



Well-being cows and dairy farmers The Swedish perspective

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NÖK congress July 2008, Bäckaskog

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A Swedish Animal Welfare Monitoring Scheme



Milk quality advisors

Preventive health care

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What is the cow's perspective?



The cow/heifer/calf perceives welfare through good **health, physiology and expression of normal behavior**

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A Well-being cow has

- Available food
- Available water
- No injuries
- No disease
- No pain
- Possibility to rest
- Possibility to behave "normally"

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How can we assess cow welfare?

- **Health:** Wounds, Injuries, Lameness, Claws, Diseases, Mortality,
- **Physiology:** Feeding – Body condition, Availability of water, Reproduction
- **Behavior:** Lying- and Raising behavior, Cleanliness, Grooming, Fur coat, Social / Abnormal behavior, Flight distance



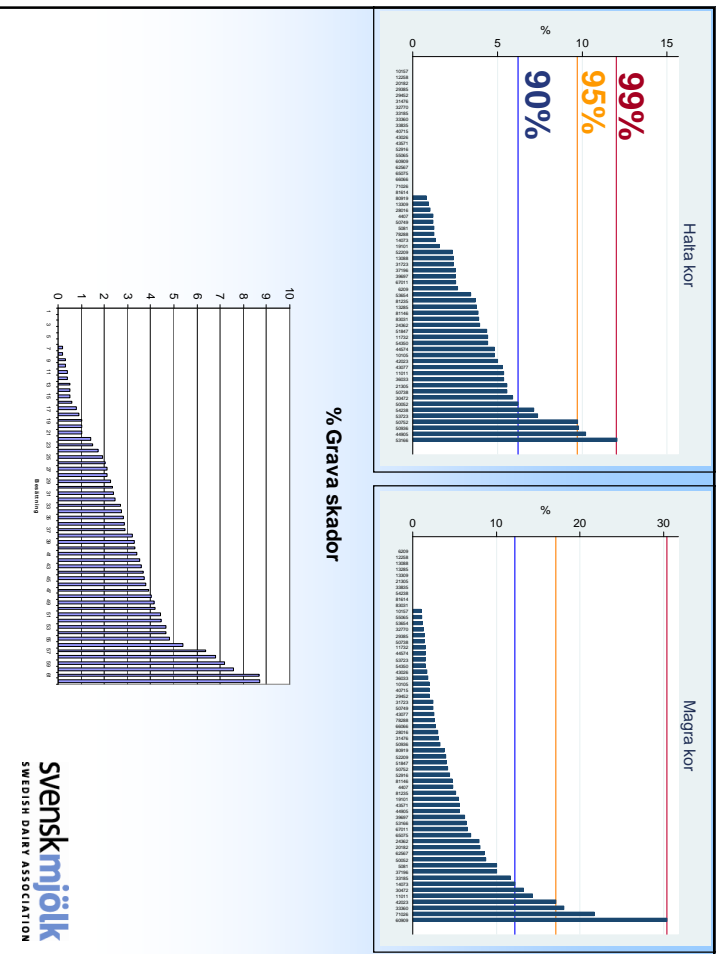
Cleanliness

+ fertility, mortality, disease and production data

**Body condition
Calves and young stock**

**Cleanliness
Calves / Young stock**


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However


The future herd.... ?

- Foot health worse
- Still birth rates higher
- Calf survival lower
- Cow survival lower
- Udder health worse
- Medical treatments increase

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Breeds differ

WELFARE INDICATOR	SRB	SHF	WELFARE INDICATOR	SRB	SHF
Calves			Udder health		
Normal calving	92%	88%	BMSCC* milk recording 1000/ml	154	211
Stillbirth or dead within 24 h	5.8%	8.3%	Incidence of chronic infections	45%	52%
Intensity - Sustainability			Fertility		
Milk yield kg ECM / cow	8790	9203	Heat detection rate	56%	47%
Survival in early lactation	93%	90%	AI/series	1.68	1.81
Euthanized/Dead cows	4.0%	6.1%	Variation coefficient calving interval	12%	17%
In good condition at culling	84%	72%	% cows with late inseminations (> 120 days)	6%	9%
% older cows (> 2 lact)	34%	29%			
Voluntary culling	6.0%	2.2%	Born and living calves/AI series	84%	78%

* Bulk Milk Somatic Cell Count 



	SRB	SHF
Milk income	26313	27764
Contribution margin 2	2012	1931

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Cow welfare risks in future intensive dairy production

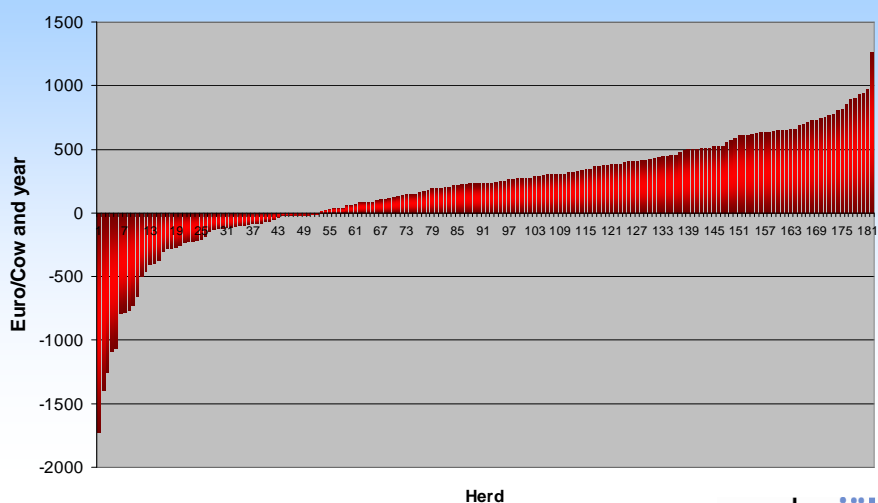
- Lameness
- Immense transitions in metabolism during the lactation cycle
- Calving difficulties with insufficient supervision
- Delayed discovery and treatment of sick animals
- Low quality in calf and young stock rearing
- Low level of biosecurity and bad hygienic conditions

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Good cow welfare is achieved by a combination of **good management and resources adjusted to animal needs combined with a sound **breeding policy****

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Contribution Margin 2 per Cow - Large variation



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Underlying Cost/Income items Contribution Margin 2 (CM2)

CM2
100%

Milk income
Other income (incl. slaughter)
Feed cost
Replacement
AI / Milk recording
Vet Services / Drugs
Labour
Miscellaneous

Boehringer Ingelheim Expert Forum
June 6-7 2008, Cardona

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Economic effects of different Cost and Income items

	β - estimate €	r^2	P - value
Milk income	0,76	19%	0,000
Feed cost	-0,68	11%	0,000
Veterinary services / drugs	-2,48	13%	0,000
Labour	-1,07	35%	0,000
The whole model		88%	

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Profit per cow of 10 most important welfare parameters

Welfare indicator	Profit €	Effects	Worst Quart	Best Quart
↓ BMSCC 1000/ml	93	Milk	257	167
↓ Deviating urea	62	Milk	18%	7%
↓ Vet. treatments	53	Vet	53%	80%
↓ Low levels urea	47	Milk	3%	1%
↑ Young stock survival	37	Labour	99%	100%
↓ Claw/Leg treatments	35	Labour	3%	0%
↓ Culling rate	25	Feed	41%	30%
↓ Late inseminations	21	Feed	26%	15%
↓ Deviating health param	-45	Milk/ Vet	23%	9%
↑ Stillbirths	-78	Labour	91%	97%

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Animal health and welfare important
for profitability

~ (450 €/cow) of the extensive
variation of CM2 is explained by
welfare indicators within all focus areas

Labour costs explained **35 %**
of CM2 effects on welfare

Veterinary costs is only the
"top of the ice-berg"

Few farmers extracts the **full potential** of the
COW

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*How does all this apply to
the farmers well-being?*

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Farmers perspective Healthy and well-being animals:

- Improve economy and simplify dairy farm enterprising
- Safeguard and strengthen consumers trust
- Facilitate communication with authorities

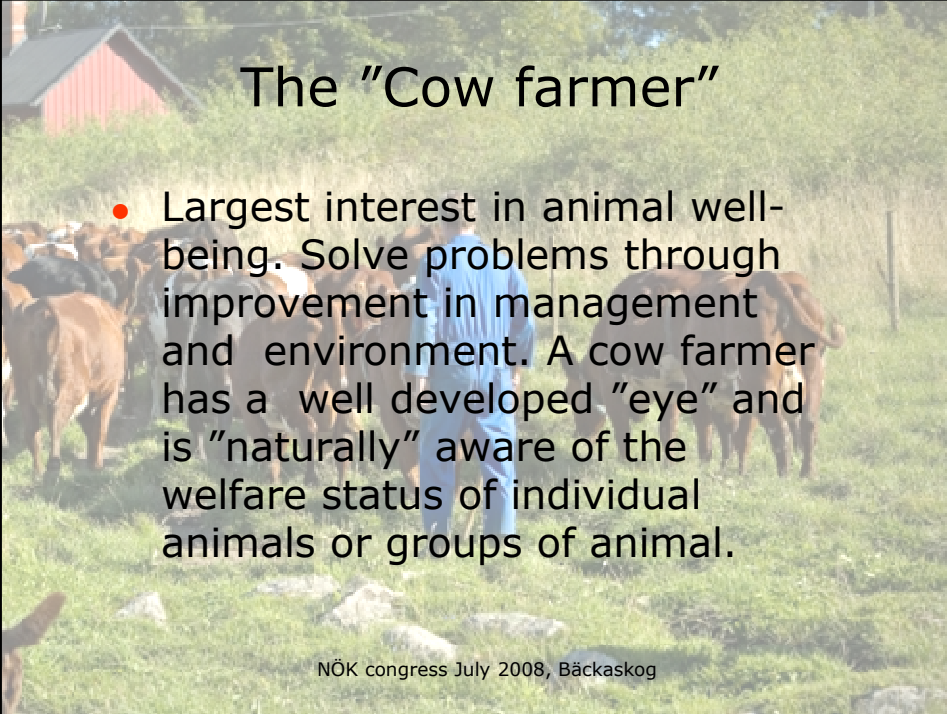
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The Dairy farmer

- Dairy farmers differs a lot concerning main incentives and focus
 - Cows
 - Technique-focus
 - Cost chaser
 - Enterpriser

(J.D. van der Ploeg)

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The "Cow farmer"

- Largest interest in animal well-being. Solve problems through improvement in management and environment. A cow farmer has a well developed "eye" and is "naturally" aware of the welfare status of individual animals or groups of animal.

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"Cow farmer" Economic profile (CM2)

CM2
100%

Milk income

Other income (incl. slaughter)

Feed cost

Replacement

AI / Milk recording

Vet Services / Drugs


Labour

Miscellaneous

↓ Profitability

↑ Profitability

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The "Technical farmer"

- Preferably solves problems with new technique, constructions and machines. This "type of farmer" often needs to be motivated to react fast and efficient enough on deviations in animal welfare

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"Technical farmer" Economic profile (CM2)

CM2 100%

- Milk income
- Other income (incl. slaughter)
- Feed cost
- Interest
- Recording
- Services / Drugs
- Labour
- Miscellaneous

INTERESTS ?

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The "Cost chasing farmer"

- Objects to expenses and investments. The profile might be conservative or generally have bad production economy. A cost chaser is not proactive but reactive in relation to animal welfare and has difficulties in preventive thinking and actions.

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"Cost chasing farmer" Economic profile (CM2)

CM2 100%	Milk income
	Other income (incl. slaughter)
	Feed cost
	Replacement
	AI / Milk recording
	Vet Services / Drugs
	Labour
Miscellaneous	

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The "Enterprising farmer"

- The enterprising farmer thinks in groups, numbers and plans. The cow is considered more as a production means. It is important to work in a systematic and structured manner. Decisions are based on sound evidence and action plans: "This cow is feeling good, this one should be culled, this needs extra care."

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"Enterprising farmer" Economic profile (CM2)

CM2 100%	Milk income
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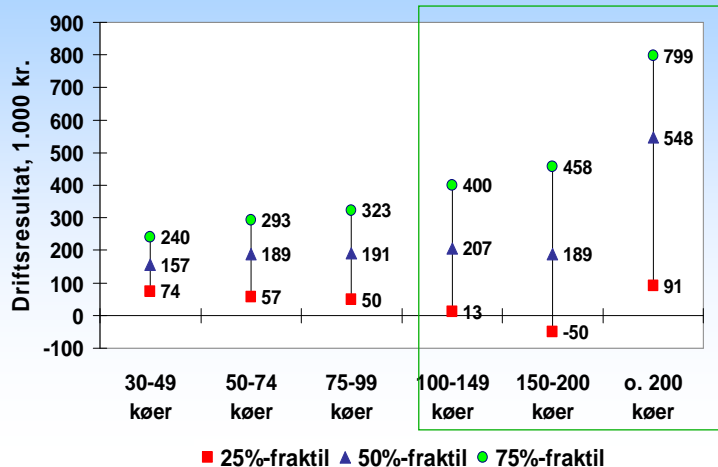
Farmer and cow well-being
may be achieved if

- **The Cow and Enterprise focus**
is successfully combined through
 - appropriate **technical solutions**,
 - skilled **advisors** and **animal observation**
- Thereby facilitating "the extraction of the full potential of the cow"

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A challenge

Future herds



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Key parameters associated to welfare

Key parameter	Good welfare	Bad welfare
<i>Vet treated mastitis</i>	Low	Varying
<i>Metabolic diseases</i>	Low	Varying
<i>Proportion of heifers with AI before 17 mths</i>	High	Low
<i>Late inseminations</i>	Low	High
<i>Varying calving interval</i>	Normal	High
<i>Calf mortality</i>	Normal	High
<i>Young stock mortality</i>	Normal	High
<i>Cow mortality</i>	Normal	High

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A VISION

Professional dairy cow husbandry adjusted to animal needs

Healthy and **well-being animals** improve economy and simplify dairy farm enterprising thereby creating a solid ground for the **farmers well-being**

The enterprising farmer demands practical tools and advisory service to supervise and improve cow welfare and profitability

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