Intensive dairy farming in Denmark and the role of grazing

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Agenda

Farm structure and development

Challenge for grazing

-Farm size and production system
-Farmers attitude and expectation

-Pasture management

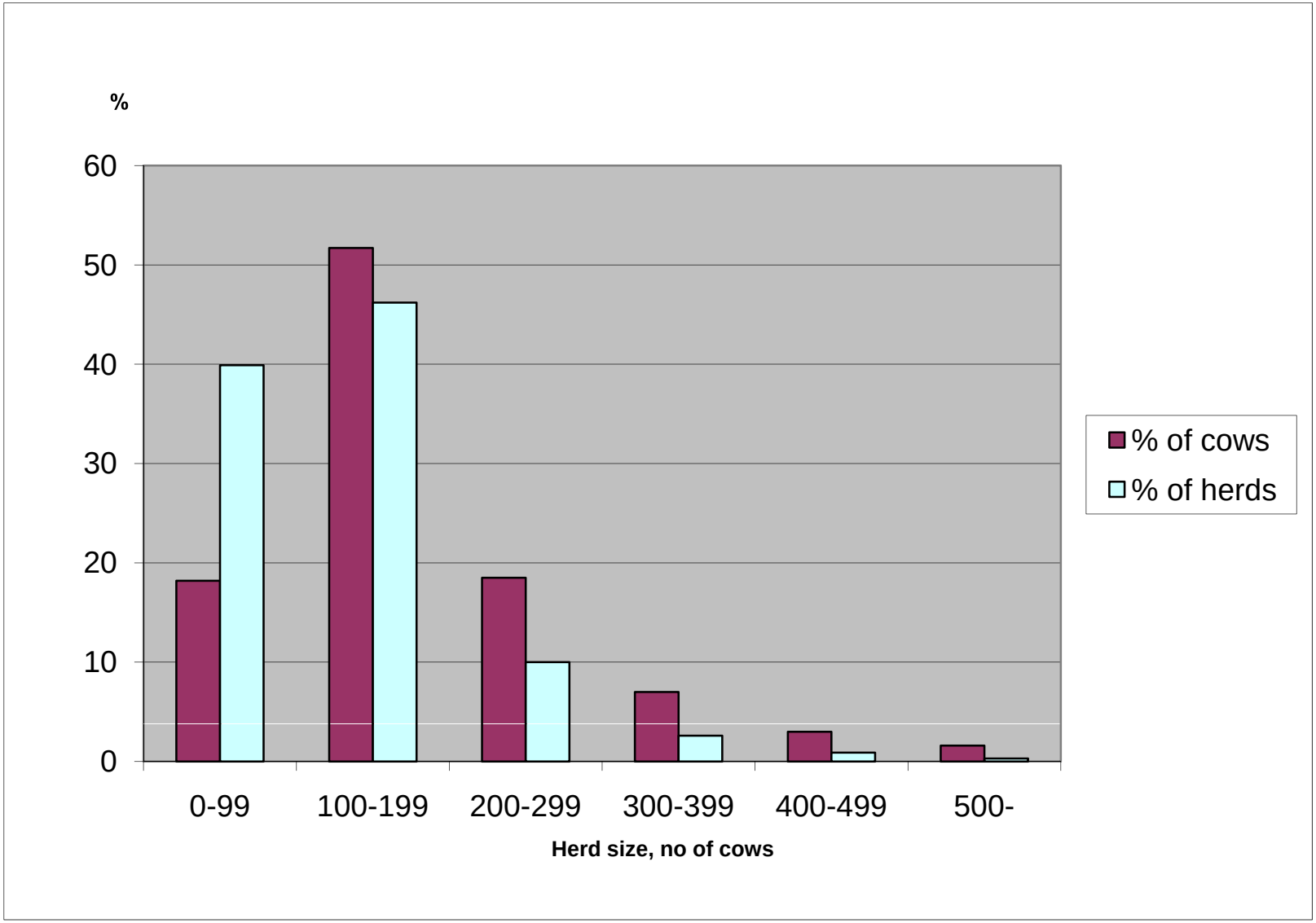
Conclusion

Danish dairy farming

Development in farm structure from year 2000 to 2008

		2000	2008
Farms, no		9800	4500
Cows per farm	n	66	126
Area per farm	Ha	74	127
Yield, per cow	Kg ECM	7600	8900
per ha		6800	8800
Production system	loose housing	35	72
% of herd	AMS milking	<1	16
	organic	8	10
Landuse,	maize for silage	8	32
% of area in rotation	grassland	34	36
	cereals	48	27

Herd structure in danish dairy farming - 2008



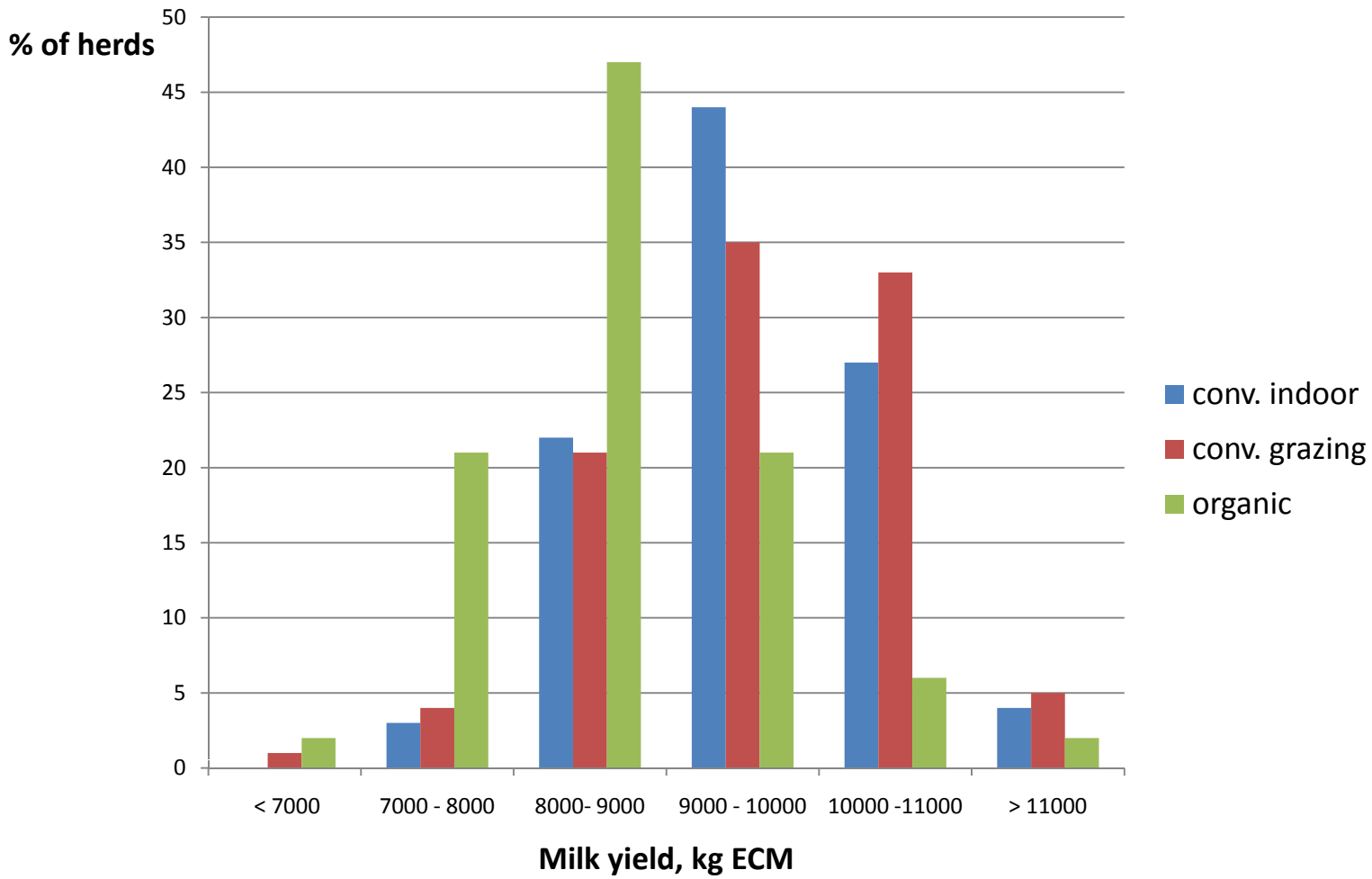
Grazing at intensive dairy farms in Denmark

Results from questioner send to 800 farmers with more than 100 dairy cows

The use of grazing on farms with more than 100 dairy cows in Denmark 2008

Production system	All	Conventional	Organic
Number	396	347	49
% of farms within system			
Grazing cows	34	25	100
Grazing heifers (372 farms)	66	62	100

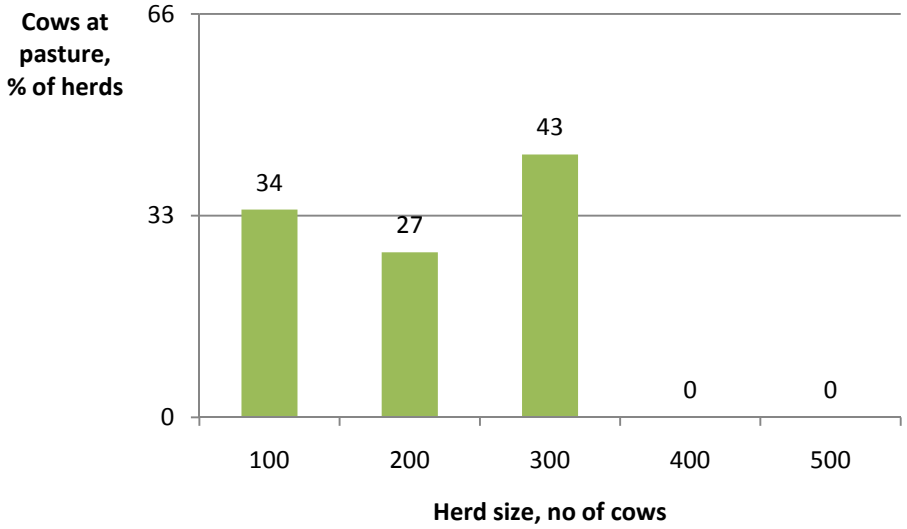
Effekt of summer feeding system on herd production, kg milk



Logistic problems in relation to the use of grazing

Access to sufficient grazingarea *(defined as at least 0,3 ha /cow)* :

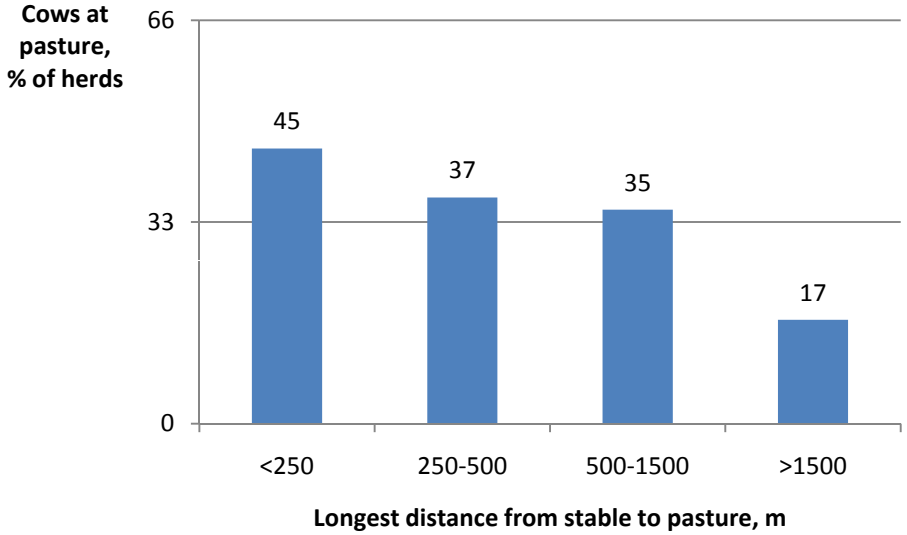
- 97% of organic herds
- 64% of the conventional herds grazing on 33% of the herds

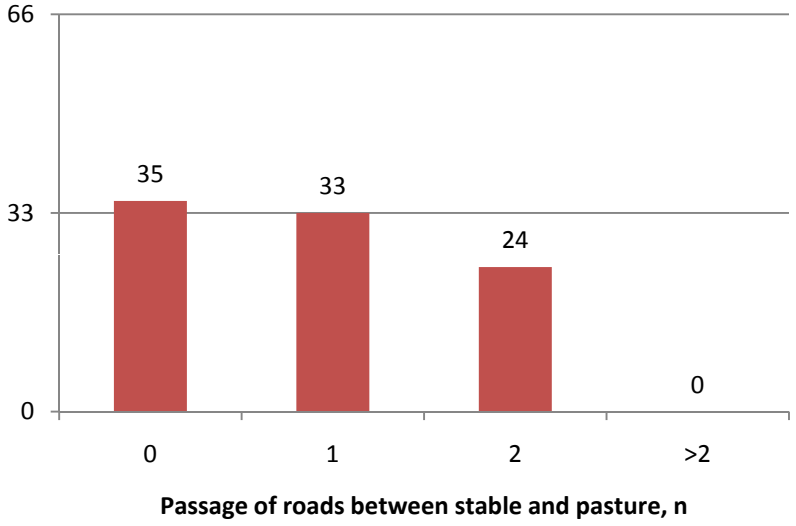


Conventional herds with more than 0.3 ha / cow

Critical limits for grazing in relation to:

-Herds size
-Distance to pasture
-Passage of roads





Effect of summerfeeding system on design of the housing facilities

Proportion of herds in each group (grazing or nongrazing)

	Grazing	
	No	Yes
Renovation of buildings after year 2000	38	29
Automatic milking	32	22
Housing of lactating cows in more than one group	25	13
More than 1 TMR ration daily to the cows	17	14
Concentrate in milking palour	52	48
Individual concentrate feeding in the stable	15	15

Renovated housing facilities and AMS reduce the use of grazing

Use of information in feeding, health and reproduction management classified after summerfeeding system

Measured at a scale from 1 (not at all) to 4 (major)

	Grazing	
	No	Yes
1:Feeding management at cow level		
Daily from milking palour	2.2	1.8
Milk recording	3.2	3.1
2:Health management		
Data from milking palour	2.4	1.9
Observation during milking	3.5	3.6
CMT test	2.7	2.4
3:Reproduction management		
Data from milking equipment	1.6	1.4
Data from cow activity sensor	2.2	2.1
Observation during milking	3.1	3.3
Observation during feeding	3.6	3.6

Nongrazing farm rely more on data than grazing farms

Farmers degree of agreement with the influence of selected areas on the choise of summer feeding system

Proportion of herds in each group (grazing or nongrazing)

	Grazing	High	Some	None	???
Problems with walking lanes	No	73	22	5	0
	Yes	37	49	14	1
Access to grazing area	No	60	29	10	1
	Yes	42	34	23	2
Housing facilities	No	19	34	45	2
	Yes	8	33	57	2
Reduced forage productivity	No	53	41	4	1
	Yes	16	66	22	2

Farmers degree of agreement towards problems of management in relation to grazing

Proportion of herds in each group (grazing or nongrazing)

	Gra-zing	High	Some	None	???
Supplement feeding	No	75	22	2	1
	Yes	28	47	24	1
Pasture management	No	57	39	3	1
	Yes	20	51	27	2
Work load	No	50	35	12	3
	Yes	7	31	59	3
Planing of daily work	No	23	32	34	11
	Yes	4	20	67	9
Reproduction	No	24	25	46	5
	Yes	4	24	70	2
Milk yield	No	65	29	4	2
	Yes	20	51	27	2

Farmers degree of agreement with the general role of grazing in year 2020

Proportion of herds in each group (grazing or nongrazing)

	Gra-zing	High	Some	None	???
New technology will stimulate grazing	No	2	23	59	15
	Yes	10	37	34	19
Increacing demand after milk from pasture based systems	No	9	43	35	13
	Yes	30	50	8	13
Environment problems will restrict grazing	No	31	40	10	18
	Yes	20	37	28	15
Animal welfare issues will increase grazing	No	16	41	27	17
	Yes	41	40	8	11

Farmers use of information sources in daily grazing management

Proportion of herds grazing 2008

	High	Some	Little	Never
Milk delivery	52	29	13	7
Milk urea content	21	41	23	15
Systematic measurement of grass hight	0	15	37	46
Observation of grass height	52	37	6	5
Observation of cow behavior	44	43	7	5
WWW grassproduction forecaste	1	7	20	73
Wheather forecast	10	22	25	43
Consultants	1	31	33	36
Experience from earlier years	62	33	4	2

Conclusions – intensive dairy farming and the use of grazing

Development	Challanges in relation to grazing
Larger herds	Area Distance to pasture Passage of road Planning of daily workroutines
Higher milk yield	Management information at cow level Supplement feeding Balance pasture – and cow production Seasonal based growth and quality
New technology	Indoor cow welfare Rentability of investment

Grazing at intensive dairy farms in Denmark