



Growing out of poverty with potato

Project results Year 3: April 2016 - March 2017

Colophon

August 2017

For more information please contact Mr. René van Rensen, R&D Director Crops at Fresh Studio Innovations Asia Ltd., and project leader of project: "Growing out of poverty with potato". You can find his contact details and additional information on our website www.freshstudio.vn.

Copyright pictures: Fresh Studio and Jacques Smit.



Did you know that potato is a highly dependable crop for nutrition security with the potential to improve the livelihood of small scale farmers in Vietnam? The potato, a staple crop so familiar in most parts of the world, could do precisely that.

'Growing out of poverty with potato' is a five year PPP (public-private partnership) project (2014-2019) between the Ministry of Foreign Affairs of the Netherlands, Fresh Studio, Agrico, PepsiCo Vietnam and Dutch Wageningen University. With the objective of setting an example of a sustainable value chain for high quality potato in Vietnam, the project has been implemented for three years and has acquired promising achievements.

Dutch potato to conquer Vietnamese market

Potato is one of the major crops worldwide. Its high yield potential and nutritional value makes it an universally loved staple food. In Vietnam, potatoes are slowly gaining popularity, but the current potato production does not yet exceed 5 kg per person per year. An increase in consumption can have a positive impact, because potatoes are very healthy. Rich in fibre, vitamins and minerals, potatoes can complement the Vietnamese diet. Production of potatoes is interesting from an economic and environmental point of view. That is why the project 'Growing out of poverty with potato' was initiated in 2014. The project aims to improve the production of potato, stimulate the demand and create robust value chains for table and processing potatoes. In this way, potatoes can contribute to improved food security, pro-poor development and a healthy, diverse diet in Vietnam.

The export statistics of the UN Comtrade Database (<http://comtrade.un.org/>) show that in 2016, Vietnam imported 137,500 kg of potato seeds from the Netherlands. As part of this project, 125,000 kg of potato seeds were imported from the Netherlands in 2016. After the anticipated successfully completed registration of the first two Dutch potato varieties for commercial introduction in the second part of 2017, we expect the volume of Dutch potato seeds imported by Vietnam to continue to increase in 2017 and beyond.

Export statistics potato seeds from the Netherlands to Vietnam

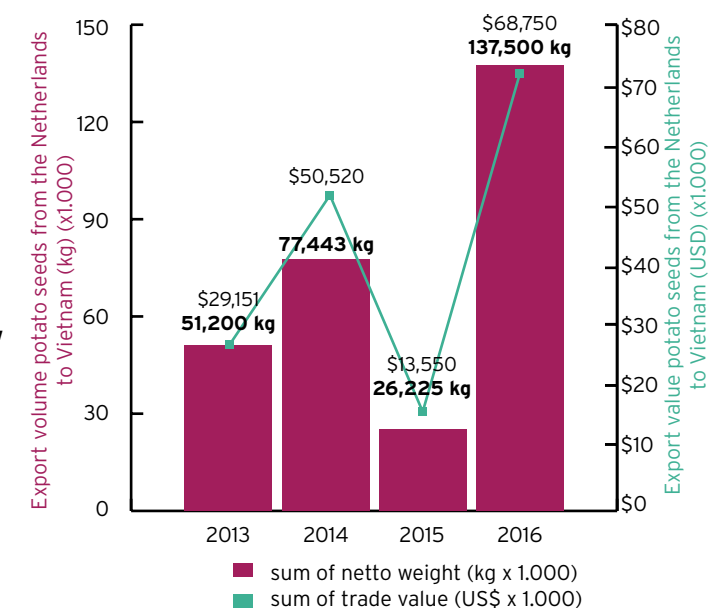


Figure 1. Annual export statistics of potato seeds from the Netherlands to Vietnam (source: UN Comtrade database)

Value chains that last

The 'Growing out of poverty with potato' project is successful when the Vietnamese potato sector can compete with imports from neighbouring countries and is able to supply both the domestic table potato market and the potato processing industry with a consistent volume of high quality potatoes. The partners of the project invest in trust, strong relationships and capacity building to create value chains that are economically viable and last beyond the lifespan of the project. The project is rolled out in the different potato production regions of Vietnam. The Red River Delta (RRD) accounts for 95% of Vietnamese potato production and the remaining 5% comes from small-scale farmers in the Central Highlands of Vietnam.

Promising results

Using the value chain approach, four main components are included in the project: supply, demand, supply chain development and policy development. On the supply side, the project focuses on testing high-yielding varieties, training farmers and production advisors. After two years, three high quality potato varieties were selected to be introduced in the Vietnamese market, 27 production advisers were certified to provided extension services to potato farmers and 1,691 farmers (72% female) were trained in potato production. Next to that, farmers and traders were brought together in a series of field activities, after which 875 table potato production contracts were signed. To generate the market access for these potatoes, awareness campaigns on nutritional value of potato were created to reach more than 1 million consumers in

the urban areas of Hanoi and Ho Chi Minh city (HCMC). Last but not least, the Potato Policy Discussion Platform has been formed and active with regular meetings and policy workshops.

Registration of new Dutch seed potato varieties

The decline in the production of potatoes in Vietnam is attributed to the limited access to high quality potato seeds. Vietnam lacks good quality seed potatoes and farmers tend to use those from previous harvests or buy seed potatoes from neighbors. This practice can lead to pest and disease problems. The project aims to introduce and formally register high-performing Dutch potato varieties. The two potato varieties Markies and Rosagold have already passed the first phase of the potato variety registration process. These two varieties are currently in the second phase of the registration process, which involves commercial production of both varieties. The potato variety Erika is expected to pass this year the first phase of the registration process. Besides these three potato varieties other Dutch potato varieties have been successfully tested in Vietnam and will also enter the potato variety registration process at the earliest possible time.

Mechanization of potato production process

Good agricultural practices and mechanization will help farmers to increase the productivity of the potato production and to obtain the best results out of the new potato varieties and high quality potato seeds. Through training and extension services the project ensures that project



"Involving the consumer in a supply chain project is quite a challenge. The Pro Poor Potato project succeeds in doing so in a very balanced and creative manner. First, there is attention for high-quality research to really understand the consumer. Second, the consumer is informed. But most importantly is the third step in which consumers are invited to actively participate: discuss, cook and taste! I am convinced that this approach will lead to a higher appreciation of potatoes in general and to the specific varieties that have been produced in a responsible manner. We are not there yet, but the potato will conquer Vietnam and bring all its benefits to its farmers and consumers"

Carmen Heinze

RVO

partners such as farmers, agronomists, traders, etc., have access to and knowledge of potato production and mechanization. As mechanization for potato production is not common in Vietnam appropriate machinery and tools are imported and introduced to potato farmers. This machinery (potato planters and harvesters) is provided to farmers groups or to agriculture service providers to ensure the machinery is use by as many as possible farmers can utilize the machinery. These partners are also trained in the usage and maintenance of the machinery.


More potato dishes on Vietnamese menu

Over the past few years, the project conducted various sensory and consumer studies to better understand the consumer preferences and behaviour. Based on the insights of these studies, the project has implemented various online (<http://thongtin.khoai-tay.vn>) and offline marketing campaigns to create customer's awareness about the health benefits of

potatoes, their taste, quality and the different ways to prepare them. Due to efforts of the project and several market parties, Vietnamese consumers are now more aware about the potential benefits of potatoes and consumption is steadily increasing.

A favourable policy environment

In order to raise awareness at the government level, the project has established a potato policy discussion platform with the project partners, the Dutch Embassy and with Vietnamese authorities. An in-depth policy brief was created to inform Dutch and Vietnamese stakeholders about the necessity of many changes to foster the development of the potato sector.

 My favourite potato recipe

Asparagus, fresh from the ground, with softly boiled Opperdoezer potatoes and a sauce of melted butter.

Downstream partners are enthusiastic

Achievements April 2016-March 2017

Enthusiasm for potato production and consumption is growing in Vietnam. On average, the farmers who received training obtained a higher productivity. In addition, they can apply good agricultural practices to other crops as well. Consumers are well informed about the benefits of potato consumption and about ways to prepare and store them. However, the biggest achievement of the past year is that traders and retailers are enthusiastic about the project and are interested to participate in a potato value chain.

The four pillars of the project are:



Supply



Demand




Value chain development




Policy dialogue




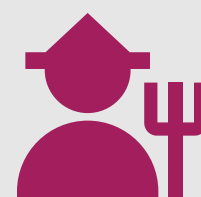
 Training and technical assistance are vital components of the project. Last year, 13 potato production advisors were trained. In total 27 advisors have successfully completed the training, consisting of four modules: 'Harvest, storage and quality', 'Planting, fertiliser application and irrigation', 'Potato disease prevention and management' and 'Seed and varieties'. The advisors will visit contract farmers at least once every two weeks to assist them in optimizing their production performance.



 Up to March 2017, 1,691 farmers followed all three training modules for farmers. Of these farmers, 72% are women. In this way, the project contributes to the empowerment of women, which is a very important objective of the project. Farmers indicate that they will use the techniques obtained. Till thus far the average productivity in the Red River Delta increased with 27%, but variations are large. Productivity decreased with 8,6% in the Lam Dong province and increased up to 65,5% in the Bac Giang province. The average productivity increase is remarkable, but to achieve the objective of an increase of 50%, extra efforts are needed. Mechanisation is one of the manners to further increase productivity. However, it will take time to educate and convince the farmers to use and invest in the machinery introduced by the project on larger scale to mechanize potato production.



 Up to March 2017, 875 potato production contracts have been realized, covering more than 800,000 kilograms of table potatoes. Project partner Pepsico has established an additional 979 contracts. By the end of the project, 2,500 contracts needs to be established of which 70% are signed by woman. With 2 more project years to go the project is well positioned to realize these 2 targets.




Supply

In 2016, 138 tons of Dutch potato seeds have been imported in Vietnam. Two new Dutch potato varieties, Markies and Rosagold, have passed the first phase of the registration after successful field trials.

They now enter the second phase of the registration process. That means that the variety needs to be produced on at least 50 hectares in the coming three years. Erika is another potato variety which performed very well under Vietnamese circumstances. This variety is anticipated to pass this year the first phase of the registration process. Besides these three potato varieties five other potato varieties are being tested for possible future registration.



 The purchase of four sets of tractors, planting and harvesting machines plays a vital role in introducing project stakeholders to mechanization of potato production in Vietnam. Since the use of tractors is totally new for farmers and their agronomists, the project has offered a tractor training to a group of project participants. After a practical training in April 2017, the agronomists now do know how to use the machinery. Next step is to demonstrate in practice the added value of the machines compared to manual work.



'MECHANIZATION WILL SUPPORT THE FARMERS TREMENDOUSLY'

"Working in potato production is really heavy and it is difficult to find workers in the rural areas. Therefore, I believe mechanization will support the farmers tremendously. The driving lessons on a tractor have been great fun and very useful. We can now adjust the tractor to the specific conditions on the field. We also learned to maintain the machinery. It is however quite a change for the farmers to use the tractors. It is our task to help farmers understand and appreciate the possibilities."

Mr. Nguyen Van Vi

Agronomist at Fresh Studio Innovation Asia Ltd.



Demand

A potato awareness campaign has been launched to create customers' awareness about the health benefits of potatoes, their tastes, qualities and the different ways to prepare them. In 21 large wet markets in Hanoi and HCMC and in 7 big supermarket chains, consumers encountered informative and appealing point-of-sale-materials and recipe cards. The campaign is based on the insights of the consumer household surveys and panel discussions executed in the first years of the project. The campaign paid specific attention to the nutritious value of potatoes, possible modes of preparation and adequate storage to prevent potatoes from turning green. The campaign also had a strong online presence on Facebook. An estimated 1 million consumers have been reached already.



The consumer survey and household panels provided valuable insights into consumers awareness, and are therefore repeated each year. In 2016, 200 consumers in Hanoi and in HCMC were interviewed. For more practical insights, four different potato varieties were tasted and tested in the household panels executed in Hanoi and HCMC with 25 people in each city.



Consumers make the actual buying decision in the supermarket. Therefore, retail personnel has been trained about the specific qualities of the different table potatoes varieties and the best way prepare and store them. As of March 2017, 70 retail staff members have been reached with the retail training.



Value chain development

The current phase of the project is all about creating lasting relationships for robust value chains. The role of the traders is crucial in this. The project aims to establish relationships with at least 5 traders. Currently, direct cooperation with one trader has been formalised.



It is observed that traders do not always pay farmers a higher price for the two Dutch varieties yet. Since the productivity of the farmers is - on average - a lot higher, this compensates for the higher price of potato seeds and the relatively low prices obtained on the market. However, it is of course crucial to obtain a higher price for the better performing new varieties. That is why traders are actively invited to participate in the field days and learn more about the project and the new potato varieties. During this project period, 28 field days have been organised attended by 19 traders and 464 farmers.

Policy dialogue



The project partners have worked on a detailed policy brief to elaborate how to overcome the barriers for a flourishing potato sector. This potato policy brief has been presented to the Dutch Agriculture Vice Minister on 22 March 2017. The policy brief is now distributed among Vietnamese

and Dutch stakeholder at appropriate events or meetings.

Another activity to create an enabling environment for potato production and consumption is the establishment of a Potato Policy Platform. The main goal of the platform is to disseminate information on relevant legislation. The Potato Policy Platform has become part of working group sessions of the World Economic Forum initiative in Vietnam. The main topics that have been discussed are the registration procedures, the allowance of sprout inhibitors and the introduction of good quality potato seeds.




On 22 March 2017, the Dutch Vice Minister for Agriculture Marjolijn Sonnemaa visited the Pro Poor Potato project in Vietnam and handed over the official certificates to the farmers that successfully completed the three potato training modules introduced by the project. The vice minister also visited the potato fields in Tu Son district, Bac Ninh, and helped to harvest the Rosa Gold potatoes.



Growing out of poverty with potato: results up to March 2017

Supply



10 Dutch potato
varieties on field trials


2 Dutch potato 
varieties are successfully in final registration phase and one new variety submitted for final registration phase.

Training of 1691 farmers
in potato production completed (seed preparation, fertilisation, disease prevention, processing and preserving the harvest)



Training of 27 potato production adviser

They will give professional advice to potato farmers and help establishing contracts between farmers and traders 

 **4 tractors**
4 planting and 4 harvesting machines purchased and tested

Demand

  **in**
Over 1,000,000 consumers
in Hanoi and HCMC reached through awareness raising campaigns in 21 wet markets and 7 supermarkets

 **600 consumers**
were interviewed to get more insight in their potato preferences

1 food lab 
in Hanoi

 **600 consumers**
participated in the sensory evaluation of the potato varieties

2 household panels 
with each 25 households prepared the four selected potato varieties at home and provided feedback per potato variety

Supply chain development



28 field days


organized, attended by 19 traders and over 464 farmers

875 table potato
production contracts covering
800,000 kg
table potatoes

979 contracts
for processing potato realized



Policy development

Potato policy brief 

presented to the Dutch Agriculture Vice Minister and distributed amongst decision makers

Policy discussion Platform 
participant in World Economic Forum initiative



Potato policy workshop
with all partners, Dutch embassy, Vietnamese authorities and research institutes.

Value chains that add value

In this phase of the project, it is interesting to see the different elements coming together. Next year is about creating strong market dynamics and synergies to reap the benefits of a strong value chain that adds value for all parties.

Sustainable production and mechanisation

In order to guarantee a sustainable potato production, the project partners will continue to look into possibilities to use less or more environmentally friendly agrochemicals. Mechanisation also continues to receive attention. Seeing is believing, and therefore next year the focus will be on showing the farmers the benefits of using mechanisation and of course demonstrating the added value of growing the selected Dutch potato varieties.

Contracts with farmers

The number of contracts between farmers and downstream supply chain partners needs to increase to 2.500. Next year will be about establishing more contracts between (especially) female farmers and traders. The activities to establish brand awareness for the Dutch potatoes will further support this.

Brand awareness for Dutch potatoes

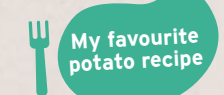
The awareness activities thus far have been about the health benefits of potatoes in general. The next phase will be about creating brand awareness of the special attributes of the Dutch potato varieties. When consumers ask for the Dutch varieties specifically, the entire supply chain can reap the benefits of this. This will be the starting point in diversifying the Vietnamese potato market, where farmers will have more choice which potato variety to grow and consumers will have more choice which potato variety (or cooking type of potato) to buy.

'TOGETHER WE CAN BUILD A SUSTAINABLE VALUE CHAIN'

"The Dutch potato varieties are a very interesting opportunity to diversify our business and the diet of the Vietnamese. The main challenge is to make sure that the potatoes are available throughout the year. Nowadays they are out of stock from June to December. When I attended a field day organized by Fresh Studio, I learned many potato production techniques and obtained a better understanding of the pest infestations on potato. With this knowledge, we can advise our farmers to produce the potatoes successfully. Together we can build a sustainable value chain."

Mr. Pham Cong Toi

Director of Thanh Ha Safe vegetable & fruit Co. LTD



French fries and pork
bone soup with potato

GIỐNG KHOAI TÂY

ROSAGOLD



Củ tròn, vỏ hồng và ruột
vàng đậm.



Khoai củ chắc và
ruột có độ ẩm.
Phù hợp với các
món xào, nấu
canh và làm
salad.



A project with real impact

A detailed quantitative and qualitative assessment of the project by Fresh Studio was executed in 2017 to fully understand and describe the potato project's background, as well as its social and economic impact on the communities. The interviews with key stakeholders (project sponsor, business, community, government) demonstrated the project's short and long-term benefits.

- **Economic output:** The total impact on the farm economy of the project in its third year, is significant: VND 16 billion in sales and over VND 13 billion in personal income. The project creates more direct and indirect jobs for farmers in the area.
- **Social/ Community Impact:** The project helps farmers to increase their social status by allowing them to pay for their children's education, school materials. It also reinforces social relationships amongst members and neighbors. Even the capacity to prepare a balanced diet has been raised.
- **Environmental Impact** A sustainable operations and potato production system is initiated, that will lead to an energy and water use reduction and cost savings for farmers.