

## Notes from the fourth annual meeting of the network LegSA – Legumes for Sustainable Agriculture, 25 March 2014 at SLU in Umeå

Fourteen persons attended the meeting, which was organized by the department of Agricultural Research for Northern Sweden (NJV) at SLU in Umeå. The majority of the participants came from SLU, representing the campuses in Umeå, Uppsala and Alnarp. One person came from Lantmännen Lantbruk and one person attended by video link from Bioforsk in Kvithamar (Trondheim), Norway.

### Introduction

Kerstin Huss-Danell (NJV) greeted everyone welcome to Umeå and to the meeting, and gave a brief introduction about the history and organization of the LegSA network. Mårten Hetta, head of department at NJV, continued the welcoming and gave a short presentation of NJV: a department with focus on grass and forage science from field (soil and crops) to product (milk and meat).

### Invited lecture about sustainable Swedish protein consumption

Elin Rööf, dep. Energy and Technology at SLU, was invited by the organizers to present her work about Sustainable Swedish Protein Consumption, a project within SLU's multidisciplinary research platform Future Agriculture. Future Agriculture has given Elin the task to synthesize knowledge for more sustainable food consumption, and she is working with defining and analyzing different scenarios for food production from a hypothetical Swedish farm of 200 ha.

### Short presentations by the participants

The following topics were presented and discussed (authors in parenthesis):

- Protein quality to ruminants – utilizable protein uCP (Mårten Hetta, NJV).
- Exploring factors underlying the contribution from red clover to feed quality of mixed swards. A short introduction to the plan of my PhD (Elin H Sikkedal, NJV and Bioforsk, Kvithamar, Norway).
- Phytoestrogens in red clover – ongoing research at NJV (Annika Höjer, NJV).
- Intercropping of reed canary grass with perennial legumes (Eva Lindvall, NJV).
- Perennial legume-grass mixtures for improved multi-functionality of stockless arable cropping systems (Georg Carlsson, dep. Biosystems and Technology, SLU).
- LEGATO – A new EU project on grain legumes with SLU participation (Erik Steen Jensen, dep. Biosystems and Technology, SLU).
- Impact of *Brassicaceae* cover crops on pea root rot (*Aphanomyces euteiches*) in subsequent peas. N<sub>2</sub>-fixing efficacy of *Rhizobium* on leguminous plants in different Swedish soils (Shakawat Hossain, dep. Crop Production Ecology, SLU).
- SITES, the Swedish Infrastructure for Ecosystem Science; and SAFE, the Swedish Agroecological Field Experimental platform (Kerstin Huss-Danell & Erik Steen Jensen)

### **Group discussions and conclusions of the meeting**

The participants were divided in two groups based on pre-announced (at registration) main interest. Group 1: soil; microbiology; *Rhizobium*; diseases; legume breeding; legume cultivation. Group 2: legumes for food; legume feed quality; legumes for bio-energy; legumes on the market. The participants were instructed to ask questions to each other in the group and then report to the other group which questions that were most intensively discussed, along with potential solutions and conclusions.

In the summary of the group discussions, it was mentioned that it would be valuable to learn more about farmers' experience about nodulation success in different legume crops, including if and how they inoculate their legumes with rhizobia. The need for higher diversity of legumes to choose among was raised along with questions about persistency of red clover and the possible need for new breeding tools with a changing climate. Market demand, competitiveness and risk management of legume crops were highlighted as important issues for increasing the cultivation and use of legumes in Swedish agriculture.

Questions about how often LegSA meetings should be organized and where the next annual meeting will be held were discussed at the end of the day. A meeting venue at or close to Arlanda airport was suggested as an interesting option for facilitating travel from different locations, but also the value of visiting different SLU campuses for the different meetings was put forward. It was also suggested that meetings during summer /autumn coordinated with field visits would be appreciated. Different opinions were raised, and it was concluded that it is desirable to continue the routine with rotating the responsibility to organize the annual LegSA meeting between the four SLU campuses, and initiatives for organizing additional meetings and field visits are highly welcome and will be announced on the LegSA homepage and network send list. Erik Steen Jensen and Georg Carlsson will look into possibilities to host the 2015 LegSA annual meeting at SLU in Alnarp.

Notes taken by Georg Carlsson