



How we manage a low milk price & RMS (recycled manure solids) on our farm

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- Äspetorp experiences of the "green bedding"

Situation in Sweden – what we discuss for the moment

- Milk crisis (again) due to milk price fluctuations
- Profitability variations
- Problem with politics, animal welfare legislation, pasture
- New resultats from commission from government about Swedish competetiveness, is being presented beginning of March -15
- What costs are most profitable to cut?

ATL article 27 January -15



High price difference between Arla milk price and other dairy companies in Sweden

Criticism about Arla lowering prices to retail stores.

Peoples opinion: milk price can be higher!

Äspetorp

- Turnover 9,4 milj SEK
- 220 milking cows, 200 heifers - Holsteincrosses
- 36 litres/cow 2,38 milj /year to Arla Foods
- 3,9 % fat, 3,3 % protein, 170 'somatic cellcount
- 230 hectars land - owned 20 hectars
- 4-5 workers / trainees, 2 owners
- Free stall housing for milking cows
- Old facilities for heifers
- Hutches and new cold barn for calves

Photo from 2010

Silos

Calf barn

50 cows

Bigger milkroom + buffer milk tank

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- 2*8 parallel parlour
- 6 row barn
- Narrow feed table
- Mattrasses
- Rubber in alleys, automatic manure scrapers
- Ventilators
- Curtain walls

Examples how we manage a low milk price

- Bank contact (lower interest, less repayments, EU loan)
- No machine investments
- Slaughter low producing cows
- Bargain and negotiate all prices
- **Built cheap calf barn**
- **Expanded milk room for buffert milk tank**
- **Advises from Gordie Jones**
- **Recycled manure for bedding (RMS)**



Calf barn 50 calves, 35 000 Euro



Used concrete blocks and posts from old silo
Non-insulated roof, self bearing type
Curtains
LED-lamps
Movable front gates
Beds are cleaned out every 5-6 week



Expansion of milk room for buffer tank

Cost ~16 000 Euro Gives 0,025 SEK / kg



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Besides extra money the
tank gives more flexibility
when milking 3 times

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Gordon Jones visit 11 dec 2014

What did we learn,
what did we do and
what money will we
get back?



What did we learn?

About cows

- Today's cow has a very high capacity for producing milk
- High milk production = absence from stress
- ABC for the cow: Air - Bunker space - Comfort
- Cows should lie down 12-14 hours
- Other activities for the cows such as eating, milking, treatments must be optimized

About feed & water

- Most of the food should be delivered after morning milking
- Feed once per day, push up feed
- Feed 105 %
- Minimum one waterer per 50 cows due to social sub groups

What is bad?



What did we do wrong

- Too little bedding / cushion – put in more bedding, use a bedding keeper
- Too little and wrong type of food in mornings – we changed feeding routine and give haysilage in evenings
- Manure systems bothers cows when they run too often – we changed routine



Results

- Milk production up
~1,3 kg/ko

= 260 kg/day*2,70 SEK

= + **21 000 SEK / month**

- extra work ~6000 SEK

Net 14 000 / month

- Not dirtier cows
when manure system
runs less frequently.
- Easier to clean feed
table when mostly
haysilage left
- More bedding =
more lying down

Why Recycled manure solids (RMS)?

Source: Report from The Dairy Group & The University of Nottingham, April 2014

19 interviewed farmers answered:

- Cost (10)
- Ease of slurry storage (9)
- Cow comfort and lying times (8)
- Cow cleanliness (8)
- Availability, use liberally (7)
- Reduced dust (7)
- Udder cleanliness (4)
- Effective utilisation of slurry (4)
- Reduced hock lesions (3)

What about pathogens?

- Separation does not alter the microbial load from fresh slurry. Not much published about this.
- Composting and digestion can reduce pathogen in optimum conditions.
- Steaphylococcus and Streptococcus are less frequently detected in bedding materials.
- E Coli and Klebsiella may enumerate in RMS
- **Bacterial counts vary greatly within and between different bedding materials.**



Impacts of using RMS

- Cow comfort & welfare: Benefits compared with mattresses and sawdust. Little difference between deep bedded sand and deep bedded RMS.
- Animal health: Cow preparation at milking is crucial as well as cow hygiene. No evidence that RMS will increase mastitis if good management practices.



More information needed

- Needed in following areas:
 - Presence of pathogens and their survival
 - Impact on human and animal health including long term effects
 - Management on farms
 - Risk pathways
 - Economic analysis

Project started October 2014 in UK, ending in July 2015: "Risks, benefits and optimal management of recycled manure solids for use as bedding for dairy cattle".

Our own study tours about "green bedding"

- Canada March 2012
- Holland December 2012
- Sweden - Marås June 2013
- Sweden - Otterslätten November 2013
- Finland – Sarka messut January 2014

**CANADA – DEEP BEDDED STALLS
WITH DRUM COMPOSTED RMS**



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- **Separator runs for 5 -6 hours / day**
- **Production ~7-8 m3 material / day**
- **50 % used as bedding**



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EYS separator model HD800

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(25)

Experiences - machinery

- Since start 24 October 2014 separator has worked well.
- Screens must be cleaned regularly to run smoothly
- Manure pump problems – too much or too little to separator it stops easily.
- If uneven raw material needs mixing and recirculation.



Experiences - management

- Fiber Dry Matter (DM) is 33 %.
- Liquid part DM is 5 %, flows automatically to slurry tank.
- Material heavy to work with – but dries quickly.
- Use double amount than peet ~3,5 – 4 m³ / day totally.
- New bedding to cows 6 days / week once a day in dayshift.
- Morning and evening beds are manually "groved" and manure cleaned away.
- Once per week we scrape back / use the old bedding (it is then very dry and nice to work with).
- Also used to heifers in bedded pack barn and old tied up barn.
- Not used in dry cow area for close up cows or calves under 3 months.



We put in bedding manually

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We scrape back bedding 1-2 times per week

Experiences

- Animal health & milk production

- Short period to evaluate, preliminary thoughts
- Clean cows
- Lying time increased
- Somatic cellcount same or lower than before
- No change in bacteria count
- No more clinical mastitis than before
- No change in hoof problems



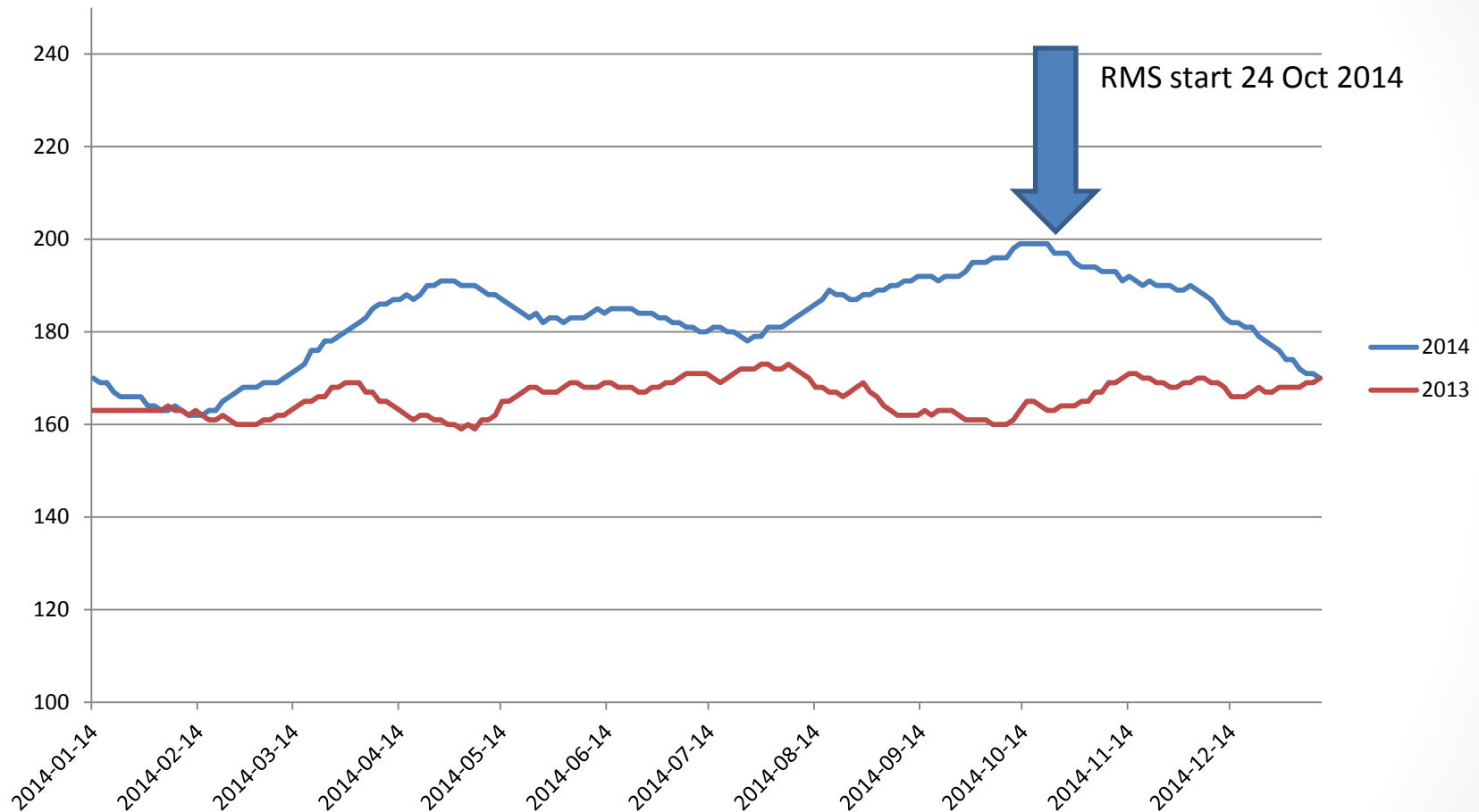
Cows are clean and lie down a lot



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Somatic cellcount 2013 and 2014 Äspetorp



What we want or need to do 2015

MORE INCOME OR SAVINGS

- More milk sold
- Good harvest
- More experiences of RMS
- Less fertilizer?
- No machine changes (= more maintenance costs?)

INVESTMENTS

- New feeding system, old is worn out
- Bedding machine - Bobman
- Rebuilding heifer barn
- New rubber mats alleys, old are worn out
- LED-lamps to cow barn

Thank you and questions?

