

® THE MAGAZINE OF HEIFER INTERNATIONAL

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worldark

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Dear Fellow Activists,

For generations, Heifer International has had the privilege of turning our generous donors' financial contributions into tangible gifts of livestock and training in environmentally friendly agriculture for families living in poverty around the world. The technical name for this model is asset transfer. Put simply, we transfer living assets—or livestock—to people who need it.

Research on livestock-based asset transfer models shows exciting results. One study examined how our program in Zambia affects household food security. It found that dairy and draft cattle and goats add diversity to families' diets and increase the money they can spend on other types of food. It also found that the benefits from our interventions are substantially greater than a cash gift of equal value.

The development organization BRAC's Ultra-Poor Programme is an asset transfer model similar to ours. The results of its study are encouraging. Statistically significant increases in household income, revenue and consumption were found as a result of the program. Also, the study found that asset transfers, when combined with trainings and savings activities, are more effective than cash-only transfers at helping households in extreme poverty improve their livelihoods. They also found that, although asset transfer programs can be expensive, the benefits outweigh the costs and last for years into the future. Learn more about this research and the Zambia study mentioned above at www.heifer.org/livestockresearch.

Having scientific evidence that the model we use is successful is extremely valuable. This is particularly true as



PHOTO BY DAVE ANDERSON

we progress toward our goal of helping 4 million families achieve living incomes by 2020, which will require significant scaling up of our programs and the impact they have on the communities with which we work.

In this issue, you will read about Ou Kongkea and others in Cambodia who have worked hard to improve their lives and opportunities. As you do, I believe you will understand why our goal is so urgent.

I appreciate your continued interest in our work, and I hope you enjoy—and share—this issue of *World Ark*.

Yours for a better world,

Pierre U. Ferrari

HOW HEIFER IS SCALING OUR IMPACT TO ACHIEVE OUR GOAL



**STRENGTHENING
SOCIAL
CAPITAL**



**DEVELOPING
FARMER-OWNED
AGRIBUSINESSES**



**TESTING
PROGRAMMATIC
PROTOTYPES**



**DEVELOPING
INNOVATIVE FUNDING
MODELS FOR NEW
PROJECTS**



**STRENGTHENING
CAPACITY IN ANIMAL
PRODUCTION & HEALTH
TECHNOLOGY**

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Heifer Village
Little Rock, Arkansas
www.heifer.org/village



COVER

Ou Kongkea waters her kitchen garden in Svay Thom village, Cambodia.

Top photo: Vatu Samady (left) and Vatu Somavatey (center) watch their mother, Ou Kongkea, check on the piglets.

Cover and top photo by Omar Havana

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Can We Eat Meat and Still Reduce Greenhouse Gases?

An expert on global food, environment and poverty issues maps a path to sustainability that embraces livestock production while also combating global warming.



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Breaking the Code

Restrictive gender norms isolate Cambodian women and cut them off from educational and professional opportunities. Heifer's work aims to boost women's confidence and prepare them to lead.



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Rubbing Elbows with the Knitterati

Celebrity knitter and author Clara Parkes talks about work, traveling and why she supports Heifer International. Plus, she shares a free pattern so you can knit up a sweet and cozy hat.





A DIFFERENT TAKE ON COLUMBUS

I very much appreciate the work done by Heifer, but I must comment on one of the Haiti "Fiction" bits by Molly Fincher. Ms. Fincher states, "...in fact, trouble began when Columbus first landed on Haiti's shore." First, Haiti did not exist when Columbus landed on the shores of what he called "Isla Española" and the natives called "Bohio." Huge changes took place between then and the slave revolution that created Haiti. Second, if you take the time to read Columbus' diary of his first trip west, you will see that he was all about treating the natives fairly and with respect. Blaming Columbus for everything that followed in his wake is like blaming Einstein for the atomic bomb, Chernobyl and Fukushima. Greed and ignorance were, and still are, the real culprits of most human pain and suffering.

Thanks!

ANA FERNANDEZ
Syracuse, N.Y.

HEART FOR HAITI

Having been three times to the mountains of Haiti on a health care mission, it was a joy to read the featured articles in the Spring *World Ark*. I have found that the Haitian people, though lacking in material wealth, have an abundance of spiritual and emotional wealth. They maintain joy and resilience in the face of incredible hardship!

Q&A SUMMER

Restrictive gender roles have long been woven into many cultures. Is it OK to push for gender equity in these places, or should we respect these cultures as they are?



I wish I had the resources to return to their country more frequently!

On another note—when I'm finished reading your magazine, it goes into my waiting room!
KAREN WATT, certified nurse midwife
Terrell, Texas

Many of our Facebook friends responded to our Spring Q&A asking, "Do you volunteer your time and efforts for a good cause? If so, what does that experience mean to you?" Here are some of our favorite answers.

My 14 years as a volunteer speaker/educator for Heifer International and seven study tours to learn about our worldwide success stories have given me a global family. And my contributions to Heifer and the Foundation are my personal legacy when I'm gone.

BARB OAKES

Volunteering gives me life! I could be your average college student who sleeps in on the weekends and does nothing but study and party. But instead I have gone out into the community and I volunteer to feed the hungry. I am studying sustainable agriculture at Unity College and I hope to spend my life working to relieve hunger in rural Maine.

JIMMY PICKETT

I run a project called Baskets of Joy where I collect donations and put together Easter baskets for children staying in homeless shelters in southeastern Wisconsin. Last year, 67 baskets were donated, enough that every child in a shelter had one Easter morning. It brings me joy to know those kids have toys of their own to enjoy and outdoor items to keep them active, and that their parents know someone out there cares.

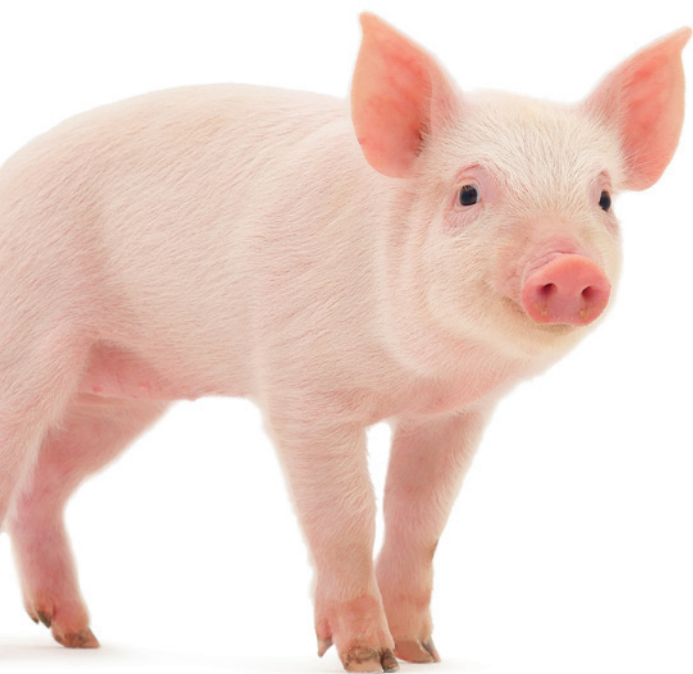
QUINN RYSHKUS

I volunteer as an English language tutor for adults. I'm proud to work in a city that welcomes refugees, but once a family arrives they often don't make friends easily and can feel very isolated. Children learn quickly, but parents are left out of conversations and feel they have little control of their lives. At the beginning of class we start with the alphabet and by the end I am speaking with new friends and we are sharing our experiences and cultures! God is so good and so faithful in the blessing of this ministry.

CHARISSA MICHELLE
RIVERA-GONZALEZ

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.



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JOIN THE CONVERSATION

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Since 1944, Heifer has helped 25 million families, directly and indirectly, 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

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Swat Team

While the mosquito-borne Zika virus is the latest reason to avoid flying bloodsuckers, it's certainly not the only one. Malaria, yellow fever and West Nile virus continue to plague us, even as the Zika threat hogs the headlines.

Malaria is still the deadliest of the mosquito-borne diseases, killing more than 1 million people every year. Although it's been eradicated in the United States, malaria remains a risk to 40 percent of the world's population. Yellow fever occurs only in tropical areas of Africa

and the Americas, and vaccines are effective. But yellow fever still kills 30,000 people per year. In the United States, West Nile virus took hold in 1999, and as of 2014, 1,538 people in the U.S. had died from brain swelling caused by the virus.

Avoiding bites is the only surefire way to avoid these and other diseases transmitted by mosquitos. Experts say to cover up with long sleeves, pants and closed shoes when you'll be in mosquito-dense areas and to use insect repellents with oil of lemon eucalyptus, deet or picaridin.

Please Add Water



Water scarcity is a much larger problem than we thought, according to a new study published in the journal Science Advances. Researchers found that 4 billion people, nearly two-thirds of the world's population, have trouble getting usable water at least one month a year. To relieve the shortages, researchers suggest improving irrigation efficiency, updating infrastructure to reduce water waste and limiting population growth in the driest regions.

Common Goals

United Nations member countries recently adopted the Sustainable Development Goals to end poverty, protect the planet and ensure prosperity for all. The goals are a rallying cry for governments, the private sector, civil society and individuals. Heifer embraces all the goals, but numbers 1, 2 and 8 are our favorites.



THE MAGICAL FRUIT

IT'S OFFICIAL. 2016 IS THE YEAR OF THE BEAN.

The United Nations' Food and Agriculture Organization designated 2016 the International Year of Pulses.



PULSE

noun a leguminous crop harvested for dry seed.

Pulses

Kidney beans
Navy beans
Chickpeas
Black-eyed peas
Cowpeas
Lentils
Split peas
+hundreds more

Not pulses

Green peas
Green beans
Peanuts
Soybeans

GOOD FOR



BODY

Pulses are 20-25 percent protein by weight, double that of wheat and triple that of rice. Low fat, no cholesterol, high-fiber, gluten-free, mineral-rich!



SOIL

Pulses convert atmospheric nitrogen into nitrogen compounds that can be used by growing plants, boosting soil fertility and shrinking a farm's carbon footprint. Some pulses can free soil-bound phosphorus, reducing the need for fertilizer.



CLIMATE

Broad genetic diversity from which to select or breed means pulses are already adapting to climate change. Many varieties can handle heat stress and don't require chemical fertilizers, which contribute to climate change.



POCKETBOOK

Pulses bring growers high prices, two to three times as much as cereal crops. But we're buying less of them. In 1970, we were eating 17 pounds of pulses per person each year. By 2006, consumption was down to 13 pounds.



Cardboard: A Garden's Best Friend

By Elizabeth Joseph, garden and education coordinator at Heifer Farm



PHOTOS BY ELIZABETH JOSEPH

If you take a peek at the to-do list for the Heifer Farm garden at any point during the growing season, you'll find the predictable tasks of watering, seeding and harvesting. What you might not expect to find is a standing line item to pick up cardboard, but it's there, and it's a big part of how we grow delicious and nutritious veggies. We use cardboard in the garden to improve the fertility of the soil, prevent weeds and install new garden space when needed. Read on to learn how to transform cardboard from a product that usually ends up in the waste stream to a soil-enhancing, microbe-boosting, weed-smothering all-star in your garden toolbox.

WHY USE CARDBOARD IN A GARDEN?

- 1** It's a great mulch and prevents weeds from sprouting.
- 2** Decomposing cardboard adds organic matter to the soil, improving your garden's drainage and boosting nutrient levels.
- 3** Earthworms flock to the dark, moist, safe habitat cardboard provides, leaving behind a nutrient-rich layer of worm castings—free fertilizer!
- 4** A layer of cardboard left in place for a season smothers out grass and weeds, creating a ready-made garden plot, no tilling required.
- 5** It's free, and you can feel great about reusing a product that would otherwise go to waste.



If you're headed to Rutland, Massachusetts, and would like to plan an outing for your family, school group or church at Heifer Farm, find the information you need at heifer.org or call (855) 343-4337.



HOW TO USE CARDBOARD IN A GARDEN

- 1** Break down packing boxes and remove any tape or labels.
- 2** Mow the area where you want the garden to go. Then, place cardboard on top, overlapping the edges a few inches so that weeds don't spring up in the cracks.
- 3** Hose everything down with water. The moisture keeps the cardboard in place and is important for both gas exchange and microbial life in the soil.
- 4** Improve soil fertility even more by layering mulches or organic matter on top: compost, shredded leaves, grass clippings, straw, you name it! At Heifer Farm, we put down a layer of compost, followed by mulch hay on top of that.
- 5** Sit back and let the magic happen. The decomposition time will vary based on soil biology. The more microbes and earthworms, the faster the cardboard breaks down.

Come planting time, if the cardboard is still there underneath the mulch, leave it all in place and simply cut a hole through it to access the soil surface so you can seed or transplant as usual. If you're looking to install new garden space, start a few months or even an entire season ahead of time to kill the sod or grass you are converting to a garden.

If you decide to give this a try, be ready to forever replace "it tastes like cardboard" with "it grew from cardboard and tastes great to boot!" Happy growing!

The Other Black Gold

The Heifer Farm isn't the only place you'll find gardens teeming with worms. Worms are one of the lesser-known animals that Heifer provides to farmers around the world.

Heifer gives worms to farmers because worms eat organic waste and convert it into top-shelf fertilizer. The process is called vermiculture, and the worm castings (that's the poo) produced from it are so valuable to farmers that they are sometimes called "black gold." Worms are composting machines, and farmers can turn waste into profit by cultivating them in compost bins and selling the high-quality fertilizer.



PHOTO BY RUSSELL POWELL

Heifer Farm's Rhubarb Crisp

Makes 12 servings

INGREDIENTS

- 2 pounds rhubarb, diced
- 1/4-1/2 cup sugar
- 3 tablespoons corn starch
- 3/4 cup butter
- 1/2 cup brown sugar
- 1/2 cup flour
- 1 1/2 cups oatmeal

PREPARATION

Preheat oven to 325 degrees. Fill a 9x13 pan with the rhubarb, sugar and corn starch and toss together. In a saucepan, melt butter and sugar together. Once sugar is melted, remove pan from heat and incorporate flour. Mix oatmeal in with the sugar and flour mixture and spread over the top of the fruit. Bake for 45 minutes or until the top is golden brown and the fruit is tender.

NOTES

Rhubarb leaves are toxic! Eat only the stems. You can substitute apples for some of the rhubarb to give extra sweetness. For a vegan version, use coconut oil in place of butter.



PHOTO BY ELIZABETH JOSEPH



Harnessing the Power of Youth

Interview by Annie Bergman, Heifer International global communications manager

Chelsea Clinton is no stranger to tackling tough problems. As vice chair of the Clinton Foundation, she's helped advance opportunities for women and girls, looked at ways to curb childhood obesity and raised awareness of the effects of climate change. She started this work more than two decades ago, after she read a book about how kids could do small things to help save the Earth.

Now she's written her own book for would-be world changers: *It's your World: Get Informed, Get Inspired & Get Going!* The book takes wide-reaching global issues like the environment, women's rights and poverty and turns them into actionable items for the up-and-coming generation.

WORLD ARK: Why did you decide to write specifically for young people age 10 to 14?

CHELSEA CLINTON: I wanted to write this book for the 10-14 age group because that's the age I was when I thought I could make a sustainable and sustained difference in the world. It's when I read *50 Simple Things Kids Can Do to Change the Earth*. That's the age you can really engage and be empowered to engage in whatever way feels right to you. Clearly, there are a lot of kids who are even younger who started making big differences when they were 6 and 7. It's not to say you have to be 10. There are kids who are changing the world who are a lot younger. That's just the

age I was when I started to really engage and the age I find kids to be when I talk to young people who are thinking along the same lines.

How did you convince children's book editors/publishers that the topics you discuss in the book were accessible enough for your audience? Did anyone give you pushback on that?

I've been really lucky to have a remarkable editor who has been tremendously supportive and who reached out to me to see if I would be interested in a project like this. I was already thinking about something like this, and it was such serendipitous timing. From the beginning she's been supportive of treating kids seriously and talking about serious issues. I hope that it

doesn't feel only serious because so many of the kids who are tackling these serious issues are so joyful when they're doing it. So I hope that comes through in the book. That even though these are big issues and changing the world is hard work, it can be fun work because it is so important and inspiring.

How can young people keep from getting overwhelmed by the issues facing the world?

I purposefully end each chapter with the "Get Going" section so that hopefully it's very clear that lots of small things matter. And small things add up to big change. There are so many different ways to make a difference. If every family ate differently and every family



PHOTO BY NELSON CHENAVULT III

Chelsea Clinton talks about her new book at the Statehouse Convention Center in Little Rock, Arkansas.

recycled, we would not have the environmental challenges we have today or the chronic disease challenges we have today. So I hope that that is clear. That small changes add up to big changes.

You deal with pressing global issues every day. How do you keep from getting overwhelmed yourself?

I just don't find it very productive, and I don't say that flippantly at all. Sometimes I get discouraged for a day. And then I think, "Well, that wasn't very productive." I think because I feel such a responsibility and am so grateful to have an opportunity to work on issues that are important in the world, I think it's going to be more productive for me to take time in my head and heart

to be thinking about how to solve a problem or support work that is already solving a problem than being depressed about a problem.

This age group is so motivated and has such a capacity for changing the world. What would your advice be to an organization like Heifer to keep them engaged?

I would ask kids. I really would. I would see what is the best way to help them continue to support your work. It's also OK if kids come in and out of supporting your work. I think that is OK because what we care about changes and evolves. You and I know what we care about now and that's probably not going to change, but it probably changed from when we were 10 to when we

were 15 to when we were 20. So I don't think you should feel badly if there are some kids who feel passionately about Heifer when they're 12, and then when they're 15 or 16 they realize at that moment in their lives they feel passionately about campaigning against drunk driving, for example. But I think there are other kids who still want to be involved in Heifer if there are ways to be involved. One of the challenges with kids, and one of the reasons why kids start their own organizations, or have variations on organizations, is because often kids don't want to be doing the same things at 16 as they did at 10 because it feels like they haven't grown or evolved. Ask them, "What more can we do to make you feel connected to us?" ■



WHY SOME COUNTRIES ARE POORER THAN OTHERS

AN EXCERPT FROM
*IT'S YOUR WORLD:
GET INFORMED, GET
INSPIRED & GET GOING!*
BY CHELSEA CLINTON

While it's hard to separate out poverty's causes and effects, it's fair to wonder why some countries—and people in those countries—are poorer than others. Why is the per capita annual income just over \$600 in the Central African Republic and more than 100 times that amount in Singapore and Norway? Or more than eighty-five times that amount in the U.S.? There are many complex reasons. Those discussed here are just a few highly generalized ones.

CHELSEA CLINTON

It's Your
WORLD

Get Informed
Get Inspired &
Get Going!

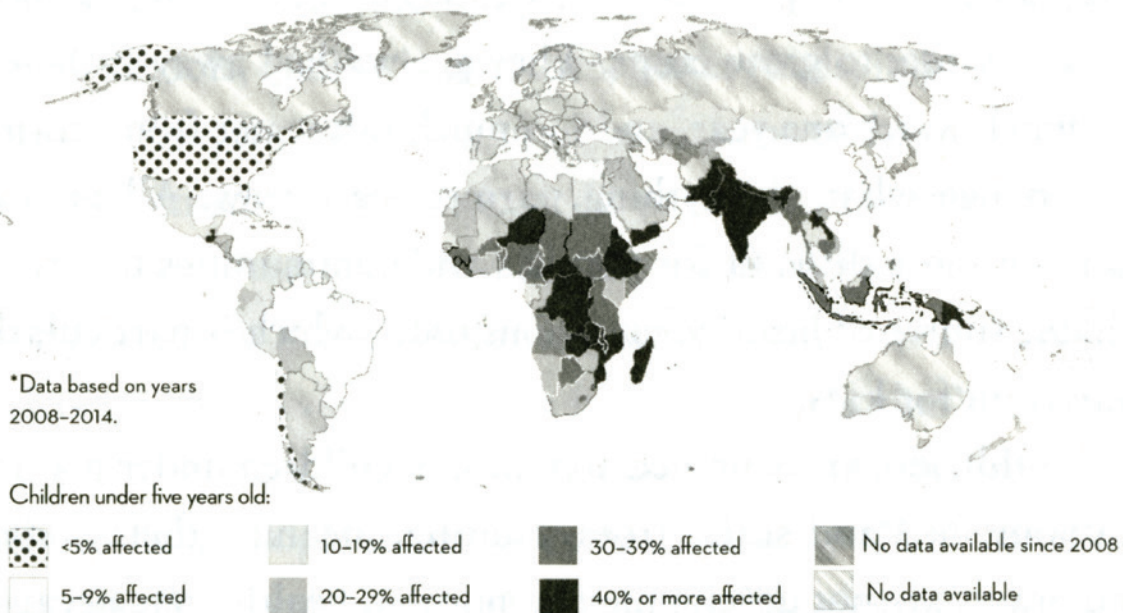
WHERE YOU ARE AND WHAT YOU EAT

Most historians, economists and social scientists—academics who study people and societies over time—agree that geography matters. Places that have more extreme climates and more extreme weather events—like hurricanes or droughts—are more likely to have more people living in extreme poverty. This is partly because extreme climates, particularly very hot, dry places, and places with frequent extreme weather events, like hurricanes, make it harder to grow crops. They get washed away if there's too much water one year, and too much salt water from storms can change what, if anything, farmers can grow. All of that makes it more difficult for families and communities to have a reliable source of healthy, nutritious food, which is particularly important for kids.





COUNTRIES WITH HIGH RATES OF (MEANING LOTS OF KIDS SUFFERING FROM) STUNTING*



Information source: UNICEF

Worldwide, an estimated 165 million children under five are malnourished and suffer from stunting, meaning their bodies and brains are not developing at a normal, healthy rate because they don't get enough food and enough of the right kinds of food to eat. Their physical and intellectual growth is stunted because of a lack of the vitamins, minerals and nutrients every child needs to grow and develop (think of all the things you see listed on a cereal box, like Vitamin A, Vitamin D, calcium—many kids don't get any of those, much less all of them, in the amounts they need).

Poverty and stunting are deeply intertwined. Parents living in extreme poverty are more likely to have children who suffer from stunting. Children who are stunted generally grow up less physically and mentally strong, less able to learn and succeed in school (if they're in school) and less able to work as productively as people who were not malnourished as young children. Adults who were stunted as children are more likely to be poor later in life.

Notice how similar this map is to the earlier one of the developing world. It's also arguably another depiction of the cycle of poverty.



A country's economy is the sum total of all activity that involves money and resources. This includes what individuals and companies make, what consumers buy and what people are paid. A strong economy depends on the strength of all these parts. The more money people earn from what they make or do, the more they can later spend. If someone has more money to spend at the market on her neighbor's paper, that neighbor will then have more money to buy food. The farmer whose food she buys will have more money to invest in seeds for next year's crops and to send her children to school and so on. If an economy has a lot more stunted workers, or workers held back by illness (that they may have gotten from dirty water) or illiteracy (because they likely never went to or stayed in school for long), none of that can happen on a large scale. Countries with fewer educated and healthy workers and fewer healthy kids in school are less likely to see their economies grow and poverty shrink.

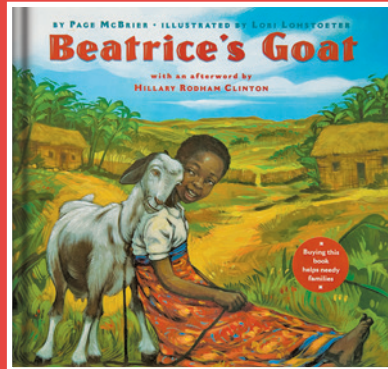
It's also hard for a country's economy to grow if it's persistently battling extreme weather or earthquakes, and not just because of the effects on crops. Imagine if you lived in a place

where hurricanes, floods or landslides occurred regularly, washing out roads and bridges, wrecking your home, your school and where your parents work and knocking out power lines (though there probably isn't power—more on that below). You'd miss days of school waiting for the damage to be repaired. Your parents would miss days of work, needing to restore your home and waiting for the roads to be fixed so they could get back to work. It's hard to build for tomorrow if you constantly have to repair damage from yesterday.

It's impossible for a country's economy to grow if there isn't enough healthy food available that people can afford. This too is not just about crops. It's also about milk, eggs, meat, fish and more. Heifer International is an organization that provides animals to poor families around the world. Not just any type of animal, but animals like cows, buffalo and goats. Why those animals? Because they—like the goat with the boy in the photo at the start of this chapter—provide both food and a way to earn money. All produce milk that can help strengthen a family's nutrition, and excess milk that can be sold to increase a family's income and help the families who buy



it improve their nutrition too. Heifer also gives families animals like chicks, ducks and geese, which produce eggs families can both eat and sell. Critically, Heifer provides families with the training they need to properly care for their animals. And Heifer asks families who receive animals to give their first female offspring (because she'll later produce milk or eggs) to another family in their community; Heifer calls this "Passing on the Gift."



My family has a few ties to Heifer. In the last few years of her life, my grandmother Dorothy gave Heifer animals to all of her grandchildren for Christmas. Well, not the actual animals, but a certificate saying our grandmother had given animals to families in need in our names. Although I wondered why I always seemed to get a buffalo (and my cousins goats), I thought the life-giving gifts were the perfect Christmas presents. My mom wrote the foreword to a wonderful book called *Beatrice's Goat*, which tells the story of Beatrice from Uganda. Heifer gave a goat to Beatrice's family that Beatrice helped take care of. After less than three months of selling the goat's milk, Beatrice's family had saved enough money to send Beatrice to school (before, they couldn't afford the school fees, a challenge we'll talk more about in *Time for School*).

Beatrice worked hard and did well in school, and as a result, received a scholarship to go to college in the U.S. She went on to graduate school at the University of Arkansas Clinton School of Public Service (started by my dad). And Heifer is based in Little Rock, right across from the Clinton Presidential Library. I am proud my dad's library is Heifer's neighbor.



YOU can make a difference.
YOU can make a change.
It's **YOUR** world.



There are lots of ways for kids and families to participate in Heifer's work, including by giving a goat to a family like Beatrice's. For \$10 or \$20, you can help send a goat, cow or flock of chicks to a family like Beatrice's. Another way to participate is through Heifer's Read to Feed program. You find a sponsor for yourself or your class who

pledges a set amount of money for each book you read in a defined period of time (you can even do it by chapter or page if you want). However many books you've read at the end gets multiplied by the amount pledged and then donated to Heifer to support their work. For more on Heifer, including Read to Feed, visit www.heifer.org. ■


Can We Eat Meat and Still Reduce Greenhouse Gases?

By **Alain Vidal**, director of strategic partnerships at CGIAR

Illustrations by **Dan Williams**

NOTE:

This article originally appeared on foodtank.com and is reprinted here with permission.

ur global food production system—which includes, in addition to crop farming, raising livestock and deforesting lands to grow livestock feed and other crops—is responsible for about a quarter of the greenhouse gases produced by human activity that are warming our planet.

As human populations and incomes continue to grow—along with demand for more meat, milk and eggs—across the developing world, scientists estimate that if agriculture were to conduct business as usual while other sectors reduced their emissions, agriculture’s share of human-induced greenhouse gas emissions could double to 50 percent by 2050.

That’s a figure we cannot afford. And we don’t have to.

The prospect of such a frightening scenario for agriculture and climate change compels us to increase significantly our investments in research. We need agricultural research to develop new ways to produce much more food with much smaller environmental footprints. In particular, we need to reduce the levels of greenhouse gases that our crop and animal farming

and deforesting are generating today. The recent French-government-led 4P1000 initiative to increase soil carbon, in which CGIAR partners with French research institutes, seeks to reduce greenhouse gas emissions as well as to help farmers adapt to climate change and increase ecosystem resilience. Yet this mostly focuses on cropland, pasture and forests, not on livestock.

Should we still worry about the impacts of rich people over-consuming meat? Yes. Most agricultural greenhouse gases come from livestock mostly from methane and nitrous oxide emitted from livestock manure and the digestive process of cattle, sheep, goats, camels and other ruminant animals, which have multi-chambered stomachs (rumens) where micro-organisms break down tough cellulose, producing methane as a by-product. The adverse climate impacts of releasing both methane and nitrous oxide into the atmosphere are far greater than those of carbon dioxide.

Should we also still worry about the impacts of poor people under-consuming meat? Yes. Across the world’s food-challenged regions, the sustenance provided by livestock—milk, meat, eggs—is critically

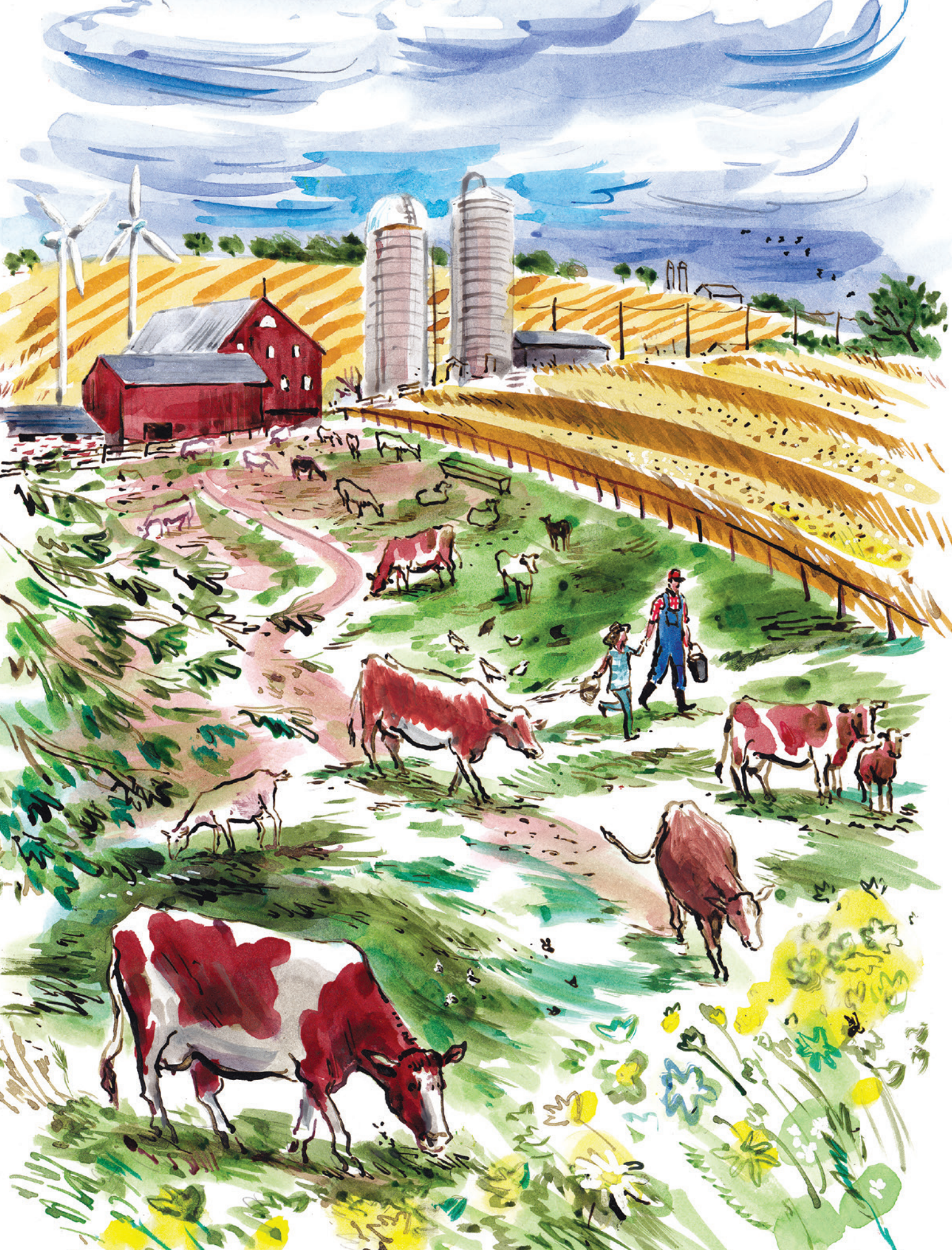


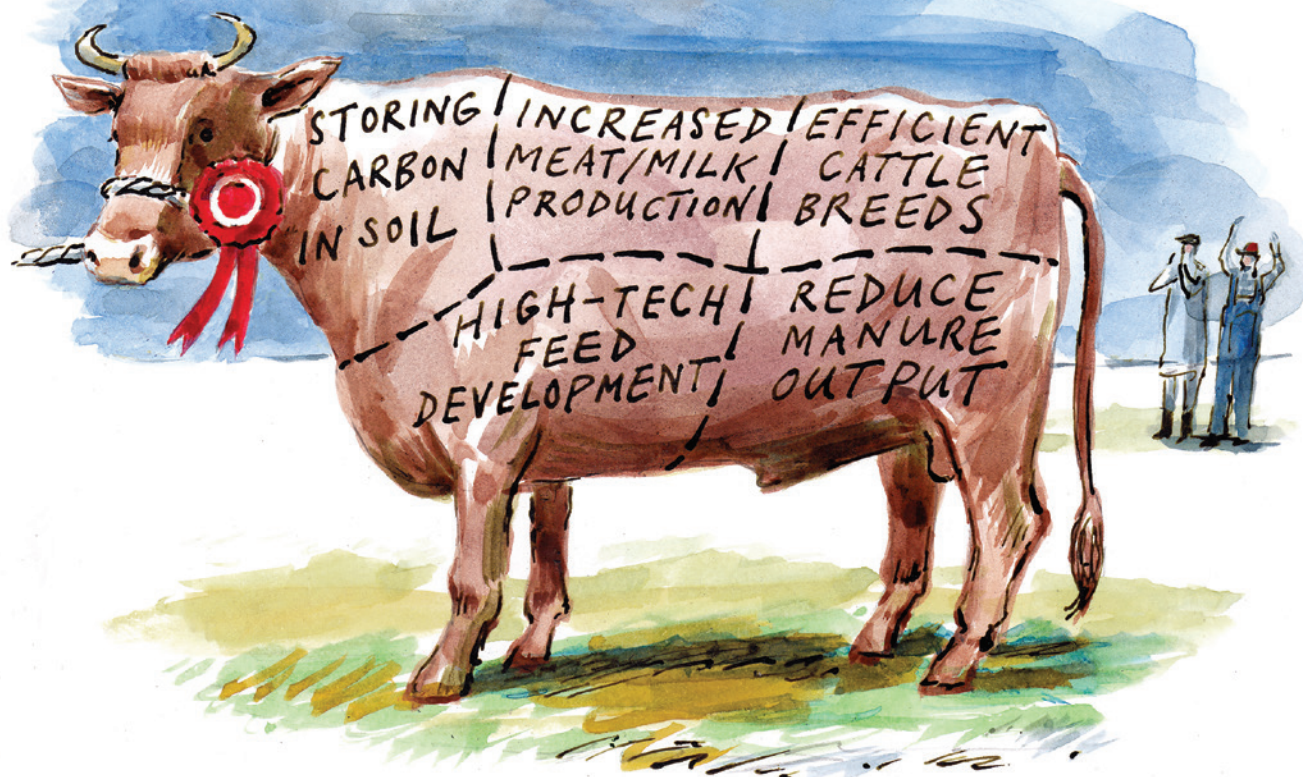
important. For most poor Africans and South Asians, for example, there are simply no alternative foods that can supply anywhere near the same level of protein and micronutrients. (To get the same amount of vitamin A in just 100g of sardines, you would have to eat 17 bananas!) Animal-source foods are particularly important for infants between weaning and two years of age. Even modest amounts of animal-source foods would save many of them from stunting, ill health, and death due to malnourishment.

On a recent visit to the Mazingira Centre ('mazingira' means 'environment' in Swahili), at the International Livestock Research Institute (ILRI), a CGIAR centre based in Nairobi, Kenya, I discovered two things. First, CGIAR is taking the issue of greenhouse gas emissions from smallholder livestock

production very seriously in Africa, where ruminant animals are a main livelihood and source of income for poor people but produce 30 percent or more of the continent's total greenhouse gas emissions. With the population set to soar, there is a huge opportunity to intervene and bring down these emissions whilst ensuring food and nutrition security. Second, even though ILRI's Mazingira Centre has been operating for less than two years, its initial findings are highly promising both for meat eaters in rich communities who care about the planet and for smallholder livestock farmers in Africa who are ambitious to rise out of poverty.

Livestock production contributes to greenhouse gas emissions in three major ways and the Mazingira Centre is investigating ways to mitigate the emissions from each of these.





Storing rather than releasing carbon:

Greenhouse gas emissions from pastures and planted forages and crops used to feed cattle and other ruminants may be reduced by adopting alternative farming and herding practices that avoid the release of these gases and, even better, store carbon in soils; such solutions are being proposed in the 4P1000 initiative.

Raising ruminant productivity:

The gas emissions from the specialized 'enteric fermentation' digestive process in ruminant animals are difficult to reduce in absolute terms, even via improved feed, but alternatives exist. One possibility scientists are researching is to raise smaller types of cattle (goats, sheeps, etc.); these not only emit fewer greenhouse gases but also better tolerate climate variations than larger cattle. The biggest opportunity yet seems to be increasing the milk and/or meat productivity of the animals, which can significantly reduce the amount of

greenhouse gas emissions per kilogram of meat or litre of milk produced.

Developing feeds that reduce emissions from manure:

Initial findings by researchers at the Mazingira Centre suggest that the most promising technique is likely to be developing alternative animal feeds, particularly those making better use of African crops that lead to reduced methane and nitrous oxide emissions from manure dropped in pastures.

It's good news for the world's climate-concerned meat eaters and milk and dairy consumers that new ways are being explored to greatly reduce greenhouse gas emissions from meat and milk production. It's even better news for Africa's small-scale livestock producers, who will be better able to increase their incomes and food from livestock production without speeding global warming. ■



Ou Kongkea teaches
her children the Khmer
alphabet in their home.



BREAKING THE CODE

CAMBODIAN WOMEN ARE BREAKING FREE OF STRICTLY
DEFINED GENDER ROLES THANKS TO HEIFER TRAINING,
WHICH ALSO TAKES AIM AT DOMESTIC VIOLENCE
AND HUMAN TRAFFICKING.



By **JASON WOODS** *World Ark* senior editor

Photos by **OMAR HAVANA**

S **VAY THOM, CAMBODIA**—For as long as she can remember, Ou Kongkea's parents worried about having a daughter. "My parents tried to explain to me not to do anything crazy because we would lose all our dignity," Ou Kongkea said.

In traditional Khmer culture, which permeates Cambodian life, a woman's reputation influences not only her own social status, but that of her husband, father and sons as well. That reputation hinges largely on how well a woman can live up to the standards laid out in the *Chbab Srey*, a traditional poem written in the 19th century.

Literally the "code of conduct for women," the *Chbab Srey* takes the form of a queen advising her daughter on the ideals of womanhood. Women should be demure and obedient, letting men take charge, the queen counsels. "Don't walk so fast that your skirt makes a sound. Don't go on a walk to someone's house. Don't sit on the stairs in front of your house—people will think you're waiting on a boy. Don't speak loudly. Don't laugh loudly."

The *Chbab Srey's* powerful influence survived French colonization, Cambodian independence,

“

Don't walk so fast that your skirt makes a sound. Don't go on a walk to someone's house. Don't sit on the stairs in front of your house—people will think you're waiting on a boy. Don't speak loudly. Don't laugh loudly.”

—PARAPHRASED
EXCERPTS FROM
THE *CHBAB SREY*,
A TRADITIONAL
CAMBODIAN POEM



Ou Kongkea, 29, waters vegetables planted outside her home in Svay Thom.



Ou Kongkea shows children Vatu Samady (left), 7, and Vatu Somavatey (center), 5, how to hold a piglet.

the brutal reign of the Khmer Rouge and the subsequent reconstruction after two decades of war. Until 2007, every girl in grades 7 through 9 memorized the *Chbab Srey* as a part of school curriculum. Some schools, especially those in rural areas, still use the poem today.

Ou Kongkea dropped out of school after the 5th grade, but she was well aware of the *Chbab Srey*. Her parents wouldn't allow her to talk to boys, and she was rarely allowed to leave the house. The heavy burden of her family's reputation frightened Ou Kongkea so much that she retreated inward. When Ou Kongkea was 20 years old, her parents arranged a marriage and she moved in with her husband, but her story was still much the same.

"I was scared to speak to anyone," she said. "When I went out in public, since I never had the chance to talk, I was afraid to speak or share ideas because they might be wrong."

In October 2012, Ou Kongkea joined a Heifer International Cambodia project that provided her family with piglets to raise and sell. Ou Kongkea's family made less than \$100 a



month before working with Heifer Cambodia. Now they're able to put \$100 into savings each month after accounting for their expenses.

But training changed Ou Kongkea's life just as much as the animal gifts. "In the trainings, people came together," she said. "I got the skills and knowledge, but also the friendship of the people in this community."



Pigs have helped raise the family's monthly income and savings.



Home gardening training helped Ou Kongkea grow healthy greens and other vegetables.



Ou Kongkea walks through her garden outside her house.



"NOW IT
SEEMS
LIKE I'M
LEADING
THE
FAMILY."
—OU
KONGKEA



Ou Kongkea shares her ideas for the family's future with her husband, Loueng Buntheun (right), 28, more often now.



Since she joined the project, Ou Kongkea has felt much more comfortable talking with her neighbors.

With Heifer Cambodia's assistance, project members formed a self-help group to move forward economically and as a community. Ou Kongkea's confidence grew at group trainings where she interacted freely with peers, examined gender roles and studied home gardening, improved animal management and business development.

The group watched Ou Kongkea grow, and when the time came to choose group officials, she was elected treasurer, a position that requires a lot of trust. "I'm so proud the members believe in me," she said. "I feel like I can do something for people, especially for my members."

Now Ou Kongkea leaves her house regularly to attend trainings, meet with local government groups or sometimes just to check in on the neighbors.

"What has changed is people acknowledge my capacity," Ou Kongkea said. "I am really

very comfortable to speak out. When I talk, people listen to me."

Ou Kongkea's leadership extends to family life as well. "When I propose something, my husband listens to me and follows along. He says, 'You have good ideas.' And we do it. Now it seems like I'm leading the family."

Although she appreciates her own parents, Ou Kongkea would like to raise her children differently.

"I plan to give them more freedom," she said. "I want them to be more educated and communicate more so they can have friends. I want them to have open minds by seeing other people, learning from the other people."

STARTING CONVERSATIONS

With such oppressive rules about gender roles, it might not be surprising that many women in Cambodia are victims of domestic violence.



Soy Phe (top right), 43, sits on the steps of his house with his wife, Houl Kimsrean (top left), 35, and their children.

“

After learning (in the trainings), I know it's not just about us, but the whole community. We can't do (anything) without supporting each other.”

—SOY PHE



A 2013 United Nations Development Programme report shows about a quarter of Cambodian women ages 18-49 said they had been a victim of domestic violence. A common saying in the country is “plates in a basket will rattle,” meaning that when people share a home, conflicts will happen. The phrase is often used to excuse a husband's violence against his wife.

Cultural norms, as outlined in the *Chbab Srey*, teach women to keep silent about domestic violence. In a 2014 study from British geographer Katherine Brickell, 75 percent of women and 55 percent of men said wives should keep quiet about domestic abuse to keep the family together. In the unlikely event violence is reported to local authorities, there will probably be no significant repercussions.

In early 2013, Soy Phe and his wife, Houl Kimsrean, joined a Heifer Cambodia project. Eventually, they



earned enough money from their fledgling swine operation to build a new house and pay for books and school fees for their five children, who all want to be teachers or police officers. But the trainings are what sparked something in Soy Phe.

"Before, I only thought about myself, my family," he said. "I never thought about others. After learning (in the trainings), I know it's not just about us, but the whole community. We can't do (anything) without supporting each other."

The trainings also led Soy Phe to recalibrate his thoughts on the role of women in his village, Andong Chros. Soy Phe and Houll Kimsrean had never fought. And Soy Phe helped cook, clean and wash clothes—chores many Cambodian men would never consider. But Soy



Soy Phe collects water from the well before making lunch.

Phe grew up thinking of the *Chbab Srey* and traditional gender roles as mostly good things. After the project began, discussions in the trainings changed his mind. After Heifer formed a self-help group in the area, Soy volunteered to be a gender peer educator for the group.

Now, Soy Phe is a familiar face in Andong Chros. Nearly every day, he walks to a neighbor's house to talk purposefully for a half hour or so, mostly with other men. After pleasantries, the conversation sometimes touches on the best ways to raise livestock or grow vegetables. But the main theme is always the relationship between women and men in the community.

Before the project started, Soy Phe noticed signs of domestic abuse in the community fairly frequently. "Sometimes we would hear it, loud, from our house," he said. "You could hear the fighting and the shouting, cursing."

As a peer educator, Soy Phe discusses gender issues with self-help group members during meetings and home visits. His message is that



Soy Phe and Houl Kimsrean share their household chores despite the gender roles prescribed in traditional Cambodian culture.






You know you have a happy family when the wife and husband are working together. We have to respect each other.”

—SOY PHE



domestic violence will destroy a family. “You know you have a happy family when the wife and husband are working together. We have to respect each other.” Soy Phe also connects with police and local authorities regularly to make sure everyone in the community remains vigilant for the signs of domestic abuse.

The approach seems to be working. A few years ago, Soy Phe estimates that domestic violence was common for 20-30 percent of families in the community. Now he thinks the number is close to 1 percent.

The early success is encouraging, and Soy Phe is motivated to continue the volunteer work. “I see a better future for my community,” he said.

CLOTH AND GOLD

One of the most repeated messages in Cambodia is “Men are gold; women are white cloth.” Gold can’t be tarnished by dirt. But if the cloth gets dirty, it’s ruined. It will never be as clean again, no matter how many times it’s washed. The directive is that a woman is expected to be a virgin before marriage. If she isn’t, no matter the reason, she will be thought of as worthless in the eyes of her peers for the rest of her life. Men are not held to the same standard. The *Chbab Srey* tells wives that if your husband takes a mistress, let him wander where he wants, and he will return to you.

If a man does choose to wander, he has a thriving sex industry at his disposal. Although the sex trade is illegal, it’s easily accessible in bars and karaoke clubs, especially in urban areas. This is due to, among other factors, a lack of law enforcement, a clientele with a large amount of political clout and a lack of respect for women.

National Public Radio documentarians estimated that 40,000 women work in the sex trade in Cambodia. Some women feel like it’s the only way to escape the cycle of poverty or the only viable economic option after sexual assault and subsequent ostracism.

Other women, or girls, are tricked into the sex trade. Some Cambodian men believe that having sex with a virgin provides youthfulness and vigor, so girls in their teens are usually the target of the scam. A common tactic is for recruiters to come to poor areas of the country offering young women jobs in restaurants and hotels. Parents, too trusting or desperate to believe a better life awaits their children, agree to let their daughters go.

“It’s very easy to pursue, especially in communities that don’t have access to information about all these cases,” said Keang Keo, director of Heifer Cambodia. “So we try to educate the people.”

Heifer Cambodia works with parents, providing information and resources on the prevention of human trafficking. The topic is discussed during regular Heifer meetings, but staff also hold a regular community forum on trafficking prevention for the entire community. In addition to exposing common deceptions, Heifer Cambodia staff connect parents to both governmental and nongovernmental organizations that help check the veracity of job offers. And projects also provide economic alternatives.

“We cannot say, no, you have to get your children back, or you’re not to send them to work anywhere,” Keang Keo said. “But we say, if you have an opportunity at home, she will be better at home.” ■

REPORTER'S



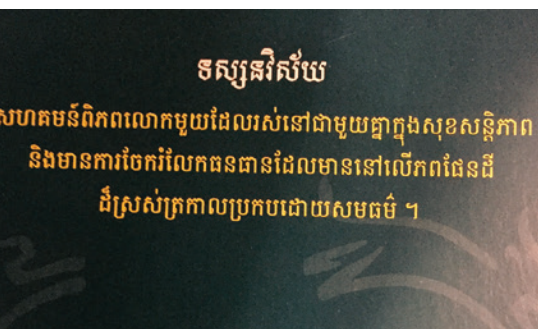
Tabletop dining



Khvet, an interesting fruit

LANGUAGE

Writing in Khmer looks pretty intimidating. There are more letters in the alphabet—somewhere between 69 and 74, depending on who you ask—than any other language, and there are no spaces between words. You write in Khmer from left to right, then straight down after you run out of horizontal space.



EATING

Prahok, or salted, fermented fish paste, is a Cambodian staple. Sometimes called “Cambodian cheese” by foreigners because of the pungent smell, prahok is usually used as a condiment.

Sitting on top of the table for meals is a pretty common occurrence in Cambodia. Tables are much lower to the ground and larger than what we use in the U.S.

One of the strangest fruits I’ve tried is the khvet, or wood apple, which is very chalky, hard to chew and sucks all the moisture out of your mouth. Sounds great, right? But it does have its benefits. According to Heifer Cambodia Director Keang Keo, people survived illnesses like diarrhea when no medicine was available during the reign of the Khmer Rouge because of the medicinal properties of this fruit.



NOTEBOOK



Apsaras



Seven-headed nags



Angkor Wat

RELIGION

The two most common images I saw in Cambodian art and architecture were Apsaras, or female spirits, and seven-headed nags, or snakes.

Siem Reap, Cambodia, is home to the famous Angkor Wat, the largest religious structure ever built. The sprawling complex of 72 monuments spans more than 15 miles.

Many families put small houses for spirits in front of their homes. The idea is that if the family offers its respects in this way, the spirit will take care of the family. Ou Kongkea and her family have a house for the land spirit.



A house for the land spirit



Riel

GOOD TO KNOW

As a greeting, Cambodians press their hands together and bring them to their chest.

The official currency of Cambodia is the riel; however, U.S. dollars are much more common. The only time I saw riels used was when change under \$1 was given.

Rubbing Elbows with the Knitterati:

An Interview with Clara Parkes

Anyone with an arsenal of pointy needles and a yarn addiction knows Clara Parkes, editor of the beloved *Knitter's Review* and author of *New York Times* bestseller *Knitlandia*. She stays exceedingly busy designing patterns, baking, writing, teaching classes and spinning wool, so we're grateful Parkes fits fundraising for Heifer into that packed schedule. Last year, the *Knitters Review* Team Heifer page raised more than \$30,000.



PHOTO BY PAT PHILBIN



WORLD ARK: You've built a successful career on baking, knitting, traveling and writing. Best job ever! What, in your opinion, is the secret formula for success?

PARKES: It's a combination of luck, hard work and a congenital aversion to working for other people. All three have fueled a decade and a half of creative endeavors. Of course, I've made myself totally unemployable by anyone else. So I have to make it work!

I have about six jobs. I run a pop-up artisanal yarn company, I run an online knitting magazine, I write books, I run an annual event, I write freelance articles, and I travel to teach and speak. I

haven't had a proper vacation since I don't know when, but I love it and wouldn't have it any other way.

When I launched *Knitter's Review* in 2000, I had no idea it would become my work or my life. I simply had to write about a topic I loved—namely yarn—and I saw that other knitters had a need for this information. Little did I know that I was there at the very beginning of perhaps the greatest boom in knitting history.

As *Knitter's Review* grew, I had to make that scary decision to let go of my day job and leap into this full-time. And just a year later I got a call from Random House, which led to five books, 39 television episodes, hundreds of yarn reviews,

thousands of pounds of wool, and—in the kitchen—more sticks of butter than I care to count.

You have to do a lot of juggling to make this kind of life work. There is no model, no set career path to follow. You're making it up as you go along. You also have to have faith that it's all going to work out.

It's not the life for everyone. But when you're 100 percent in it for yourself, when you're the sole captain of your ship, your focus and commitment are so much greater, and the victories are that much more gratifying.

How did you learn about Heifer International? What made you decide to become a donor?



I forget how I first learned about Heifer, I just remember being very excited as soon as I understood what you were doing. It's one thing to throw bags of aid money at people, interrupting the context and scope and scale of their daily lives, and then wonder why their world hasn't changed overnight. It's like delivering a truckload of cars without bothering to find out if the community has roads or knows how to drive—or if cars are even what they most urgently need.

But Heifer gives people the means by which to work themselves out of poverty, in a context that is relevant and appropriate to their culture and community. Heifer offers an education on how to care for these animals, how to be proper stewards of these lives. And perhaps my favorite part of all is the commitment to pass the first female offspring of your livestock to another family, the Passing on the Gift. It's beautiful and ingenious in its simplicity.

What have you learned about people from traveling that you couldn't have learned if you'd stayed home?

It's so easy to think of the rest of the world as a great big scary, foreign "other." Obviously there are differences.



Geography, climate, architecture, economy, politics, cuisine, religion ... but when you venture forth into the world, eyes and soul wide open, you immediately see how alike we are on a fundamental level. For me, travel underlines the universality of the human experience. That awareness is deeply comforting.

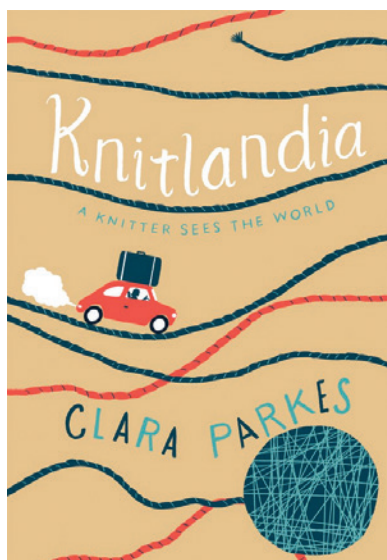
I also love how travel reveals different ways to live, different possible daily rhythms, even the different and often ingenious solutions people have found to common challenges. Which architectural techniques did we employ to build our village on steep hillsides? Where did we put the train station in relation to the rest of town?

What are our morning rituals? What hot beverage do we sip in the morning, where and with whom? What do our markets look like? How do we get around? Each new place I visit allows me to see and celebrate this ingenuity and pick and choose what pieces I'd like to bring home and incorporate into my own life.

I have discovered that knitting, in particular, offers an ideal way to experience the world. It gives you

an instant opening. People see you working the very same motions they may know how to make, that they watched their mothers and grandmothers make, and the cross-cultural inhibitions evaporate almost instantly. I can't count the number of wonderful encounters I've had that were sparked by yarn and needles. People trust you, they open up.

My new book, *Knitlandia: A Knitter Sees the World*, celebrates some



of my favorite such journeys and encounters, from Iceland and Paris to Edinburgh and Columbus, Ohio!

What do you hope your contribution to Heifer will accomplish?

I am particularly attracted to the longevity of a Heifer contribution, its multi-generationality. I'm a firm believer in small changes, the baby steps we take on a daily basis that can, over months and years, have a powerful cumulative effect.

The ripple of a Heifer gift grows larger and larger over time, from animal to flock, from generation to generation, family to family, community to community.

What is your favorite Heifer animal, and why?

As a lover of wool, I was naturally excited to hear that Heifer included sheep in its program. I know firsthand how significant a difference one sheep can make in terms of its fleece. One year's fiber growth can keep a person clothed and warm all winter—not



to mention the pleasure it brings to the person who gets to make the clothes. Multiply that times the thousands of sheep Heifer has placed in communities over the years, and the impact is staggering.

Of course wool is only a portion of what sheep contribute to a community. Depending on the breed, the wool may not play into the equation at all. Sheep's milk and meat are equally significant components of any economically viable flock. Not only do lamb and mutton provide an excellent source of protein, but they're also high in vitamin A, riboflavin, niacin, vitamin B12, copper, selenium, iron, phosphorous and zinc. My job as a yarn maker and reviewer is to increase demand for all kinds of wool, even the

heartier stuff produced by meat breeds, so that farmers are more inclined to keep their animals longer before sending them off to the great meat locker in the sky.

I also love that Heifer includes honeybees in its program. The more I learn about the current threats to their viability and the more I witness their miraculous work firsthand in my own garden, the more grateful I am to these industrious creatures.

If you could visit a Heifer project in any country, where would you go? What would you do?

As a proud graduate of a women's college (Mills College in Oakland, California), I am pleased to see Heifer take such a strong role in

championing the rights of women worldwide. Giving women access to education, providing training in gender equality, leadership skills, money management and basic small-business skills, those are such valuable tools—not to mention the women's self-help groups. You're facilitating a safe environment in which women can speak up and be heard, find community and support among their peers and effect personal and collective change.

I would love to travel to Nepal or India and sit in on one of these meetings. I realize I'd miss a lot between the cultural differences and the language gap. But who knows? Maybe if I pulled out my yarn and needles, we could break down a few barriers and find common ground. ■

Clara's Hat

Designed by Chris Roosien of Briar Rose Fibers

Chris dyes gorgeous yarns by hand and sells them through her business, Briar Rose Fibers. This simple, cheerful, thick and cozy hat is a perfect way to say "I love you" to someone. For the sample shown here, Chris used my Clara Yarn Cormo 3.0, combining one skein of undyed, straight-off-the-sheep white with one skein that she custom dyed for me. By the time you read this, Cormo 3.0 may be gone, but Briar Rose Collett is a perfect alternative.



MATERIALS

- 240 yards (219) bulky-weight wool in equal amounts of two contrasting colors.
- Size US 10 (6mm) circulars or DPNs. This is a big, comfy hat, but the circumference can be easily modified simply by using US 9 (5.5mm) needles instead.
- Darning needle.

YARN SOURCES

Clara Yarn: <http://www.clarayarn.com>

Briar Rose Fibers: <http://www.briarrosefibers.net>

GAUGE

14.5 stitches per 4 inches in stockinette working in the round.

PATTERN

In main color (MC), cast on 68 stitches. Join stitches, being careful not to twist.

Begin rib pattern: *K1 through back loop, p1*, repeat until work measures 1.5 inches (3.8cm).

Work 4 rounds in stockinette.

Begin checkerboard pattern:

Rounds 1-2: *K2 in MC, k2 in CC*, repeat to end of round.

Rounds 3-4 (changing colors): *K2 in CC, k2 in MC*, repeat to end of round.

Round 5-8: Knit all stitches in MC.

Round 9 (contrast stripe): Knit all stitches in CC.

Round 10-13: Knit all stitches in MC.

Repeat Rounds 1-9.

Change back to main color and begin crown decreases as follows:

Round 1: *K3, k2tog*, repeat around.

Round 2: *k2, k2tog*, repeat around.

Round 3: *k1, k2tog*, repeat around.

Round 4: *k2tog*, repeat around.

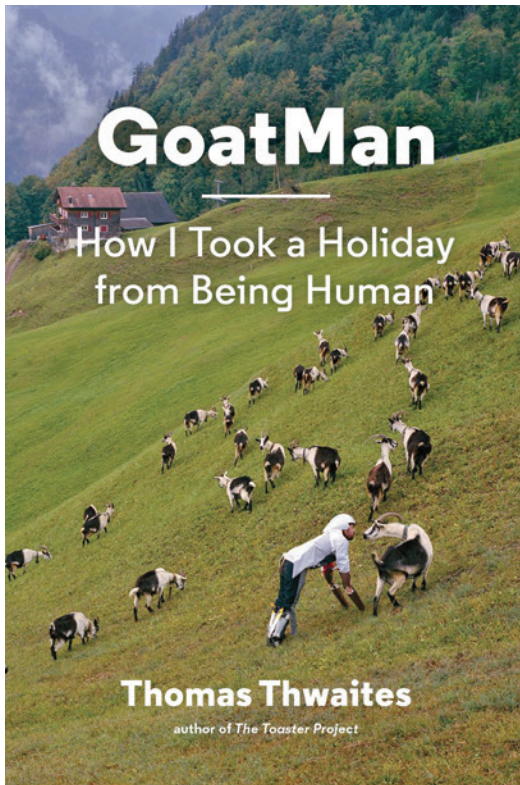
Repeat Round 4 until 6 stitches remain. Using a darning needle, thread the tail through those six stitches and secure snugly into the crown of your hat. Darn in all remaining ends and enjoy!





He Must Be On Grass

Reviewed by Austin Bailey, *World Ark* editor



*GoatMan: How I Took a Holiday
from Being Human*

By Thomas Thwaites

Princeton Architectural Press, 2016

Hardcover, \$24.95; 208 pages

The premise, we concede, is an odd one. An underemployed 34-year-old designer plots to escape the anxiety of modern urban existence by plunging himself as deeply as possible into the animal world. The young man's wholehearted pursuit to become a goat in every way possible—physically, behaviorally, psychologically—requires a team of scientists, a shaman, engineers and goatherds, all of whom share expertise to create as authentic a ruminant experience as possible. The resulting book chronicles author Thomas Thwaites' experiment in full detail, complete with dozens of photos of the author decked out in his goat kit.

If you're feeling embarrassed for Thwaites about his four-legged antics already, you can relax. Get past the cringe-worthy cover image of him nuzzling a goat as the two graze on an Alpen mountainside, and you'll soon discover that the author is in on the joke. So much so, in fact, that it's hard to take him seriously. Heavy-handed with the knee slappers and puns, Thwaites is a master of the "dad joke" genre despite not yet having any children to embarrass (and if he doesn't lose the goat suit soon, he likely never will).

Readers might struggle to keep the goofy writing style and unfortunate photos from distracting from a serious question at the crux of the book: What exactly is it that differentiates us from the animals? *GoatMan* offers an absurdist approach to answering this age-old question. Humans trying on animal characteristics, both physically or mentally, is not a new concept. Thwaites offers a colorful history of human/animal hybridization, from a 40,000-year-old cave carving of a lion/man to a relatively recent drawing of a costumed Siberian shaman channeling deer. Our animist ancestors sought



PHOTOS BY TIM BOWDITCH

communion with the divinity of other creatures, and hunting cultures sought understanding so they could better track their next meal.

For Thwaites, though, the draw of a grass-fed, pasture-raised lifestyle is freedom from angst. Pressure to succeed, the hectic pace of life in London, no clear path forward: Thwaites pines to exchange this millennial ennui for a carefree gallop through the clover. Simple enough, but he goes all in, even exploring ways to surgically alter his body to make it more goat-like. Luckily doctors could find no medical means to give Thwaites 360-degree vision or the ability to digest grass with just one stomach (goats have four).

Full goat mode is Thwaites' singular pursuit, but he proves easily distracted. Readers will topple down lots of rabbit holes to learn interesting factoids that are perhaps only peripherally related but interesting enough to warrant a side trip. For example, did you know that jockeys used to

put goats in pens with horses the night before a big race to keep the horses calm? Jockeys would sometimes steal the competition's goat to upset a horse, hence the term "get his goat." To his credit, Thwaites offers up loads of these trivia-night gems.

But while Thwaites' premise was compelling, his conclusions were not. He seems ultimately to enjoy his few days of goat life, but fails to give it much meaning. In the end, Thwaites comes off more like a stunt man looking for validation than a serious thinker in search of a vacation from the human condition. Animal behaviorist Temple Grandin communed with livestock in a different way than Thwaites, mentally putting herself in their place to improve their lives and deaths by making slaughterhouses more humane. A tough act to follow, to be sure. But is it too much to ask for some sort of epiphany after his months-long pursuit? Ultimately, *GoatMan* comes through with entertainment value but fails to deliver much of anything else. ■



READ TO FEED

"I learned about Heifer when I was in fourth grade last year, and we did a fundraiser at our school. I really, really wanted to help families again. This year, a catalog came in the mail and my mommy gave it to me, and she thought I might want to look through it. I got thinking about things I could do to earn money by doing chores and things so I could help families. Then I brought the catalog to my principal because I wanted to do this again at my school."

It really makes me feel good to know that I can help families that can't help themselves. I feel generous because I help give. It makes me feel special. It makes me feel like I am caring because not every person thinks of ways they can help other people."

MANDY FAUROT

5th grade

Columbia Independent School
Columbia, Missouri

LEARN MORE AT WWW.READTOFEED.ORG

THREE FAVORITES:

CHILDREN'S BOOKS ON SHARING AND CARING



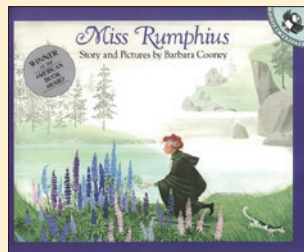
The Mitten Tree

By Candace Christiansen



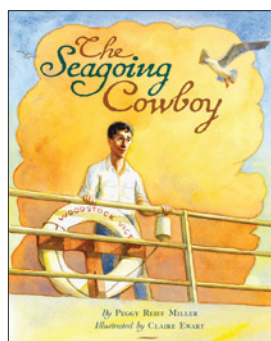
The Quiltmaker's Gift

**By Jeff Brumbeau
Illustrated by Gail de Marcken**



Miss Rumphius

By Barbara Cooney



NEW AND NOTEWORTHY

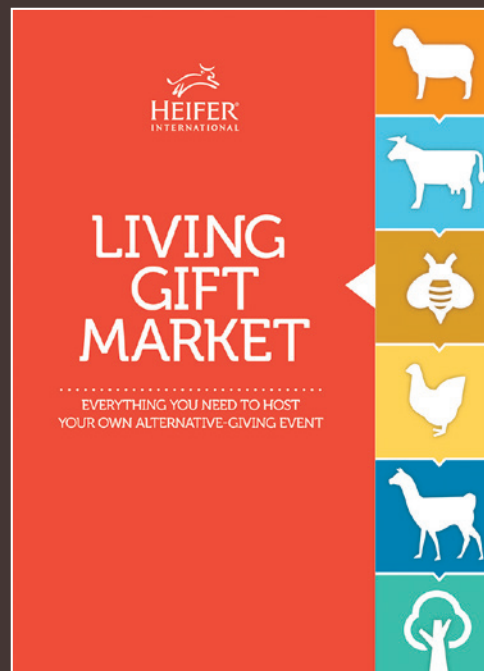
The Seagoing Cowboy

**By Peggy Reiff Miller
Illustrated by Claire Ewart**

This beautiful adventure book for children ages 4 to 8 tells the story of Heifer International's earliest days, when young men crossed oceans to deliver livestock to people suffering the effects of World War II.

A TIME TO GIVE

You can provide food and income-producing "living gifts" like goats, bees and cows to someone in need. A Living Gift Market is an event that allows your faith community to purchase these symbolic gifts through Heifer International. Turn your fellowship hall into a small business that helps families all over the world launch their own.



ORDER YOUR FREE LIVING GIFT MARKET RESOURCES NOW AT
WWW.HEIFER.ORG/FAITH OR CALL 888.5HUNGER (888.548.6437).

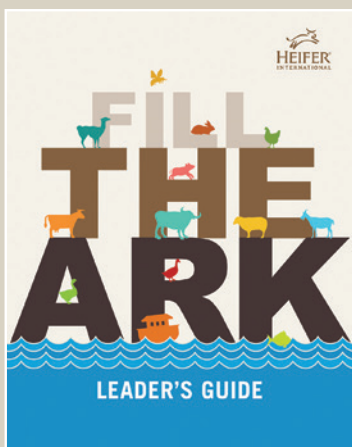
FOR EVERYTHING THERE IS A SEASON

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



FILL THE ARK

Challenge your congregation to help end hunger when you "Give Up to Give Back" with this daily missions-giving calendar.



ANIMAL CRACKERS

Through simple Sunday School lessons, Animal Crackers is designed to help students feel connected to the global family.



Beyond the Goat:

The Full Measure of a Heifer Project

By Molly Fincher, *World Ark* writer



PHOTO BY BRIGITTE LACOMBE

MADHUBANI, INDIA—Project participants, Heifer employees, donors and people just getting to know Heifer all have at least one pressing question in common: How do we know the Heifer model really works?

Traditionally Heifer answered questions about the impact of our projects with two numbers: how many animals were given, and how many families were enrolled in any given project. These touchpoints paint a simplified picture of what we do, and address what most people know Heifer best for: giving livestock to families in need. But in truth, these two statistics don't even come close to communicating Heifer's full impact. When a project participant

receives that llama or flock of ducks, the project isn't done—we're just getting started.

It's a big challenge to mark progress on the intangibles that are the true heart of Heifer's work. Empowering women, protecting the environment and unifying communities are important goals that aren't easily quantifiable. But in 2012, we made measuring our impact more comprehensively a priority for all of our projects.

One of the first Heifer projects measured with this new criterion is in Mahubani, India, where baseline numbers were captured at the project's inception in 2012. Progress was measured three years later.

The impact studies gauged women's empowerment by

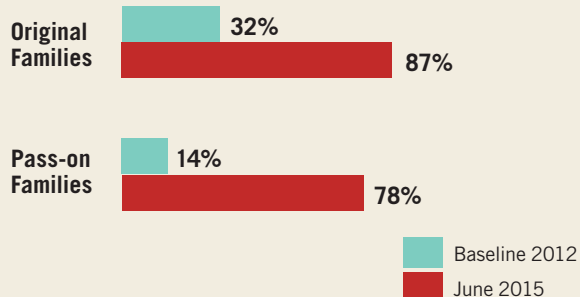
measuring how much **control women had over family finances**. In the Mahubani project, the percentage of women with equitable control over family income has more than doubled in the past three years.

Also measured was **access to sanitation**, which is a huge public health problem in many places around the world. It's especially serious in India, where millions use the bathroom in the open. India's immense population means that people are hard-pressed to find a place where the waste won't come into contact with other people, water sources or crops. Not only does this spread disease like crazy, but young women are often targeted and assaulted while trying to find somewhere to use



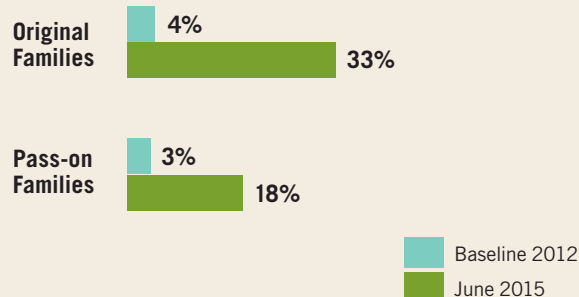
WOMEN WITH EQUITABLE CONTROL OVER FAMILY INCOME

2015 Global Impact Monitoring



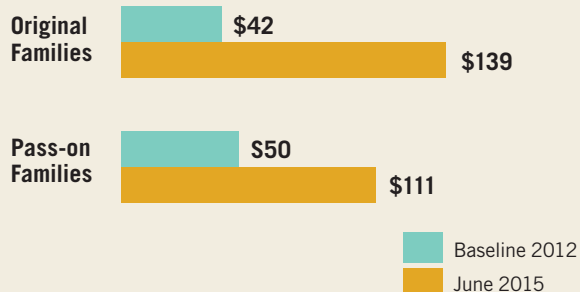
FAMILIES USING IMPROVED SANITATION FACILITIES

2015 Global Impact Monitoring



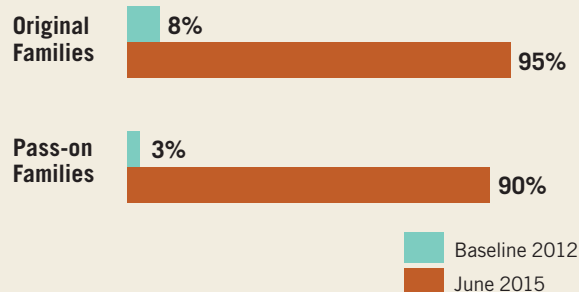
AVERAGE MONTHLY INCOME

2015 Global Impact Monitoring



FAMILIES USING SOIL BUILDING PRACTICES

2015 Global Impact Monitoring



the bathroom at night. The Heifer project in Mahubani includes a rotating fund specifically for the purpose of improving sanitation. So far, 152 families have completed construction of their new toilets.

Investment in healthy soil may seem an unlikely indicator of progress, but healthy soil means healthy crops, which mean healthy people and better prices for the farmer selling those crops.

Teaching ways to build healthy soil is an important part of fulfilling the “sustainable” part of our “sustainable agriculture” credo. One of the best things about focusing

on soil health is that it often doesn’t require buying expensive fertilizer or equipment. It’s all about gaining the knowledge to use what many farmers already have in spades, like manure, to the best effect. Heifer farmers are trained and encouraged to use intercropping techniques and to plant fodder crops that can improve soil fertility. Add composting and vermiculture (worms) to the mix, and this year’s crop is looking up.

Increase in income is the most straightforward way to measure progress, and project participants in Madhubani made great strides.

Heifer’s ultimate goal is to close the gap between the income the farmers with whom we work typically earn (usually at or below the extreme poverty line) and the income they need to thrive and be self-reliant (also known as a living income).

Extreme poverty is defined as living on \$1.90 or less per day. The average income for our project families in Mahubani is about double what it used to be: Daily income rose to about \$4.50 for original families and about \$3.70 for pass-on families. By the end of the project, we aim for these daily incomes to rise even more. ■



Viroqua Elementary

Students Sell Cookie Jars For Heifer

By Misti Hollenbaugh, *World Ark* contributor



Student teacher Laura Muzia helps students (from left) Alara Running, Hope Hellerud, Braden Sanwick and Kaylee Funk.

PHOTOS PROVIDED BY KARIN IVERSON AND SARAH TUNKS

Third-grade students at Viroqua Elementary decided to make a difference during the holiday season by creating and selling cowboy cookie jars, raising \$1,459 to help families in need.

Each year, the third-graders in Viroqua, Wisconsin, study communities around the world as part of their school's curriculum. This year, the teachers decided to take it a step further, creating a service-learning

project for their students. Teacher Karin Iverson said the project was designed to heighten the awareness of global needs, deepen the students' compassion and expand learning beyond the classroom.

"The kids did such a good job at thinking it through and discovering why it is good to get out of our corners of the world and think about the needs of others," Iverson said.

The five classes of third-grade students



Elly Simonson measures out chocolate chips for her school's Heifer fundraiser.



Bailey Prinz and teacher Cindy Turner work on labels.



Cookie jars are ready for sale.



(Left to right) Kaitlyn Hanson, Kyle Huschka, Leah Brevik and Vincent Naporski open up shop.

started with a brainstorming session, during which the teachers offered suggestions based on successful past projects. The students decided on cowboy cookie jars, quart jars with layers of the dry ingredients needed to make chocolate chip oatmeal cookies, including sugar, brown sugar, chocolate chips, flour and baking powder—everything but the eggs and butter.

Iverson won a \$250 grant through Thrivent Financial to purchase the supplies. In one day, the 90 third-graders came together to create 139 jars by forming a production line, which included helpful parent volunteers.

Iverson, along with fellow third-grade teachers Cindy Turner, Danelle Weston, Sarah Tunks and Krista Woodward, rallied support from the school and community. After creating the jars on Dec. 4, the students sold them at the school's winter concert for \$10 the next week. Although

they did not sell all the jars at the concert's two performances, word got out to the parents, who, along with other school staff members, purchased the remaining jars.

The students also created handmade notes for everyone who purchased a cookie jar. The school previously participated in Heifer's Read to Feed program, so students used Heifer pictures on the cards, coloring and cutting to create a unique thank you for each donor.

The third-graders then got together to brainstorm how to use their money so it would help the most people, looking at different animals they could purchase and studying the purpose of each one. After much group discussion and debate, the students decided to purchase one goat, four flocks of chicks, 11 colonies of bees, 10 flocks of ducks and geese, three trios of rabbits, two llamas and two pigs.

Iverson said the children were

enthusiastic about the project and were involved every step of the way.

"The excitement was pretty evenly expressed across the board with the kids," she said.

Viroqua Elementary also supported Heifer International with projects in 2005 through 2008, but took a seven-year hiatus before resurrecting the program this year. "We thought it would be a good idea to do it again, and everyone was on board," Iverson said.

While Iverson said past projects have gone well, she said this year's group of third-graders was special.

"Sometimes you get a sense that some groups of children are more understanding of service projects and such," Iverson said.

Based on the success the school always has in supporting Heifer projects, Iverson said future third-graders at Viroqua Elementary likely will have the same opportunity to make a difference. ■

SHOP @heifer



▲ GIVE HOPE T-SHIRT | \$15

For so many in the world, hope can be found in the gift of a cow. Wear this inspiring shirt and help educate others about what a Heifer gift can do. Unisex, sizes S-XXL.

NTHOPE Blue



▲ 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



▲ HEIFER WATER BOTTLE | \$9

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

NWTRBTL15



▲ 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



◀ HEIFER WINDOW DECAL | \$2

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

ND0005

► 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 black and green colors, one size fits all.

NCAPBLACK Black
NCAPGREEN Green



▲ HEIFER MUGS | \$8

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

NCERMUGBLU Dark Blue with Light Blue Interior
NCERMUGORG Orange with Yellow Interior
NCERMUGGRN Dark Green with Light Green Interior



◀ HEIFER NOTECARDS | \$11

Join Heifer in celebrating over 70 years of work with notecard sets featuring Life Changing Animals. The set contains eight beautiful photographs printed in sets of two on 16 blank cards with 16 corresponding blank envelopes. Cards measure 5-1/2" x 4-1/4" **NANIMALFY16**



Hang in there!



Wish you were here.



Missing Ewe!



Thinking of you.

▶ HEIFER CHARM BRACELET | \$16

Layering bracelet or single strand necklace measuring 26 inches. Features a charm with the Heifer jumping cow. Handmade by a women's group in India. Available in teal color. **NBRACLT16TL**

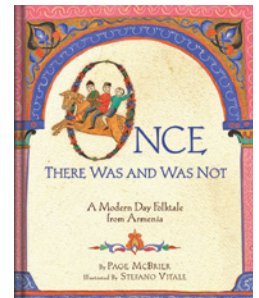
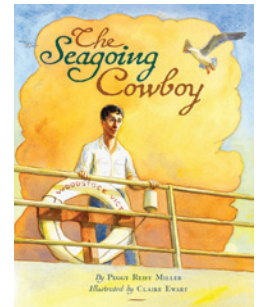
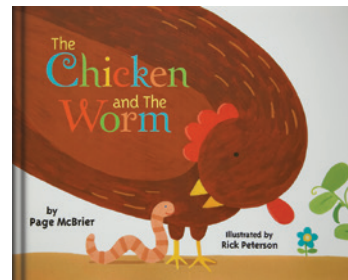
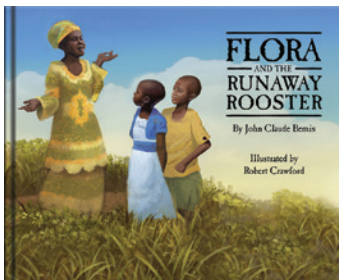


◀ HEIFER GREETING CARDS | \$13

Have something to say? Say it with these adorable baby Heifer animals! This set of 20 cards and 22 matching envelopes features five different animals with five encouraging messages, such as "Hang in there!" and "Missing Ewe!" **69.NGRTCDFY15**



All "kidding" aside. Happy Birthday.



▲ 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. **NBFLORAFY15** Hardcover

▲ FAITH THE COW | \$10

Chronicles the first shipment of Heifer cows to Puerto Rico. For ages 4 to 6. **NB0705000** 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

▲ THE SEAGOING COWBOY | \$18.99

Hop aboard for a story of Heifer International's original high-sea adventurers, who took livestock to people suffering the effects of World War II. **NBCOWBOY16** 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

▲ 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

▲ 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

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PHOTO BY OMAR HAVANA

"I am proud of all my children."

Soy Phe

Soy Phe and his wife, Houl Kimsrean, have four daughters and one son, 7-year-old Mon Chey Samang, who is flying a kite he made himself in the photo above. Soy Phe has two main dreams for his children—a better education and a more comfortable house. Thanks to Heifer Cambodia's gift of piglets and training, Soy Phe and his family already built a new house, complete with a metal roof that keeps out the rain. The family's small swine business will generate enough money to send the children to college in the future.

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If you are 70½ or older and own an Individual Retirement Account (IRA), there is something you should know. Congress enacted a law that lets you do something special with your IRA to reduce taxes, but you must act before December 31 to benefit this year.

Rollover into Tax Savings

The IRA charitable rollover allows you to avoid taxes when you transfer funds from your IRA directly to a charity. You can transfer up to \$100,000 this year to a qualified nonprofit. And your gift will count against your required distribution, reducing your income and taxes. Best of all, an IRA rollover gift is an easy way to help further our mission.

Contact us or your IRA administrator to make a difference this year with your IRA. This opportunity may not last, but your gift can impact our mission well into the future.





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

