

Lindhof Farm profile 2010

Experimental farm for organic farming and extensive land use systems
Faculty of Agricultural and Food Sciences
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Main farm income: certified organic cereal, potato, beef, and pork production

Area:	155.5 ha
production area	
(ca. 5 ha experimental area included)	130.9 ha
-> arable land	114.0 ha
-> permanent grassland	16.9 ha

Conversion to organic farming: stepwise since autumn 1994, completed in 2001.
Member of the German organic growers associations: **Naturland and Bioland**,
Control number: D-SH-OKI-006-4175-A

Precipitation: 785 mm p.a.
Temperature: average: 8.7 °C
Soil type: sandy loam, loamy sand,

Staff:

1 farm manager	2 field-experiment-technicians
1 field-worker	2 farm trainees

Animal production

20 suckler cows and followers (Limousin Breeding cattle)
40 fattening cattle (Limousin heifers) bought from a cooperating organic farm in spring and autumn at 300 kg live weight
50 sows managed in an outdoor system rotating on grass-clover leys
360 fattening pigs (actual), (1000 finished pigs per year)
60 hens for egg-production
a few millions of bees

Crops 2009/10

	ha	% of arable farmland
Grass clover (perennial ryegrass with red clover and different proportions of white clover, incl. area for outdoor sows)	33.1 ha	29.0
Spring oats	9.2 ha	8.1
Spring wheat	18.2 ha	16.0
Potatoes (seed and consuming potatoes)	13.8 ha	12.1
Winter triticale (<i>TRITicum x seCALE</i>)	14.8 ha	12.9
Winter spelt (<i>triticum spelta</i>)	20.6 ha	18.1
Silage maize (trial for variety comparison)	0.4 ha	0.3
Permanent set-a-side with grass/clover	3.9 ha	3.5

* As an exception in 2010 no grain legume but spring wheat instead, due to limited seed availability as a consequence of poor yields and quality in 2009.

Crop rotations (flexible, depending on product-prices, quality of clover understoreys and demands for forage or field-trails)

Average legume content of the crop rotation: 40%

Catch-crops are sown in between two main crops if the following crop is a spring crop for soil conservation purposes and to avoid nutrient leaching

Actual crop rotations:

on soils suited for potato-production

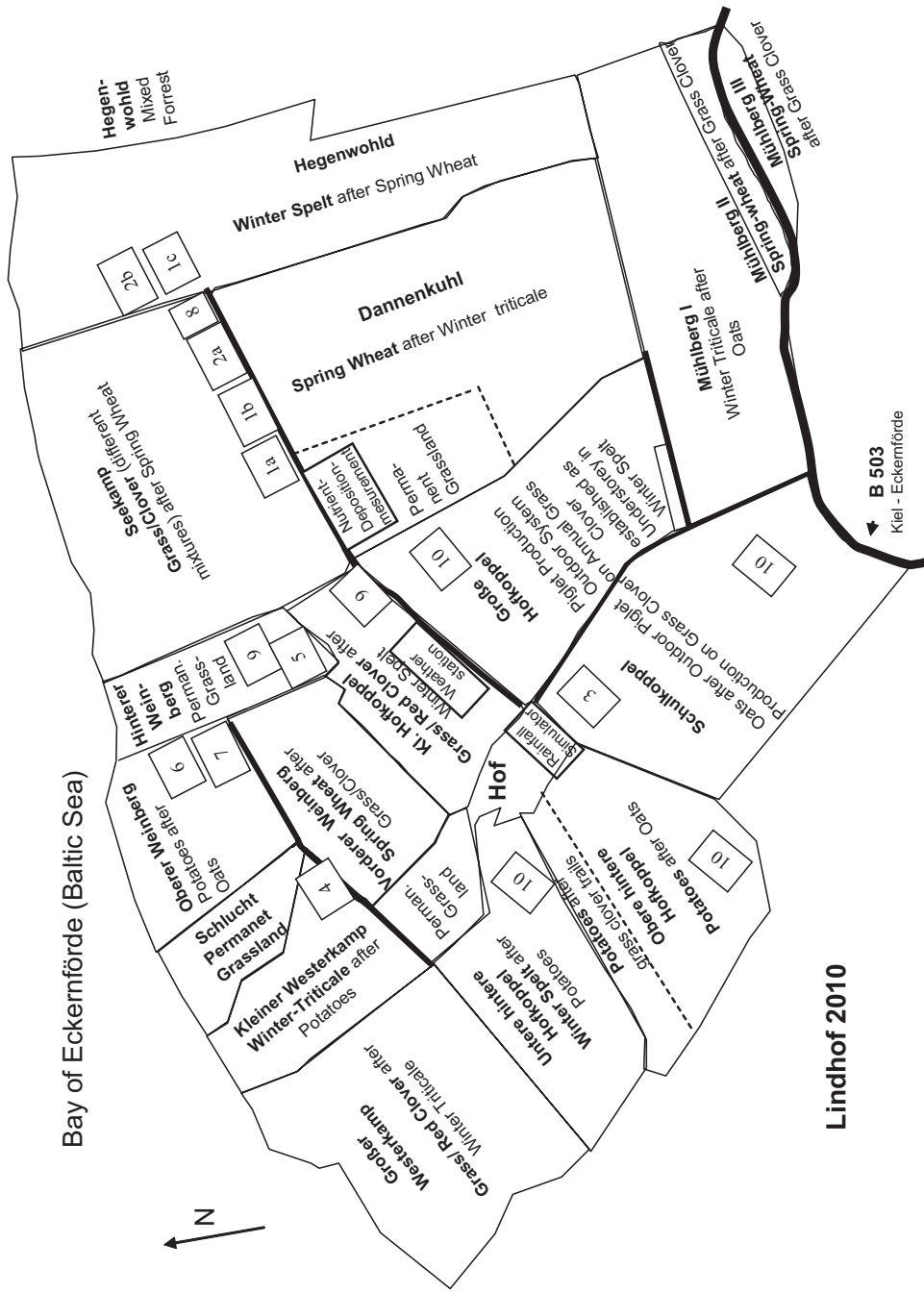
1. Grass/clover,
2. Oats - followed by catch crop white mustard,
3. Potatoes - followed by catch crop winter rye,
4. Grain legumes* - followed by catch crop annual ryegrass,
5. Winter spelt with undersown clover/grass.

on soils not suited for potato-production

1. Grass/clover,
2. Oats,
3. Winter triticale,
4. Grain legumes* (as an exception 2010 spring wheat),
5. Winter spelt with undersown grass/clover.

Sale: Direct from the farm shop,
deliveries (ordered by email),
bulk sale to Bioland's trading organisation or private trading companies.

Field- map of the experimental Farm Lindhof - Location of field experiments 2010



Field experiment:

- | | |
|----|--|
| 1 | Herbal forage plants and alternative legume species, analysis of potential as secondary forage plant
a) large scale trail (7 species)
b) 19 species grown on small plots |
| 2 | Comparison of 9 grass species for grass clover production (1 st production year) |
| 3 | Different silage maize varieties for organic production (in collaboration with LWK SH extension service) |
| 4 | Nitrate leaching on Grassland – comparison of 9 different slurry application dates between August and April |
| 5 | Resowing of grassland – impact on GHG emissions, yield, root growth and N and C leaching (Interreg IVa) |
| 6 | New established grassland in comparison to different arable crop rotations with respect to soil carbon storage (start autumn 2010, Interreg IVa) |
| 7 | Comparison of potato varieties for organic production (in collaboration with LWK SH extension service)) |
| 8 | Characteristics of DON-leaching of grass-clover (Project of Aarhus University, DK) |
| 9 | 2 sites of the federal longterm-soil-monitoring programme (in collaboration with the federal state of Schleswig-Holstein) |
| 10 | Monitoring points crop rotation with out door sows |

More informationen about research activities at Lindhof at: www.grassland-organicfarming.uni-kiel.de