

Rye Cultivation in Competition – Evaluation of a Comparative trial

Morten Haastrup, Msc. Agricultural Science, Specialist Adviser, Crop Production, Denmark

A series of experiments during a 3-year period (2009 – 2011) identified the competitive relationship between winter wheat, triticale, winter rye and winter barley, grown on both sandy and clay soils for pig feed.

Yield comparison

The highest yield was harvested in winter rye as an average of 8 trials over 3 on sandy soils, see table 1. Winter rye also gave the highest yield as an average of 3 trials over 3 years on clay soils. The results testify to the high yield potential in hybrid rye, but is probably also of an early and long winter and periods of drought in the spring, during the last couple of years. Under these conditions winter rye typically perform better than the other species. Measured as net yield (minus the costs of cultivation) winter rye gave a yield, that was 94 euro better than winter wheat and 42 euro better than triticale on the sandy soils, while winter rye, winter wheat and triticale were more equal in the 3 trials on clay soils.

Table 1. Yield and costs of growing winter cereals after winter wheat. 8 trials over 3 years, sandy soils.

8 trials	Grain yield, hkg per ha ¹⁾	Value, euro per ha (gross yield)	Costs of cultivation, euro per ha	Net yield, euro per ha
Winter wheat, Hereford / Frument	68.3	1239	364	875
Winter rye, Palazzo / Evolo	80.9	1305	325	969
Winter barley, Matros / Zephyr	62.6	1136	320	816
Triticale, Dinaro / Cando	67.6	1227	299	927

¹⁾ LSD = 6.0

Value as pig feed

The value as pig feed was also measured in the trials, as were the yield in feed units (FE) per hectare. On the sandy soils winter rye produced 1.100 FEsv more than winter wheat and 1.300 FEsv more than triticale, as average of 3 years trials, see table 2 (FEsv = feed unit for growing pigs). As a result,

Contact:
 Claus Hinrich Heuer
 Tel.: +49 (0) 5051 477-325
 E-Mail: claus.heuer@kws-lochow.de
www.ryebelt.com

KWS LOCHOW GMBH
 Post box 11 97
 29296 Bergen
 Ferdinand-von-Lochow-Str. 5
 29303 Bergen
 Deutschland

one feed unit cost 25 % less to produce in winter rye compared to winter wheat, and 10 % less compared to triticale. On the clay soils winter rye and winter wheat gave similar yields, when measured in feed units per hectare, while triticale gave c. 500 FEsv less. One feed unit cost 7 % less to produce in winter rye or triticale compared to winter wheat on the clay soils.

Table 2. Value as pig feed and yield of feed units per ha. 8 trials over 3 years on sandy soils.

8 trials	Feed units per hkg (FEsv)	Feed units per hkg (FEso)	Grain yield, hkg per hectare	FEsv per ha (growing pigs)	FEso per ha (sows)
Winter wheat, <i>Hereford / Frument</i>	115.2	113.2	68.3	7868	7732
Winter rye, <i>Palazzo / Evolo</i>	109.9	109.9	80.9	8980	8891
Winter barley, <i>Matros / Zephyr</i>	106.5	106.5	62.6	6698	6667
Triticale, <i>Dinaro / Cando</i>	111.7	111.7	67.6	7666	7551

Contact:
Claus Hinrich Heuer
Tel.: +49 (0) 5051 477-325
E-Mail: claus.heuer@kws-lochow.de
www.ryebelt.com

KWS LOCHOW GMBH
Post box 11 97
29296 Bergen

Ferdinand-von-Lochow-Str. 5
29303 Bergen
Deutschland