

Improved weed management in organic crop production



B. Melander¹ and J.E. Olesen

¹Aarhus University, Department of Agroecology (Bo.Melander@agrsci.dk)

Implications

- Weed problems constrain organic crop production, especially perennial weeds
- Weeds are particularly problematic on farms with limited access to manure (without livestock)
- Improved transfer of knowledge to growers is needed
- Effective weed management is a prerequisite for improved crop productivity

Background and objectives

- Stagnated crop yields and little conversion of new land to organic production
- Improve weed management through the development of new weed control concepts for inclusion in a cropping system planning tool

Key results and discussion

- A set of principles, strategies and tactics have been produced to support advisors and growers for better weed management

How work was carried out

- Analyses of data from long-termed crop rotation experiments
- Information from the literature, other networks and ongoing research projects
- Formulation of weed management concepts according to the three principles: a. competitive crops, b. effective control actions, c. disruption of weed growth cycles

Principles

- a. Competition
- b. Effective interventions
- c. Disruption of weed growth

Strategies (examples)

1. Incorporation and placement of nutrients
2. Diversified crop sequences
3. Accurate timing of control actions
4. Low weed tolerance in row crops

Actions (examples)

- I. Weed mapping
- II. Injection of slurry
- III. Minimum 20% N-fixating green manure crops in the crop rotation
- IV. Cross cultivation for seedbed preparation
- V. Competitive cultivars
- VI. Weed harrowing in cereals and pulses

