

# CONTRACT FARMING IN NEPAL

INTRODUCING PAY-AS-YOU-GO  
WATER ACCESS



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value chain.

In 2015, Nepal imported US\$525.7 million worth of vegetables.<sup>1</sup> Yet, vegetable production capacity in 2009–2010 was 2.8 million metric tons, which would be sufficient to meet national demand.<sup>2</sup> Vegetables are mainly produced by smallholder farmers with less than 0.5 hectares of land who rely on the private sector for distribution.<sup>3</sup> This situation leads to erratic supply due to poor crop planning, surplus or deficit production especially in crops like potatoes, and increased imports from India. Moreover, farmers are completely dependent on age-old farming practices and weather conditions, which result in lower productivity with implications for farmers' financial resilience.

Considering the challenges in the sector and focusing on providing a market-led solution, SunFarmer Nepal—a solar-powered irrigation solutions company with support from the UN Capital Development Fund programme MM4P—developed a business plan that aims to enhance farmers' income through contract farming of high-value crops under a co-owned company between SunFarmer and the farmers. The business plan is based on the experience of SunFarmer that indicates, to ensure sustainable business, the focus needs to be on the entire agricultural value chain, with a pay-as-you-go irrigation solution as one component of the value chain. To ensure crop quality and to manage farming risk in the proposed model, SunFarmer (through its contract farming company) will support the farmers at all levels of the value chain.

<sup>1 2 3</sup> SunFarmer Nepal, Market Research, 2016, Makwanpur, Research Report



To better understand market conditions in Nepal, SunFarmer conducted an initial market research study on both the supply side and demand side that revealed the following:

## SUPPLY SIDE

- Vegetable market gap of Nr196 billion (US\$2 billion)<sup>4</sup>.
- Lack of year-round irrigation for 40% of farmers in mid hills and high mountains.
- Majority of cultivable land is being for low profitability crops.
- Smallholder majority among farmers.
- Lack of access to quality agricultural inputs like seeds and fertilizers.

## DEMAND SIDE (FARMERS)

- Unmanaged production and dependency on traditional farming practices.
- Lack of information on production flow in the market.
- Need for safe transportation and logistical support to sell the produce in vegetable markets.

## CHALLENGES TO SOLVE



### 1. UNPLANNED CROP PRODUCTION

1. The majority of smallholder farmers in Nepal rely on age-old practices that make production seasonal and weather dependent. Farmers incur huge losses because they simply lack knowledge of modern farming techniques for off-season crop and vegetable cultivation needs.<sup>3</sup>



### 2. UNFAIR PRICING MECHANISMS

2. A farmer sells the produce to a merchant at a minimal rate, who re-sells it to a wholesaler with a high mark-up. The wholesaler finally sells the produce to a retailer at a fixed rate, which is incorporated into the final higher price for the customer. Without a proper supply chain in place and a fair pricing mechanism, the farmer is paid very little while the end customer bears a higher price.



### 3. HIGH COST OF AGRICULTURAL TOOLS

3. Due to the high cost of a solar water pump (US\$900–US\$7,000), SunFarmer provided farmers an option to pay for the system over 24 months. Despite its initial success, the company is facing issues with client underwriting and payment collection. SunFarmer currently offers leasing models whereby farmers pay equal instalments for the solution. Despite these schemes to bring down cost, a solar water pump is still considered a luxury item instead of an investment by farmers.

# SOLUTION PROPOSED

## CONTRACT FARMING MODEL



### 1. PRE-HARVEST

To offer digital payment solutions to acquire pay-as-you-go solar water pumps for farmers.

To develop an agri-market intelligence system, including market prices, weather and production data from other locations as well as modern farming techniques for off-season crop and vegetable cultivation.



### 2. HARVEST

To set up centrally located collection centres to purchase produce from farmers.

To collect, grade and package produce and pay farmers through digital channels.



### 3. POST-HARVEST

To transfer payments from SunFarmer wallet to farmer wallet.

To digitally secure transaction data for additional analysis and develop products and services that cater to the needs of farmers.

<sup>4</sup> Exchange rate: Nr1 = US\$0.0093 (Source: <https://www.xe.com/currencyconverter/convert/>, 2018). Note: This rate was used throughout the document to provide United States dollar equivalents for Nepalese rupees.



# EXPECTED RESULTS

BY 2020



To reach **8,000 farmers with modern agricultural technology** and an open marketplace to improve their livelihood.



To partner with **one digital financial service provider and two insurance service providers** to offer digital financial solutions to farmers.



To farm over **15 hectares of land** with modern practices aided by the market intelligence system.



To register **350 farmers who make digital payments** for pay-as-you-go irrigation services.



**“Smallholder farmers in Nepal face many barriers to prosperity. With support from UNCDF, SunFarmer Nepal wants to help farmers dramatically increase their income with modern agricultural solutions and digital finance. Our vertically integrated agribusiness invests in infrastructure (irrigation and processing), provides quality inputs, trains farmers on high-value crop cultivation, and markets and sells farmers’ products via a branded produce company that is co-owned with the farmers.”**

AVISHEK MALLA  
CEO | SUNFARMER



Supported By:



For more information, please contact MM4P (Nepal Office):

📍 UNCDF-MM4P, Central Business Park-5th floor, Thapathali, Nepal

☎ +977 01 620 0545

🌐 [mm4p.uncdf.org](http://mm4p.uncdf.org)

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