

Cost benefit module animal health

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What did we (already) know?

- Costs of production disorders substantial
 - Mastitis €210 / clinical case [1]
 - Lameness €89 / clinical case [2]
 - Ketosis US\$78 - US\$289 per case [3-5]
 - Metritis €92/ clinical case [6]
- Highly prevalent
 - Mastitis 30% [7-9]
 - Ketosis 47% [8,10,11]
 - Lameness 70% [12-14]
 - Metritis 90% [15,16]



What did we (already) know

- Consequences are typically
 - Milk production losses
 - Discarded milk
 - Treatment (Vet, Medication, Labour)
 - Involuntary culling
- „A cow fails to reach its full potential“
 - Failure costs
- „Actions made to prevent a cow of becoming ill“
 - Preventive costs



What did we (already) know?

- There exists a trade-off between the preventive actions made and the consequences of a disease [17,18]
- At some point wise to allocate resource to another disorder



What did we do about it (economics)?

- Analyse perception towards animal health management - Deliverable 5.1
- Evaluate intention and motivation to implement recommendations - Deliverable 5.2
- **Development of a cost benefit module - Deliverable 5.3**
- Development of a linear programming tool managing multiple production disorders - Deliverable 5.4
- Formulate policy recommendations - Deliverable 5.5



How can economics help?

- Estimate farm specific failure costs
 - Use herd (health) recordings
 - Price levels of individual farms
- Evaluate potential new preventive measures
- Assess potential economic gains
- Tool available for both organic and conventional farm systems
- <http://www.impro-dairy.eu/index.php/en/2012-10-04-16-49-49/economic-tool>

A1

fx

Animal health management tool press continue to start

This cost-benefit module has been developed as
part of the EU 7th Framework project IMPRO

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START TEXT 1 FC 1 FC 2 CS FC TEXT 2 PC 1 PC 1 Custom PC 2 PC 2 Custom PC 3 PC 3 Custom

Ready



60%



Questions about disease occurrence, effects and prices.

No knowledge: “our” value is used

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File Home Insert Page Layout Formulas Data Review View Developer Add-Ins

A10

Input data from questionnaire

Please complete the following questions leave blank if you do not know the correct value for your farm, Please note that percentages need to be filled in as a number without the %. If the answer to Q1 would be 30% you just enter 30.

Question	Input	Unit
How many of your dairy cows have been treated by a veterinarian for Ketosis on your farm last year?	2	# c
How many of your dairy cows have been showing signs of early metritis? Diagnosis before 21d after calving	25	# c
How many of your dairy cows have been showing signs of late metritis? Diagnosis after 21d after calving	15	# c
What was the average received milk price/ costs last year?	€ 0.45	€/
What was the average feed price/costs (including concentrates and roughage) last year?	€ 0.20	€/
How do you value your labour?	€ 20.00	€/
What was the average replacement value of a dairy cow last year?	€ 1,300.00	€/
What were the average costs of destruction of a dairy cow (incl. euthanasia, on-farm pick-up and destruction)?	€ 100.00	€/
What was the average received slaughter price for a dairy cow last year?	€ 750.00	€/
What percentage of your total number of dairy cows has been replaced last year by a heifer?	30	%
What was the amount of penalties to be paid last year as a consequence of an elevated SCC?*	€ -	€/
What was the amount of bonus received last year as a consequence of a low SCC?*	€ -	€/

* leave blank when no penalties or bonuses are paid or received

START TEXT 1 FC 1 FC 2 CS FC TEXT 2 PC 1 PC 1 Custom PC 2 PC 2 Custom PC 3 PC 3 Custom PC 4 PC 4 Custom TEXT 3 PC 5 TEXT 4

ready 100%

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Overview losses of udder health

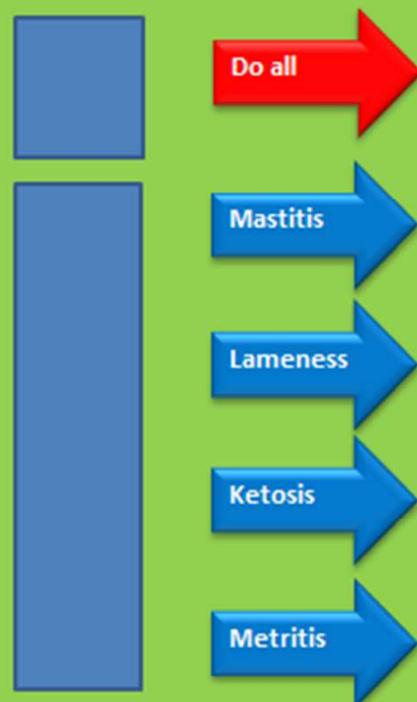
	A	B	C	D	E	F
1	Overview losses of udder health					
2					Totals	
3	Milk production losses	<i>Clinical cases</i>		€	3,116.25	
4		<i>Subclinical cases</i>		€	4,897.71	
5					€ 8,013.96	
6	Costs of discarded milk (due to antibiotic treatment)			€	531.30	
7					€ 531.30	
8	Costs of treatment (only clinical cases are treated)	<i>Veterinarian</i>		€	33.00	
9		<i>Medication</i>		€	110.00	
10		<i>Homeopathic treatment</i>		€	-	
11		<i>Labour</i>		€	450.00	
12					€ 593.00	
13	Costs of culling and destruction			€	2,500.00	
14					€ 2,500.00	
15						
16	Estimated total costs of udder health			€	11,638.25	/year
17	Mean costs per cow			€	116.38	/cow / year
18	Mean costs per clinical case			€	387.94	/ case / year
19						
20						
21	Overview losses of lameness					

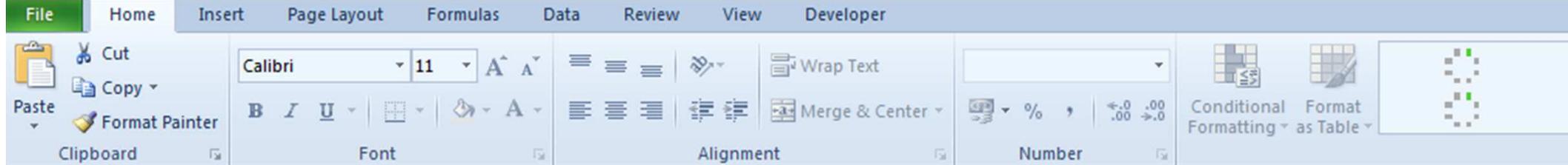
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In the second part of this support tool we try to assess which preventive measures may be applicable in your specific farming situation and the associated preventive costs of each of the four different diseases.

Each of the following pages contains potential management measures which could be applied on a farm to prevent a specific disease from occurring. Each page is dedicated to one of the four diseases. Please indicate which management measures you should like to apply on your farm. You can either explore all diseases "do all" or only focus on one specific disease.





V38

A B C D E F G H I J K L M N O

1

You have defined alternative udder health management measure(s)

2

To estimate the costs of this measure we ask you to complete five questions for each management measure

3

1 Apply organic teat spray

4

1.1 How much labour do you expect to use to fully complete this measure once

minutes to fully complete measure once

5

1.2 How often a year would you apply this measure? (e.g. once a week would be 52 times a year, e.g. twice a day would be 730 times a year)

times a year

6

1.3 If there are any short-term investments (e.g. medication, disinfectants) associated with the measure think about what these could be and how much would they cost for a whole year?

short term investments (€)

7

1.4 If there are any long-term investments (e.g. new milking parlor, new calving pen) associated with the measures think about what these could be and how much they would totally cost and what the depreciation period would be (e.g. buildings usually 15-20 yrs, machinery usually 10-15 years)

total investment (€)

8

10 depreciation period (yrs.)

9

1.5 Are there any costs not accounted for in the previous questions (other than labour, short investments (consumables) and long term investments), if so please indicate the expected costs

other costs

10

11

12

13

14

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17

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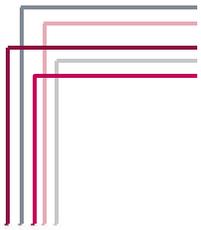
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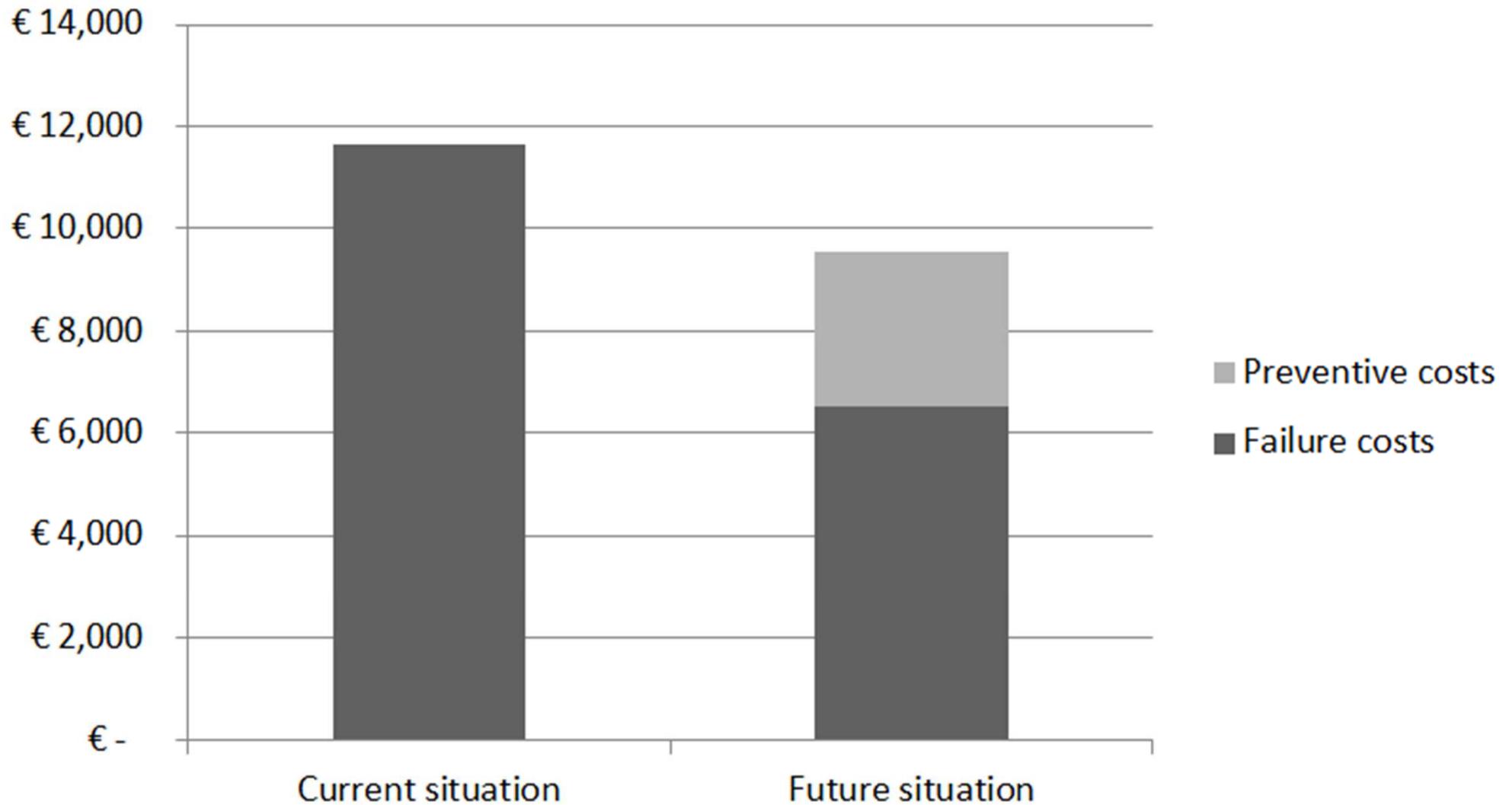
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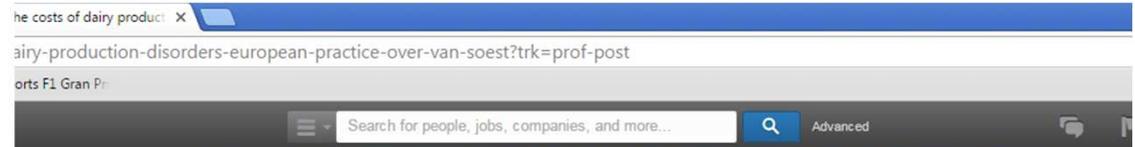
Results

Total costs of Udder health management



Future outlook

- Farmers / Veterinarians should start using it themselves



The costs of dairy production disorders in European practice; over- or underestimated?

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One and a half week ago I gave a presentation at the Word Buiatrics Conference in Dublin with the same title as this LinkedIn post. The message of my presentation was that farmers, veterinarians and farm advisors may benefit from a more structured method to estimate the impact of animal health disorders on farm economics.

"Farmers, veterinarians and farm advisors may benefit from a more structured method to estimate the impact of animal health disorders on farm economics."

I decided to post the abstract here as well:

Future outlook



Literature

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