



Strong start with phytochemicals

Dr. Tyler Turner,
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Euroopa Maaelu Arengu
Põllumajandusfond:
Euroopa investeeringud
maapiirkondadesse

Goals of early calf development

- Healthy, vibrant calves
 - Rethinking restricted feeding
- Fast development to mature rumen
 - How to entice intake?
- Average daily gain over first year ca. 850 g/d
 - Milestones
- First calving at 22-24 months
 - Lifetime efficiency



Factors affecting performance

- Early development critical for lifetime potential
- Adequate nutrition for target gains
- Diarrhea most common mortality cause
 - Sub-clinical disease can stunt development
 - More vulnerable to subsequent disease
- Missed milestones/early culling risk

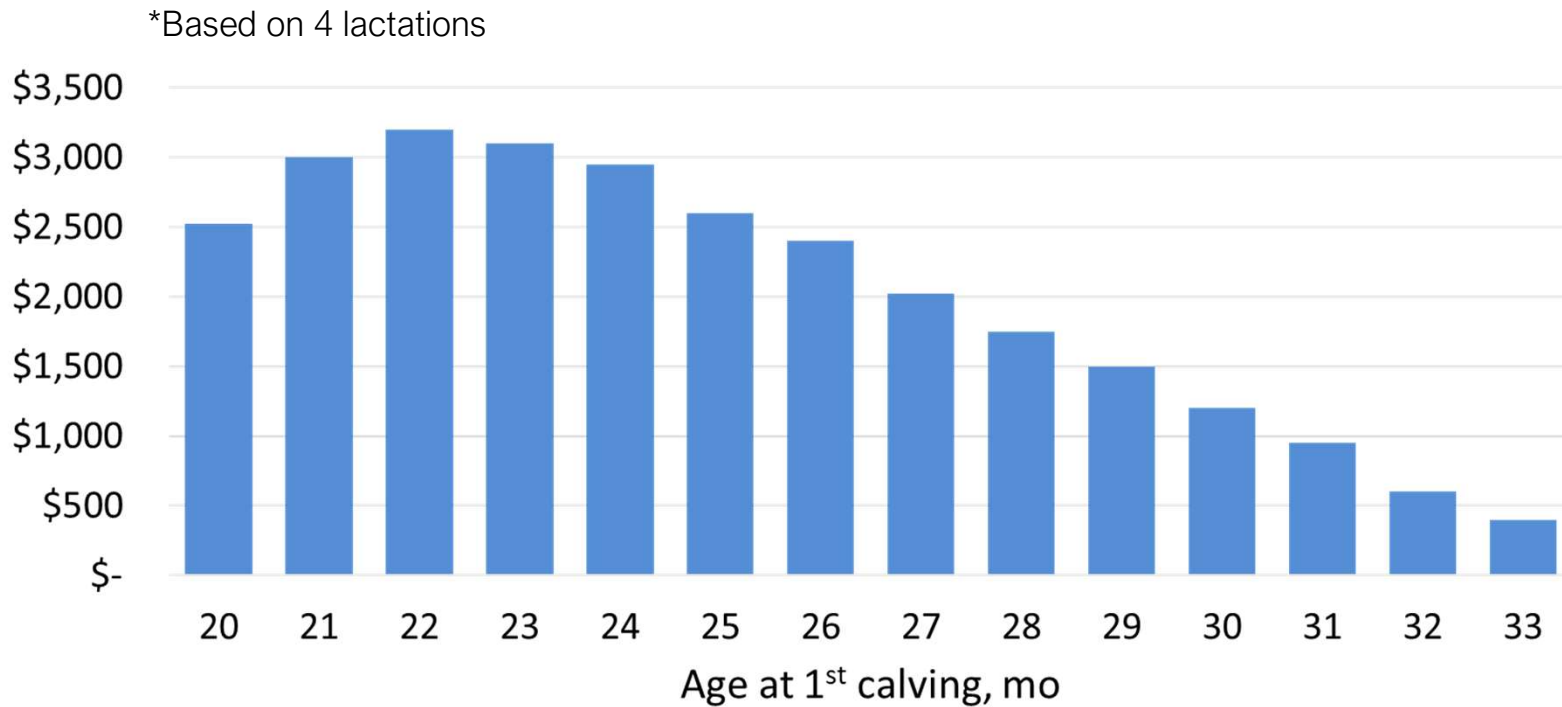


Jump-starting calf performance

- Performance based on strong start
 - High nutrient intake met
 - Pathogen pressure control
 - Enhance GIT development/functionality
 - Boster GIT integrity
 - Minimalize stress challenges
 - Nutrients directed for growth
 - Greater ADG, weaning wt.



Impact of 1st calving on lifetime profitability*

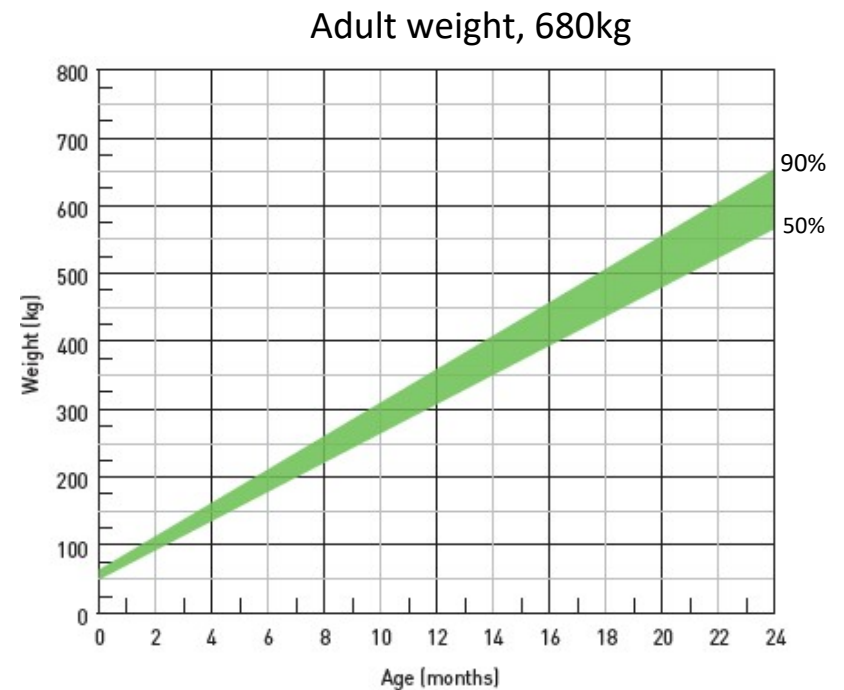


Canadian Dairy Net, 2015

Meeting the milestones to achieve goals

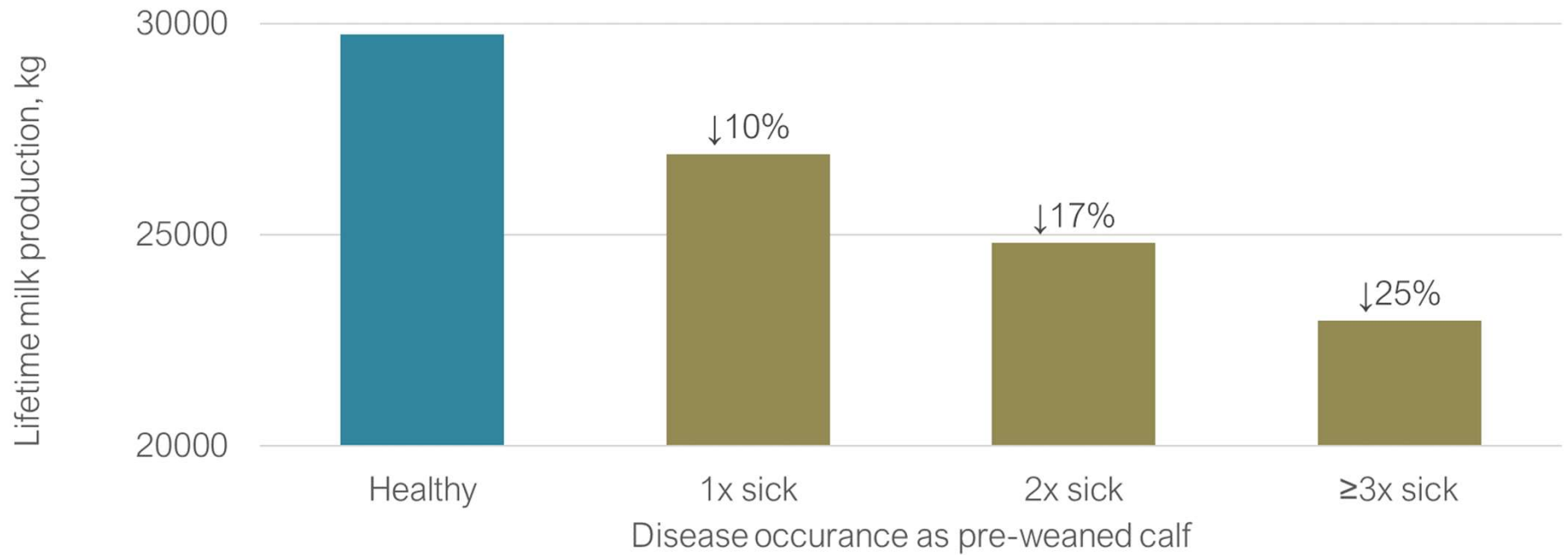
- Calves consume max 2.3% bwt.
- Cannot afford slumps
 - Nutrition
 - Health

Age, mo	Bwt., kg	% adult weight
4	135	21%
6	180	28%
9	245	38%



DHI, 2015

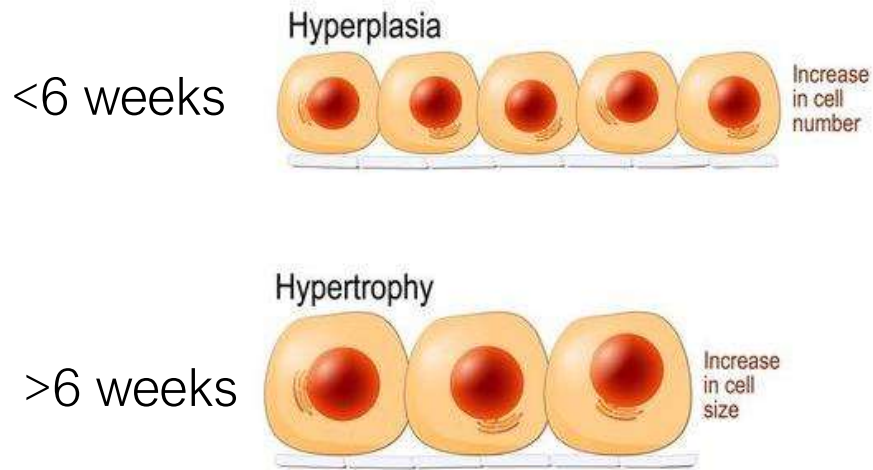
Disease impact on lifetime productivity



Trilk and Münch, 2008

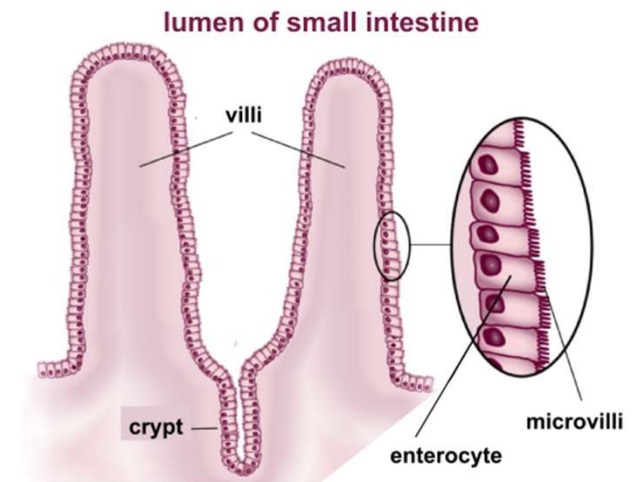
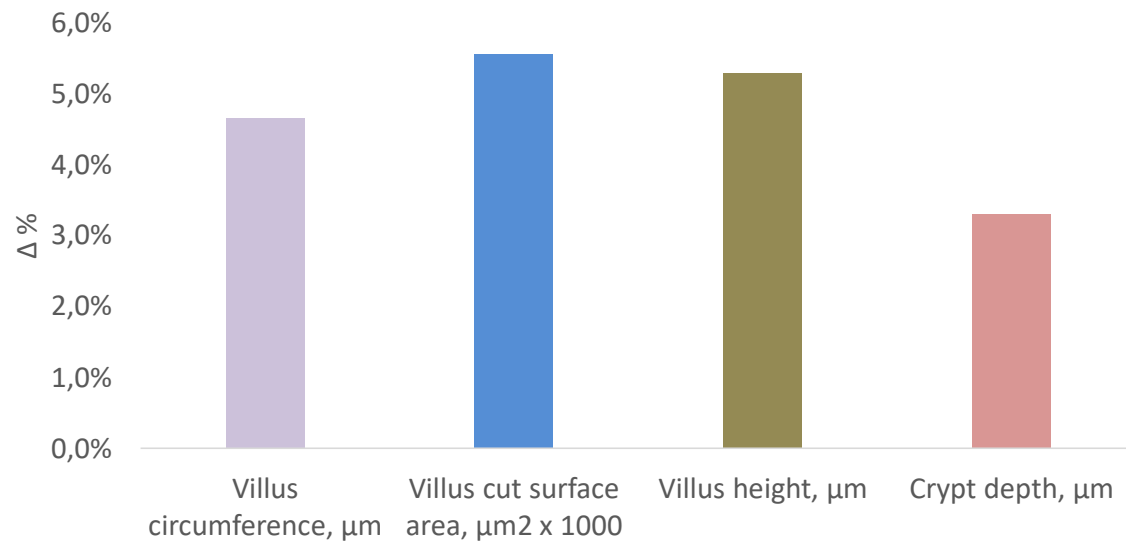
Hyperplasia – feeding for the future

- Metabolic programming
- Opportunity to influence gene expression
- Adequate nutrition enhances organ growth



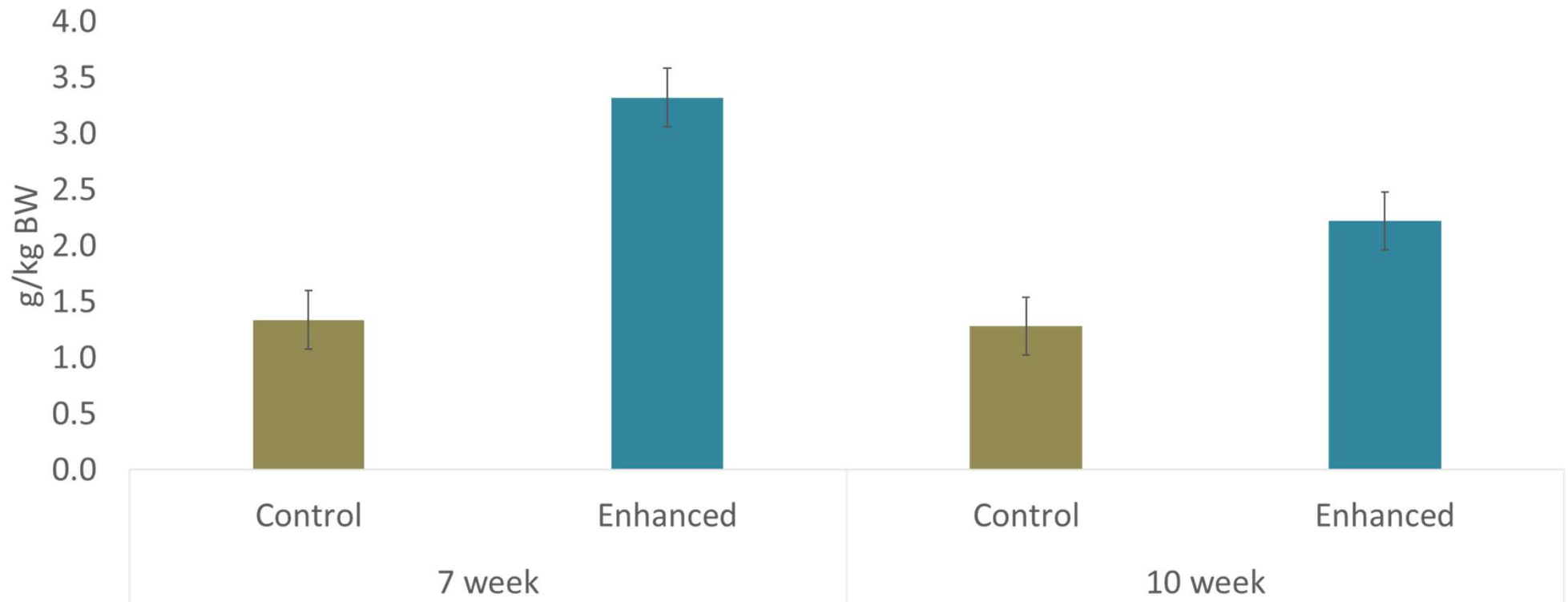
Hyperplasia – GIT development

- Higher intake leads to greater GIT development
 - 3 m longer
 - More surface area / μm^2
 - Positive effect on IGF system – GIT development



Kosh et al. 2019

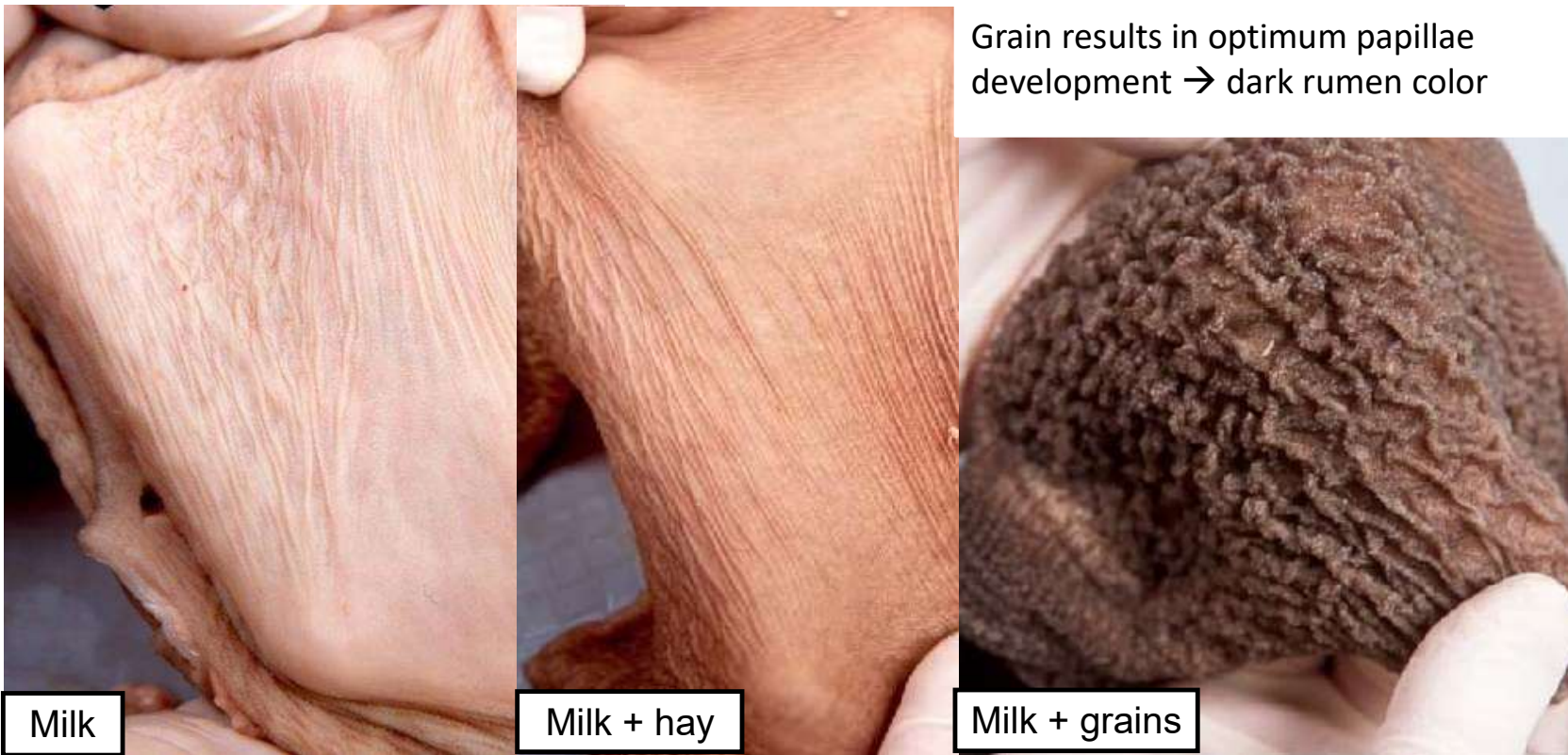
Hyperplasia enhances mammary gland growth



Geiger et al., 2016

Early developmental growth

Transitioning to starter – Rumen development at 6 weeks



Source: Penn State Univ.

How to encourage starter intake?

Clean water!

Free choice, starting day 1

Effect of water access on starter intake of calves from birth to four weeks of age

	Water (free-choice)	Water (none)	
Avg. daily gain (g)	309	180	38%↓
Starter intake (kg)	11,8	8,2	31%↓
Scour days/calf	4,5	5,4	

Source: Kertz et al. 1984

Digestarom® Bos – proactive solution to boost efficiency



High acceptance of Digestarom® Bos boosts calf performance by supporting GIT development and enhancing natural tolerance to immune stressors, thus enabling calves to reach their genetic potential

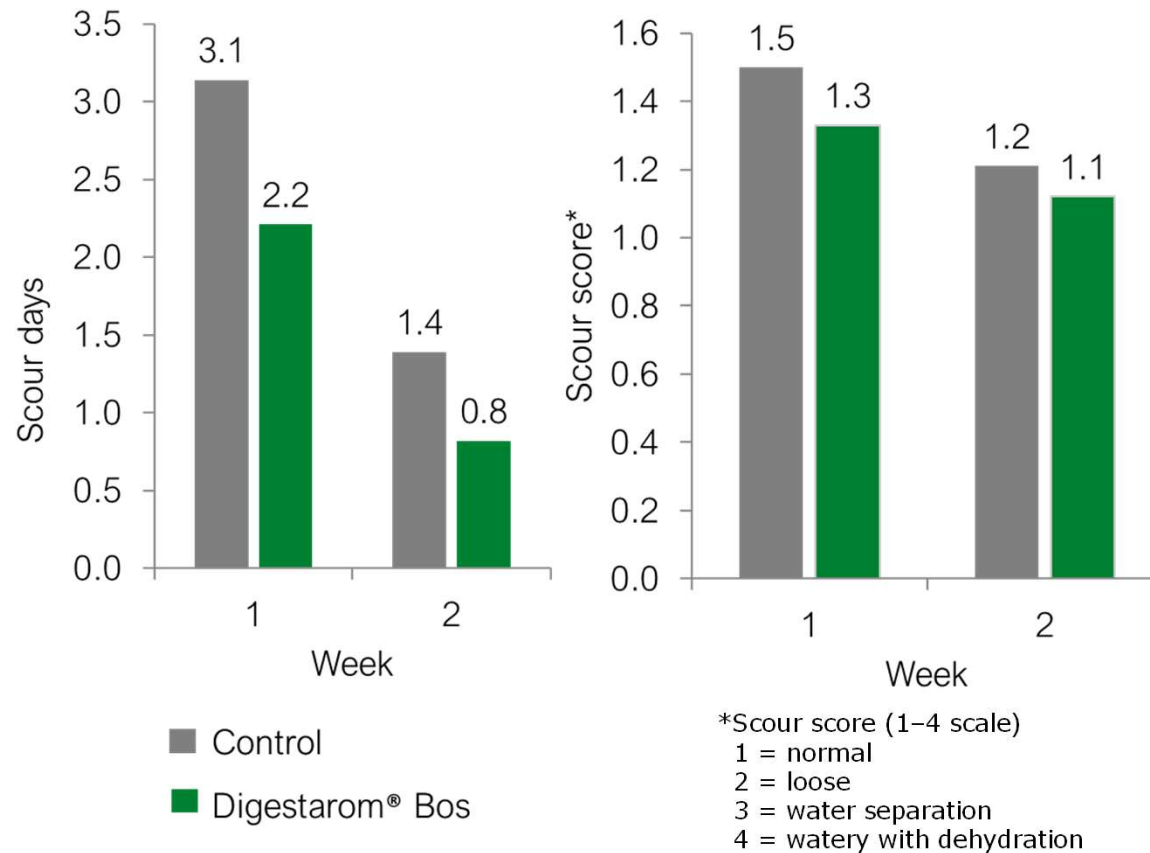
Efficacy comes from high complexity of phytogetic compounds work synergistically to broaden the bioactive spectrum. The unique blend lends to unrivalled high acceptance as appetite stimulant leading to consistent performance under field conditions

Digestarom® Bos – proactive solution to boost efficiency



1. High acceptance
 - Greater intake/less refusals
 - Increase appetite for solid feeds
2. Microbiota modulating effects
 - ↑ Pathogen resilience
 - Support eubiosis development
3. High antioxidative/anti-inflammatory effects
 - ↑ Stress resilience
 - More nutrients available for growth
4. GIT health support
 - ↑ GIT development
 - Better nutrient absorption

Digestarom[®] Bos reduces scours



Healthier animals
have lower FCR

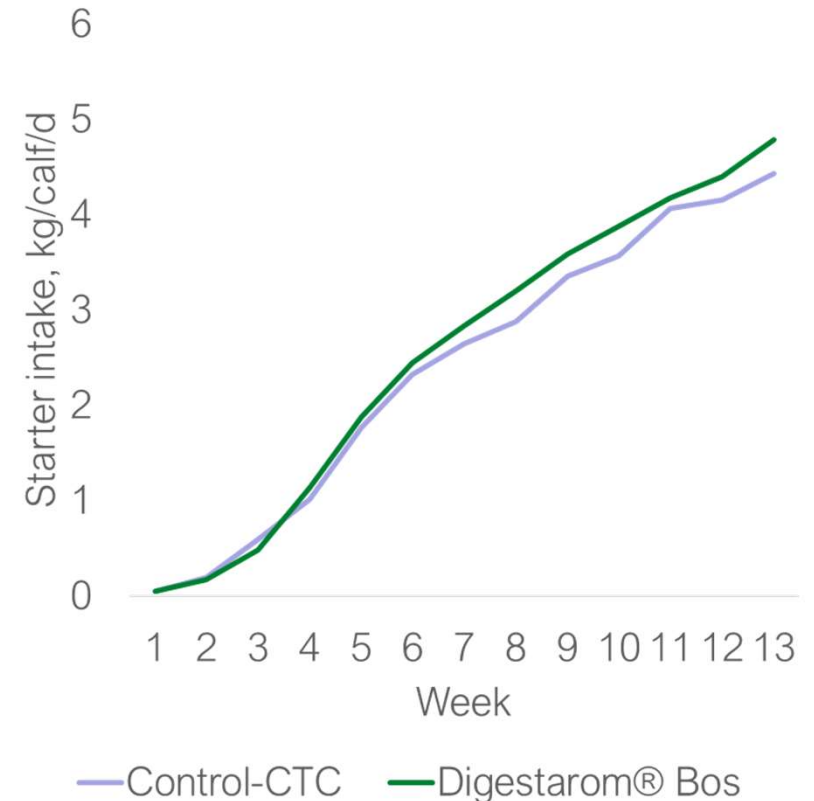
Digestarom[®] Bos
FCR 18 points better!

C.Bos.006

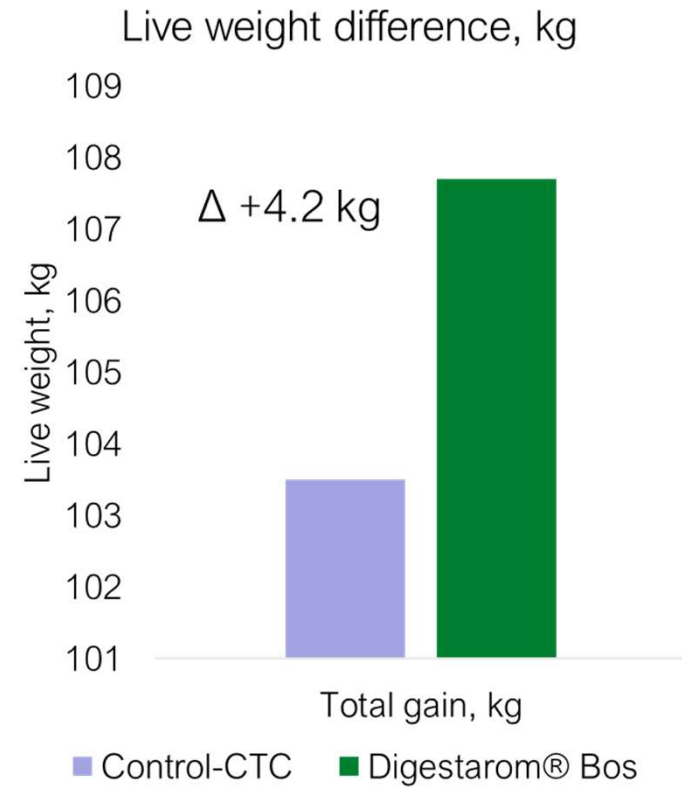
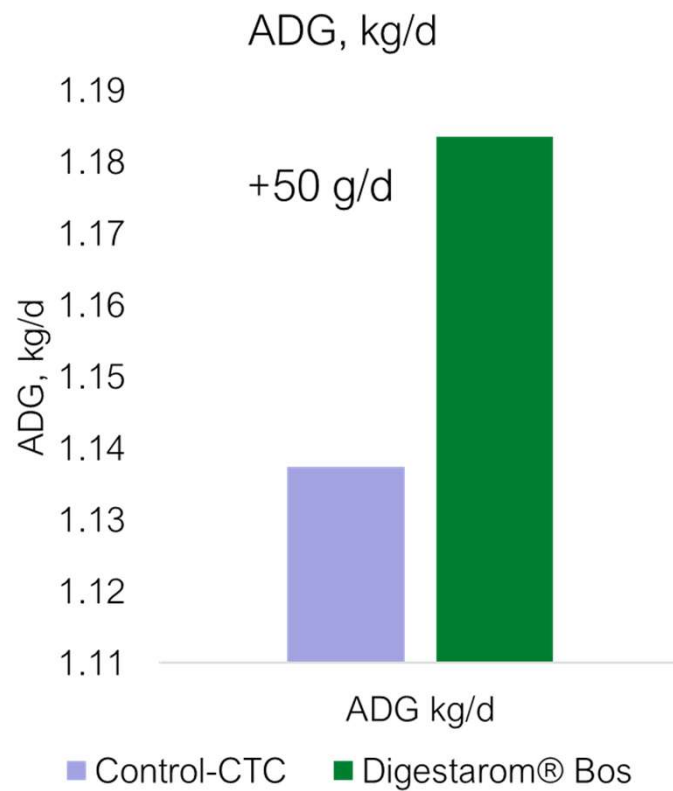
Avoiding post-weaning slump – maintain intake

- Post-weaning intake consistency enhanced
- Marked greater intake beginning wk 6
- Starter intake beneficial to GIT development
 - Rumen papillae
 - GIT microbiota
 - GIT integrity

CTC – chlortetracycline (EU banned)
– broad spectrum anti-microbial
– inhibits GIT microbiota development



Strong GIT integrity leads to performance





MEGA P.E.P. – milk enhancer

Dr. Tyler Turner,
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Early pathogen challenges facing calves

Basic needs:

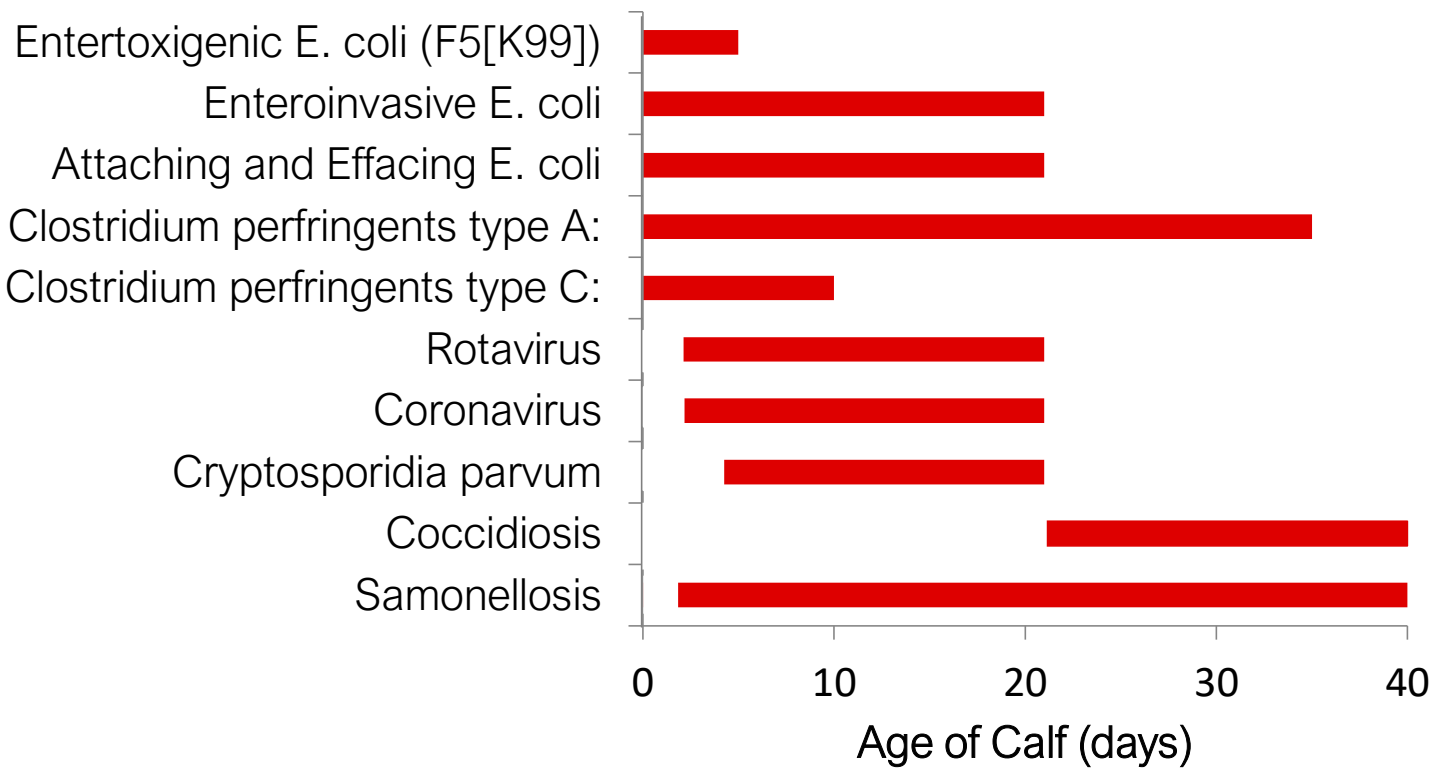
- Dry
- Warm
- Draught-free

Management challenges:

- Hygiene
- Pathogen suppression
- Adequate nutrition

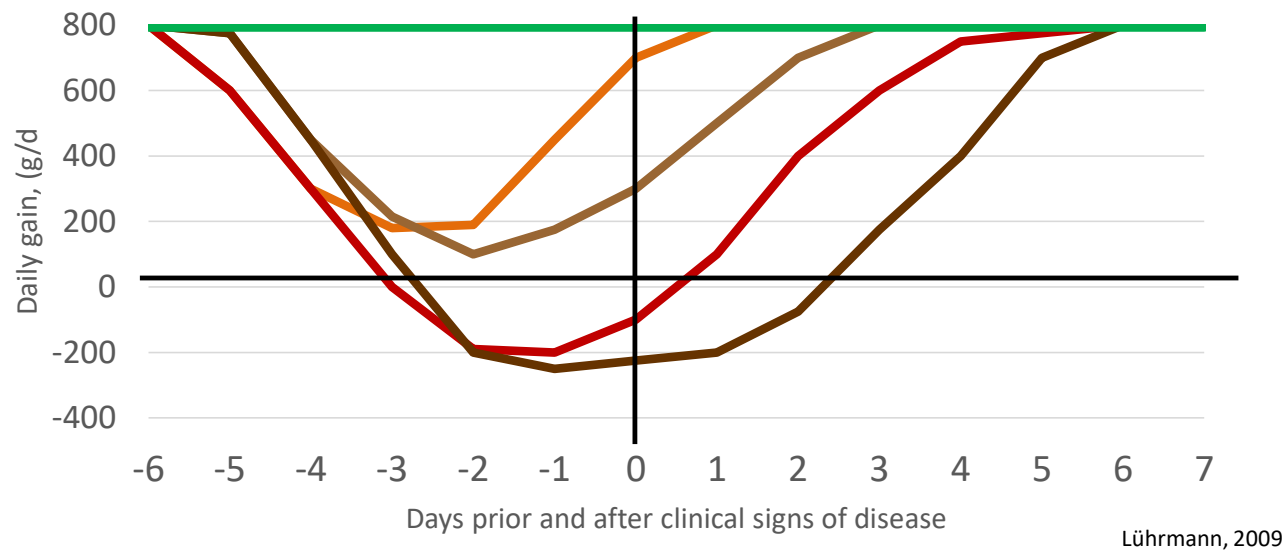


Wide range of pathogen pressure



Socket et al. 2013

Losses incurred before disease seen



- Healthy
- Mild respiratory
- Mild diarrhoea
- Sever respiratory
- Sever diarrhoea

Power of Mega P.E.P. – in milk solution

Digestarom P.E.P. – blend of EO

- Microbial modulation throughout lower GIT
- Protecting gut integrity

Blend of readily dissolved fats

- Energy boost to support immune system
- Balance against cold stress

Delivers bigger, healthier calves with strong appetite





Thank you for your attention

Questions and discussion
