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# 2017 Agriculture Annual Report

Opportunity. Dignity. Hope.

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Agricultural workers make up a large portion of the population in developing countries. Subsistence farming is the main source of employment, livelihood and income for smallholder farmers<sup>1</sup>. Without access to water and irrigation equipment during the dry season, education on good farming practices on environmentally suitable land, and awareness of how to prevent plant diseases and pests, growing food is a steep challenge. Farmers also struggle with connecting to markets where they can reliably sell their products and purchase other necessary goods<sup>2</sup>. These factors create food insecurity, leaving families hungry and at risk of poverty.

World Hope International's (WHI) goal is to help farmers—and their families—produce more food and sell more crops through training, agricultural inputs, technology and linkages to viable markets. When farmers earn more income, they are able to send their children to school, provide for medical care for their families, and meet other household needs.

<sup>1</sup> The World Bank, "Employment in Agriculture", <sup>2</sup> Food and Agriculture Organization of the United Nations, "Approaches to linking producers to markets"



## Greenhouses Revolutionizing Output

Penn State University's Engineering and Social Entrepreneurship Program (PSU-HESE) and Lehigh University just finished its third year in Sierra Leone and Mozambique. The majority of the populations of both countries live in the rural areas, where their sole source of income is farming. Unfortunately, many of these farmers do not have the capital to undertake large-scale farming. They lack technical experience, do not have access to quality supplies, and access to markets is hindered by poor infrastructure. In an effort to help these farmers get out of poverty by creating sustainable food for both self-sufficiency and a surplus for the market, WHI works with farmers in numerous ways. These include training them in improved practical agricultural methods, providing them with quality agricultural inputs (such as viable, high-yielding varieties of seeds), and linking them to markets where they can sell their goods.

In 2017, over 1,615 farmers benefited from 36 new GRO greenhouses—learning new agronomic practices for vegetable production, eating healthier as a result of harvesting nutritious vegetables, and using production as a major source of livelihood. In Sierra Leone, the majority of farmers who participated in the training on the use of greenhouse and how to grow vegetables from seedlings were women. At least 54 farmers were linked to a viable market to sell produce.





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**Ngor** is the wife of **Sron Srin**, and they have three beautiful children. They were previously farmers growing rice and cassava in a small field. Sron sometimes had to go to a far town to work as a wood cutter. When food was not available, the family would find snails and crabs from the rice field to feed their family. Without any income, the children were not able to go to school and when they fell ill, there was no means to receive treatment. After Ngor and her family learned about and began growing mushrooms, their life changed for the better. Now, they no longer need to borrow money with high interest rates. They are buying seedlings for growing crops and were able to build a storage for raw materials. Their house has electricity, and, the children are going to school again. The family plans to extend the mushroom house to reach their goals of purchasing a truck and motorbike, drilling a well, and building a toilet.

## Cambodia Mushroom Business Rapidly Expanding

There is a high rate of men migrating to Thailand for labor, leaving women in Cambodia as the head of their households. For this reason, WHI expanded the Sisters Community Development Program to explore mushroom production in five villages in Kampong Cham Province, Cambodia. Initial activities began in 2014 with 128 female-lead households who were members of self-help/savings group formed by WHI.

In 2017, 75 households—including 137 females, 148 males and 141 children—continued to grow mushrooms. At the beginning of the year, 12 hand pump boreholes were provided by WHI to create livelihood options for consistent cash flows through the engagement of women in and around their obligations at home. Fifteen additional boreholes wells were dug by mushroom growers at their own expense to increase their production and to expand production to include other cash crops, especially mung bean. This bean also enhances the soil through nitrogen fixation. Additionally, growers can add the dried mung bean stalks to the rice straw after harvest to create the mushroom growing substrates.



Some of the early adopters of mushroom houses have gone on to build even more and buy agricultural waste from neighboring farms to supply their mushroom operations. In late 2017, some female-led households started trials on higher value cultivars such as black and yellow ginger, rosella, cacao and avocado to sell together with mushrooms.

In one year, the number of mushroom grow-houses increased from 23 to 92. In 2017, the households produced a total of over 67 tons of mushrooms. This increase in mushroom cultivation was mainly due to a mutually-supportive approach to marketing and market linkages forged by WHI through Thera Metrey. Meaning “Compassionate Earth”, Thera Metrey is a local cooperative enterprise formed by WHI for collective sorting, processing and delivery of mushrooms and other cash crops produced by households. Through Thera Metrey, WHI is able to help improve the farm gate price for household producers and farmers. At the end of 2017, the project generated a gross sale of \$177,729.

## Hope Farms Demonstration Plot

Hope Farms, established by WHI in 2016, serves as a demonstration plot for farmers in Sierra Leone. Farmers have the opportunity to observe and learn modern methods of pineapple productions taught by WHI’s Agriculture staff. In 2017, five acres of land were prepared for the planting of pineapple suckers and a drip irrigation system was installed.



## Mozambique Garden-Cattle Cluster Project

WHI Mozambique’s cattle program continues to build momentum. Within the program model, five poor rural families were selected to receive two heifers each and share a bull to create a new cattle cluster. These new cattle came from the offspring of existing cattle, or were purchased by donations from WHI’s Gift Catalog. After four years, each family passes on two heifers from their cows’ offspring to another needy family in the community, forming a new cattle cluster. During the past year, five new cattle clusters were launched, including 50 new cows and five new bulls, helping 25 new people. These people use their cattle for purchasing tools for another business, or making improvements to their homes.

Ultimately, cattle are a safety net against hunger when crops fail. WHI trains para-vets, or “village vets” for each cattle group, serving the needs of the cluster and the wider community. In 2017, village vets vaccinated 538 young calves within the clusters against black leg and yellow fever diseases. Cattle husbandry workshops increased trainees’ knowledge of livestock rearing, and cattle groups were connected to agricultural extension agents to access further assistance. Nine village vets were involved in both classroom and hands-on learning.

## Garden Program

In 2017, five new community gardens were formed, increasing the total in the country to sixteen. A total of 611 families participated in the garden project during the year. Any surplus vegetables not needed for the family’s nutritional needs were sold for a cash income. This money could be reinvested by the family, such as by the purchase of seeds for the next year. Two hundred fifty families were trained on vegetable production as well as pest and disease control. After the training, 208 irrigation cans and 10 spray pumps for insecticides were distributed.



Juvêncio is a father of four school aged children who lives in the Mbambane village. The garden project has helped his family tremendously to provide for his family needs. From the sale of his vegetables, he is able to buy school uniforms for the children and purchase other items such as sugar, cooking oil and bathing soap. He is also happy that his family is able to eat nutritious meals every day.



Spending of World Hope International (Canada) funds is confined to Board approved projects. Funds designated towards a project are used as designated, with the understanding that when the need for that project has been met or cannot be completed for reasons determined by the Board, the remaining funds designated will be used where needed most. Charitable # 86950 0173 RR0001

