

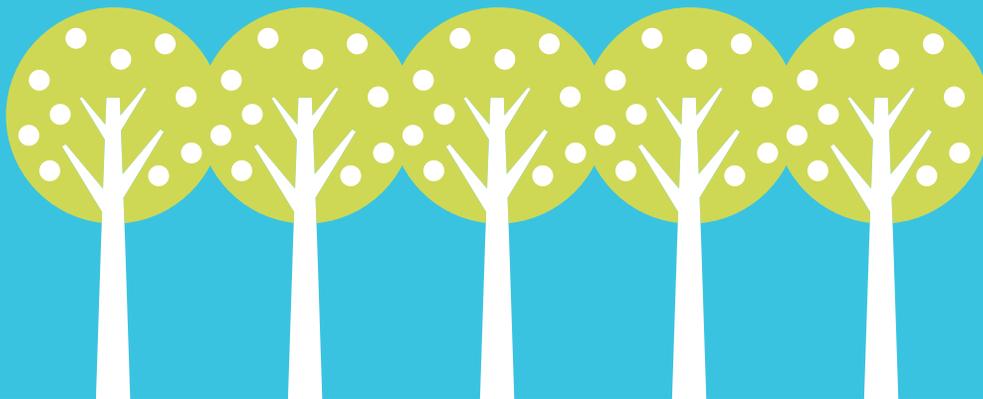
Green Farmer Training Program

Green Farmer Training Program is a project that BSR implemented in partnership with Walmart China, as part of Walmart's global goal to train 1 million farmers in its supply chain.

Working with Chinese farmers provided us with a unique opportunity to address concerns about food safety and environmental pollution, while enabling farmers to use more sustainable agricultural practices and improve rural health and livelihoods.

Impact Highlights

- ✦ More than 60 customized trainings delivered to farms on sustainable production of vegetables, fruits, and livestock
- ✦ On average, each participant shared his/her knowledge from trainings with 13 others, reaching more than 16,000 community members
- ✦ Losses due to crop diseases were reduced by 10%
- ✦ Apple farmers noticed better soil fertility and reduced pesticide use by 50-60%



Program Design

To build an effective training program, we started from the ground up, visiting sites ranging from pomelo farms in Fujian to vegetable farms in Guangdong to grape farms in Shandong. We talked with farmers, technicians, and managers of farm cooperatives to learn about their unique challenges and to design a process that would maximize the program's reach and effectiveness.

Program Scope

Trainings were held in 22 provinces across China, primarily in partnership with medium-sized farm cooperatives.¹

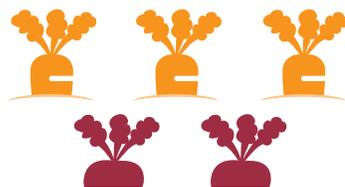


Types of Crops Covered

We helped train farmers on production of vegetable crops like tomatoes, eggplants, cucumbers, and leafy greens; fruit crops like grapes, apples, and pomelos; and livestock like pigs and chickens.

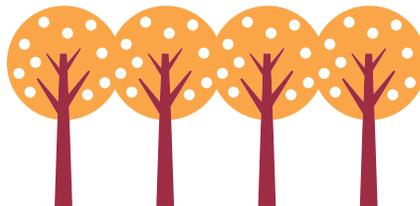
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VEGETABLE FARMS



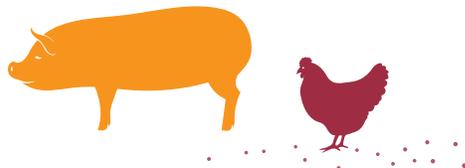
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FRUIT FARMS AND ORCHARDS



5

LIVESTOCK FARMS



Our Training Process

We created a five-step process that is standardized in its approach but flexible by design to enable adaptation to local needs.

1

IDENTIFY NEEDS

Our program starts with a needs assessment led by an expert facilitator to understand the most pressing challenges and concerns at each farm.

2

FIND LOCAL EXPERTS

We work with local experts to create training content that covers both general sustainable agriculture principles and specific technical recommendations to address the farmers' needs.

3

TRAIN KEY PARTICIPANTS

By targeting the training to a focused group of technicians and lead farmers, we can provide a more in-depth and interactive experience, including field-based learning. These participants then take the lead in sharing information with other farmers.

4

CREATE AN ACTION PLAN

At the end of the training, the participants also identify a set of concrete actions that they will take to apply the new knowledge they have learned.

5

MEASURING IMPACT

After the training, we follow up with farmers to measure the program's impact, including in-depth evaluation at a selected number of farms, to track the spread of information and any impacts on knowledge, skills, and practices.

¹) The program was implemented in the following provinces: Beijing, Chongqing, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Heilongjiang, Hubei, Hunan, Inner Mongolia, Jiangsu, Jiangxi, Liaoning, Shandong, Shanxi, Sichuan, Tianjin, Xinjiang, Yunnan, Zhejiang

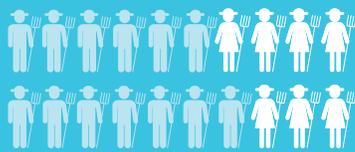
Scaling New Knowledge

We maximize training impact by reaching key individuals, such as farm technicians, who then test and share their knowledge with family members, neighbors, and other farmers. Sometimes information is shared through informal chats over tea, and sometimes through organized trainings, but we found that on average, **each training participant shared their new knowledge with 13 other people.**²

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AGRICULTURE TRAININGS

TRAINING PARTICIPANTS



More than 35% of the participants were female³

Knowledge-Sharing Multiplier Effect



New Knowledge and Techniques Learned

Trainers worked with farmers in their fields to identify practical ways to apply tested sustainable agriculture approaches, such as Integrated Pest Management. These methods were designed to help maximize the health of the farmer, the crop, and the environment, while minimizing the use of harmful chemicals.



SOIL TESTING

Soil testing to determine needs for organic fertilizers and soil conditioners



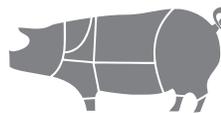
DISEASE IDENTIFICATION

Identification of common fruit and vegetable pests and disease



PRUNING

Fruit tree pruning techniques to maximize tree health and yield



PIG PRODUCTION

Food safety and quality in pig production



PESTICIDES

Selection and use of appropriate and effective pesticides



RECORD KEEPING

Careful and consistent records to track inputs and understand effects

2) In our post-program impact evaluation of 11 farms, 1269 participants shared their new knowledge and techniques with 16,876 members of their communities.

3) Of the 4912 total participants, 1730 were female.

Program Impacts

Each training had unique environmental and economic impacts, since content and action plans were customized to address local farmers' specific needs. In our field visits to a selection of farms for training evaluation, we found evidence that, in many cases, participating farmers are using their new knowledge and skills to create positive impacts on environmental health and on their own livelihoods. The list below shares examples of those impacts.



Environmental Impacts



Economic Impacts



Vegetables

- + Use of crop rotation enabled farmers to reduce pesticide by 60%
- + Pesticide application reduced from two to three times per year to just once
- + No more use of highly toxic pesticides on crops
- + Fewer incidents of dizziness and other negative health effects from pesticide use

- + Crop rotation to prevent soil-borne disease increased yields by 20-30%
- + Pilots for control of root-knot nematode disease increased yields by 30%
- + Losses due to crop diseases were reduced by 10%
- + Use of organic fertilizer to boost plant health reduced losses from disease by up to 30%



Fruits

- + Farmers stopped using herbicide in apple orchards to kill grass, which helped improve soil quality by preventing hardening and soil acidification
- + Pear farmers learned to control pests and diseases through Integrated Pest Management methods such as clearing the orchard and reduced the number of pesticides used from 6 to 4
- + Grape farmers switched to more organic fertilizer

- + Apple farmers noticed better soil fertility and reduced pesticide use by 50-60%
- + A pear cooperative is applying for a "Green Food" certificate that will help them get a higher price
- + Date farmers found that their fruit had a much better appearance when they stopped mixing pesticides, so it was worth a higher price



Livestock

- + Reduced use of pharmaceuticals to treat piglets

- + Improved piglet health and reduction of porcine reproductive and respiratory syndrome
- + Improved fertility and piglet weight and better disease resistance