World Café Topic: Can a Commercial Technology Solution Dually Benefit Incomes and Nutrition?

Feed the Future Partnering for Innovation works with business partners to advance commercial solutions to development outcomes. Workshop participants learned how EthioChicken is working in the poultry sector to enable access to protein sources in smallholder communities. The solutions also contribute to partner business success so that their products and services remain available to smallholder farmers beyond the partnership period. Read how two partnerships are making more protein available in smallholder communities beyond Partnering for Innovation’s investments, and about additional pathways to nutrition sensitive activities that participants discussed. Also visit the AgTechXChange to read about and contribute to successful commercial solutions in agriculture development.

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Two of Partnering for Innovation’s partners are bringing new economic opportunities to smallholder farmers through poultry breeding. As of the end of May, EthioChicken had already exceeded its end-of-project day-old chick sales target by more than 10 percent, selling more than 2.2 million chicks in a 15-month time period through a network of 500 commissioned sales agents. Access to improved poultry breeds through EthioChicken is benefitting an estimated 400,000 smallholder farmers so far with improved chickens for meat and egg production.

In Kenya, Surehatch launched the SH180, an improved and expanded automatic incubator for smallholder farmers. Many farmers found that they quickly outgrew the smaller model whose commercialization had been supported by Partnering for Innovation but were unable to afford Surehatch’s larger model. To address this gap in product offering, Surehatch developed a mid-range model with a capacity of 180 eggs. This new model was introduced to the Kenyan market in late July 2016 and initial smallholder demand has been promising.

Read on for a spotlight about EthioChicken and a case study about Surehatch’s commercialization model.
FY16 Progress

EthioChicken surpassed its goal of 2.2 million improved day-old chick sales several months ahead of schedule, and has reportedly sold 3.2 million day-old chicks by the end of FY16.* The better than expected sales demonstrated strong smallholder demand for quality, high-yielding chickens for egg laying and meat as well as the advantages to having an extensive network of sales agents close to the customer. Smallholder farmers showed that they are willing to pay more for a more productive, high-quality product. This also suggests that EthioChicken’s expansion into the feed business is promising as more farmers are seeing the benefits of buying feed rather than relying on scraps and scavenging to feed their chickens. EthioChicken has invested in improved feed mill equipment, locked in supplies of local maize and soy, and anticipates meeting its goal of selling 2,600 metric tons of improved poultry feed by the end of 2016.

In addition to providing smallholders with a good source of protein and potential income, the partnership expanded a robust network of more than 500 agents that provides good jobs and incomes in rural communities. Furthermore, EthioChicken’s success proves that privatizing state-owned enterprises can work, improving outcomes for smallholders and attracting needed outside investment to the agricultural sector. With the success of this partnership and the EthioChicken model, the company will continue to expand across Ethiopia, bringing additional employment, income generation, and improved nutritional outcomes to smallholder farmers. This partnership’s success may well lead to similar projects elsewhere in Africa.

*This figure is pending verification from farmer surveys.
Case Study: Commercializing Surehatch’s Small-Scale Incubators

Completed Partnership, Kenya

Partnership outcome: Surehatch sold 250 small-scale egg incubators to smallholder farmers and farmer cooperatives and established a trained salesforce in Kenya. More than a third of its Kenyan customers are women, and it is expanding into other African countries.

As incomes in developing countries rise, more people are able to afford protein in their diet. Chicken is an increasingly important source of protein in these countries, and global demand for poultry has outpaced supply in recent years. In 2016, according to the FAO, developing countries reported a shortage of one billion chickens, with this number projected to increase by 40 percent over the next eight years while production remains steady. Current production methods for chicken in rural Africa rely on the natural, unpredictable cycle of a hen that can hatch approximately 30 chicks in one year. Rural access to day-old chicks and full-grown chickens, as well as processed meat sources, is further constrained by infrastructure challenges in the distribution network of commercial producers in urban centers.

Surehatch, a South African manufacturer of egg incubators with product sizes ranging from 42 to 2,000 egg hatching capacity, distributes incubators throughout southern Africa. This product allows Surehatch customers to build their own chicken businesses selling eggs, day-old chicks, and chickens for consumption or laying. Owning an incubator enables clients to generate income within three weeks of product use. For example, a farmer purchasing an incubator with a 42-egg capacity is able to hatch day-old chicks every three weeks, moving their production from an average 30 chicks per year to 300.

Pre-Partnership Situation Analysis

With an estimated 85 percent of sub-Saharan rural households raising poultry, the potential demand for incubation technology is significant. With an established sales base and product brand in southern Africa, Surehatch began to receive one-off orders from Kenya that led it to assess the potential for marketing the incubator in a new country. For two years, Surehatch conducted market research and extensive field tests on the functionality and appropriateness of its incubators in the Kenyan market. Using this information, Surehatch made improvements to the incubator by making the units more energy efficient and to retain heat in the event of a power outage as well as upgrading the internal and external finish of the incubator to improve sanitation of the equipment over time. The company also noticed that expensive, low quality incubators imported from China were available in Kenya but exclusively in urban areas. After the market research and product testing phase, Surehatch had a product that was ready for sale in rural Kenya.

Partnership with Feed the Future Partnering for Innovation

Surehatch applied to Feed the Future Partnering for Innovation during the program’s second funding round. During the negotiation phase, Partnering for Innovation’s experience in the smallholder market allowed it to help modify Surehatch’s in-country sales strategy. Specifically, Surehatch’s initial target market was peri-urban. But Partnering for Innovation was able to share specific market opportunity information and interest in western and central Kenya, prompting Surehatch to establish regional offices in those areas that would become the focal point for promotion and interaction with rural smallholders.
At the same time, Partnering for Innovation emphasized the need to add important features to the project such as training and after-care services to develop a more customer-focused relationship with smallholders and encourage product adoption, as well as distinguish Surehatch’s brand from others in this market segment. Surehatch’s pre-sales training became the cornerstone of its commercialization strategy, reaching more than 750 farmers during the 12-month partnership. Surehatch also called each smallholder for 30 days following their purchase to see the farmer through their first hatch, promoting technology adoption and protecting Surehatch’s brand in this new market. As a result of these activities, Surehatch customers in Kenya saw their average monthly income from poultry increase from 11,000 KES ($108) to 16,697 KES ($165).

One immediate outcome of the partnership was sales of 250 42-egg capacity SH80 automatic incubators to smallholder farmers throughout Kakamega and Machakos counties. By marketing directly to smallholders, however, Surehatch learned that a larger incubator in the same market was also needed. The next model in the product line had too high of a capacity for smallholders and the price was also unattainable. Accordingly, Surehatch began designs for a new product with four times the hatching capacity of the SH80 but, at $150, is only twice the price. In a recent study conducted by Partnering for Innovation, 74 percent of farmers surveyed expressed interest in purchasing an incubator with higher hatching capacity. Within two months of introducing the larger model—the SH180—in Kenya, all 20 units in stock were purchased.

**CHALLENGES GOING FORWARD**

- **Customs challenges limit in-country stock**

At the close of the partnership, Surehatch intended to stock and sell additional SH80 incubators in Kenya. The company shipped 100 units from Cape Town to Mombasa using the same process as the incubators already sold in Kenya. However, unknown to Surehatch, the Kenya Bureau of Standards (KEBS) had changed its customs policies to require both an inspection and certificate of conformity for all products entering Kenya. Though the company had a certificate of conformity for the shipment, its container was detained and ultimately, the entire shipment was lost.

For nearly six months, Surehatch tried to work with KEBS to provide further documentation to release its shipment as well as clarify the requirements for any future shipments. Eventually, KEBS finalized its import procedures and selected an internationally recognized company to conduct pre-inspections. Now, Surehatch works with the inspector in South Africa to obtain certification for the shipment prior to export.

- **Profitability in the smallholder market remains unseen**

Since the introduction of the SH80, Surehatch has struggled with balancing a price point low enough to be affordable for smallholders yet profitable enough for the company to continue to invest in the market given the cost of aftercare support and high-touch technical assistance. As a result of its market analysis, Surehatch determined that their targeted customer could pay more than the initial price established for the SH80. From the smallholder perspective, use of the Surehatch incubator is highly profitable, with farmer income rising by nearly 50 percent and, in some cases, poultry rearing overtaking vegetable production as their primary source of income.

Partnering for Innovation conducted an impact study following the partnership to determine the benefit of the incubator to the farmer’s livelihood. At the time, Surehatch was already testing the larger SH180 model and requested the study include survey questions on a farmer’s willingness to pay for a larger model. The survey results revealed that there was farmer interest in an incubator with more hatching capacity at a higher price. The average price a farmer is willing to pay for a larger model is $500, which allows Surehatch a margin to sufficiently invest in growing its market share in Kenya.

- **Financing partner needed to satisfy demand**

Despite farmer interest in paying a higher price for an incubator with more capacity, Surehatch still determined that a financing partner was needed to enhance access to and scale adoption of the technology. Surehatch also expressed its concern that financing might be needed for farmers to purchase the SH80, but it turned out that this was not necessary. To meet the potential need for financing the SH180, Partnering for Innovation introduced Surehatch to Musoni, a local microfinance institution and Partnering for Innovation partner. Musoni and Surehatch have since agreed that there could be a mutually beneficial relationship in promoting each other’s product in rural areas and facilitating sales and loans to smallholder farmers.
LESSONS LEARNED FROM SUREHATCH

- **Right product, wrong size**
  By engaging with smallholder farmers in western and central Kenya, Surehatch was able to understand their capacity and demand for automatic egg incubation. The local trainings generated so much demand for the SH80 that customers expressed interest in buying additional units for their farms. Farmers were also interested in larger units, but the company did not offer a product that was affordable enough for smallholders to graduate to a larger unit. In July 2016, with information provided by the Partnering for Innovation market survey, Surehatch launched the SH180 and sold more than 150 units in just two months in southern and eastern Africa. The SH180 offers a new product design that maintains the automatic attributes of Surehatch’s incubators and high quality at a lower cost. Surehatch has similarly field-tested the new model and, since the initial introduction, has enhanced the product with a digital humidity reader; adjusted the software platform to eliminate glitches with auto-turning; and installed a sensor to better detect temperature and humidity and protect the incubator from fluctuations in power. Surehatch now has a new product that can be mass produced to meet demand.

- **Technology breeds entrepreneurship**
  Purchasing Surehatch’s technology is more than just acquiring an incubator to produce chickens; the incubator allows the farmer to build his or her own profitable business that can be up and running in as little as three weeks. Noting the challenges in meeting the smallholder market’s rising demand for animal protein, the Surehatch incubator allows for decentralized hatchery businesses to emerge in rural areas. As farmers see demand for eggs, day-old chicks, and chickens increase, they can scale their production by purchasing additional incubators, making the business model sustainable for both the farmer and Surehatch.
World Café Feedback: Pathways to Nutrition

Access to high-quality nutritional products is a proven first step for solving issues of under- and malnutrition in countries where USAID works. While Partnering for Innovation works with commercial partners to build access, there are many ways to integrate nutrition-sensitive activities into partnerships. At the TOPS/SPRING workshop on nutrition-sensitive agricultural value chains, participants discussed potential avenues that public private partnerships can take to be more nutritionally sensitive.

- Integrate behavior change messaging into product marketing campaigns (television, radio, etc.), specifically about water and sanitation such as hand washing.

- Train salespeople in how and why diet diversity alongside their product will benefit their customers (and specifically about how to limit food borne illness).

- Use packaging materials to advertise nutrition and health.

- Advocate with government offices for enabling environments that lower the overall cost, and thus price, of nutritious food products.

- Use byproducts, such as egg shells, to fortify other products with calcium.