



Research for organic farming and practical soil protection

Dr. Eva Erhart and Team

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Research Priority Soil : Project: Targeted Humus Management in the Soils of Lower Austria

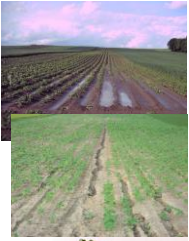
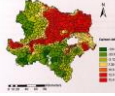
Why Humus Management?

Soil organic matter is decisive for

- Soil structure and soil fertility
- Water storage and infiltration
- Flood prevention
- Erosion prevention

• 1. Prognosis of the **soil organic matter deficit**
soil organic matter **map** (in cooperation with Prof. Wenzel, Univ. f. Bodenkultur)

• 2. Developing **practical measures** for farms **adapted** to site conditions and farm type

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Research Priority Soil: Humus balancing

Humus addition


- organic fertilizers
- straw
- green manuring
- humus increasing crops

Humus decomposition


- crops
- soil
- green manuring
- humus increasing crops

Humus balance

increase or decrease of soil organic matter



Site adapted humus balancing method STAND by H. Kolbe



Humus balancing courses for farmers

- Farmer learn from practical examples
- Farmers learn how to calculate the humus balance for their farm using the humus balancing software tool
- Discussion of the results together with the farmers for improving soil organic matter status and efficiency of carbon cycling

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AGRIUM

3

Soil protection with cover crops

Minimizing N- and C-emissions by optimizing catch crops



Project partners:

- 5 farmers
- Machinery ring

Field experiments

- **Fitting** the cover crops into the crop rotation of the main crops
- **Species composition**
- **Adapting nutrient release** from the cover crop biomass to the needs of the following main crop
- Rooting intensity and depth

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Maschinenring

MIT UNTERSTÜTZUNG VON BUND, LÄNDERN UND EUROPÄISCHER UNION

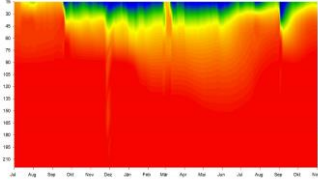

LE 14-20

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Soil protection with cover crops

Flexible Cover Crop Management in Viticulture

- Analyzing soil water content in relation to the drought stress of the grapes
- Developing practical strategies for a flexible cover crop management

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GreenManager

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Multifunctional Windbreaks

Multiple uses of windbreaks for sustainable food production, for reducing erosion and for increasing regional added value



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Research Priority Closed Cycle Economy

Project: Optimizing the Use of Biogenic Resources in Western Hungary, Vienna and Burgenland BIORES-AT-HU

Developing a Method for Measuring Compost Quality using NIRS (Near Infrared Spectroscopy)

- Chemical analysis of more than 700 compost samples
- Plant tests
- Measuring NIRS spectra
- Integrated assessment of compost maturity
- NIRS calibration and modelling


www.bioresathu.bioforschung.at/

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FTI PROGRAMM WISSENSCHAFT - FORSCHUNG NIEDERÖSTERREICH

FLORIPAL INNOVATION Complex Regional Development Fund

creating the future

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Innovative Technologies for Composting and Compost Utilization

- New Technologies for composting
- Compost quality control with NIR-spectroscopy
- Phosphorus recycling
- New method for measuring nitrate leaching with ion-exchange resin technology



ZERA Zentrum für Energieeffizienz und Ressourcenschonung

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Mendel University in Brno

NARS NATURAL RESOURCES

MINISTERIUM FÜR LANDWIRTSCHAFT, FORSCHUNG UND VERBRAUCHERSCHUTZ

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WISSENSCHAFT - FORSCHUNG NIEDERÖSTERREICH

FTI PROGRAMM WISSENSCHAFT - FORSCHUNG NIEDERÖSTERREICH

Research Priority Closed Cycle Economy: Regional Biofertilizer Production

- Compost tea for seed treatment
- Cut and Carry – transfer-mulch
- Liquid fertilizer from vermicompost





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VERMIGRAND vermicompost.com

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ÖkoKauf Wien – EcoProcurement Vienna: Purchasing Organic Food for Vienna's Hospitals and Schools

Head of Working Group „Food“: Dr. Bernhard Kromp

- Organic foodstuff for 3.6 Mio meals per year
- Hospitals: 32.6 % organic food
- Kindergartens 51.7 % organic food
- >15 Mio € /year for organic food




ÖkoKauf Wien Für Umwelt- und Klimaschutz

www.oekokauf.wien.at

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ÖKOLOGISCHES LANDBAUWIRTSCHAFTS- UND LEBENSMITTELVERBAND

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Thank you for your attention!




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