts, who are eager to teach you about life on this diverse and unique island.

"The idea is to come get involved with the community, to meet people in town and get to know our family," explained Lizandro Chila, the fifth of 10 siblings and the son who takes a lead role in running his family's hostel.

Muisne's charm comes partly from its unique schedule. Island life snaps to the whims of the tide. Some boating routes open only when the water is high, while many roads and paths on the island are fully submerged when the tide comes in. Houses on the edges of Muisne hover on stilts to stay dry, their front porches becoming diving platforms for children when the water rises.

The unique ethnicity of Muisne's people is also a draw. The island is in Ecuador's Esmeraldas region, where more than half of the population consists of Afro-Ecuadorians. Descendants of African people who escaped Spanish slavers centuries ago, today's Afro-Ecuadorians retain distinctive cuisine, music and other traditions.

The Chila family's compound is set up to give guests enough privacy to be comfortable, but with plenty of opportunities to mingle with their temporary neighbors. Sleeping quarters are private, but all meals are cooked and served in an open-air dining hall where everyone eats together. And if you want a reprieve from the tropical heat, you'll have to join those who've already claimed their hammocks. William Chila seems to relish



Muisne is surrounded by mangroves.



With few cars on the island, children have free reign.



Buildings on the Island age quickly in the salt air.



Swordfish soup is a popular dish in the region.



The Chila family hopes visitors will fish, boat and otherwise enjoy the perks of life among the mangroves.

the opportunity to race up a tall ladder to pluck a coconut for anyone wanting to sip on coconut water.

Until fairly recently, the Chila family earned most of its money by harvesting wood and processing it into charcoal for sale. A few years ago they launched Bella Vista as an income source, since the mangroves that they and most other families in and around Muisne traditionally counted on for their livelihoods are being eaten away by development and pollution.

"Mangroves used to be all around the coast," said Rosa Rodriguez, Heifer Ecuador director. "But now, the shrimp farms are devastating them." Women who used to harvest hundreds of shellfish a day from among the mangrove roots have far fewer places to hunt, since more than half of the country's mangroves have been toppled or polluted in recent decades. Now, these shellfish gatherers, known as *concheras*, report they're lucky to come up with a fraction of their previous harvests and can no longer make a living on shellfish alone. People who fished or collected wood in the mangroves are also having to find new careers as natural resources disappear.

So in Muisne and the surrounding region, Heifer came in nearly a decade ago to support efforts to preserve the mangroves that are left and regenerate destroyed mangrove plots. At the same time, Heifer is broadening its scope beyond agriculture to help families who can't rely on the mangroves anymore make a living in new ways, many of them tourism-related.

The Chila family got some starter money for Bella Vista from Heifer International and FUNDECOL, an Ecuadorian nonprofit. The first bungalow built for guests cost roughly \$4,000, with half of the money coming from FUNDECOL. One of the Chila brothers, a shipbuilder by trade, oversaw construction. And the family harvested the wood locally.

The family began hosting guests from France, Spain, Italy, Germany, Canada and Colombia, along with tourists from other parts of Ecuador who wanted to experience life on the coast.

"Every time we get a group, we can do upgrades," Lizandro Chila said. The money the family earned from the first guests' fees went toward the construction of another structure that boosted Bella Vista's capacity



Houses are built on stilts to keep dry during high tides.

“YOU CAN GET TO KNOW THE SPECIAL CULTURE OF THE MANGROVE PEOPLE.”
—LIZANDRO CHILA, INNKEEPER

so it can host more than 20 people at a time.

The rough wooden two-bedroom bungalow and the larger wooden dormitory available to tourists both sit up on stilts—think Gilligan’s Island meets Swiss Family Robinson—to avoid the occasional floodwaters from the Esmeraldas River, which flows between the island and the mainland. A raised dining room sits in the middle of the broad dirt courtyard, and a constantly shifting cast of skinny dogs trot through, sometimes stopping to nap or scratch.

Some of the Chila children are grown and have moved away, but half of them still live on the family compound, in a house attached to the entrance gate. The brothers and sisters help keep the hostel running by cooking, doing laundry and befriending guests.

All meals are prepared and served in the thatched, open-air dining room, and guests

are encouraged to wash up and come help in the kitchen. In fact, many of the people who stay at Bella Vista are culinary students from other regions of Ecuador, visiting to learn how to prepare unique Ecuadorean seafood dishes, like coconut shrimp soup and ceviche.

“You can see how we chop the fish and the onion. You can get to know the special culture of the mangrove people,” Lizandro Chila said.

The lifestyles of his family and neighbors are molded largely by the water and jungle, which inform what their houses are made of, how they make a living and what they eat. “You can see our interactions with our surroundings,” he said. “That’s fundamental to us.” ■

To learn more about Bella Vista, contact Lizandro Chila at turismobellavista11@gmail.com.



FROM THE MOUNTAINS TO THE SEA

Heifer International currently runs six projects in Ecuador to help small-scale farmers, harvesters and entrepreneurs from Andean communities to the mangrove forests along the coast.

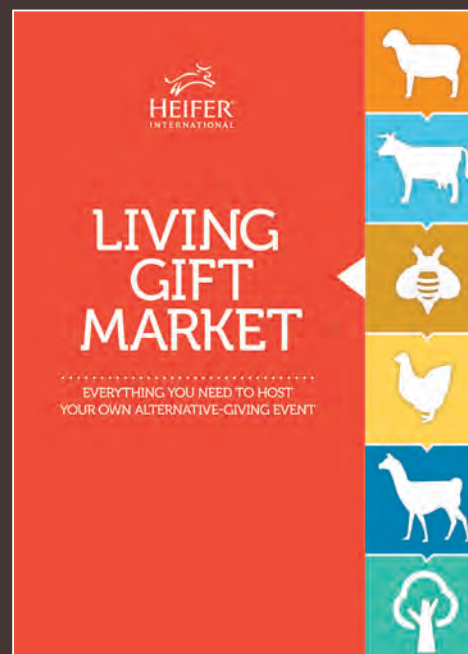
Some project participants are growing coffee and cocoa. Others are raising livestock, corn, beans and other crops using sustainable hillside agriculture practices to protect the soil from erosion. In the highlands, Heifer is helping alpaca farmers harvest high-quality fiber from their animals for maximum profit.

GOALS FOR PROJECTS ACROSS ECUADOR

- ▶ Promote sustainable agriculture and conservation
- ▶ Help farmers process their products to meet market demand
- ▶ Build larger, more robust markets for our farmers and producers
- ▶ Advocate for food sovereignty so that that the people have control over the food they grow and eat

'TIS THE SEASON

It's not too late to plan an alternative giving event for the upcoming holidays! Order your free Living Gift Market resources now by calling **888.5HUNGER** or visiting www.heifer.org/faithcommunities.



#HEIFERFAITH

Bring "love thy neighbor" to life year-round with our faith-based programs. These **FREE**, hands-on resources can help you transform hearts in your own community while helping to end hunger and poverty worldwide.



TAKE AN ALTERNATIVE MISSION TRIP

Heifer Learning Centers are a great place to host your fall faith retreats.



FILL THE ARK

Fill the Ark is a great resource for the Lenten season. Join Heifer when you "Give Up to Give Back." (New look for 2015)



ANIMAL CRACKERS

It's not too early to plan your spring and summer ministry programs. Animal Crackers is a ministry resource for all ages.





The Bright Continent: Br C

Reviewed by Molly Fincher, World Ark writer



*The Bright Continent:
Breaking Rules and
Making Change In
Modern Africa*
By Dayo Olopade
Houghton Mifflin
Harcourt, 2014

Hardcover; \$26; 236 pages

When you think of Africa, what images spring to mind? It's quite likely you catch glimpses of desperation,

violence and disease. From the standby nag parents use to get picky kids to eat ("There are children starving in Africa!") to newsreels of skeletal children with flies buzzing around their faces, the messages Americans hear are consistent: Africa is broken and needs outside forces to fix it.

"The Bright Continent: Breaking Rules and Making Change In Modern Africa" is a corrective to this typical Africa narrative. First-generation Nigerian-American Dayo Olopade provides a guide on how to interpret the development of sub-Saharan Africa to understand how the story is actually unfolding.

The book title inverts the "Dark Continent" moniker coined by Henry Morton Stanley after his travels in the Congo in the 19th century. Around this time, the Western world was celebrating the "discovery" of the source of the Nile—nevermind that 3 million people living around Lake Victoria clearly knew the Nile was there and had been using it for travel

and trade for eons. (Olopade points out that the Europeans' great race to explore and map the Nile would have been easier and faster if someone had bothered to ask for directions).

Even now, efforts to "develop" Africa, be it charitable, political or economic, are making the same mistake, as evidenced by ill-considered charitable endeavors such as "1 Million Shirts" and tone-deaf marketing materials like a poster depicting shoeless and disheveled African children with the slogan, "We're still waiting," which incited Olopade to write this book as a riposte.

Much of "The Bright Continent" follows the familiar pattern of reporting in the development sector: startling statistic, interesting personal anecdote, repeat. But rather than focus on what's going wrong, Olopade focuses on what's going right, and why it's going right. She explains that, in the absence of functional formal institutions that shape society in the developed world, such as effective governments and accessible infrastructure, informal networks and innovative alternatives emerge to fill that role in Africa. Olopade argues that these informal systems are where real innovation and progress are taking place, and they are often overlooked precisely because they function outside the system and follow a different path than much of the developed world is used to seeing.

One of the most striking examples is the path the adoption of mobile technology is taking. In the developed world, widespread use of these technologies came incrementally. First, everyone was connected through landlines, then the PC revolution and the Internet happened. Now we carry our personal computers and primary means of communication around with us on our



READ TO FEED

I read "What the Dog Saw" by Malcolm Gladwell for Read to Feed. Being a part of such a cause inspires me to read more, help others and be grateful for the life that I have now.

ALEXANDRA MAYNARD,
7th grade, Johnston Middle School
Houston, Texas

LEARN MORE AT WWW.READTOFEED

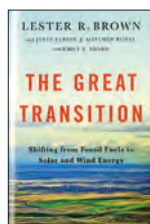
t. Breaking Rules and Making Change In Modern Africa

smartphones. Not so in sub-Saharan Africa, where landlines and PCs were essentially skipped over, and now the \$56 billion mobile ecosystem is arguably more sophisticated than in the United States.

Olopade deftly uses vocabulary to shift readers' perspectives on developed and developing countries. Plenty of descriptors have come and gone since "First World" and "Third World" became obsolete: global North and global South, developed and developing, low/middle/high income, global majority and global minority. Olopade's terms of choice: fat economies and lean economies. She thinks of developing countries as having similar challenges and advantages of lean business startups: they don't have the resources that big, established companies might have, and they tend to be unstable, but they have innovation and agility on their side. While fat economies have resources in excess, they have their own problems, too. Bureaucracy gets in the way of creativity and slows innovation. Thinking in terms of fat and lean economies does not deny problems inherent in either model, but also doesn't classify one as inherently superior to the other.

"The Bright Continent" is not an argument against development or government, and Olopade doesn't deny that access to education, infrastructure and healthcare are giant needs in sub-Saharan Africa. She simply argues for a better understanding and appreciation of the ways Africa is already succeeding. Economic, humanitarian and government efforts are far more likely to succeed when actors are mindful of where real opportunity lies. ■

NEW AND NOTEWORTHY



The Great Transition: Shifting from Fossil Fuels to Solar and Wind Energy

By Lester Brown, with Janet Larsen, J. Matthew Roney and Emily E. Adams

A Tempered and Humane Economy: Markets, Families and Behavioral Economics

By Jannett Highfill and Patricia Podd Webber

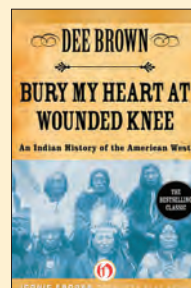


FOUR FAVORITES ON: NORTH AMERICAN INDIGENOUS PEOPLES



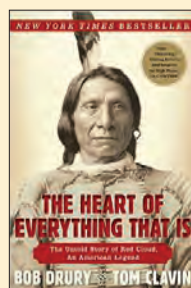
Empire of the Summer Moon: Quanah Parker and the Rise and Fall of the Comanches, the Most Powerful Indian Tribe in American History

By S.C. Gwynne



Bury My Heart at Wounded Knee: An Indian History of the American West

By Dee Brown



The Heart of Everything That Is: The Untold Story of Red Cloud, An American Legend

By Bob Drury and Tom Clavin



Ceremony

By Leslie Marmon Silko



Celebrating Success in

Story by Judith Schwartz, *World Ark* contributor | Photos by Tony Eprile



Heifer Zimbabwe staff and residents of Ndlovu celebrate a healthy and growing cattle herd.

NDLOVU, Zimbabwe—It's the day to pass on cows in Ndlovu, a community of 50 homes about 18 miles south of Victoria Falls. And because this is Zimbabwe, any opportunity for festivity is an opportunity for song: not the *pro forma* singing one might expect at a staged gathering, but hearty, full-bodied song, graced by ululations: that high, trilling, resonant sound that marks much of African music tradition and is unforgettable once you hear it.

It's also late September, the heart of the dry season. The air is near parched; the sun's rays filter through dust. Yet the mood is exuberant as guests wait to celebrate the growing cattle herd. Amid

chatters of anticipation, a group of women, several with infants on their laps, settle themselves around a large shade tree. Village leaders hand out printed programs. The welcome song beckons people to dance. Zimbabwe country program manager Sibusisiwe Mbedzi gleefully throws her arms up in the air and twirls and shakes as if these were lifelong friends. A local schoolteacher translates the words of the song, "This day is our wonderful day to smile."

In Ndlovu—the name means elephant in the Ndebele language—livestock equal wealth. The village is in a poor rural area in a nation that has little industry and lacks even its own currency



ss in Zimbabwe



Heifer project participants prepare to pass on a cow during Ndlovu's third Passing on the Gift ceremony.

(the U.S. dollar is generally used); jobs are scarce. Many in the region rely on international food aid. Owning a cow or two can make the difference between dependence and self-sufficiency, particularly for families caring for orphans and the elderly.

Sipho Ndlovu, a project leader, shares the saga of Ndlovu's animals. Of the first 30 cows they received from Heifer, 26 were taken out of the village to graze, and only four returned. "We were left in misery," she said. A trained dog retrieved all but one. But then, two were devoured by wild animals. After a rocky start, the herd now thrives. Two more groups of cattle arrived from Heifer, and despite threats from lions and an ongoing drought, village residents now have 69 head of cattle and money to buy more. In total, about a dozen community





Farmers prepare to pass on animals, some of whom suffer minor stage fright.

members speak at the pass on ceremony, each stressing the importance of the unity of the project group, which since 2000 has met without fail the first Thursday of the month.

Today, as members of the village's fourth generation of Heifer animals change hands, seven young cows and three young bulls get new homes. Then there's a community lunch of roadrunner chicken (a spicy stew) and *sadza*, a cornmeal porridge ubiquitous in Zimbabwe.

Over lunch, Obert Ndlovu, 49, talks about his animals. A father of five, he owns 10 cows, including two from Heifer. "We get milk, and we can put manure in the fields," he said. "As a result, we have better crops. When we have enough maize, we can trade for other things. Before, we did not have enough maize to feed ourselves." His cousin Alfred Ndlovu, also 49, said the two cattle he received from Heifer provide draft power.

"I can carry the manure to the fields to help with our crops," he said.

The challenges Ndlovu's cattle owners face are enormous. Villagers share one borehole, and pumping water takes much time and effort. Lions are an ongoing threat to livestock, and elephants sometimes trample food crops. The rains are erratic. Animals sometimes succumb to Senkobo disease, an infection thought to be spread by insects.

Yet project members remain optimistic. Joyce Dklovu, 64, has three cows. "I'm very excited because we will have milk and are starting to have manure [for fertilizer]," she said. A widow since 1980, when her husband died in the liberation war, Dklovu is raising seven grandchildren, ranging in age from 3 to 18. "The new cow will make life easier. I'm looking forward to taking care of these cattle so they can continue to be helpful in the future." ■



Thanks, Moms!

Supporters Send Messages of Love Around the Globe

By Peyton Olsen, *World Ark* contributor



Women share the cards they received at a Mother's Day celebration hosted by Heifer Haiti.

PHOTO BY HERVIL CHERUBIN

Gifts of animals and financial support are invaluable to Heifer project participants, but sometimes, donors want to give something a bit more personal. And because Heifer International works with families in remote rural communities oceans away, opportunities for Heifer donors to meet the people they help come few and far between.

This Mother's Day, however, donors from around the United States reached out to mothers around the world with handwritten cards filled with messages of love, support and appreciation. The cards, sent to Heifer supporters blank and then returned to Heifer headquarters with handwritten messages, have already been delivered to mothers in Haiti, Malawi, Guatemala and Tanzania.



"Our donors' response has wildly exceeded my expectations, with more than 1,700 cards full of inspiration, gratitude and motivational messages for our project mothers who are working hard to make better lives for their families," Berit Kimrey, Heifer's donor loyalty and retention manager, said. "Our donors have inspired me and shown how invested they are in our project families with this overwhelming response."

Heifer headquarters in Little Rock continues to receive letters, most of them from other mothers, that offer women in the midst of hardship a reminder that they are not alone. Hundreds of these letters—full of stickers, doodles and messages of love, hope and sisterhood—have already been hand-delivered by Heifer staff in the field. While the cards are all written in English, translators make sure recipients can understand them.

Some of the messages:

"You have experienced more hardship than I ever will. I know your accomplishments would astound me, and your beauty as a human being would amaze me."

"The world needs you and the children you have raised."

"You are making a difference for your children. You inspire me."

"I am 88 years old but I still remember how hard it was to raise my children by myself. They are all grown now with their own children, and I am so proud of them, and proud of me, too. I send you love and good luck with yours."

"Many blessings to you for all your work and remarkable strength to carry on."

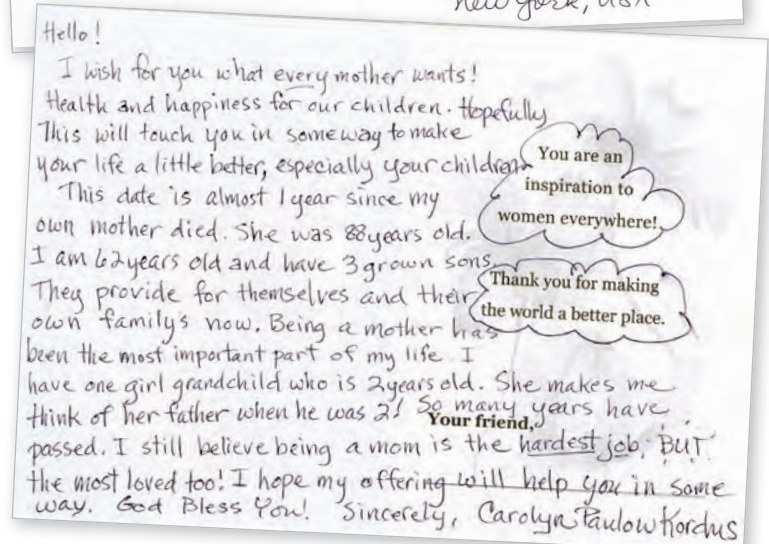
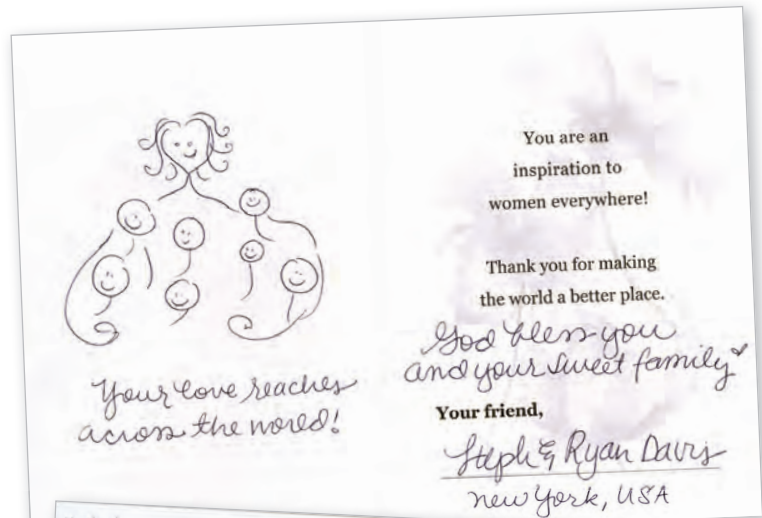
"The world would not be the same without your care and love."

"You inspire me to do better every day and to be a better human being. You're in my thoughts and prayers."

"I am so grateful for the care and many selfless acts mothers pour into their children every day. Thank you for all you do."

Heifer Senior Editor Brooke Edwards handed out cards in Malawi in May. "The women were thrilled. They hugged the notes tightly and carried them proudly for the rest of the day," Edwards said.

No matter what side of the ocean we're on, the message is clear: we love our moms for all they have done and all they are going to do. ■





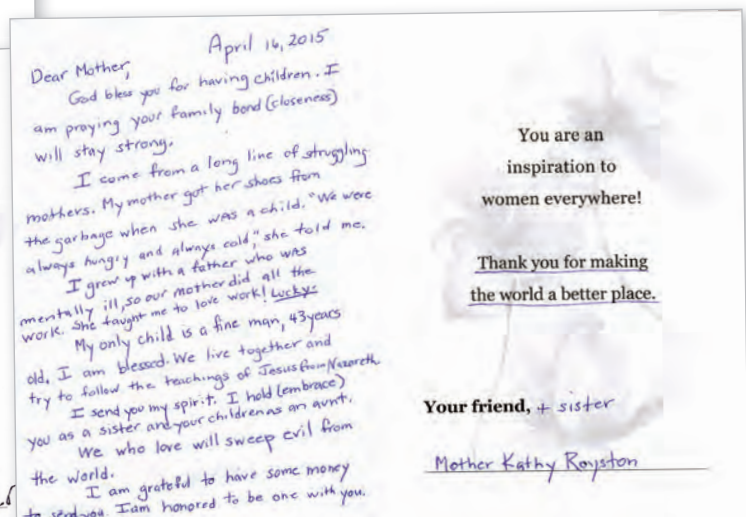
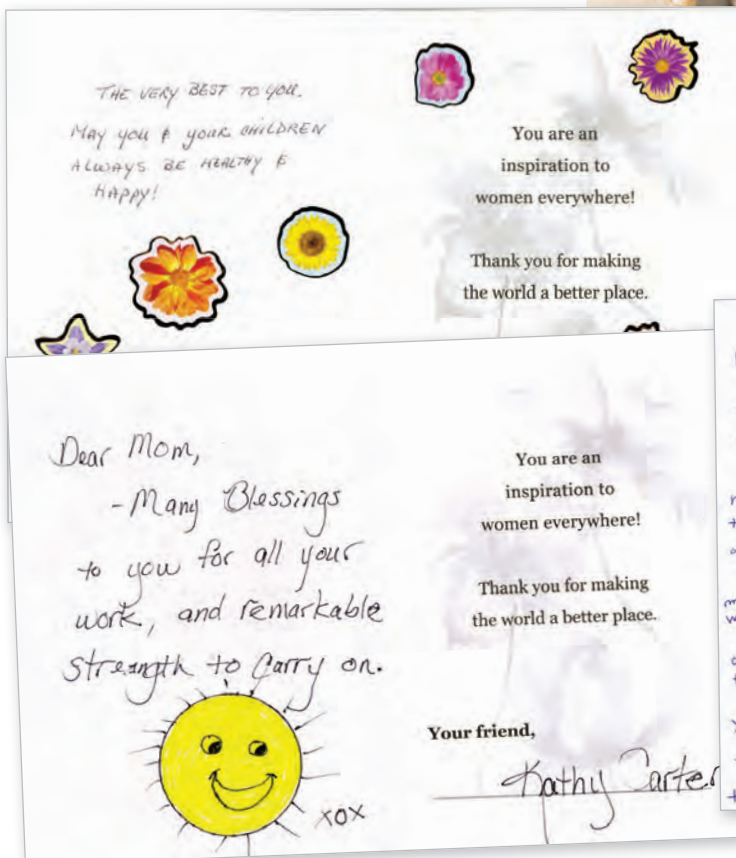
Cards with handwritten messages from Heifer donors were delivered to moms in Haiti.

PHOTO BY HERVIL CHERUBIN



Moms in Baie de Henne, Haiti, open their cards.

PHOTO BY LACEY WEST



SHOP @heifer



◀ WHO'S YOUR LLAMA? | \$14

This T-shirt asks an important question that Heifer can help answer. Youth sizes XS-XL
NLLAMAYTH



◀ END HUNGER ATHLETE | \$17

Get comfy with this classic heather gray athletic T-shirt in soft cotton. S-XXL
NATHLEH



▶ 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. One size fits all.

NCAPMAROON Maroon
NCAPGREEN Green



▲ HEIFER JUMPING COW | \$25

This understated long-sleeve thermal shirt is a great way to show your support and keep you warm on chilly fall days. Adult sizes S-XXL
NTHMLBLK

◀ HEIFER AFRICA SUNSET | \$17

You, too, can watch the sun set on hunger when you buy this unique short-sleeved, feminine cut T-shirt. Women's adult sizes S-XXL
NSUNSETFEM



▲ HOLIDAY CARD | \$15

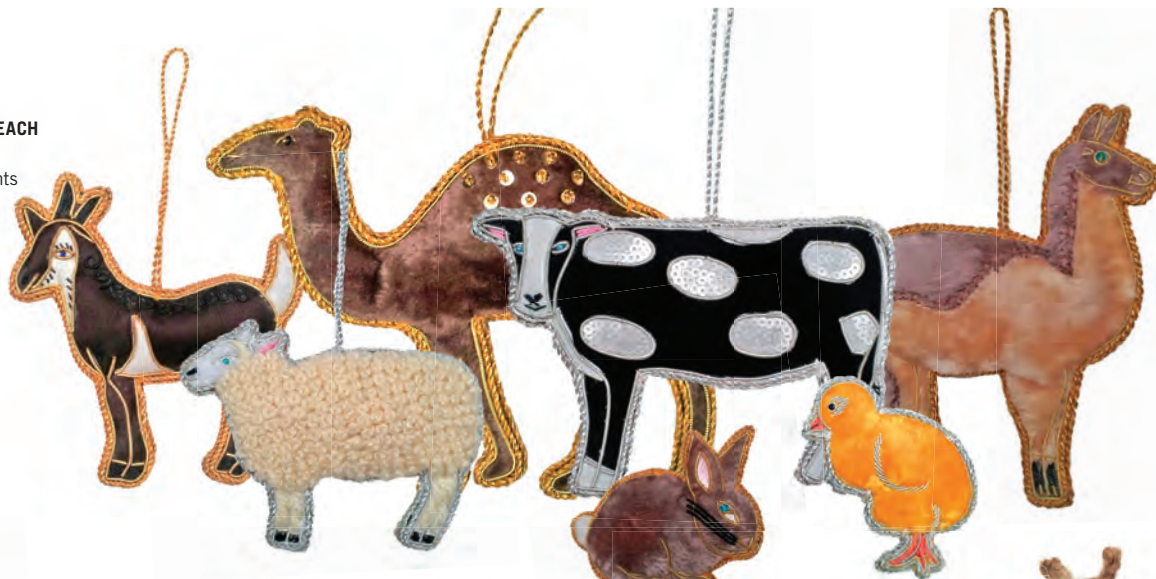
Send along your best holiday wishes with this Heifer-themed card. Inside: *Wishing you many blessings this holiday and for all the days ahead.*
NHOLCARD15

CALL: 877.448.6437 ★ ONLINE: HEIFER.ORG/SHOP ★ MAIL: P.O. BOX 8058, LITTLE ROCK, AR 72203-8058

ANIMAL ORNAMENTS | \$13 EACH

Adorn your home with these handcrafted animal ornaments representing animals Heifer gives to families around the world.

NC0017GOAT Goat
NC0014SHP Sheep
NC0023CML Camel
NC0020COW Cow
NC0022RBT Rabbit
NC0015LMA Llama
NC0019CHK Chick



▲ 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

▼ SEASON'S GREETING CARDS VARIETY PACK | \$10

These holiday cards help spread holiday cheer and the Heifer spirit. 20 cards and 22 envelopes.

NCARDH202



▲ HEIFER GOURD ORNAMENT | \$10

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

▲ KNITTED ANIMAL ORNAMENTS | \$8 EACH

100% alpaca wool. Hand-knitted by a women's group from Peru. Comes in a variety of colors.

NLKNITORSHP Sheep
NLKNITORNGOAT Goat

NLKNITORNLMA Llama
NLKNITORNCOW Cow



▲ HEIFER GROCERY BAG | \$15

Show everyone you're serious about caring for the Earth and sustainability when you take these reusable totes on your next shopping trip.

NBGUORCHID Orchid
NBGUBLUE Blue

CALL: 877.448.6437 ★ ONLINE: HEIFER.ORG/SHOP ★ MAIL: P.O. BOX 8058, LITTLE ROCK, AR 72203-8058

SHOP @heifer



▲ HEIFER MUGS | \$8

Keep your coffee warm and your heart warmer with these lovely ceramic mugs featuring Heifer's logo. Microwave and dishwasher safe. 14oz.

NCERMUGBLU Dark Blue with Light Blue Interior

NCERMUGORG Orange with Yellow Interior

NCERMUGGRN Dark Green with Light Green Interior

◀ HEIFER WINDOW DECAL | \$1

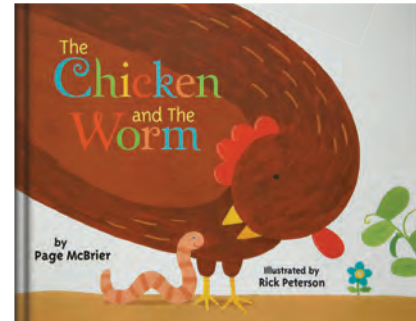
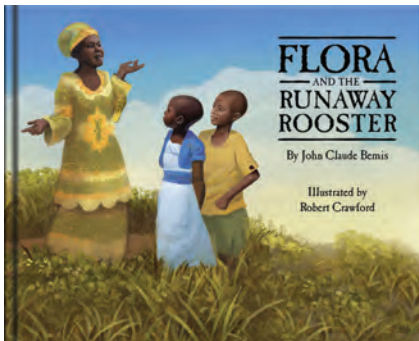
Show your support and spark conversation with this attractive, weather-resistant vinyl decal. White color, 5 inches x 3.5 inches.

ND0005

▼ BAMBOO UTENSIL SETS | \$15

Eat on the go? This set of reusable utensils is a great way to reduce your footprint.

NTOGOPUMP PUMPKIN
NTOGOIND INDIGO BLUE
NTOGOMUL MULBERRY



FLORA AND THE RUNAWAY ROOSTER | \$10

Young Flora dreams of going to school with her brother and sister so she can play soccer. But when one of her family's roosters Kubika runs loose, he leads Flora on an adventure. Along the way she learns the value of friendship, responsibility and Passing on the Gift. Written by John Claude Bemis. Illustrated by Robert Crawford.

NBFLORAFY15 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

FAITH THE COW | \$10

Chronicles the first shipment of Heifer cows to Puerto Rico. For ages 4 to 6.

NB0705000 Hardcover

WINTER IN SONGMING | \$10

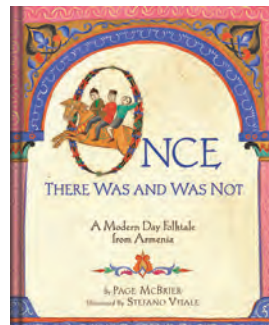
Follow a boy taking his first step into manhood while his village takes a step toward self-sufficiency. For 3rd and 4th grades.

NB07180HB Hardcover

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



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

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

CALL: 877.448.6437 ★ ONLINE: HEIFER.ORG/SHOP ★ MAIL: P.O. BOX 8058, LITTLE ROCK, AR 72203-8058



"You couldn't ask for more, except maybe some money to live on."

Fernando Cesar Quinonez-Mina

Fernando Cesar Quinonez-Mina of Las Manchas, Ecuador, loves the tiny island where he's lived his whole life. The ocean air and natural beauty keep him there, even as the mangroves surrounding his home are lost to pollution and development. Most of his neighbors moved away, but Quinonez-Mina can still make an extremely modest living fishing and driving a motorboat taxi.



LEAVE IT BETTER THAN YOU FOUND IT

Gifts to our general endowment grow over time, providing long-term support for our proven approach to ending hunger and caring for the Earth. To find out how to create a living legacy that will effect positive change for generations to come, visit www.HeiferFoundation.org or call 888.422.1161.





1 World Avenue
Little Rock, AR 72202/USA

Nonprofit
Organization
U.S. Postage
PAID
Heifer International



PRINTED ON RECYCLED PAPER

69.RPWAFY16



FRIENDS OF HEIFER

A PERFECT PARTNERSHIP

Heifer International needs caring supporters to join a critically important group we call Friends of Heifer®. Friends of Heifer send a regular contribution each month that generates a steady, reliable stream of support so we can deliver animals, training and hope to families in need around the world.

For just a few dollars a month, you can provide these families with heifers, goats, sheep and other livestock that produce nutritious milk and cheese, wool, eggs and draft power. This increases income available for medicine and school fees and enables families to lift themselves out of poverty. All you have to do is sign up, and we'll take care of the rest!

MONTHLY SUPPORT | LIFETIME BENEFITS

**Call us at 888.5HUNGER or
visit www.heifer.org/monthly**

To join Friends of Heifer, you can also use
the envelope between pages 26 and 27.



*Friends
of Heifer®*