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Learnings from vegIMPACT NL Capacity Building of Potato Professionals

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vegIMPACTNL

Improving vegetable production and strengthening private sector development in Indonesia

The vegIMPACT NL program contributes to improved vegetable production and private sector development in Indonesia. The program builds on the results of previous joint Indonesian-Dutch horticultural cooperation projects, especially the vegIMPACT program (2012 – 2017). The program activities of vegIMPACT NL (2017-2020) address Knowledge transfer, Seed potato technology and supply system, Shallot production and post-harvest technology and Young farmers, while digital information and social media are cross-cutting and supporting activities. The vegIMPACT NL program is financed by the Government of the Netherlands and coordinated by Wageningen University & Research in The Netherlands.

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1. Introduction

Since 2012, the Government of the Netherlands has supported Indonesia with the development of the horticultural sector through the vegIMPACT program (2012-2017). To continue this Indonesian-Dutch horticultural development cooperation, a new vegIMPACT NL program was officially launched in 2018. vegIMPACT NL continued to contribute to the development of vegetable production and private sector development in Indonesia using horticulture knowledge and expertise from the Netherlands.

The vegIMPACT NL program (2017-2020) contains different tracks and activities, but capacity building and training of sector professionals is a key activity in most tracks. One of the tracks addressed seed potato technology and supply systems. As part of this track, a training called 'Capacity Building for Potato Value Chain Professionals' was developed and implemented in Indonesia. The overall objective of the training was to expand the knowledge and skills of potato professionals in Indonesia. Participants consisted of lead farmers, private sector (agricultural input companies) staff, public sector researchers, and vocational schoolteachers. This activity started in October 2018 and consisted of three theoretical trainings in the form of classroom lectures, three in-field sessions, and a closing event in the form of a public demo-field day organised for companies, lead farmers and related institutions in the Indonesian potato industry.

This capacity building activity was evaluated just before the last training session was ended, the demo-field day in July 2019 (Humaira, 2019). Findings of this study are summarized in Chapter 3.

One year after this capacity building activity has finished questions arise such as, what have the trainees done with the acquired knowledge? How did the acquired knowledge spread through the potato sector? How many sector professionals with new acquired knowledge have been reached by the trainees? What trained knowledge is most used, and in hindsight, what topics were missing in the trainings according to the trainees?

To answer this type of questions, a survey has been carried out one year after the demo-field day in July 2019. This study reports on the results of that survey.

The following Chapters describe the details of the survey, a summary of the evaluation findings at the end of the capacity building activity in 2019, results of this survey and some final conclusions.

2. Survey method and questions

Because of the COVID-19 pandemic, the survey was done by telephone from June to July 2020. Twelve participants agreed to anonymously take part in the telephone interviews. These participants were selected randomly, and they represent all organizations that participated in the training:

- 2 lead farmers from Malang, East Java
- 2 lead farmers from Karo, North Sumatera
- 1 Kenhose staff member
- 2 BAYER staff members
- 1 YARA staff member
- 2 Balitsa researchers
- 2 SMKN 5 Jember teachers

The total number of trainees in the capacity building activity varied from 16 to 33 depending on the attendance of trainees in the training sessions (Humaira, 2019).

The survey questions were specifically aimed at understanding what trainees had learned and recalled, and the outreach to sector professionals (farmers, colleagues, etc.) since July 2019. The following questions were raised:

1. Could you please remind us the most important learning points of the potato course?
2. Have you used knowledge acquired in the potato training in your profession? If yes, please elaborate.
3. Have you transferred knowledge acquired during training to colleagues, farmers, students or other professionals in the agro-chain? If yes, how many for each of these actors?
4. How did you engage with these beneficiaries/actors: informal bilateral contact, farmer group discussion, or organized trainings?
5. Have you observed that the knowledge you have transferred has benefited farmers and others? If yes how?
6. Have you faced any personal barriers to transfer knowledge or reluctance from trainees to accept and adopt knowledge suggested?
7. Which knowledge have you mobilized in your work? Which knowledge have you transferred?
8. One year after the training, can you identify missing points in the training? Topics missing?

Because the enumerator and first author of this report had also carried out the evaluation of the training in 2019, she knew the respondents. This allowed her to discuss the questions in the personal context of respondents.

3. Main findings of the evaluation in 2019

See the report of Humaira (2019) for the used methods and a complete overview of the evaluation, which was carried out just before the end of the final training session, the public demo-field day. Here, the key findings are summarized:

- The training influenced the trainees' capacities in giving explicit and tacit knowledge that trainees need in their daily work. Particularly knowledge improved on seed selection, soil assessment, planting distance, pesticide formulation, and fertilizer formulation.
  The acquired knowledge is different and unique for each trainee due to the diversity in daily work, expertise and profession level, educational background, age, and English proficiency. Therefore, knowledge and skills were not adopted by all the trainees at the same time.
- The training influenced the trainees' capacities for mobilizing knowledge and skills by enhancing the trainees' knowledge and skills on optimizing potato crop production. This further built the trainees' confidence in providing detailed advice to their respective ultimate target groups. Barriers to knowledge transfer include institutional environment, little stimulating working environment, limited interaction and networks, and individual constraints.

Furthermore, various practical issues were identified that limited (the effect of) knowledge transfer:

- The selection of trainees can be improved because some trainees did not directly deal with potato production or the ultimate target group (farmers, sector professionals) in the day-to-day practices.
- Training messages were not always understood and (not yet) accepted by trainees due to language barriers, delayed distribution of training material, and time constraints.
- Unfavorable training schedules hindered trainees to attend all training sessions.
- The remoteness of field activities was time-consuming and made trainings less efficient.
- High turnover of participants due to internal and external factors. Internal factors included the trainees' commitment and willingness to learn, while external factors included permission and support from trainees' organization, location distance, transportation cost, etc.

The most significant change for the trainees was on how the trainees experienced applying the obtained knowledge in practice ('manage'). Unintended positive outcomes of the trainings included the application of (acquired) knowledge in other crops, collaboration among participants, positive changes in attitude of trainees. However, some technologies promoted during the training (e.g. hand tractor) affects social relationships, i.e. employment opportunities of the local population, suggesting that the training material needs to be adapted to the local needs and context.

4. Results

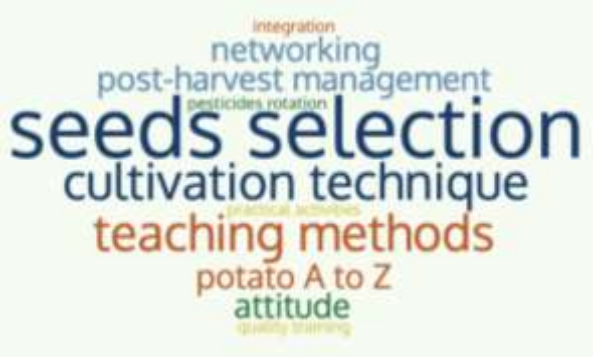
The 12 interviewed trainees reached out in one year to a total of 2,601 other professionals using information and knowledge acquired during the potato capacity building training. The professionals include farmers, SMK students, and colleagues.

Trainees engaged with beneficiaries through informal bilateral contacts, field visits, farmer meetings, organized trainings or school classes, and social media (WhatsApp and Facebook). Seven out of 12 participants reported informal bilateral contact as the main method of knowledge transfer. The majority of the outreach (2,200) was realized by trained YARA staff through farmer meetings, field days, and webinar using Facebook livestream.

Seven out of 12 trainees mentioned that they have no proof (yet) that the transferred knowledge has benefited the beneficiaries. This was mainly because beneficiaries did not yet harvest the potatoes at the time of the interview. The other five trainees described that beneficiaries already have reported positive effects on crop performance and yield, such as healthier crops (bigger potatoes, better controlled pests and diseases) and increased yield (from 0.6 to 16 ton, and from 6-8 ton to 18 ton). In addition, COVID-19 affected knowledge transfer and contacts with beneficiaries because various farmers lack smartphones, while due to social distancing, no demo plots could be organized.

The following word clouds summarize other important results of the questionnaire. The bigger the words, the more people have mentioned those words in the interviews. The pictures help us to identify the most popular or repeated answers among participants.

The most important learning points of the potato training:



Used knowledge from the potato training in participants' profession:

Knowledge and skills that trainees have transferred:

Barriers to knowledge transfer:

Missing points in the training:

The importance and use of learnings differed among the trainees, e.g. commercial staff directly engaging with farmers found the training material on site selection and setting up demo fields more relevant than SMNK teachers who were more inspired by the applied teaching methods of the trainers. One of the trainees indicated to use experiences gained during the vegIMPACT NL trainings on how to plan and organize more effectively own trainings on completely other topics than potato.

Interestingly, knowledge on quite basic agronomical activities such as planting densities and soil preparation were most mentioned by trainees as most used knowledge domains.

Various trainees mentioned that the lacked information on post-harvest management of potatoes in the trainings. Some mentioned that more information of and exposure to Dutch technology in the trainings could inspire trainees. However, other trainees indicated that Dutch technology such as mechanized field preparation is difficult to transfer to the Indonesian context where most potatoes are cultivated on sloping fields.

An important barrier to transfer knowledge to farmers was identified as 'the traditional behavior of farmers', for example, the over-supply of fertilizers, which practice is hard to change. Despite the fact that the training also paid attention on how to communicate and transfer complex technical knowledge, gaining trust of farmers and telling a convincing story to farmers are important training topics to get the message accepted.

Interestingly, also personal learnings were shared, such as being more punctual at meetings and working more disciplined. This may be because the trainers from the Netherlands had only a limited time to give the trainings and to complete the entire curriculum, trainings started punctual and trainees needed to prepare and finish assignments timely.

5. Conclusions

Though limited in size, the survey results give an interesting insight in how trainees have used and implemented different learnings in their daily practice, one year after ending of the vegIMPACT NL training for potato professionals.

The 12 interviewed trainees indicated to have shared knowledge with 2,601 beneficiaries. The survey underlines that the effect of trainings on the ultimate beneficiaries, farmers, is difficult to measure. Most trainees had reached out to potato farmers one year after ending of the training, but effects on management and performance of these farmers was often not yet clear, because the harvest still needed to be done. This was further aggravated by the COVID-19 pandemic which hindered trainees to engage with farmers. The difficulty to measure the impact of interventions in horticultural systems within the lifetime of projects was also addressed in the final report of vegIMPACT.

Depending on the working environment, trainees appreciated technical knowledge, while others were more inspired by the way of teaching by the WUR trainers and the organization of the trainings. This was also observed in the evaluation carried out at the end of the training mid-2019 (Humaira, 2019). Important is that most trainees one year later somehow still have contained the trainings (content or form of training) in their daily work, even if they have changed position within their organization.

References

Humaira, Siti Nisrina Hasna, 2019. Evaluation of vegIMPACT NL Capacity Building of Potato Value Chain Professionals. vegIMPACT NL report 1, Wageningen, The Netherlands.