



Livestock Nutrition and Animal Health Concerns with Grazing Livestock

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Animal Nutrition Requirements

- Water
 - better quality = better performance
- Carbohydrates
 - Energy for body functions & heat
- Protein
 - Formation of tissue > growth, reproduction & maintenance
- Salt & Minerals
- Mineral Nutritional “Wisdom”

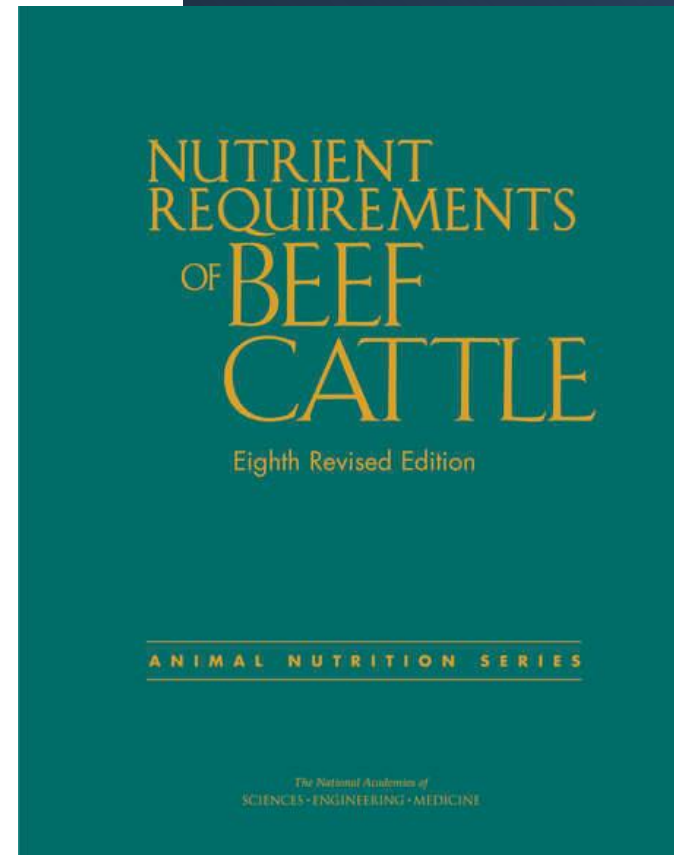


Water

- Most important
- Least considered
- Impacts all functions
- Surface Water – control access
- Well Water
- ~ 2 gallons/100 lbs body weight
- Fresh forage is mostly water

Carbohydrates & Protein

- NRC (National Research Council)
- Different livestock classes have different requirements
 - Lactation
 - Growing – frame, muscle, fat
 - Late Gestation
 - Mid Gestation





Forage

- Supply Livestock with Protein
- Supply Livestock with Energy
- And the plant still has to feed itself
- One of our jobs as grass managers is matching the forage quality to livestock requirement.

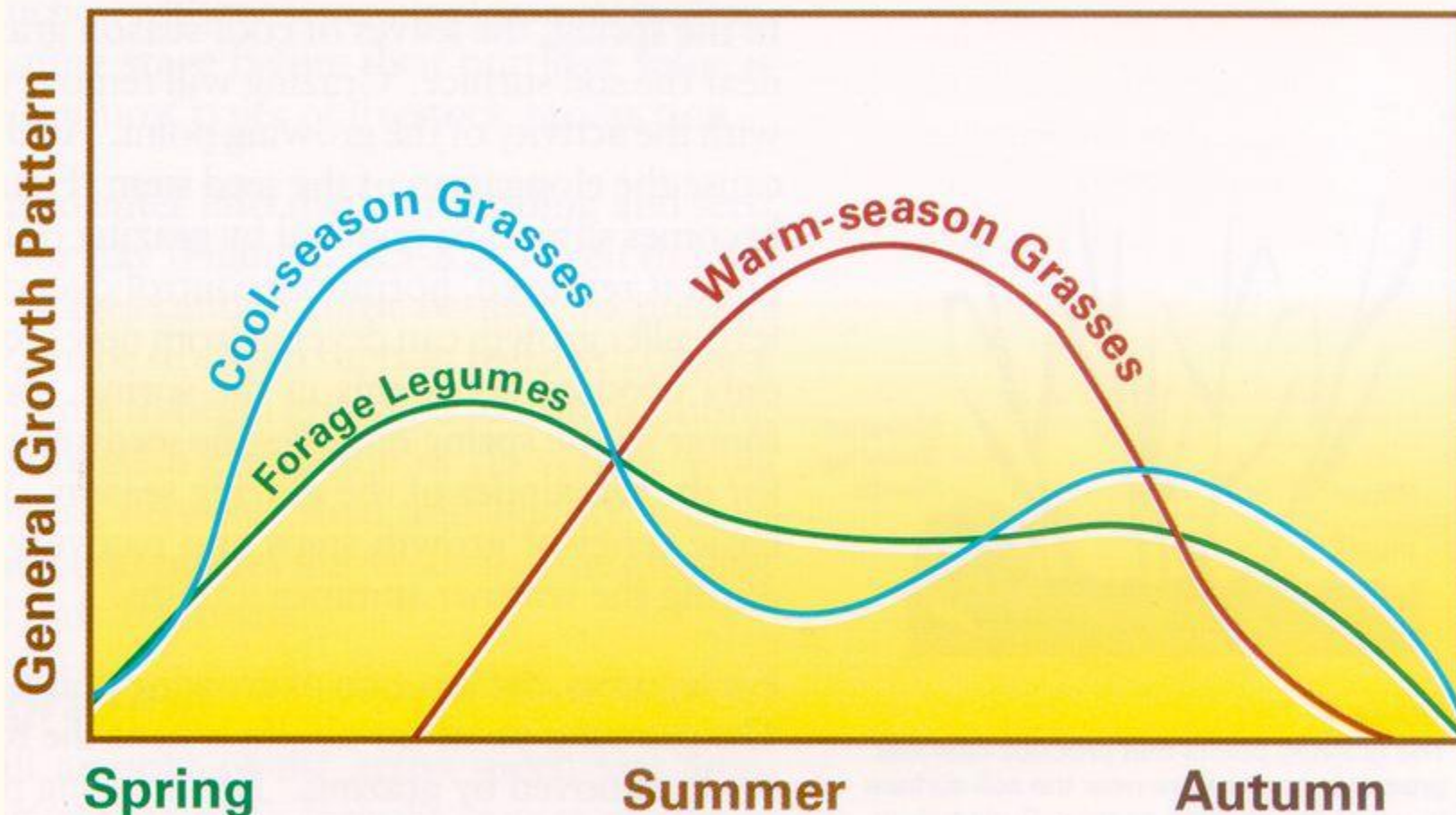


Figure 5

Pasture plants can vary greatly in their pattern of growth. Some producers find that pasture production is more uniform when legumes are grown with grasses, or when a warm-season grass is available for summer grazing.

From Pasture Management Guide

UW Soil & Forage Analysis Laboratory

2611 East 29th Street
Marshfield, WI 54449
Phone 715-387-2523 Fax 715-387-1723

COOPERATIVE EXTENSION
University of Wisconsin-Extension
University of Wisconsin-Madison
Soils Department, Madison, WI

Iowa County Extension Office -
222 N Iowa St
Dodgeville, WI 53533

Account: 555025
Date received: 10/8/2010
Date processed: 10/12/2010

Results also available on-line at <http://uwlab.soils.wisc.edu/reports>
lab number: 4901 access code: dakt



PROUDLY USING
NIRSG EQUATIONS

Grass Hay

Report Number: 4901 Lab Number: 9783 Sample Description: Campbell cover crop
Material: Grass Hay
Harvest date: 10/7/2010

Item	Abbreviation	Unit	Result	Method ¹
Dry Matter	DM	% as fed	61.65	WC
Moisture		% as fed	38.35	C
Protein Fractions				
Crude Protein	CP	% DM	25.80	NIR
Soluble Crude Protein	SCP	% CP		NA
Rumen-Undegraded Protein	RUP	% CP	44.57	NIR
Rumen-Degraded Protein	RDP	% CP	55.43	C
Acid Detergent Fiber Crude Protein	ADF-CP	% DM	0.20	NIR
Neutral Detergent Fiber Crude Protein	NDF-CP	% DM	4.11	C
Heat Damaged Protein-Estimated		% DM	0.20	C
Adjusted Crude Protein		% DM	25.80	C
Fiber Fractions				
Acid Detergent Fiber	ADF	% DM	17.82	NIR
Neutral Detergent Fiber	aNDF	% DM	30.54	NIR
Lignin, Acid Detergent	ADL	% DM	4.00	T
Lignin, Acid Detergent	ADL	% aNDF	13.10	C
Neutral Detergent Fiber Digestibility, 48 h	NDFD	% aNDF	93.97	NIR
Carbohydrates and Fats				
Non Fiber Carbohydrate	NFC	% DM	32.11	C
Fat		% DM	2.30	T
Energy Calculations: 2001 NRC				
Total Digestible Nutrients, 1X	TDN	% DM	76.14	C
Net Energy, Lactation, 3X	NEl	Mcal/lb	0.79	C
Net Energy, Maintenance	NE _m	Mcal/lb	0.90	C
Net Energy, Gain	NE _g	Mcal/lb	0.60	C
Metabolizable Energy	ME	Mcal/lb	1.33	C
Relative Forage Quality	RFQ		327.19	C
Milk/Ton		lbs	4,132	C

Ration(s)

consumed in 24 hours

occupancy |

carb's

total feed

age, dry hay,

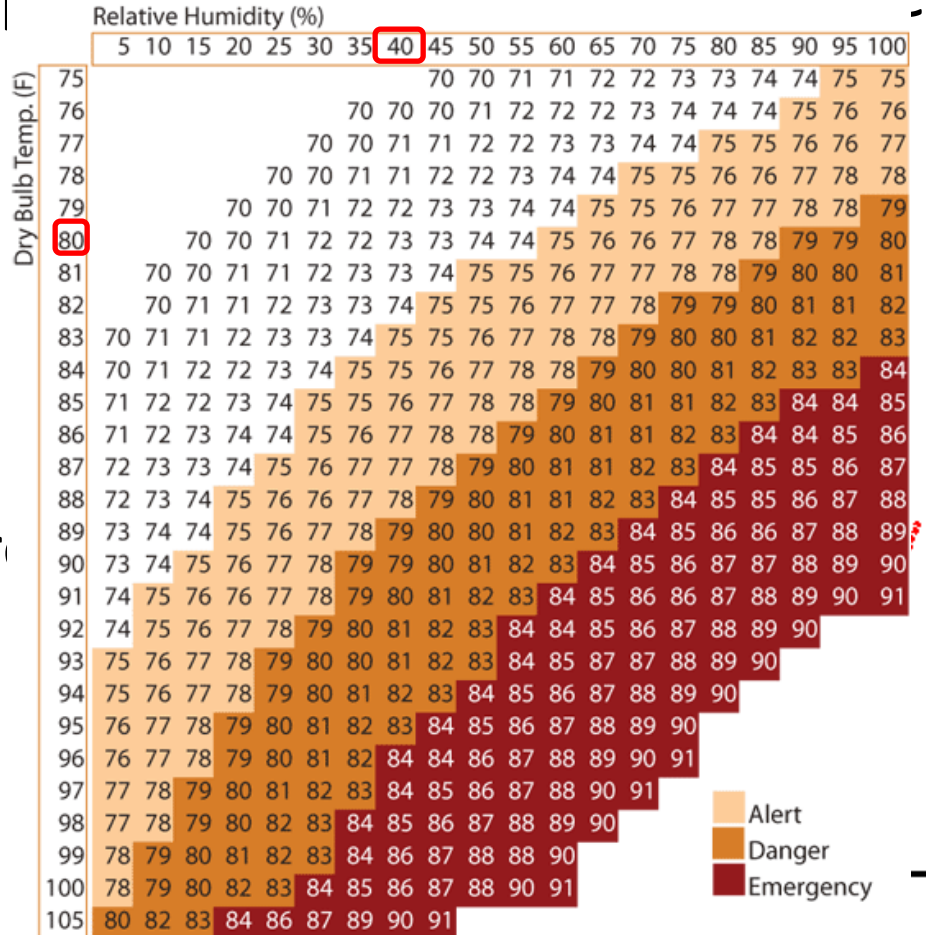
Feeding

ly

manage pasture



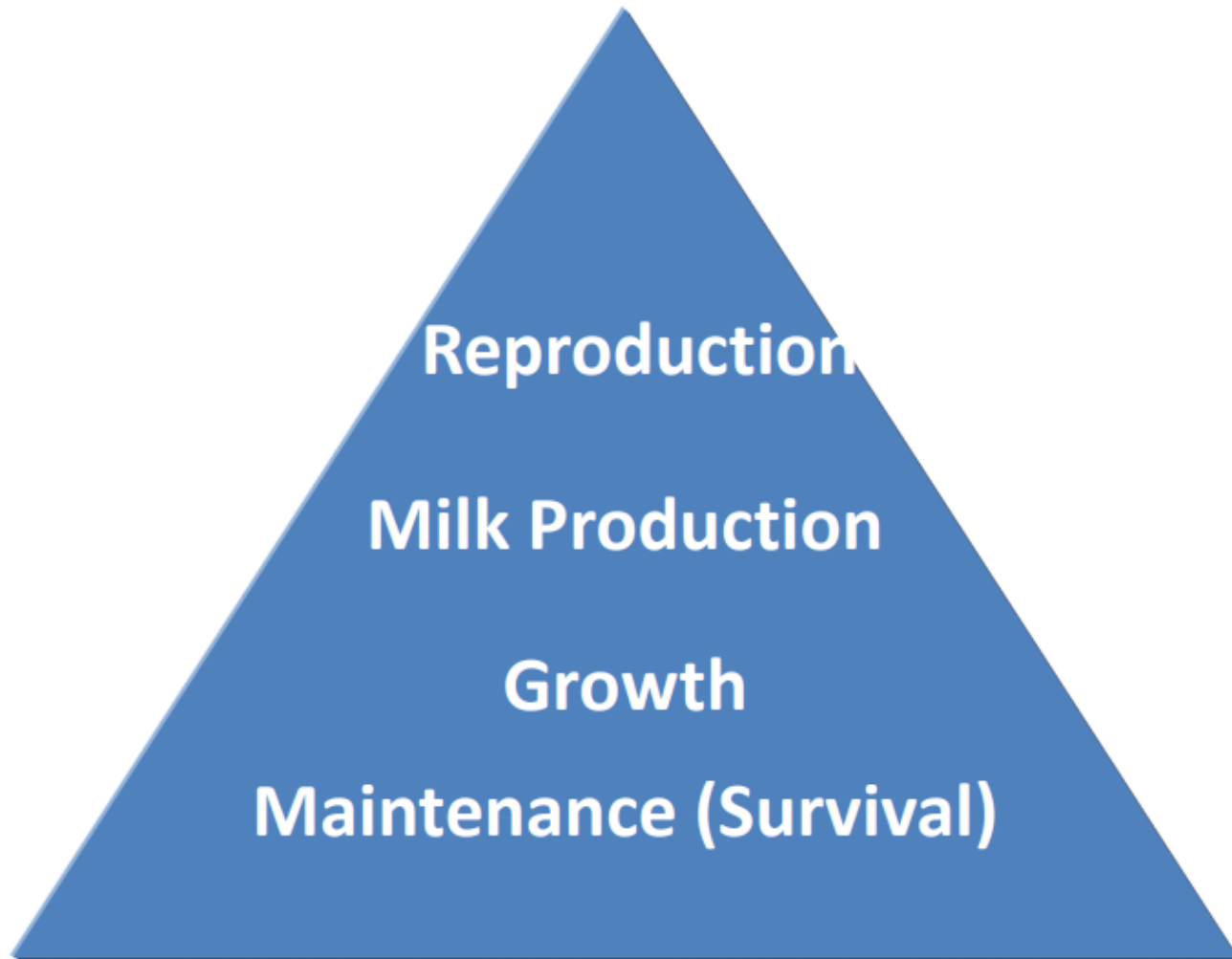
Livestock Weather Hazard Guide



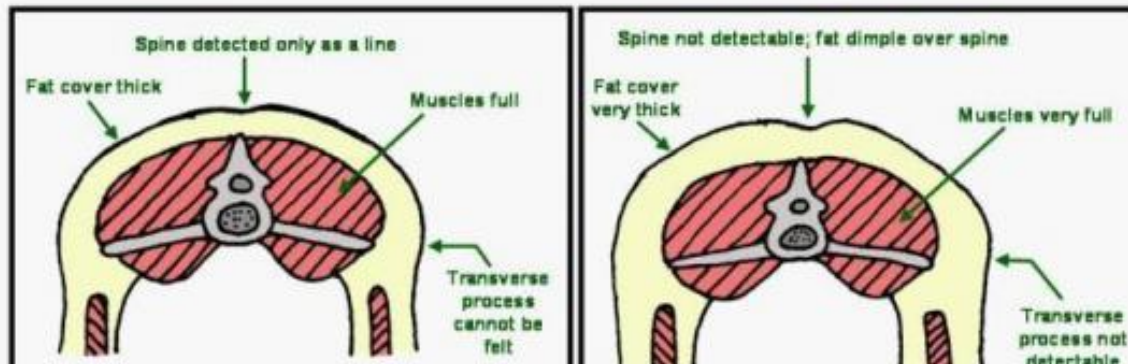
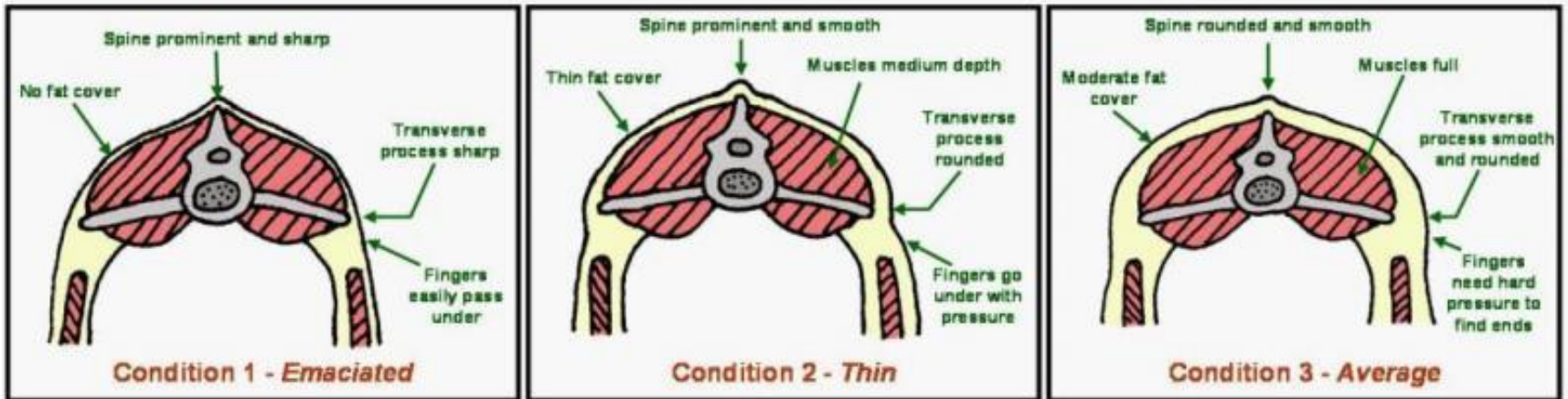
Coat Description	Critical Temperature
Summer coat or wet	59 degrees F
Fall coat	45 degrees F
Winter coat	32 degrees F
Heavy winter coat	18 degrees F

Adapted from D.R. Ames, Kansas State University.

Biological Priorities of Beef Cows










Body Condition Scores – Sheep/Goats



Body Condition Scoring

Table 1. Body Condition Scoring Guidelines

		Condition Score								
Trait	1	2	3	4	5	6	7	8	9	
V E T E R I A N										
										

Pregnancy Rate (%):	43
Calving Interval (days):	414
% Showing Estrus 30 Days After Calving:	46
% Showing Estrus 60 Days After Calving:	66
Post Partum Interval:	89
Increased Risk of Cull (%):	8
Antibody (IgG) Levels in Colostrum (Mg/dL):	1998
Calf Weaning Weight (lbs):	374
Calf ADG (lbs):	1.61
Calf Death Loss (%):	8

Pregnancy Rate (%):	93
Calving Interval (days):	364
% Showing Estrus 30 Days After Calving:	91
% Showing Estrus 60 Days After Calving:	100
Post Partum Interval:	52
Increased Risk of Cull (%):	0
Antibody (IgG) Levels in Colostrum (Mg/dL):	2349
Calf Weaning Weight (lbs):	515
Calf ADG (lbs):	1.85
Calf Death Loss (%):	3

Animal Health

- Healthy livestock perform better
- Establish a relationship with a local vet, BEFORE you have need of one.
- Treatment is expensive
- Vaccines are cheap (prevention), safe and effective
- Education can be expensive
- Observation is critical
- Beef Quality Assurance (BQA)



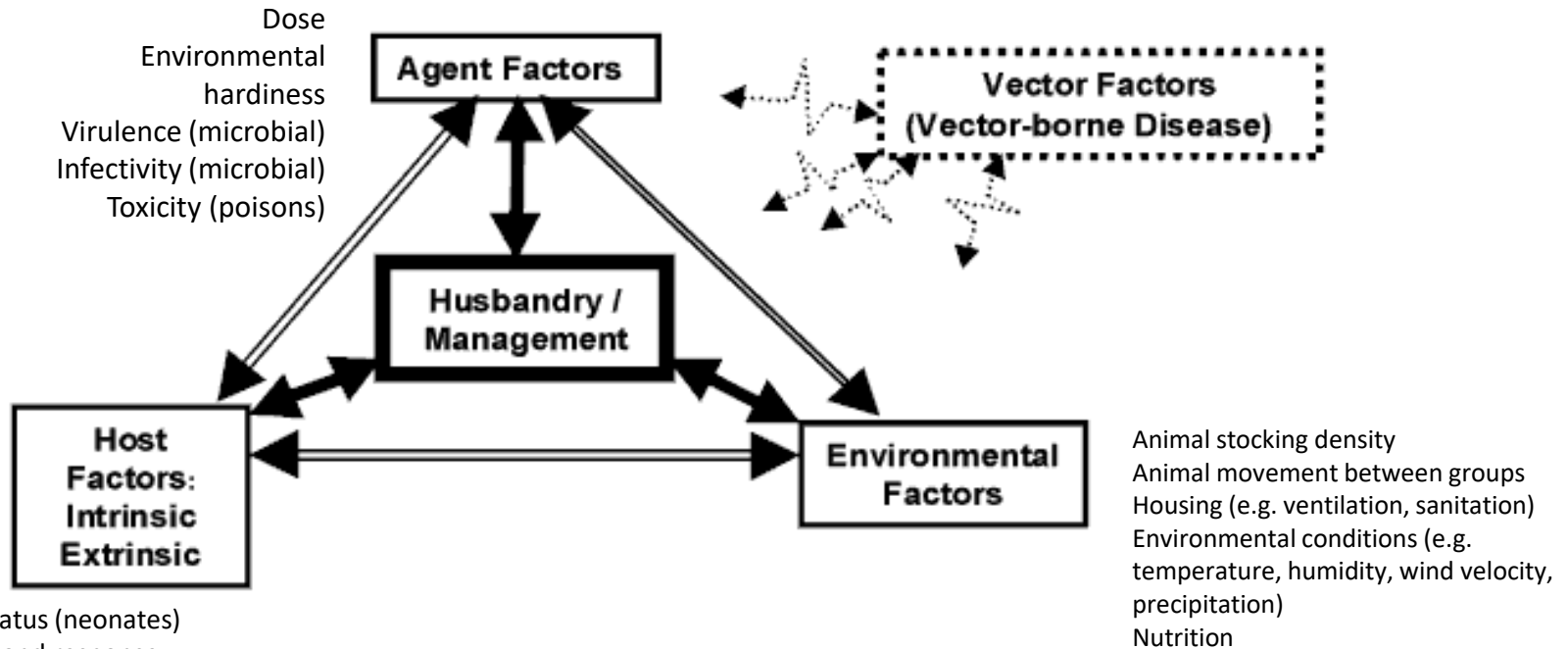


Animal Health

- Nutrition
- Weather
- Prolonged or Multiple Stress
 - Cold & Wet, mud, weaning, shipping, handling
- Animals from multiple sources
- Biosecurity

Animal Health

The Epidemiologic Triad



The components of medical ecology

Other Health Considerations

- Grass Tetany
- Parasites
- Flies?
- Pink Eye
- Bloat
- Shade?
- Predators

Questions

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