

Feedlot Health Management

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US Feedlot Production

- Feedlots began Corn Belt area in late 1800s
- Shortened time to harvest from 6 years to 3 years



Feedlot Practice

- Farmer Feeders
 - Small Farms
 - Grew own feed (corn)
 - Bought calves
- Barns
- Paved feedlots



Feedlot Expansion

- After World War II
 - Irrigation



Feedlot Expansion

- Great Plains
 - Drier climate
 - Soil less clay




Feedlot Expansion

- 1970 Larger operations
 - 20,000 – 100,000 head



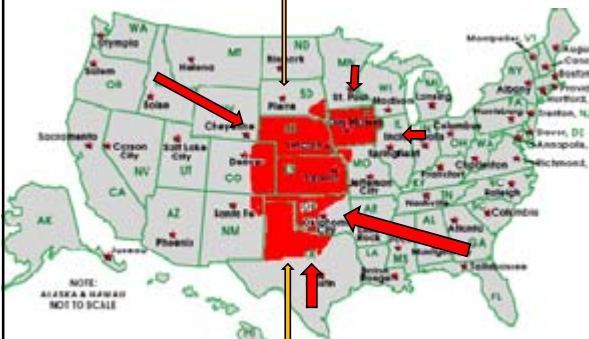
Feedlot Expansion

- 12,000,000 – 14,000,000 head per year
- 75% Great Plains
- 10% Iowa



NOTE: ALASKA & HAWAII NOT TO SCALE

Calves



NOTE: ALASKA & HAWAII NOT TO SCALE


Respiratory Disease

- Most Common Health Problem
 - 1999 Data
 - Respiratory Disease 14.4 %
 - Digestive 1.9 %
 - Lameness 1.9 %

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Respiratory Disease

- Most Common Health Problem
 - 2001 data
 - 57.1 % all deaths
 - 1994 – 0.103 % cattle
 - 1999 – 0.142 % cattle



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Impact Respiratory Disease

- Treatment costs
- Death loss
- Performance loss

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Performance Loss

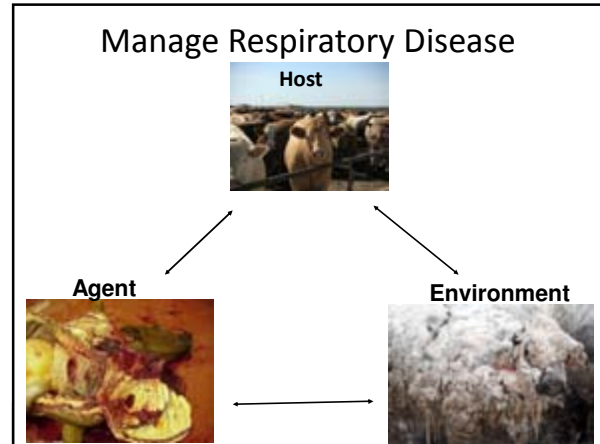
	Sick	Healthy
Head	218	1080
Death Loss	5.5 %	0.7 %
ADG (lb/day)	2.6	3.1
Cost of Gain	\$66	\$49
Medicine Cost	\$27	0
Net Return	\$23	\$146

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Performance Loss

Treatments	ADG (lb/day)	90 Day Gain (lb)	Difference (lb)
0	3.5	308	
1	3.1	273	35
2 or more	2.6	242	66

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- ### Pre-conditioning Calves
- Prepare calves feedlot
 - Vaccination respiratory and Clostridial diseases
 - Treated endo and ecto-parasites
 - Weaned 30 – 45 days
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- ### Pre-conditioning Calves
- Weaning
 - Calves recover from stress weaning
 - Adjust eating from bunk
 - Castrate and de-horn if not done at 3 months of age
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- ### Pre-conditioning Calves
- Advantage
 - Calves perform better
 - Worth more
 - \$3 – 6 / cwt
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- ### Receiving
- Ideal Cattle
 - Immunity
 - Bunk broke
 - Castrated & dehorned
 - Stress free
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Receiving Program

- Timing
- Capacity



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Facilities


- Dry clean pens
 - Bedded if wet or cold
- Shelter / windbreak
- Least 14 m²
- 0.3-0.4 m bunk space



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Receiving


- Fresh clean water
- Long stem grass hay
 - Not backgrounded
 - Stressed



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Risk

- Age/ weight
- Origin
 - Sale barn vs Direct
- Co-mingling
- Travel distance
- Weather
- Nutritional status



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Risk

- Predictable
 - Source, weight, etc.
- Evaluate each lot on arrival
 - Weather
 - Transit
 - Shrink < 7%
 - Appearance
 - Nasal and ocular discharge
 - Lameness

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Age / Weight

- Less 600 lbs
 - Acquired immunity not complete
- Importance of Pre-conditioning program



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Risk Category

- Low Risk
 - Yearling Cattle
 - Minimal stress
- Moderate Risk
 - Yearling Cattle
 - Stressed shipping or management
 - Calves
 - Pre-conditioned
 - Not stressed



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Risk Category

- High Risk
 - Calves
- High Risk, naïve
 - Fresh weaned off ranch



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Receiving

- 3 R's
- Rest
- Rehydration
- Rumen restoration



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Rest

- On arrival ????
- 12 – 24 hour rest
- 48 hours or longer
 - Visually appraise cattle
 - Up & walking
 - Drink water
 - Free choice hay



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3 R's

- Added stress
- Immune response
 - Active process above maintenance
 - Vaccine work
 - Negative energy balance
 - Dehydrated

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Receiving Protocols

- Vaccines
- Antibiotics
- Anthelmintic
- Implant
- Other
- Castrate
- Dehorn



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Receiving Protocols

- Castrate and Dehorning
 - On arrival vs re-implant
 - Depend on stress
- Temp ?

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Re-vaccination

- Validity
 - Stress
- Timeline

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Agent Factors

- Antibiotics
 - Meta-phylaxis
 - High Risk calves
 - Long lasting antibiotics (3 – 7 days)

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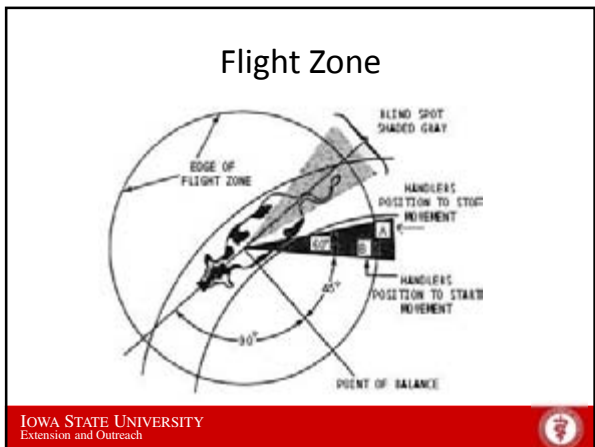
Meta-phylaxis

	Non medicated	Meta-phylatic
Morbidity	47.7 %	22.6 %
Mortality	2.3 %	0.5 %
ADG (kg/day)	1.03	1.11

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Facilities

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Low Stress Handling

- Don't hurry
- Herd animals
- Prey animals

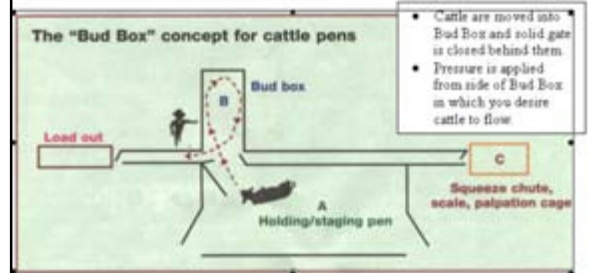


Low Stress

- Quiet
- No hot shots
- Use cattle instincts



Low-stress facility



Low Stress

- Acclimation
 - Train cattle
 - Herd
 - Initiators



Environmental Factors


- Climate
 - Temperature
 - Humidity
 - Precipitation
 - Wind



Environmental Conditions

- Dry clean hair coat
- Temperature range no wind -8 to 20 C
- Hot Weather
 - Wind good
 - Wet hide good
- Cold weather
 - Wind bad
 - Wet hide bad
- Mud
 - Every 4 inches increases maintenance 7%


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Identifying Calves

- More important antibiotic choice
- Identify early
 - Minimize lung damage


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Identifying Calves


- Observe Daily
- Every calf is observed
 - Prey animal
- Scoring System
 - Attitude
 - Respiratory

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Scoring System

- Attitude Score 0
 - Normal, cattle are bright and alert, hold their head up and readily move away from the observer




Scoring System

- Attitude Score 1
 - Mild depression, cattle's attitude is slightly depressed but respond quickly to observer and appear normal



Scoring System

- Attitude Score 2
 - Moderate depression, cattle stand with head down, ears droop, abdomen lack of fill and may appear floppy, cattle move away slowly from observer



Scoring System

- Attitude Score 3
 - Severe depression, cattle stand with head down and very reluctant to move, very noticeable gauntness of abdomen



Scoring System

- Respiratory Score 0
 - Normal, eyes clear, nose is clean with no discharge, normal breathing



Scoring System

- Respiratory Score 1
 - Mild Respiratory, serous discharge from eyes and/or nose, slight cough



Scoring System

- Respiratory Score 2
 - Moderate Respiratory, muco-purulent discharge, cough, increased respiratory rate



Scoring System

- Respiratory Score 3
 - Severe Respiratory, excessive muco-purulent discharge, harsh cough, open mouth breathing



Scoring System

- Attitude Scores most sensitive
 - Usually score 2
 - High morbidity pull score 1
- Temperature
 - 104°F






Antibiotic Treatment

- Antibiotics don't cure calves
- Antibiotics keep calves alive long enough for the immune system to work
- Treatment failure is usually not a failure of the drug but a failure of management or immunity


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Antibiotic Treatment


- Consistent
 - Evaluation
 - Resistance usually isn't issue
 - Little correlation antibiotic sensitivity and clinical response
 - Can't expect simple antibiotic regime perform miracle

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Respiratory Therapy

- Early Identification Critical
- Lung Damage
 - Bacteria minimal damage
 - Inflammatory response




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Antibiotic Selection

- Understand antibiotic
- Pathogen
- Calf

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Antibiotic Classes

- Penicillin
- Tetracycline
- Cephalosporin
- Fenicols
- Florquinilones
- Macrolides



Treatment Moratoriums

- Different sides
- Rational
 - Look at pharmacokinetics



Antibiotic Rotation

- Different sides
- Depends on first choice



Hospital Pens

- Prefer return to home pen
- Hospital Pens
 - 2-5% capacity
 - Provide fresh feed and water
 - Feed 2-3 x per day
 - 24 inches bunk space
 - Who is responsible



Thank You

