OK-Net Arable
online knowledge platform

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Implementation of knowledge

TOOL:
Information about how to put existing knowledge into use
Formatted in a way easy for end-users to utilize
Farmer groups discuss and evaluate tools
EIP-AGRI Focus Group Organic Farming
Optimising Arable Yields

- Poor soil fertility management
- Inadequate nutrient supply
- Insufficient weed management
- Pest and disease pressure
- Variety choice.
OK-Net Arable - exchange knowledge, enhance farming

Browse the knowledge base in one of the five themes:

- Soil quality and fertility
- Nutrient management
- Pest and disease control
- Weed management
- Crop specific
Soil quality and fertility

Sustainable crop production is dependent on maintaining and improving soil quality and fertility, which are dependent on organic matter in the soil and its impact on the soil’s chemical, biological and physical properties. Organic matter is the source of life for the immense variety of soil microbes and soil fauna that make nutrients available and build soil structure. Therefore, crop rotations should always include a phase that allows organic matter in the soil to build up, e.g., through incorporating perennial grass-clover leys or catch crops during autumn and winter. To protect soil life, the input of nutrients via manure, crop residues or other fertilizers should be well-balanced.

Compaction by heavy machinery should be avoided for the same reason.

On this page, you can find tools and resources to help you improve soil quality and fertility, and you can discuss the topic with others.

Tools

This weeks recommended tool

Aerated compost tea (ACT) to improve soil biology and to accelerate nutrient cycling

There is a growing body of evidence supporting the benefits of aerated compost tea (ACT) application, but not all studies have shown this conclusively. Compost tea application helps build healthy soils which...

Most popular tool

Visual soil assessment: field guide for croppers

Visual assessments provide a diagnostic tool to evaluate many physical, biological (a degree chemical) soil characteristics...
Crop rotation and its ability to suppress perennial weeds

**Preventive control of perennial weeds through weed-suppressing crop rotation**

**Problem**

The problem of perennial weeds in organic arable farming

**Solution**

A well-designed crop rotation system is the key to preventive control of perennial weeds.

**Description**

Weed-suppressing crop rotations are essential for sustainable organic arable farming. Preventing spread of perennial weeds will increase crop yields and quality. The tool is a factsheet created for all organic farmers as we all need renewed knowledge on weed-suppression and crop rotation from time to time. The factsheet provides practical recommendations on crop selection and composition of crops.
Sædskifte og dens evne til at undertrykke rodukrudit

Forebyggende bekæmpelse af flerårigt ukrudt gennem ukrudt-undertrykkende vekseldrift

Relateret indhold fra Organic Eprints
Link til mere information

Giv din bedømmelse af værktøjet: ★★★★★
Gennemsnitsbedømmelse af værktøjet: 0.0 Antal bedømmelser af værktøjet: 0

Problem
Problemstil med rodukrudit i økologisk planteavl

Løsning
Et godt designet vekseldrift er nøglen til forebyggende bekæmpelse af flerårigt ukrudt.

Beskrivelse
Weed-undertrykke sædskifter er afgørende for en bæredygtig økologisk planteavl. Forebyggelse spredning af rodukrudit vil øge høstudbytte og kvalitet. Værktøjet er et faktablad skabt for alle økologiske landmænd, som vi alle har brug for fornyet viden om ukrudt-undertrykkelse og sædskiftelse.

Anvendelsesområde

Tema
Jordkvalitet og frugtbarhed, Ukrudtsbekæmpelse, Afgrodespecific

Sprog
dansk sprog

Vis mere information
Crop rotation and its ability to suppress perennial weeds.

Summary

Weed-suppressing crop rotations are essential for sustainable organic arable farming. Preventing spread of perennial weeds is crucial. The tool is a factsheet created for all organic farmers as we all need renewed knowledge on weed-suppression.

The factsheet provides practical recommendations on crop selection and composition of crop rotations in accordance with the combination of crops and green manures, designed specifically for the conditions and needs of individual fields. It not only serves for prevention but also provides recommendations in case of high weed pressure. Example: Do not sow a winter crop for an extended period of time. Instead, undersow a cover crop in the legumes to hold back the nutrients and sow a competitive

Online at: https://www.landbrugsinfo.dk/Oekologi/Plante
Controlling potato beetles with Bt
Crop rotation and its ability to suppress perennial weeds
Efficient use of nitrogen from livestock manure
Growing cover crops in organic arable crop rotations: Best practices from Denmark
Weeds topping machine on soya
Roller crimper and other green mulching techniques for soya cultivation
Cultivating a diverse wheat population suitable for low-input and organic farming
Aerated compost tea (ACT) to improve soil biology and to act as a biofertiliser/biofungicide
Diverse fertility building leys in arable rotations
Monitoring weed regulation services by carabids
Use of rock dust against the rape pollen beetle
Rolling of grains to prevent winter kill damage
Calculate the risk of wireworm infestation in the field
Using crop rotation to control wireworms
Controlling docks by stubble cultivation
Reducing the use of copper in potatoes
Commercial organic fertiliser as supplementary fertilisers in potato crop production
Winter field peas as green manure before maize
Nitrogen supply for winter oilseed rape
Testing peas for legume fatigue
Reducing weed seed pressure with the false seedbed technique
Catch crop in maize
No-till cultivation of maize in rolled forage peas
Black-grass control in winter cereals with hoeing
Crop rotation and its ability to suppress perennial weeds

Problem
Perennial weeds like thistle and couch-grass hinder growth and yields of arable crops. Without a proper focus on perennial weeds (through a good crop rotation system) organic arable cropping systems may not manage for more than 6 years without facing major weed problems.

Solution
Crop rotation is a key tool for preventive control of perennial weeds in arable farming. Weed-suppressing rotations include an appropriate percentage of competitive crops and green manures. Selection of the right crops and their proper management are important for successful weed prevention.

Related content from Organic Eprints
More about the tool on Organic Eprints

Give your rating to the tool: ★★★★★
Average rating to the tool: 4.0 Number of ratings to the tool: 1

farmknowledge.org
Practical recommendation

Basic rules

- Implement green manures, such as clover or lucerne, in at least 20% of the rotation.
- Do not grow more than 50% of cereals with low weed competitiveness in the rotation. Do not cultivate such crops for more than 2 consecutive years.
- In fields with prevalent high weed pressure cultivate only crops with high weed competitiveness.

Crop selection and composition of crop rotation

![Diagram showing crop selection based on weed competitiveness and nitrogen demand](farmknowledge.org)
Dear user of farmknowledge.org,

Please complete as much of the information below as possible:

Your name:

Name of recommended tool:

Why do you think this tool is relevant?:

Link to the tool or to a website with information about the tool:

Tool producer/owner (name and link/ address/ email):

Thank you,

The OK-Net Arable Team
Video gallery

BASE-ABC, a group of French organic farmers applying conservation agriculture
3:42

Le réseau RotAB : sites expérimentaux biologiques (OK-Net Arable & Désert)
1:43

Presentation of RotAB Network for organic farming (OK-Net Arable & Désert)
1:45

Dialogue between Belgian and French farmers in the OK-Net Arable & Désert network
6:06

BASE-ABC, a group of French organic farmers applying conservation agriculture
3:35
Statistics

- 670 visitors/month
- 300 pageviews/month
- > 50% English
- 10% German
- 6% Italian
- < 5% each of other languages (Dutch, Danish, French, Czech)
Farmknowledge.org
- knowledge platform of OK-Net Arable

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- Visit http://farmknowledge.org/

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