



Animal Health Matters.
For Safe Food Solutions.



Schweizerische Eidgenossenschaft
Confédération suisse
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Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
State Secretariat for Economic Affairs SECO

Establishment of a risk-based food safety control system in the Ukrainian dairy value chain



Component 3

Activity 3.1.1.2

Training of Trainers (ToT), focus: small producers
Animal health and calf rearing

Jorge Pinto Ferreira

Kyiv, 12-16.09.2016

Animal health and calf rearing

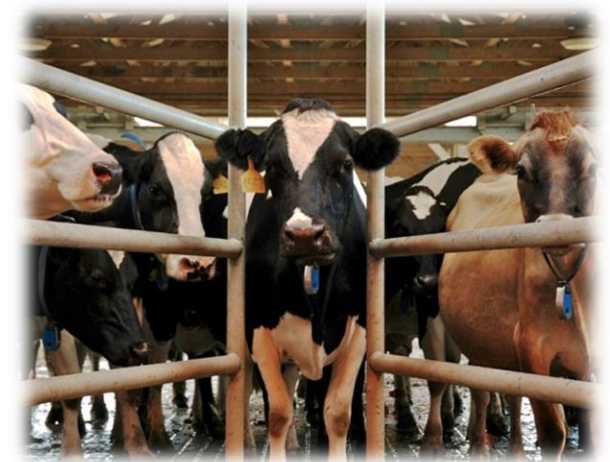
Agenda:



Calfs



Heifers



Cows



Animal health and calf rearing

Remember: It all starts with the calving...



- Hygiene
- Facilities
- Staff training
- Calf reanimation
- Umbilicus

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Animal health and calf rearing

What is the best antibiotic in the world? **COLOSTRUM**

- Calves should ingest **100 g of IgG1** in the first hours of life; in 66-85% of the cases, this is equivalent to **3 to 4 L**
- **Maximum** capacity for IgG **absorption: 4-5h after birth**; after 6 h starts to decrease and reaches «zero» between 18-24 h
- However, until the third day of life, 3-4 daily L are recommended (developpt. of mucosa, nutrients, local immunity)



Animal health and calf rearing

Colostrum of *M. paratuberculosis* cows should not be used.

Paratuberculosis

????



Crohn's Disease



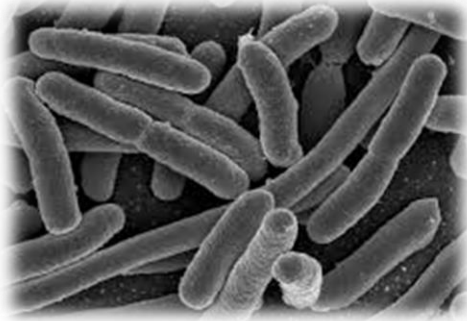
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Johne's
Doença de
Crohn



Animal health and calf rearing

Top-3 health problems to consider in calfs:

SEPTICEMIA



en.wikipedia.org

DIARRHEA



commons.wikimedia.org

PNEUMONIA



Animal health and calf rearing



CALFS RISK FACTORS:

- 1) Failure or incomplete transfer of immunity from colostrum
- 2) Prolonged exposure to adult cattle
- 3) Ventilations limitations of warm *housing*



Animal health and calf rearing

Five keys to safer food

Keep clean

- Wash your hands before and after food and after using the toilet
- Wash your hands with soap after going to the toilet
- Wash and sanitize all surfaces and equipment used for food preparation
- Protect kitchen areas and food from insects, pests and other animals

Buy safe raw materials and keep them separate from cooked food

- Select only fresh and wholesome food from a trusted seller
- Do not eat food beyond its expiry date
- Choose food which has been processed and/or kept at consistently low temperatures and stored such as frozen and bottled meats

Cook thoroughly

- Cook food thoroughly, especially meat, poultry, eggs and seafood
- Boil food for 10 minutes to kill germs. Firm meat and poultry make sure both juices are clear and hot.
- Make all cooked food thoroughly re-cooked when it is cold stored

Keep food at safe temperatures

- Do not leave cooked food at room temperature for more than 2 hours to prevent the growth of harmful germs. Avoid eating food kept for a long time unless it has been reheated properly (especially below 5 minutes cooking)
- Keep cooked food piping hot when serving
- Do not store food for long time in the refrigerator

Use safe water and wash food the right way

- Use only clean water for washing food. Boiling water is best if water is not safe to drink
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The five C's formula:

- 1) Colostrum
- 2) Cleanliness
- 3) Comfort
- 4) Calories
- 5) Consistency

adapted from «Managing the Young Calf – Keep It Simple!»
Sheila M. McGuirk, University of Wisconsin-Madison



Animal health and calf rearing

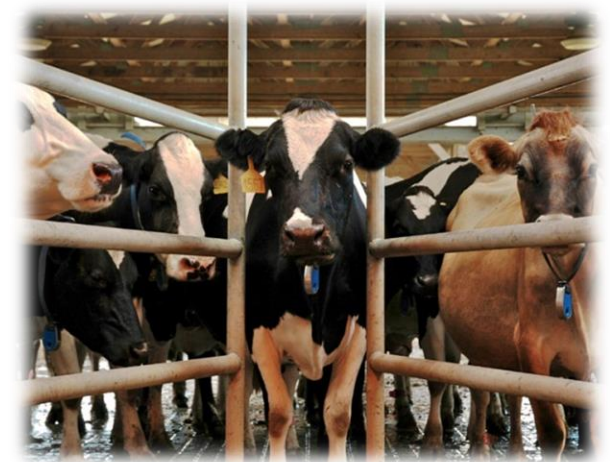
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Calfs



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Animal health and calf rearing

Rearing heifers replacement

Age (months)	Holstein		Friesian		Jersey	
	weight (kg)	withers height (cm)	weight (kg)	withers height (cm)	weight (kg)	withers height (cm)
2	76	87	72	84	55	78
3	110	93	100	88	75	82
4	127	96	120	93	95	89
6	180	104	162	100	130	94
12	340	124	285	118	220	109
15 (mating)	420	129	350	122	265	114
16	440	131	370	126	280	117
18	490	133	405	130	305	119
21	545	137	470	132	355	120
22	586	138	490	133	362	121
24 (pre-calving)	636	140	535	134	395	122
24 (post-calving)	568	140	485	134	350	122

	3 months	7-8 months	12 months	16 months	20 months
Weight change (kg/day)	0.9	0.9	0.9	0.9	0.8
Bodyweight (kg)	100	200	300	400	500
Grass silage-based			(kg fresh)		
11 ME/12 CP grass silage		10.00	22.00	28.00	32.00
Barley straw	1.00				
18% rearing cake	3.00				
Wheat (rolled)		1.25			
Soya (hi pro)		0.50			
Total intake	4.0	11.8	22.0	28.0	32.0
Nutrient supplies					
Energy required (MJ)	35	52	72	92	104
Diet energy (% of req.)	109	104	101	100	102
Protein required (g)	335	377	416	457	480
Diet protein (% of req.)	104	103	102	117	124
Straw-based			(kg fresh)		
Barley straw	1.00	4.00	6.50	9.00	11.00
18% rearing cake	3.00				
18% dairy cake		3.00	3.50	4.00	4.00
Total intake	4.0	7.0	10.0	13.0	15.0
Nutrient supplies					
Energy required (MJ)	35	57	78	98	112
Diet energy (% of req.)	109	104	104	104	103
Protein required (g)	335	377	416	457	480
Diet protein (% of req.)	104	106	120	131	131

Tables in «Managing youngstock feeding», DairyCo Feeding +



Animal health and calf rearing

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Animal health and calf rearing

Top-3 health problems to consider in adult cows:

MASTITIS



REPRODUCTIVE



LAMENESS



agriobit.com



Animal health and calf rearing

Multifactorial.



Animal health and calf rearing

- Brief presentation

- Group work

- 1) Problems/issues

- 2) Solutions

- 3) Key messages

- 4) Delivery method

- Presentation of results and discussion





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Thank you for your attention

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Swiss-Ukrainian Project

“Establishment of a risk-based food safety
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