



Rye as a fodder – New Facts versus Stereotypes

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For years rye has had a very poor image as a feed material in Poland. Trial results from the 1960s to 1980s appear to confirm this. For a period of over ten years no new feed trials were conducted with rye. The question therefore arises as to whether the results from the 1960s and 1980s still retain their validity today.

So in 2010 a feed trial was commenced at the initiative of the RYE BELT Designer Team for Poland. The objective was to examine the effects of using rye on the economic performance and the key production figures in the fattening of pigs. This was tested both in dry feed (ad libitum) as well as in liquid feed (with rationed feed doses). In both methods the traditional feed mix with a high barley component was compared against a mixture in which barley was partially substituted by rye. With the dry feed method, the following proportions of rye were applied in the three-phase feed: 10% in the starter feed, 25% in middle phase and 50% in the final phase. In the liquid feed variant, the two-phase feed consisted of 25% rye in the starter feed and 50% for the final feed. To ensure comparability, the nutritional content of the control feed and the trial feed (with rye) were equivalent: starter feed: 13.1 MJ ME, 175 g protein absolute; middle phase: 13.25 MJ ME, 172 g protein absolute; final feed: 12.85 MJ ME, 139 g protein absolute.

The results show that the addition of rye had a positive effect on the feed absorption and the daily gain. With the dry feed, a slightly higher feed consumption per kilogram of growth was detected for the trial group with feed mix containing rye. The carcass yield indicators for the livestock groups were at a similar level in both trials (Table 1 and 2). However, within the group fed with rye, the range of values in relation to the respective aspects was significantly smaller.

The economic indicators also underscore that rye is eminently suitable for pig feed (Table 3 and 4).

These new findings show that the presumptions held about rye are not sustainable. Findings made by German and Danish feed specialists also confirm the Polish results. On this basis the use of rye in pig feed is worthwhile. Rye is an extremely efficient and productive cereal excellently suited for the feeding of livestock.

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Table 1. Feed performance and carcass evaluation of the control and trial groups given dry feed

Parameter	Control group (barley)	Trial group (rye)
daily gain (g)	747	783
Feed absorption per day (kg)	2.15	2.35
Feed consumption per kg growth (kg)	2.66	2.77
Carcass yield (%)	74.14	76.06
Fat thickness (mm)	15.7	16.8
Loin (mm)	58.3	60.5
Lean meat content (%)	56.05	55.95

Table 2 Feed performance and carcass evaluation of the control and trial groups given liquid feed

Parameter	Control group (barley)	Trial group (rye)
daily gain (g)	752	784
Feed absorption per day (kg)	1.94	1.91
Feed consumption per kg growth (kg)	3.00	2.83
Carcass yield (%)	82.73	81.48
Fat thickness (mm)	15.6	16.3
Loin (mm)	60.1	58.4
Lean meat content (%)	56.46	55.52

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Table 3. Contribution margin in feeding pigs using barley and barley with rye supplement in dry feed

Economic indicators	Control group (barley)	Trial group (rye)
av. price per 1 kg carcass (PLN/kg)	5.07	5.19
av. price per carcass (PLN)	406.13	428.77
Sale value (PLN), total.	29952.77	32154.96
Piglet costs (PLN), total	16455.71	16844.29
Feeding costs PLN (total)	11566.67	12587.68
Direct costs, PLN (total)	28022.38	29431.97
Contribution margin (PLN)	1930.39	2722.99

Tab. 4. 4. Contribution margin in feeding pigs using barley and barley with rye supplement in liquid feed

Economic indicators	Control group (barley)	Trial group (rye)
av. price per 1 kg carcass (PLN/kg)	5.97	5.97
av. price per carcass (PLN)	554.45	563.84
Sale value (PLN), total.	22732.32	23266.29
Piglet costs (PLN), total	7629.40	7710.80
Feeding costs PLN total	10469.31	10555.49
Direct costs, (PLN) total	18255.71	18266.29
Contribution margin (PLN)	4633.61	5000.00

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