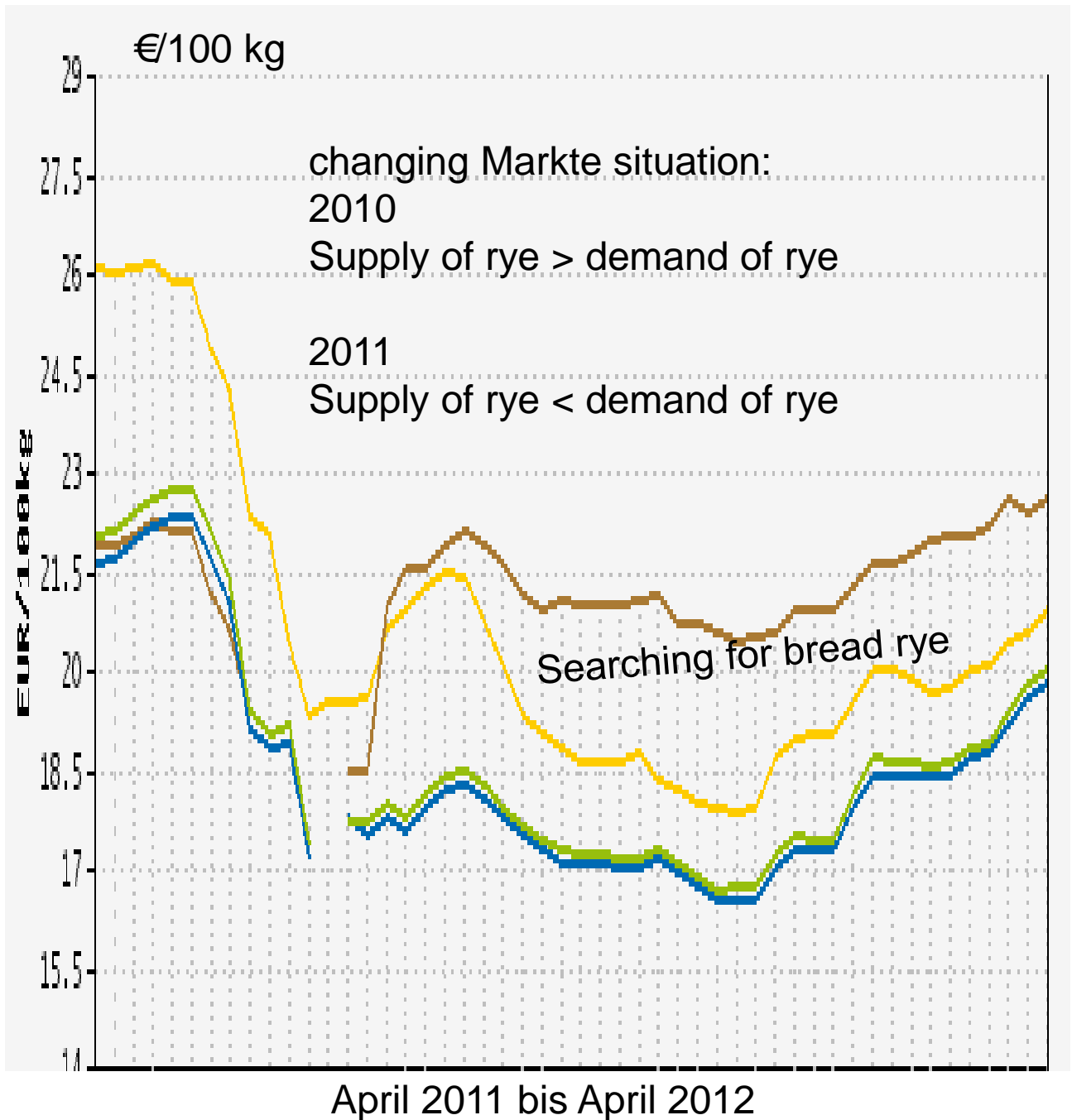


# Rye more than a Cash Crop

Dr. Reimer Mohr  
Hanse Agro  
Unternehmensberatung GmbH

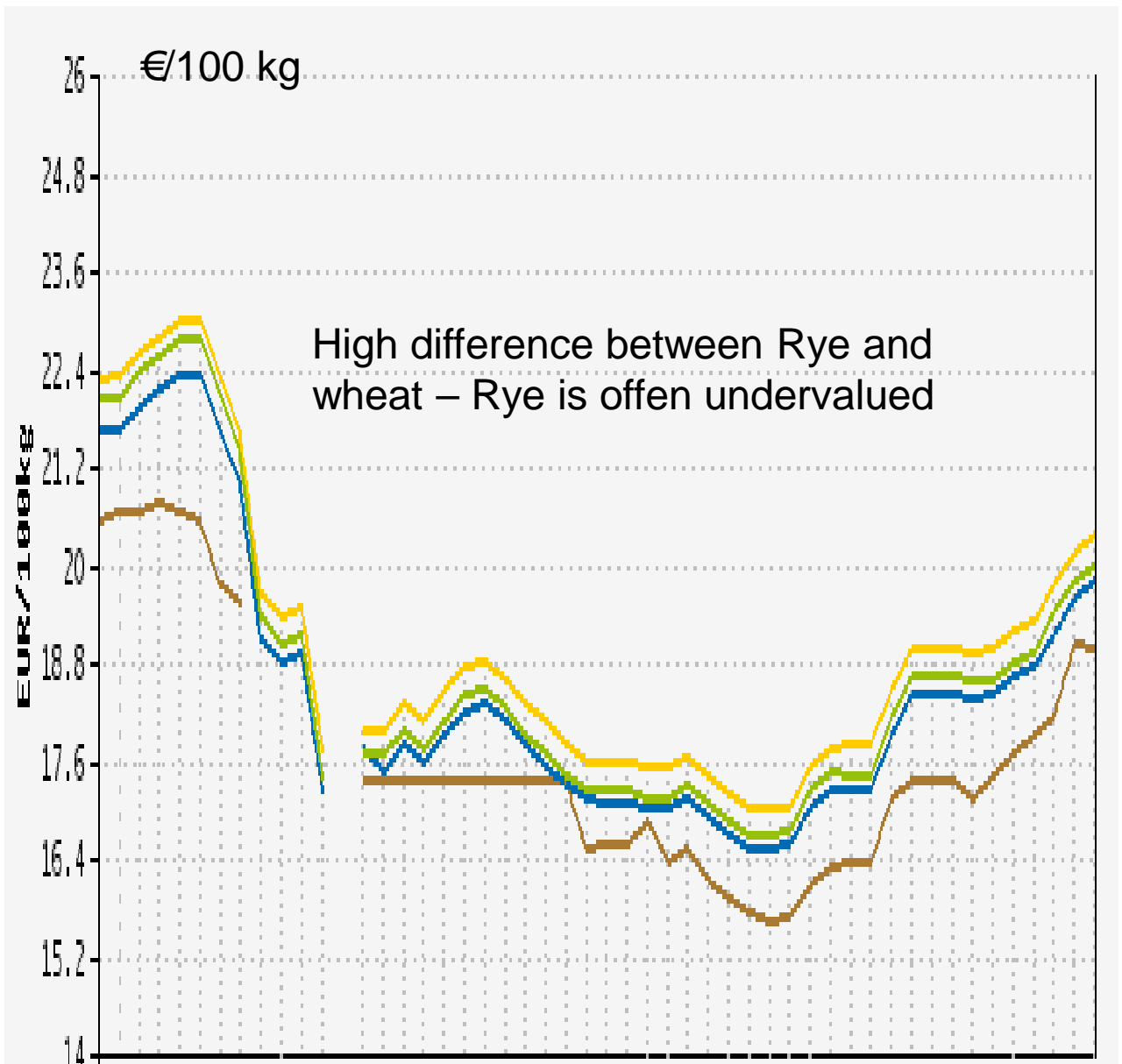
# Price of bread rye and bread Wheat in Germany April 2011 bis April 2012



■ Brotroggen  
■ A-Weizen

■ Vergleichswert von Brotroggen in der Milchviehfütterung  
■ Vergleichswert von Brotroggen in der Schweinefütterung

# Price of feed rye and feed wheat in Germany April 2011 bis April 2012



April 2011 bis April 2012

Futterroggen  
Futterweizen

Vergleichswert von Futterroggen in der Milchviehfütterung  
Vergleichswert von Futterroggen in der Schweinefütterung

# Yields of a grain farm in North of Poland in dt/ha

	07	08	09	10	11	Average
wheat	46	59	65	64	48	56
barley	50	60	63	61	42	55
rye	58	76	78	68	61	68

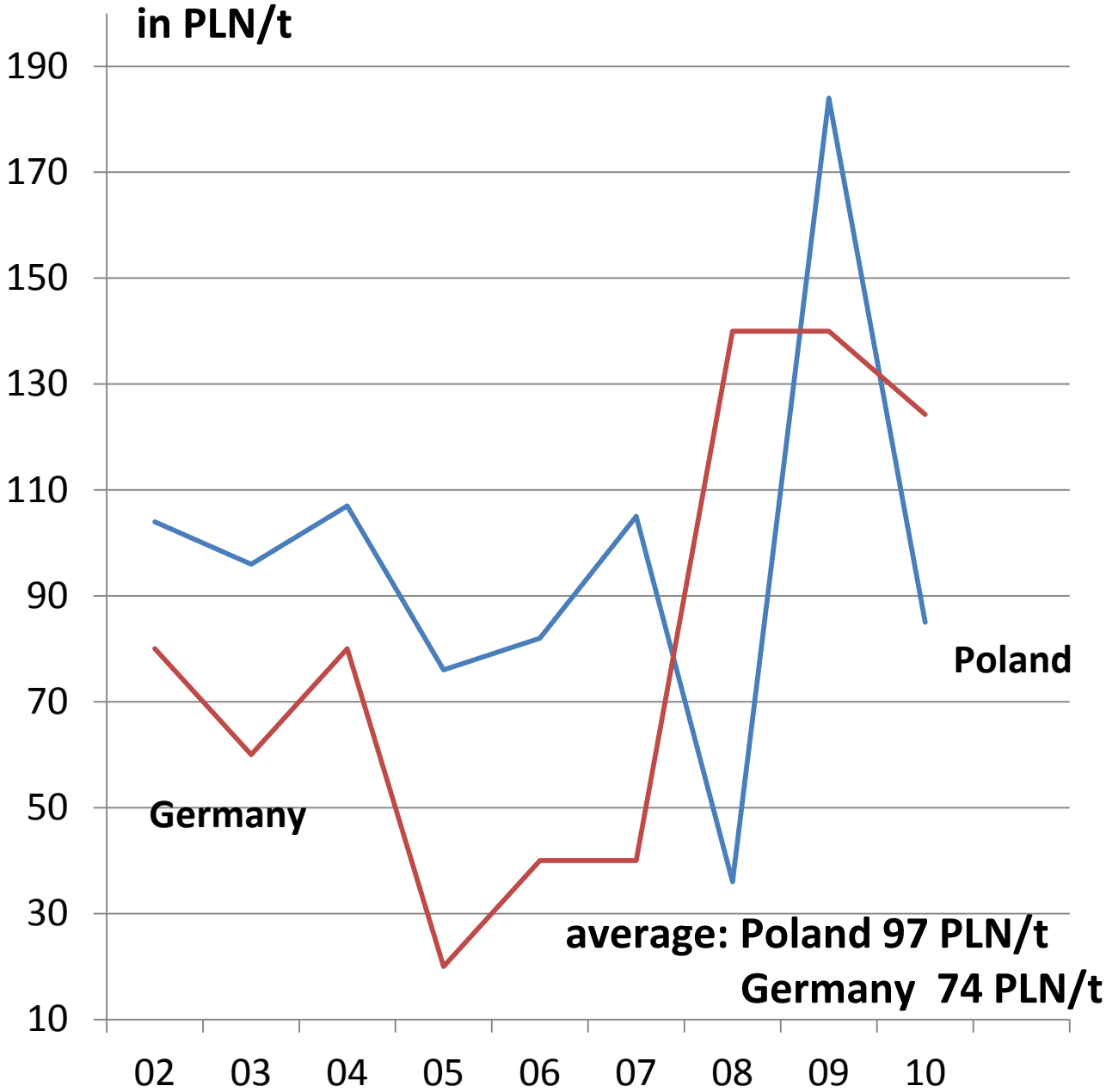
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# Grain prices of a grain farm in North of Poland in PLN/t

	07	08	09	10	Ave- rage
wheat	753	532	460	619	591
barley	525	610	390	469	498
rye	475	395	280	515	416

Hanse Agro

# Price difference between wheat and rye in PLN/t



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**Market price of rye is  
compared to his feed  
value often undervalued**



**economical advantage for  
mix farms**

# Economical advantage of using rye as feed for animal production in a Mix-Farm

## An economical model calculation



# The Mix farm

# **The farm:**

**Crop production: 700 ha**

**Pig production:  
farrowing to finishing  
700 sows**

**Feed grain per Year in t: 4.000 t**

**Purchase of feed grain: 800 t**

# **Rye in Crop production**

## Production Cost of different crops - above average farm -

		wheat	Triti- cale	winter- barley	rye-75	corn	rape
Yield in t/ha		<b>7,0</b>	<b>7,0</b>	<b>6,5</b>	<b>7,5</b>	<b>7,5</b>	<b>4,0</b>
seed	PLN/ha	208	192	168	225	504	182
fertilzer	PLN/ha	732	582	582	582	581	1.205
Nirtrogen	kg/ha	171	117	117	117	99	207
Plant protection	PLN/ha	430	330	330	250	180	650
Drying cost	PLN/ha	0	0	0	0	420	0
Hale insurance in	PLN/ha	40	40	40	40	40	80
Salaries, fuel and machine	PLN/ha	1.263	1.198	1.198	1.168	1.088	1.308
Rent	PLN/ha	620	620	620	620	620	620
Administration	PLN/ha	140	140	140	140	140	140
Shed for machine	PLN/ha	20	20	20	20	20	20
Total production cost per PLN/ha		3.453	3.122	3.098	3.045	3.593	4.205
<b>Total production cost per PLN/t</b>		<b>493</b>	<b>446</b>	<b>477</b>	<b>406</b>	<b>479</b>	<b>1.051</b>

## Cost Comparison for different Crops

	yield in t/ha	Cost in PLN/t	Cost difference to rye 75 PLN/t
Rye-75	7,5	406 PLN	- PLN
Wheat	7	493 PLN	87 PLN
Triticale	7	446 PLN	40 PLN
Winterbarley	6,5	477 PLN	71 PLN
Corn	7,5	479 PLN	73 PLN

## Actual situation in the Crop production without rye production

<b>actual</b>	<b>area</b>	<b>amount in t</b>	<b>cost /ha</b>	<b>sum</b>
Rye -75	0	0	3.045 PLN	- PLN
wheat	175	1.225	3.453 PLN	604.275 PLN
triticale	175	1.225	3.122 PLN	546.350 PLN
Winter barley	90	585	3.098 PLN	278.820 PLN
corn	25	188	3.593 PLN	89.825 PLN
<b>sum</b>	<b>465</b>	<b>3.223</b>	<b>3.267 PLN</b>	<b>1.519.270 PLN</b>
<b>Cost per t</b>		<b>69,3 dt/ha</b>		<b>471 PLN /t</b>

## Plan situation in the Crop production with rye

<b>Plan</b>	<b>area</b>	<b>amount in t</b>	<b>cost /ha</b>	<b>sum</b>
Rye -75	175	1.312	3.045 PLN	532.875 PLN
wheat	87	609	3.453 PLN	300.411 PLN
triticale	88	616	3.122 PLN	274.736 PLN
Winter barley	90	585	3.098 PLN	278.820 PLN
corn	25	188	3.593 PLN	89.825 PLN
<b>sum</b>	<b>465</b>	<b>3,320</b>	<b>3.176 PLN</b>	<b>1.476.667 PLN</b>
<b>Cost per t</b>		<b>71,4 dt/ha</b>		<b>446 PLN</b>
<b>Sum without rye</b>	<b>465</b>	<b>3.223</b>	<b>3.267 PLN</b>	<b>1.519.270 PLN</b>
<b>Cost per t</b>		<b>69,3 dt/ha</b>		<b>471 PLN /t</b>

# Financial success by switching to rye production (75 dt/ha)

<b>Crop Production</b>				
Changing area of crop production	Increasing production	Difference in cost of production per ha	Difference in cost of production total	Cost difference per t
<b>0</b>	88 t	-91 PLN	465 ha * 91 PLN/ha -42.315 PLN	-25 PLN
<b>Animal Production - Feedcost Disadvantage in Feed cost compare to feed wheat</b>				
	rye per hog	Total use of rye	cost increase	increase per t rye
	89 kg	1.341 t	11.448 PLN	9 PLN/t
<b>Total result</b>				
<b>Savings of purchase feedgrain</b>				
Price of feed grain in PLN/t	Decreasing Feed amount	Cost savings	Cost saving in production	total Advantage
450	88 t	39.600 PLN	30.867 PLN	70.467 PLN
600	88 t	52.800 PLN	30.867 PLN	83.667 PLN
750	88 t	66.000 PLN	30.867 PLN	96.867 PLN
900	88 t	79.200 PLN	30.867 PLN	110.067 PLN



# Conclusion

- Rye replace other grain crops in hog, cattle and milk production
- Production cost of rye are lower than for other grain crops (lower cost/ha and higher yields/ha)
- Highest economical advantage for rye are in mixfarms, which using rye as feed for their animal production
- Additional Advantage are market situation like 2011/12 with scarce supply if bread quality (sale bread rye and buy feed wheat)