Team-up crop diversification and weed management

**PRODIVA project**

Better utilization of crop diversification for weed management in North European organic arable cropping systems

Gerowitt B1, Hofmeijer MAJ1, Melander B2, Krawczyk R3, Salonen J4, Verwijst T5, Zarina L6

**Introduction**

The research-network PRODIVA focuses on a better utilization of crop diversification for weed management in North European organic arable cropping systems. The goal is to maintain diverse arable weed vegetation that is manageable in the long-term and could fulfill other necessary system-functions including support of beneficial organisms.

The partners in PRODIVA will:

- Synthesize knowledge from existing literature, previous and new experiments on cover crops, variety mixtures and crop mixtures.
- Survey regional fields for weeds to safeguard relevance of the experimental research.
- Involve and interact with relevant stakeholders and extension services in agriculture from the participating countries to assist in the research.

**Objectives**

- To strengthen the scientific foundation for utilization of crop diversification.
- To survey the weed flora regionally.
- To link the weed situation to the applied agronomic measures in farms.
- To bridge the information from surveys with the scientific groundwork.
- To disseminate important results and recommendations to extension services and growers. Active communication about the experiences on both sides.

**Hypotheses**

Weed management can be improved with:

- Pertinent crop sequencing, mitigating noxious weed species.
- Selected competitive cover crop species.
- Improved cover crop establishment.
- Better utilization of growth resources with crop mixtures.
- Stronger pressure on weeds with variety mixtures.

**Project details**

**Work package 0: Project coordination**
Location: Denmark. Responsible: Bo Melander

**WP1: Weed dynamics in crop rotations with cover crops**
Location: Finland, Latvia, Denmark. Responsible: Jukka Salonen
Theme: Characteristics and relative competitiveness of cover crops

**WP2: Crop mixtures for weed suppression**
Location: Sweden, Poland. Responsible: Anneli Lundkvist
Theme: Ecophysiological traits which determine crop-weed interactions

**WP3: Variety mixtures for weed suppression**
Location: Denmark, Poland, Latvia. Responsible: Bo Melander
Theme: Variety mixtures of spring barley and oat competing with weeds

**WP4: Crop diversification applications and weed flora on farms**
Location: Germany, Denmark, Sweden, Finland, Latvia, Poland
Responsible: Bärbel Gerowitt
Theme: Identifying the potential of crop diversification for weed management

**WP5: Project dissemination**
Location: Germany, Denmark, Sweden, Finland, Latvia, Poland
Responsible: Bärbel Gerowitt

**Time frame**

This project has a duration of three years: 01.03.2015-28.02.2018.
Annual partner meetings and stakeholder meetings will be organized.

**Funding**

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**Contact**

Bo Melander: bo.melander@agro.au.dk  Fl: jukka.salonen@luke.fi

www.coreorganicplus.org

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1 University of Rostock, Crop Health, Rostock, Germany
2 Aarhus University, Department of Agroecology, (lead partner), Denmark
3 Institute of Plant Protection, Department of Weed Science and Plant Protection Techniques, Poland
4 Natural Resources Institute Finland (Luke), Jokioinen, Finland
5 Swedish University of Agricultural Sciences, Crop Production Ecology, Uppsala, Sweden
6 State Priekuli Plant Breeding Institute, Field crop management, Priekuli, Latvia