
Growing out of poverty with potato

Project results Year 2: April 2015 - March 2016



How to achieve food security, improved nutrition and accelerate sustainable agriculture in Vietnam? How to increase the income of small scale farmers in Vietnam? The **‘Growing out of poverty with potato’** project aims to tackle this challenge and sets an example by creating a value chain for a high quality and sustainable potato production system in Vietnam. Funded by the Facility for Sustainable Entrepreneurship and Food Security (FDOV), this project is a public-private partnership between Fresh Studio, Agrico, PepsiCo Vietnam, Applied Plant Research of Wageningen UR and the Ministry of Foreign Affairs of the Netherlands.

Colophon

September 2016

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

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Netherlands Enterprise Agency



Potatoes: nutritious and beneficial

Potatoes provide an interesting opportunity to improve food security, support pro-poor development and boost a healthy, diverse diet in Vietnam. Potatoes are richer in fibre, vitamins and minerals than rice or wheat. The production of potatoes requires less water and land than other staple crops and it is a profitable addition to the current crops planted by small-scale farmers in Vietnam. Despite all these benefits, production and consumption of potatoes in Vietnam are still very modest. Annually the current potato production does not exceed 5 kg per person. The Red River Delta (RRD) accounts for the lion's share (95%) of Vietnamese potato production. The remaining 5% comes from small-scale farmers in the Central Highlands of Vietnam.

Creating value chains

The partners of the ‘Growing out of poverty with potato’ project are committed to developing a sustainable potato production system in Vietnam. The ultimate goal is to build a robust system that will sustain and flourish when the project is formally finished. The 5-year project stimulates supply, fosters demand, develops the value chain and initiates a structural policy dialogue to support a sustainable potato sector in Vietnam. The ‘Growing out of poverty with potato’ project is successful when the Vietnamese potato sector can compete with imports and supplies both the domestic table potato market and the potato processing industry with a consistent volume of high quality potatoes.

New varieties for trained farmers

A critical success indicator of the project is the availability and accessibility to high quality seed potatoes for Vietnamese farmers. Therefore, a number of new, high-yielding Dutch potato varieties are tested in Vietnam. Those who performed best on yields and disease resistance are submitted for national registration. The training of farmers is another important part of the project. Small-scale farmers, mostly women, receive training on potato production and machinery application. This helps them to increase yields and quality while improving the sustainability of potato production.

Telling the potato story to consumers

Consumers in Vietnam have not yet adopted potatoes as an alternative staple for rice in their diet. To create awareness on the fact that potatoes are both healthy and tasty, we need to have an in-depth understanding of consumer preferences and behaviour. To gain such insight, annual surveys are conducted among consumers in the North and South of Vietnam. In taste labs, consumers assess the appearance, taste and structure of several varieties of potatoes. In addition, household panels test the new Dutch varieties by preparing the table potatoes at home. Based on these insights we inform consumers about the health benefits of potatoes, their taste, quality and the different ways to prepare this surprisingly versatile food.

Linking supply and demand

The project creates a value chain that brings locally and sustainably grown potato varieties of high quality to the Vietnamese market. It also establishes a potato policy discussion platform with the project partners, the Dutch Embassy and with Vietnamese authorities. This will increase awareness about the necessity to improve and streamline the approval system for commercial potato varieties.

'REAL COMMITMENT TO GIVE A BOOST TO THE POTATO SECTOR'

"This project covers every link of the potato production chain. We know both the opportunities and the constraints, and we develop suitable and workable solutions. We are really starting to create a positive impact in the potato sector in Vietnam. I cherish the positive cooperation between all stakeholders. There is a real commitment among partners to boost the potato sector in Vietnam. I look forward to introducing the first two new potato varieties on a commercial basis to farmers. We expect a positive effect on the yield achieved by farmers and with the excellent quality - confirmed by the results of the taste labs - we foresee a high consumer demand for these new potato varieties."

Mr. René van Rensen,

Project leader 'Growing out of Poverty with potato'
and Director of R&D and Crops at Fresh Studio

My favourite potato recipe

Stew pork with potato



'PRACTICAL KNOWLEDGE TO REDUCE MY COSTS AND INCREASE YIELDS'

"I decided to join the project because I want to learn about new techniques in order to get higher yields. In the training we learned how to prepare the soil, how to apply the right type and amount of fertilizer and how to take care of the potato plants. It is very practical knowledge that I can apply directly on my farm. This helps me to reduce costs, as I do not use more fertilizer or plant protection chemicals than needed. The success of the crop season depends a lot on the quality of the potato seeds and the weather. Changing weather conditions is one of the biggest challenges I face. The machinery that the project introduced, helps me to reduce the working time in the field. I now have some extra time to spend with my family."

Ms. Nguyen Thi Loc

Farmer in Bac Ninh province with 0,14 ha potato production

My favourite potato recipe

Potato wedges from the oven, coated in a thin layer of flour and olive oil and sprinkled with salt and rosemary.



Well on track

Since its launch in 2014, the 'Growing out of poverty with potato' project made a great deal of progress. These pictures give an overview of the milestones of the project from April 2015 till March 2016.

The four pillars of the project are:



Supply



Demand




Value chain development




Policy dialogue




 Field trials with five high-yielding potato varieties were successfully completed. Some farmers also tested new varieties on their own farm. Four varieties showed excellent results in yield and product quality. Two of these varieties will be submitted for registration for commercial introduction for the fresh market in 2016. The other two will be registered in early 2017. The Department of Agriculture and Rural Development in all five provinces where the varieties were tested, supports the registration. The preliminary results of the first screening trials with additional new potato varieties are promising as well.




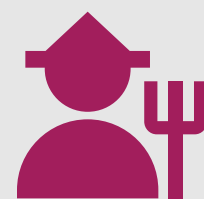
 Potato production enhancing equipment like irrigation systems and machinery to plant and harvest potatoes were successfully tested. This machinery will be disseminated among farmers in the current project year. It will contribute to a more resilient cultivation system of potatoes.



 The first 353 potato farmers in the Red River Delta signed contracts with 10 traders to supply high quality potatoes. The contract requires farmers to record input use and other important production data. An important step as this allows for the monitoring of the type and quantity of agro-chemicals used. These data also provides potato farmers with important insight in their return on investment.



 A group of 950 farmers received an instructive training in potato production. The farmers obtained knowledge about topics such as potato seed preparation, fertilisation, disease prevention, post-harvest techniques. After successfully completing all 3 training modules, they proudly received their certificate. 70% of all trained farmers is female. This supports the empowerment of women, which is one of the targets of the project.





Supply

Cultivating better quality potatoes with higher yields improves the income of the poorest farmer communities in Vietnam.

More sustainable production also reduces the environmental footprint of potato cultivation. On the supply side, the project focused in its second year on testing new high-yielding varieties and training farmers and potato production advisors. The advisors will help to establish a minimum of 2,500 contracts between farmers and traders to supply high quality potatoes with prolonged shelf-life. These contracts and the development of an extension network with trained advisors are essential. Both contribute to a sustainable potato production system for the long term.



 Potato production advisors will visit contract farmers at least once every two weeks to assist them in optimizing their production performance. The project developed specific materials for their training, which comprises 4 modules and a final exam. The first 14 advisors did the training and passed the exam successfully. They are now ready to give professional advice to potato farmers and they can support the establishment of contracts between farmers and traders.

 Three employees of Fresh Studio followed a potato production course at the Potato Business School in Emmeloord, the Netherlands. They will use the knowledge gained in the Netherlands, to train potato production advisors in Vietnam.





'A GOOD ADVICE STARTS BY LISTENING TO THE FARMERS'

"Always adapt your advice to the local conditions and start by listening to the farmer. That is my key message when I train potato production advisors. First we really need to know what our farmers want. I was delighted to see that the participants shared their knowledge and that they were open for discussion during the training. Topics as seed preparation, hilling up and storage of potatoes that I learnt during the course in the Netherlands, were valued by the participants. They were eager to join more training sessions to improve the potato production by transferring their knowledge to the farmers."

Ms. Cao Thi Hong Luyen

Senior Agronomist at Fresh Studio
and one of the trainers of potato production advisors

My favourite potato recipe

Fried potatoes



Demand

Table potatoes are a nutritious and tasty alternative for white rice. Still, they are not yet common in the Vietnamese diet. Most consumers don't know the nutritional value of potatoes and lack the information on how to prepare different types of table potatoes. To change this, the 'Growing out of poverty with potato' project created compelling awareness and marketing campaigns targeting urban consumers both in Hanoi and Ho Chi Minh City (HCMC). The campaign strategy is based on the results of annual market price scans, insights gained from consumer household surveys, and the experiences in the taste labs and household panels. These campaigns are key in increasing the market demand for table potatoes in Vietnam.



The annual consumer household survey among 200 consumers in both urban HCMC and Hanoi shows that consumers strongly prefer locally produced potatoes over imports. They mainly use potatoes to make soup, fries or stir fry. The survey confirms that more information on both health benefits and possibilities to use several varieties in different dishes, will help to increase the consumption of table potatoes.



Fifty households participated in the household panels and prepared four newly selected potato varieties at home. This showed that consumers prefer medium to large sized (but not too big) yellow peel potatoes with shallow or no eyes for easier peeling. Information about the texture and cooking time helps people to select and prepare the potatoes of their liking. In addition, Vietnamese consumers are concerned about quality and safety. For this reason, it is important to highlight the Vietnamese origin of the potatoes in the campaigns.



The food lab in Hanoi is now fully operational and used to identify consumers' preferences in potato consumption.



The consumer awareness campaign reached 200,000 urban consumers in Hanoi and HCMC. In supermarkets, wet markets and vegetable shops, consumers encountered informative and appealing point-of-sale-materials, seven recipe cards with tasty dishes made of potato, an animated cooking show and a funny potato mascot for kids. So called 'hot moms' posted information about potato dishes and their nutritional value on Facebook. The major Vietnamese e-newspapers featured 12 articles on potatoes, which reached millions of people at the core of the target group. This first informative and interactive awareness campaign provides a solid basis for follow-up marketing activities in order to increase consumer demand for potatoes.



Value chain development

Only trusted partners can collaborate well and create a sustainable and robust potato value chain. An efficient registration of new potato varieties and the joint preparation of the policy brief are successful collaborative actions in this project. This contributes to strengthening ties and building trust among the main partners and actors in the Vietnamese potato sector.



During field days the new potato production techniques and potato varieties were introduced to local project partners, traders and farmers. A total of ten field day were organized, eight in the Red River Delta and two in Lam Dong (Central Highlands). The field days were attended by 6 traders and over 350 farmers. Throughout the day they keenly examined and discussed the results of the different potato production techniques and new potato varieties.

Policy dialogue



An enabling environment is essential to realize a thriving and sustainable potato production sector in Vietnam. To create such an environment, joint action of all actors in the potato value chain is needed, including the government. A potato policy brief was developed to summarize the required joint actions to transform the potato sector in Vietnam. This will be distributed among actors in the potato value chain and policy makers.



In April and September 2015, two Dutch potato experts joined meetings of the Vietnamese Potato Policy Discussion Platform. Central topic in these meetings was finding viable solutions to overcome barriers that limit potato production in Vietnam. The Platform is part of the working group sessions of the World Economic Forum Initiative in Vietnam.

On March 16, the draft version of the policy brief was discussed with stakeholders. Their feedback provided valuable input to finalize the policy brief. This highlights the need to start public-private initiatives to coordinate efforts and to invest in potato propagation materials. It also contains a call to action for all stakeholders to develop and deploy decision support systems for farmers. These systems will help to fine-tune supply and to monitor the need for agrochemical inputs and irrigation water. The final version of the policy brief will be disseminated among Vietnamese and Dutch policy makers.



'POLICY BRIEF WILL SUPPORT TRANSFORMATION OF POTATO SECTOR'

"The establishment of the policy brief was a great accomplishment of the project last year. The policy brief was established by involving all relevant stakeholders. Carrying out the recommendations will greatly assist in successfully transforming the potato sector in Vietnam. Another true highlight last year was the workshop with stakeholders from government departments, NGOs, science and industry on March 16, 2016. It was very well organized and conducted by Fresh Studio. Now the policy brief is written, it is a matter of drawing attention to it and possibly organizing an implementation or policy priority setting workshop."

Prof. dr. ir. Anton Haverkort

Plant Research International of Wageningen UR

My favourite potato recipe

French fries



Pro poor potato: results up to March 2016

Supply



Field trials with

10 Dutch potato
varieties

1 tractor
1 planting
and 1 harvesting
machine
purchased and tested



Training of
950 farmers
(70% female) in potato production
(seed preparation, fertilisation, disease
prevention, processing and preserving
the harvest)



Training of
14 potato
production
advisers

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

Demand

f **🐦** **in**
200,000
consumers

reached through awareness campaigns
in wet markets and supermarkets in
Hanoi and HCM City.

400 
consumers

were interviewed to get more insight
in their potato preferences



food labs

in Hanoi and HCMC,
400 consumers participated
in the sensory evaluation
of potato varieties

50 
households

prepared the 4 selected potato varieties
at home and provided feedback per
potato variety.

Supply chain development

10 field
days

organized and
attended by 6 traders
and over 350 farmers



353
farmers

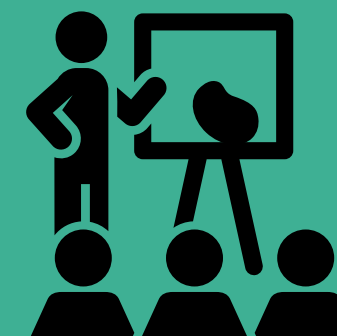
signed contracts with traders
to deliver potatoes

Policy development



2
meetings

with the Potato Policy
Discussion Platform



Potato
policy
workshop

with all partners, Dutch embassy,
Vietnamese authorities and
research institutes

From registration to the market

For next year, the project will continue training farmers in potato production. The training and the extension network will be further integrated with the process of the contracts between farmers and traders. The project partners will put much effort into making a success of the commercial introduction of the first two registered potato varieties. Farmers growing these potato varieties will be empowered to collaborate more closely. Retailers' staff members will be trained to become knowledgeable on the different potato varieties and their specific qualities. Finally, a marketing campaign which tells the story of the potatoes and their different varieties will be conducted.

Introducing better equipment

Planting and harvesting of potatoes is still mainly a manual process in Vietnam. This puts pressure on yields and (financial) returns. Therefore, selected machinery was introduced to reduce labour costs and improve yields. Using potato planting and harvesting machinery is a necessary step to make the Vietnamese potato sector more competitive.

Establishing extension network

In the coming years the network of qualified potato production advisors will be extended to support more Vietnamese farmers. The ultimate objective is to train 40 new advisors for table and processing potatoes. They will not only support farmers in their farming practices, but also help to establish at least 2,500 contracts between farmers and traders to produce high quality potatoes for the Vietnamese market.

Testing and awareness raising

In the food lab, testing of the new varieties continues in the next year. A group of consumers will assess the colour (peel/flesh), taste, texture (floury/waxy) and size of the new varieties of table potatoes. All insights gained in the food lab and household panels in Hanoi and HCMC will be used in the final selection of potato varieties. The annual awareness and marketing campaigns will inform urban consumers about the taste and health benefits of potatoes. These campaigns tell consumers everything they need to know about storing potatoes, and using them to cook different delicious and nutritious meals.



'THE KEY ROLE OF POTATO'

"PepsiCo Vietnam is member of the World Economic Forum (WEF) Sustainable Agriculture Taskforce and we're honoured to be partner in this project. Together we have built the project model and developed the policy advice to transform the potato sector in Vietnam. It is very rewarding that the potato sector policy brief is now finalised and will be presented by the end of this year. The bright & great initial results of the project show that we are on track. We strongly believe that potato, including processing potato, will become a key contributor to food security, pro-poor development and a healthy diet in Vietnam."

Nguyen Duc Huy

General Manager PepsiCo Foods Vietnam

My favourite potato recipe

Chicken salad
with potato chips





Empowering female farmers

The majority of potato farmers in Vietnam are women. Empowerment of female farmers is an important objective of the project. The project has been quite successful in the participation of female farmers in the trainings: 70% of the farmers trained are women. This sets a next goal for the project partners: increasing the share of female farmers in the contracts that are signed. Such contracts will be a subject in the training sessions, and the potato production advisors will make an extra effort to involve and support female farmers when negotiating contracts with traders. By stepping up our efforts, we will achieve our goal of 1,750 contracts signed by female farmers.