

THE SIMPLE AGRICULTURAL KIT IMPROVING LIFE FOR NEPAL'S TERRACE FARMERS

Life as a farmer on the terraced plots of land in Central Nepal isn't easy, but the introduction of new agricultural practices and a few cheap, simple tools could be a boon for the men and women who work the region's soil

POSTED BY BRIAN BANKS ON AUGUST 16, 2017

Few landscapes are more stunning than the incredibly steep hillside terrace farms of Central Nepal, especially during the rainy season, when they are lush and green. Yet for the millions of Nepalese who make their living as farmers on these tiny, multi-tiered plots beneath Himalayan peaks, their picturesque existence has long masked a struggle against food insecurity, environmental calamity and physical distress. The latter is especially true for girls and women, who do most of the labour and suffer disproportionately from injury, drudgery and a lack of other opportunities.

Against that backdrop, one might think that any remedy must lie in a big fix. Yet a three-and-a-half-year [program](#) funded by the International Development Research Centre and Global Affairs Canada via the Canadian International Food Security Research Fund and jointly led by Manish Raizada, a professor in the department of plant agriculture at the University of Guelph, and a Nepalese NGO called [Local Initiatives for Biodiversity, Research and Development](#) (LI-BIRD) is making a strong case for a solution built around a few basic new agronomic practices, some simple, low-cost tools and inexpensive seeds. "Farmers are so resilient," says Raizada. "They just need a little bit of help here and there."

That help comes in the form of [Sustainable Agricultural Kits](#), a concept Raizada developed, tested and refined in two districts in Central Nepal in tandem with LI-BIRD and its private-sector seed subsidiary, [Anamolbiu](#) (which means "precious seed" in Nepalese). The kits consist of a menu of locally approved seeds, low-cost tools such as corn shellers and garden gloves, and [knowledge-extension picture books](#) explaining sustainable practices such as intercropping and weed control. From these, individual households pick and choose according to their needs. "What we're trying to do is allow for a little bit of extra production and then some profit," says Raizada.

One example of a farming innovation is the new planting techniques making more efficient use of the terrace walls. For instance, yams that were once planted in the ground and dug up by hand are now planted in sacks that are stood at the base of the wall. The plants grow up the wall and don't have to be dug up at harvest time. "You just turn the bag upside down," says Raizada.

Planting yams in sacks has become a real hit. And the economic benefit of faster harvest and more intense use of the space is making many households as much as an extra \$200 a season, which Raizada says is "dramatic."

The adoption of manual corn shellers — hollow metal cones that cost about \$2.50 each — has been equally far-reaching. Traditionally, corn grown on the terraces had to be processed



Nepalese women use a handheld sheller to remove kernels from corn cobs. The shellers are just one of the simple, low-cost tools included in Sustainable Agriculture Kits (SAKs), which are helping improve the lives of Nepal's terrace farmers. (Photo: Dr. Tejendra Chapagain, University of Guelph)

manually, either by putting the dried cobs in a bag and beating the bag with a stick or by removing the kernels by hand. This work, which was always left to girls and women, was hard on their bodies and damaging to the crop. Removing the kernels with the sheller, however, is less taxing, does less damage and saves about two weeks of labour a year per household.

To date, the corn sheller has been the kits' largest-selling product — 11,000 units through the spring of 2017. But the story goes beyond the numbers. Raizada believes men and boys are much more likely to do this job when they can use a sheller. His theory? Men like their toys. "You introduce a simple tool or machine, a gadget, and the guys start getting involved," he says. "It's transformational. That's what we want — gender empowerment that allows women to focus on opportunities such as education and off-farm employment."

As the project enters its final stages the emphasis is increasingly about proving the concept can scale up (it's already being used in nine districts in Central Nepal), be successfully handed off to Anamolbiu and be self-sustaining. "We think by the time the project ends in January 2018 we'll reach about 200,000 people, so about 40-50,000 households," says Raizada.

While even that would exceed their initial goals, he thinks the project's biggest impacts will be long-term. "I suspect if we go back five years later, it will be fascinating to see how many people were affected and how institutionalized these ideas have become. Did it create new businesses? That's what we want to see — new businesses that enliven the private sector."

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READING AS THINKING

Before reading the entire article:

1. Read only the story's headlines and then try to predict some of the main ideas and themes of the article. Make a list of all the issues with the buses themselves and explain why they are problematic.

2. Look at the picture without reading the caption and answer the questions below.

<p>What do you see in the picture? (Who? What? Actions?)</p>	
<p>What does it remind you of?</p>	
<p>How do you think the picture relates to the article?</p>	

After reading the article, answer the following questions.

3. For which group of Nepalese in particular is farming a struggle? What are those struggles and how do you think they affect this particular group?

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4. Choose a farming innovation from the article and explain its benefits and how its use affects the farmers.

5. Do you agree with Manish Raizada's theory that men and boys will be more likely to shell corn — traditionally a task for women and girls — if they're able to use a sheller because they like using tools or gadgets? Explain your reasoning.

6. Describe some reasons why the corn sheller is the Sustainable Agricultural Kits' largest-selling product.

7. Raizada believes that the project will have long-term impacts in Nepal. How do you think people will be affected in the long run, and how will the ideas behind this initiative grow?

8. What is something that you learned from the article that you found surprising? Explain your answer.

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Think-Pair-Share

9. *Think*

From the [Canadian Agrifood Ambassadors Resources](#), choose a Canadian or Nepalese export idea. Use the table below to compile information.

<p>Who will benefit from this export?</p>	
<p>What are the benefits of this export?</p>	
<p>What are some challenges with this export? Barriers? Possible solutions?</p>	

10. *Pair*

With a partner, look over both of your tables and add more information if possible. Choose an audience (government, farmers, citizens, etc.) and make a marketing campaign (video, brochures, posters, etc.) to promote these exports to their respective recipient (Canada or Nepal).

11. *Share*

Present your marketing campaigns to the class and discuss as a class which exports are the most appealing and why.

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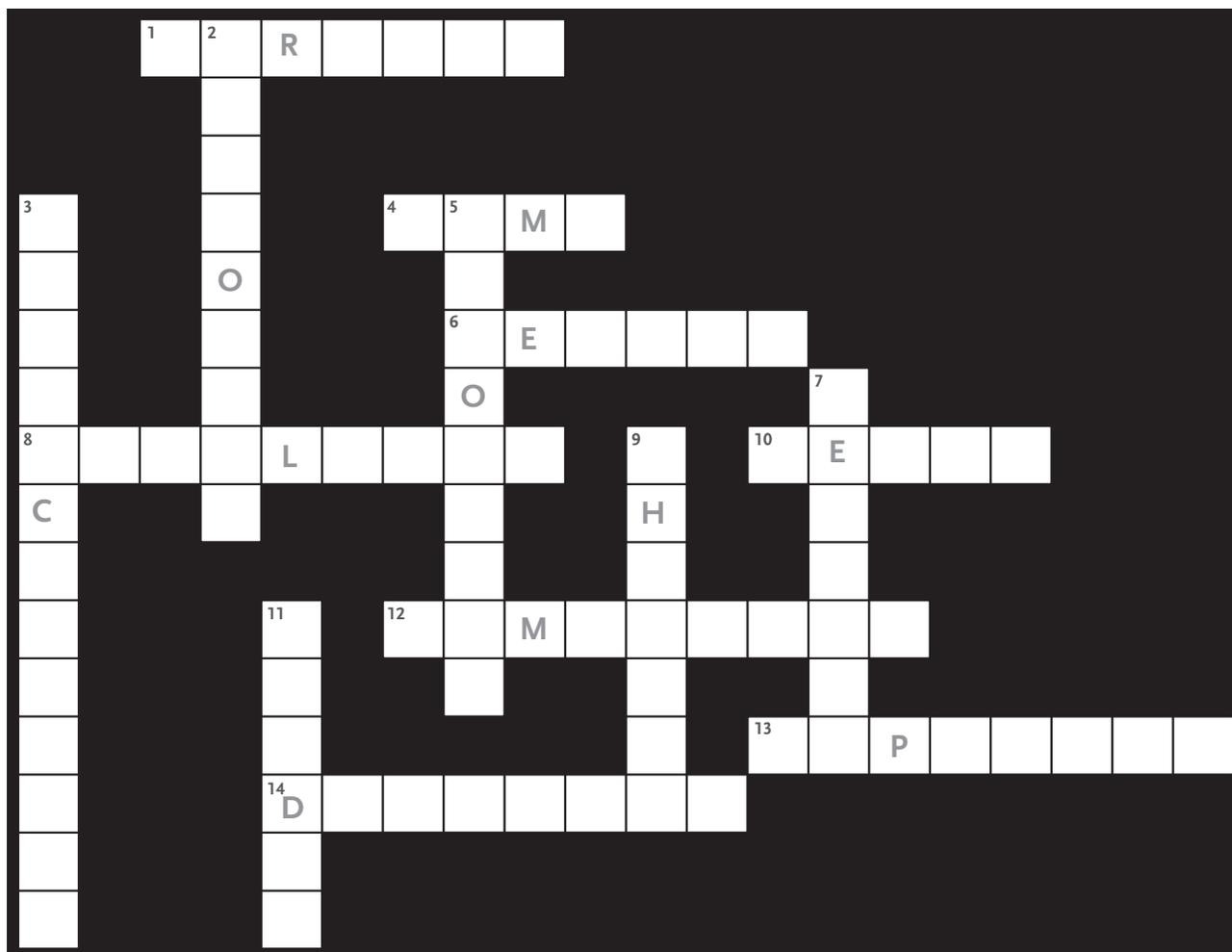
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ONLINE

1. Using [Google Maps](#), locate Nepal and explore the country by using Street View and the satellite and map modes. Using the quick facts section and other research tools, find the following:
 - a. The population
 - b. The capital city
 - c. The neighbouring countries
 - d. Conservation areas and reserves
 - e. Major bodies of water
 - f. Terrace farms of Central Nepal
2. Watch the Sustainable Agriculture Kits [video](#) in the article. Make a list of the different farming innovations that the Nepalese are now using and how they are benefitting from them.
3. Learn more about some [ideas](#) to encourage the next generation of Nepalese to go into agriculture.
4. Read this [article](#) about the challenges and improvements in the agricultural business that this French farmer has experienced after farming in Nepal for 10 years.
5. Look through this [collection](#) of resources of tools for subsistence and terrace farmers. Choose one or two tools and learn more about each.
6. Learn about [sustainable agriculture](#) and innovation in Canada's agri-food sector.
7. Interested in agriculture? Read up on [programs, services, training, organizations and resources](#) in Canada for youth and young farmers between the ages 18 and 39

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CROSSWORD:

Across

- Gathering crops
- These were once planted in the ground and dug up but are now planted in sacks
- Solution
- The farmers in Nepal are described as this
- One of the items included in the Sustainable Agricultural Kits
- This major mountain range runs through Nepal
- A citizen of Nepal
- Girls and women who do the most labour suffer from injury, a lack of other opportunities and this

Down

- The word for "precious seed" in Nepalese
- Growing more than one crop in the same piece of land
- Relating to the science of managing soil and crop production
- The agricultural kit helps farmers of this type of farm
- The Sustainable Agricultural Kits' largest-selling product
- Done together