

Grain legumes in Finland¹

Seminar and Workshop 13.2.2019

Tieteiden talo

Introduction

Ground for Growth organized its first networking event that took place on the 13th of February 2019 in Helsinki, Tieteiden talo. Various actors involved in legume-based value chains attended the event. This included representatives from research institutes, universities, extension services, food and plant breeding companies and processors. The event started with four presentations from the University of Helsinki: Kristina Lindström gave a presentation on grain legumes and her research; Fred Stoddard gave a presentation on bringing grain legumes to Finland; Tuula Sontag-Strohm gave a presentation on highlighting important technological solutions for processing grain legumes; and lastly, Casimir Schauman presented the project Legumes Translated to the participants.

A workshop followed. The participants worked in six smaller groups with the task of mapping out sector level needs and potential development paths for different legume related topics. These discussion topics were pre-defined by the participants themselves and prior to the meeting itself.

Workshop results

Group 1: Challenges with producing grain legumes

This group discussed the possibility to use pea as fodder. The group started by mapping out some challenges regarding the production of peas. One critical aspect in the cultivation of peas is soil and having the right humidity. Another challenging part is to thresh peas. The current limited amount of raw material in Finland [for fodder] is considered a constraint and pea production should be increased to 12000 ha/year. The group also highlighted the opportunity to use mixed crops as fodder.

There are several chemicals for plant protection; however, the current legislation does not allow their use in Finland. This also includes seed treatment substances. Nevertheless, there is the possibility to purchase treated seeds from abroad, to avoid having to treat the seeds in Finland.

The personal quality of a pioneer is required if a farmer decided to grow grain legumes. This entails proving the economic potential of producing the crop to other growers.

The group also spoke in favour of contract farming. This is dependent on a farm having enough hectares of land to make it profitable and worthwhile. The group also discussed the possibility of extending contracts, as many of the contracts tend to be limited to a year.

For some of the producers, the relationship between processors and growers is not always in balance. Processors should understand the reality of crop rotations of farms and establish collaboration based on long-term commitment. The willingness to take risks is not always present among growers.

¹ The summary text was originally produced in Finnish. Some modifications were made in this English version to make the content clearer for the reader.

Other matters that gained the group's attention:

- Compensation for storing grains
- Setting a price based on protein content
- What are consumers willing to pay?

Group 2: The environmental effects of legumes

This group started to discuss the importance of replacing imported soy. The environmental effect of transport and the destruction of rainforest should reinforce the importance of increasing the production of domestic grain legumes. Crop rotation and mixed cropping is key to increasing the cultivated area of legumes in Finland.

The pre-crops effects of legumes are excellent, not to forget their nutritional values and low carbon footprint.

The main challenges in Finland is the one harvest season and the relatively small yields. Yield stability is also a problem that should be dealt with by improving production methods.

Legumes are a great way to reduce the carbon footprint of food systems, especially when meat and dairy products are substituted for plant-derived proteins. Organic farming is also an option to improve biodiversity. The impact of grain legumes on the climate/biodiversity still requires better data to make substantiated claims of their positive effects.

Production chains would benefit from closed-loop thinking, something that can mainly be achieved through innovation and technology.

Group 3: Legumes as raw materials and ingredients for food products

To increase the consumption of legumes in households, the products should be easy to use and tasty. Information targeted to different target groups is essential. The Martha Association in Finland, for example, could have a role in educating consumer target groups, and professional kitchens should gain training from companies on matters related to using legume-derived food products in larger quantities. Orientation days could be organized for existing food products to present various opportunities.

The group also discussed that more support is needed for legume research and plant breeding. Another need that emerged from the debate was the carbon footprint of the food chain. The carbon footprint of plant-based proteins has great communication value especially when targeted to consumers.

Legumes are for various reasons "efficient" crops and thus the food sector should be subject to an efficiency requirement and legume production should be supported. Current support for grain legumes is not considered to be sufficient.

Group 4: Information management and communication

Useful information to farmers should be invested in the future also. It is important to learn more about optimal ways to grow legumes, based on up-to-date scientific knowledge. New research is also needed for this.

The pricing policy of grain legumes must be taken more into account when considering future development paths in Finland. At the same time, consumer education is important. Improving the "brand" of grain legumes in Finland could prove useful. This could partly be achieved through an association dedicated to pulses. Moreover, the sector would benefit from developing national value chains with an emphasis on traceability and food security.

Group 5: Quality requirements

Currently, quality requirements is scarce for grain legumes. They are mainly used in the case of feed. This includes criteria of origin, moisture, weight, dirt and germination of seeds.

The food criteria are less clear. The definition of quality is in the hands of the buyer and varies from one buyer to another. The following criteria were discussed as having some significance: microbiological criteria such as mould, ferment odour (yeasts and bacteria); size 6-10 mm; germination weight; transport equipment (the gluten-free market); use of plant protection products; colour (e.g., yellow vs. green pea); drought (seed 18%, feed 14.5%, food less than 14.5%); chemical / nutrient criteria (protein).

Group 6: How do we get different age groups to consume more legumes?

This group looked at how to make pulses more attractive to different age groups. Recipe development is important, considering differences between commercial kitchens and households [not to forget differences between households]. For older age groups, legumes are already a familiar food item. In this case, updates to existing recipes might prove useful.

Legumes can be a supplement to the diet i.e. it is not intended that everyone will become vegan. Home economics classes at school is another way to influence young people, showing how delicious legumes can be. National nutritional recommendations are in favour of adding legumes to the diet, and therefore these recommendations should be put into practice. The group would see that legumes should be more widely available in military kitchens and canteens as well.

At the cultural level, change is slow. Even having a day dedicated to only eating vegetables for a day can evoke negative feelings. Thus, a sense of "absoluteness" should be left out. The challenge is to evoke positive thoughts of plant-based foods as a "sturdy" meal, not merely the idea of a green salad).

Food services would benefit from guidance on tax-subsidise, procurement of legumes and designing the right lunch for including more vegetarian alternatives.

Casimir Schauman

Disclaimer: The content of the text in this document is based on discussions from a workshop that the author has reported ex post. The text does not reflect the official policy or position of the University of Helsinki or the European Union's Horizon 2020 research and innovation programme.

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