


Ranching 101
Animal Health and Disease Management
January 15, 2013



THE SAMUEL ROBERTS
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 FOUNDATION


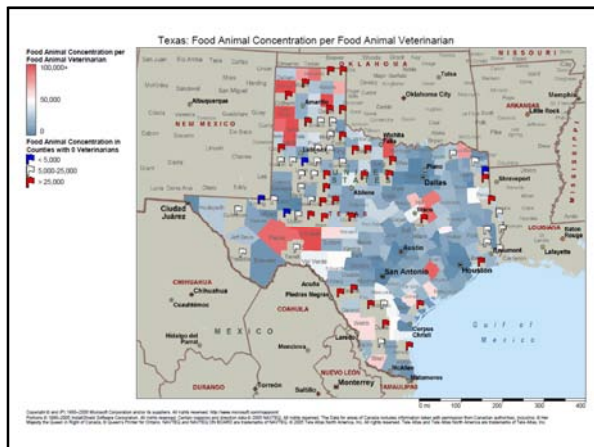
Clay Wright
 Livestock Consultant

Develop a Plan/Protocol
Biosecurity
Biologicals
Keep Records



Herd Health Protocol

- Develop with your vet.
- Allows for a quick reference guide
 - Proper protocol for vaccinations
 - Treatments
 - Injuries
 - Processing
 - etc.
- Assures consistency of management
- Make sure everyone is familiar with it

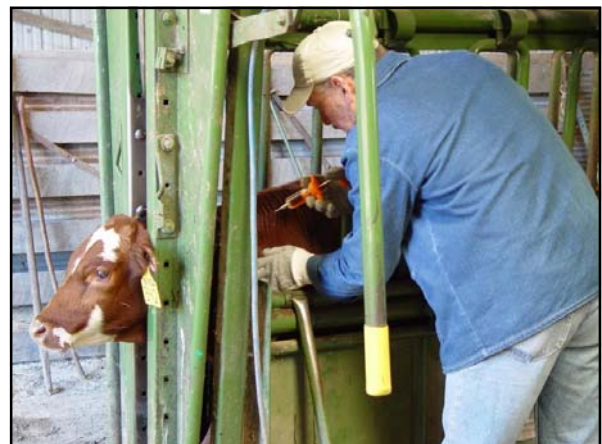



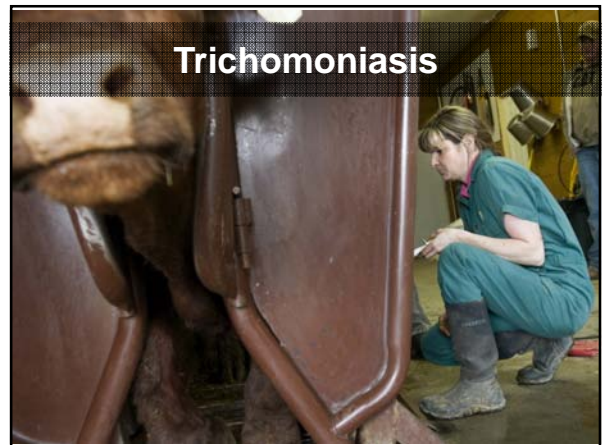
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Neospora caninum


- Coccidian parasite
- World-wide distribution (60% beef herds tested had @ least 1 infected)
- Infection is life-long
- Transmission
 - Dam fetus (Congenital)
 - Dog feces infected feed stuffs & water
- Signs
 - Abortion - 3 to 7 months gestation





Brucellosis

- Third trimester abortions with *B. abortus*
- Retained placenta
 - Once expelled will have a leathery appearance
- Endometritis
- Birth of dead or weak calves
 - Respiratory distress and lung infections
- Low milk yield



Center for Food Security and Public Health, Iowa State University, 2008


Johne's Disease

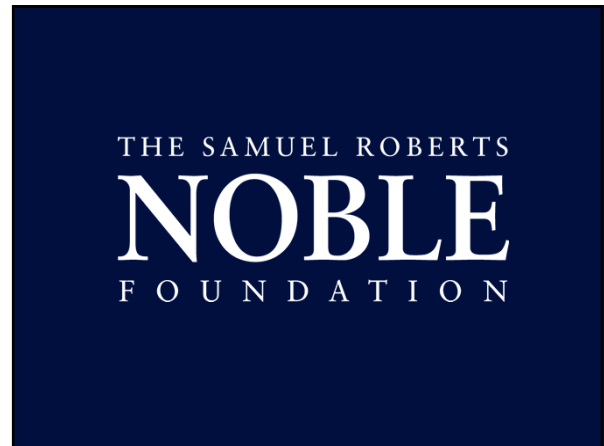
Chronic bacterial infection of lower intestinal tract
Mycobacterium paratuberc.

Takes years to develop

Usually occurs in mature animals

Diarrhea, weight loss, reduced production unthrifty, bottle jaw, deterioration, death, but good appetite





Cattle Vaccinations

Vaccinations

- Consider type first
 - Modified Live Virus (MLV) vaccine
 - Killed vaccine (KV)
- Keep out of direct sunlight
- Timing
 - Read labels
 - Maternal antibodies
 - Prior to stressors
 - Shipping
 - Inclement weather

Modified Live Virus (MLV)


- **MLV = Attenuated Infectious Vaccines**
- **Small dose of reduced virulence**
 - Virulence is the ability to cause disease
 - Attenuated is reduced virulence
- **The pathogen will reproduce within the animal to induce an immune response**

Modified Live Advantages

- **GREATER EFFICACY**
 - Best systemic, local, cellular, and humoral immunity
 - Most complete immune response possible
- **Only one shot required typically**
 - 2 doses are sometimes used
- **Longer duration of immunity**
 - Years to lifetime


Modified Live Disadvantages

- Most are **not approved for pregnant cows or calves nursing pregnant cows**
 - Potential for abortions
- **Very sensitive to sunlight, heat and time after reconstitution**
 - Mix up only what you can use in 1 hour
 - Takes more care to use




Killed Virus (KV)

- **Non-infectious vaccines**
- **Usually have an adjuvant that helps stimulate the immune system**
- **Usually takes a larger dose**
 - Has to have more virus' or bacterial/cc
 - Not necessarily larger dose quantity




Killed Virus Advantages

- **No potential to cause a disease**
- **Less sensitive to environment**
 - Sunlight
 - Temperature
- **Safe to use in pregnant cows or with calves that are nursing**



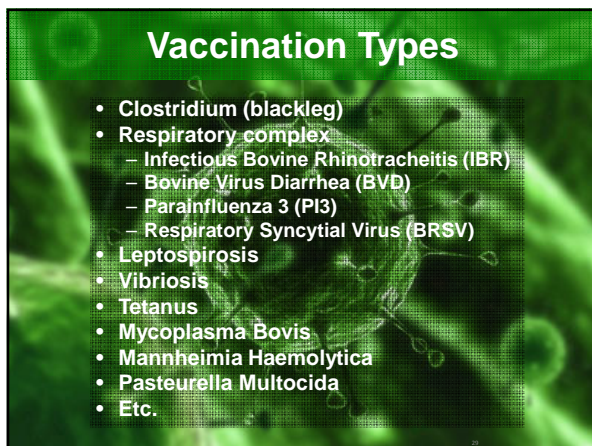
Killed Virus Disadvantages

- **Less likely to get as good immune response**
- **Potential for injection site reactions**
- **Shorter immunity period conferred**
- **Must be given at least 2x initially**
 - 1st dose "primes" immune system
 - 2nd dose actually confers immunity
 - Timing between doses is important
 - 2-6 weeks apart



Vaccination Types

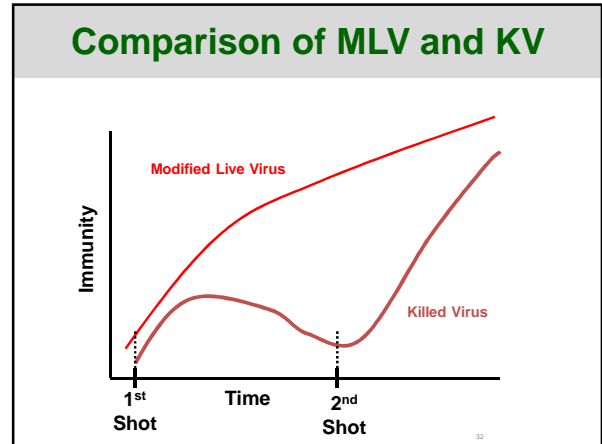
- Clostridium (blackleg)
- Respiratory complex
 - Infectious Bovine Rhinotracheitis (IBR)
 - Bovine Virus Diarrhea (BVD)
 - Parainfluenza 3 (PI3)
 - Respiratory Syncytial Virus (RSV)
- Leptospirosis
- Vibriosis
- Tetanus
- Mycoplasma Bovis
- Mannheimia Haemolytica
- Pasteurella Multocida
- Etc.



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Calf Vaccinations



Comparison of MLV and KV



Calf Vaccinations

2-3 Months of Age

- 1) 7- or 8-way Blackleg
- 2) 4-way Viral BRD*
- 3) Pasteurella bacterin & Leukotoxoid
- 4) Haemophilus bacterin
- 5) 5-way Lepto.

*Must be a killed vaccine if the cow has not been previously vaccinated with a MLV vaccine of the same product.

TAMU Extension L-5295, 4-99

Prewearing - Weaning

- 1) 7- or 8-way Blackleg
- 2) 4-way Viral BRD*
- 3) Pasteurella bacterin & Leukotoxoid
- 4) Haemophilus bacterin
- 5) 5-way Lepto. bacterin
- 6) Bang's vaccine (heifers)

*Must be a killed vaccine if the cow has not been previously vaccinated with a MLV vaccine of the same product.

TAMU Extension L-5295, 4-99

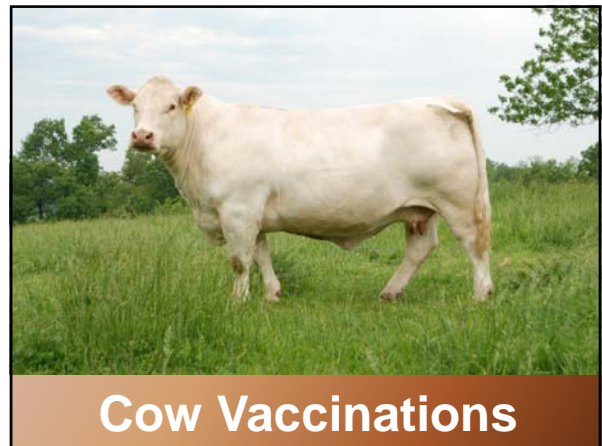
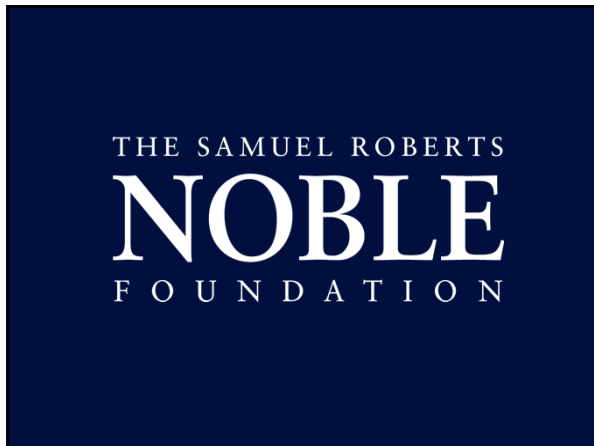
Vaccination Schedule†

1. 3-4 months of age (blackleg)
2. 4-6 weeks prior to weaning
Respiratory complex/blackleg*
3. At weaning
Respiratory complex/blackleg*
4. 14-21 days after weaning
Respiratory complex

<u>Good</u>	<u>Better</u>	<u>Best</u>
1-3-4	1-3	1-2-3


*Blackleg only needs to be re-administered at 1 of these times if given at calf working.

†From: <http://etbeef.tamu.edu>



Precalving:
6-9 months bred

- 1) 7- or 8-way Blackleg
- 2) 4-way Viral BRD*
- 3) 5-way Lepto. bacterin
- 4) Vibrio bacterin
- 5) **Scours vaccine**
- 6) **Pasteurella bacterin & Leukotoxoid**
- 7) **Haemophilus bacterin**



*Must be a killed vaccine if the cow has not been previously vaccinated with a MLV vaccine of the same product.

TAMU Extension L-5295, 4-99

Heifer and Bull:
3-6 weeks before breeding

- 1) 7- or 8-way Blackleg
- 2) 4-way Viral BRD (MLV)
- 3) 5-way Lepto. bacterin
- 4) Vibrio bacterin
- 5) Pasteurella bacterin & Leukotoxoid
- 6) Haemophilus bacterin



Converting to MLV



Using MLV in suckling calves

- Cow must have received same MLV while open
 - Product labeled for this use
 - Bovishield Gold FP, Pyramid
 - At least 30 d prior to breeding
- **Booster cow annually**

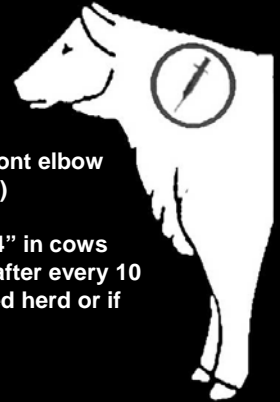


MLV Advantages

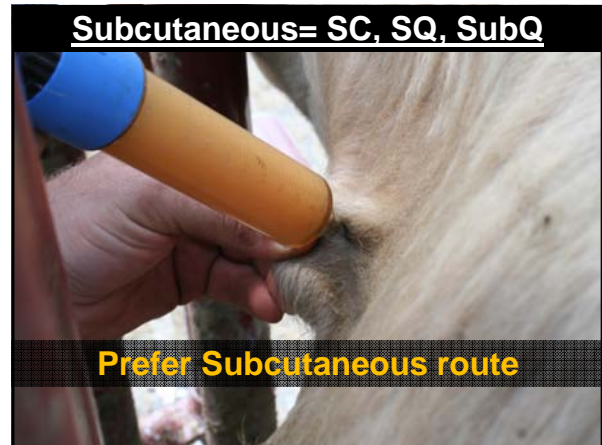
- ✓ Better degree of passive immunity conferred to calves (in utero & via colostrum).
- ✓ Can vaccinate calves with MLV while on the cow.
- ✓ Can give MLV Viral BRD at branding
- ✓ Titers and seroconversion equal to vaccinating 3 weeks to weaning and again at weaning.

Kirkpatrick, et al., JAVMA 2008; 233:136-142

Injections



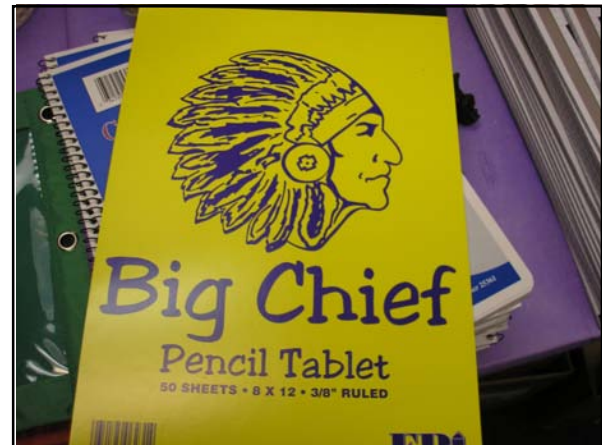
- Neck region, or behind front elbow
- Prefer subcutaneous (SQ)
- No more than 10 cc/site
- Space far enough apart, 4" in cows
- Change needles at least after every 10 animals. More if registered herd or if anaplasmosis exists
- Clean needles
- Clean injection site





Route of Administration									
SQ (1/2 to 1 inch needle)			IV (1 1/2 inch needle)			IM (1 to 1 1/2 inch needle)			
Viscosity of Injectable									
<300 lbs.	300-700 lbs.	>700 lbs.	<300 lbs.	300-700 lbs.	>700 lbs.	<300 lbs.	300-700 lbs.	>700 lbs.	
18 gauge	18-16 gauge	16 gauge	18-16 gauge	16 gauge	16-14 gauge	20-18 gauge	18-16 gauge	18-16 gauge	
Thin Liquids Example: Saline									
18-16 gauge	18-16 gauge	16 gauge	16 gauge	16-14 gauge	16-14 gauge	18 gauge	16 gauge	16 gauge	
Thick Liquids Example: Oxytetracycline									

Select the needle to fit the cattle size.
Use the smallest practical size of needle you can, without bending it.



- National Beef Quality Assurance Records Guidelines
- Individual or group identification
 - Date treated
 - Product Administered (Company Lot or Serial #)
 - Dosage used
 - Route of administration and person giving the product
 - Withdrawal date

CATTLE PREVENTATIVE HERD HEALTH PROCESSING INFORMATION

Owner: John Doe Ranch: Healthy Calf Ranch Premises ID: 123456

Initial Working (Branding) Calves Date: Apr. 29, 2008

Sex	M #	F #	Dehorn #	Castrate #	Knife Brand
	<u>55</u>	<u>59</u>	<u>83</u>	<u>55</u>	<u>RSW</u>

Site	Product	Dose (mL)	Route	Lot#	Exp. Date	Initials
(1)	<u>Covexin-8</u>	<u>5 ml</u>	<u>SC IM IV Oral</u>	<u>A591121</u>	<u>5 Jun 07</u>	<u>RSW</u>
(2)	<u>Ivermectin</u>	<u>1 ml/22 lbs</u>	<u>SC IM IV Oral</u>	<u>123987</u>	<u>12 Aug 07</u>	<u>RSW</u>
(3)	<u>Cattlemaster 4</u>	<u>2 ml</u>	<u>SC IM IV Oral</u>	<u>458GW6</u>	<u>5 Aug 08</u>	<u>RSW</u>
(4)			<u>SC IM IV Oral</u>			
(5)			<u>SC IM IV Oral</u>			

Brand: _____ Location: _____

Secondary Working (Weaning)

Sex	M #	F #	Dehorn #	Castrate #	Knife Brand
(6)					
(7)					
(8)					
(9)					
(10)					



Beef Quality Assurance
A SAFE, WHOLESOME AND HEALTHY BEEF SUPPLY

TEXAS BEEF QUALITY PRODUCER PROGRAM

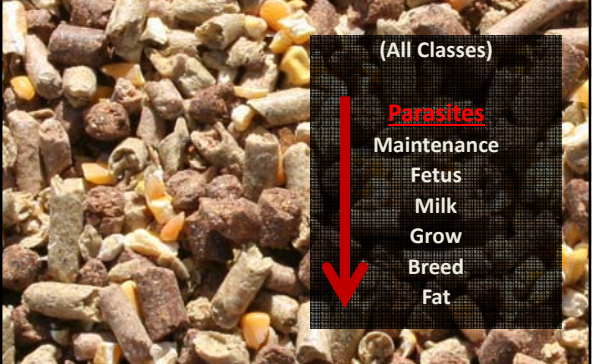
The mission of the Texas Beef Quality Producer (TBQP) Program is to promote good management practices for cattle producers in an effort to strengthen consumer confidence in beef as a wholesome food product.

BQAONLINE.COM



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Hierarchy of Nutrient Use



(All Classes)

- Parasites
- Maintenance
- Fetus
- Milk
- Grow
- Breed
- Fat

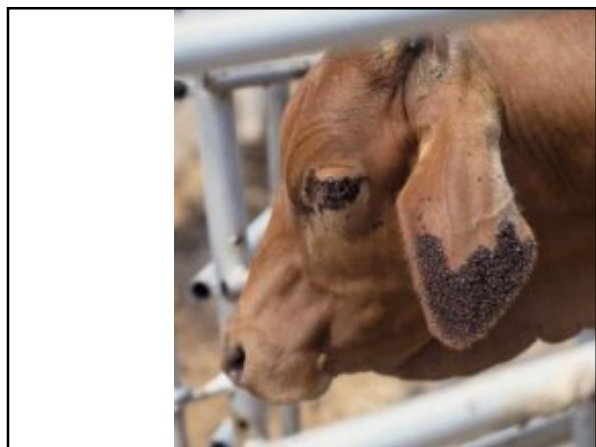
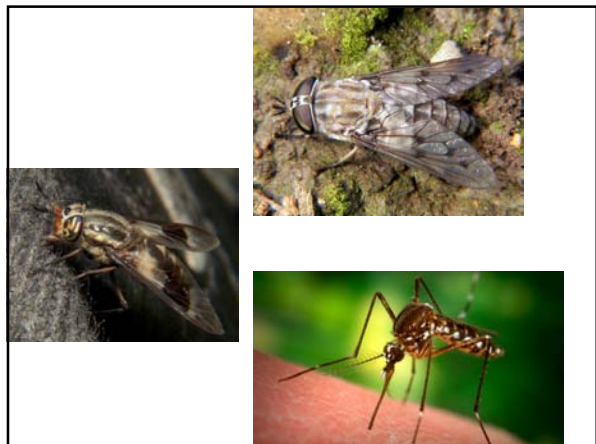


External Parasites

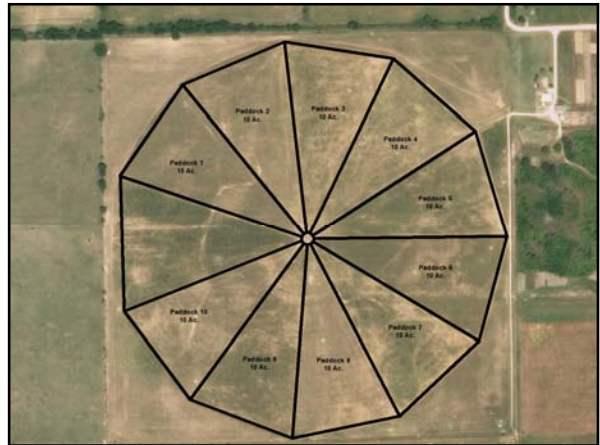
- Constant irritation
- Increased nutrient demand
- Lower milk production (-10-50# WW)
- Lower weight gain (-10-50# gain)
- Lower conception rates
- Disease (pinkeye, anaplasmosis, etc.)
- Product damage (hide and meat)

Cost us over \$1 billion per year!!



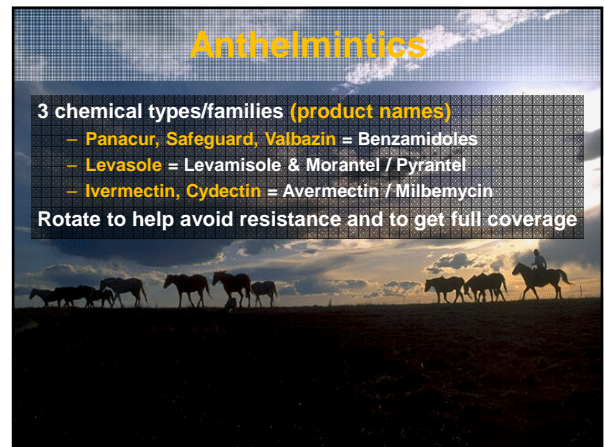
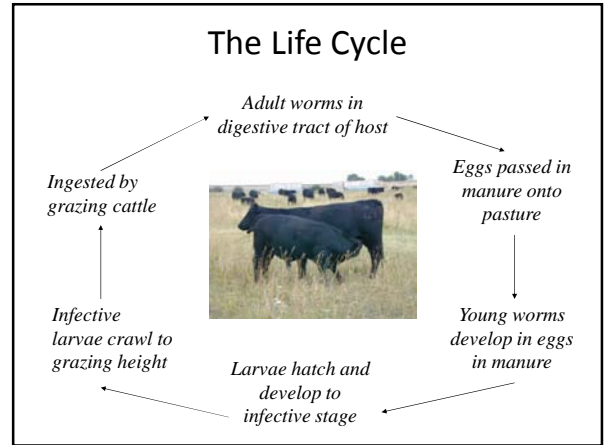
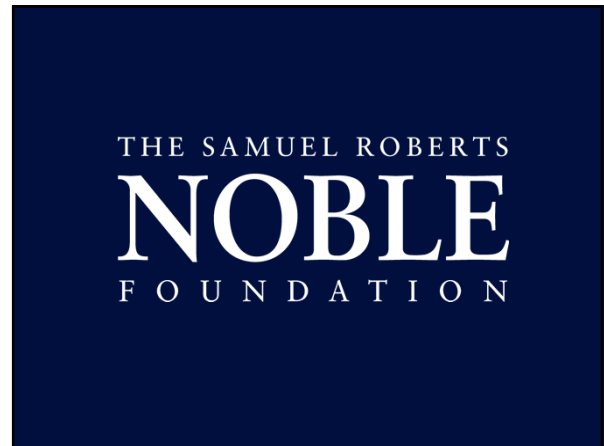
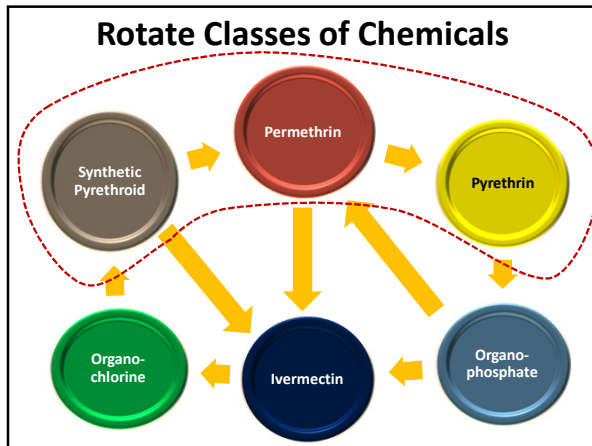






Chemical Withdrawal Times

Product	Days to Slaughter
Co-Ral	0
Sabre Pour-on	0
Eprinex Pour-on	0
Ravap 28.7%	1
Elector	2
Prolate/Lintox	3
Lyssoff 7.6%	35
Dectomax Pour-on	45
Ivomec Pour-on	48

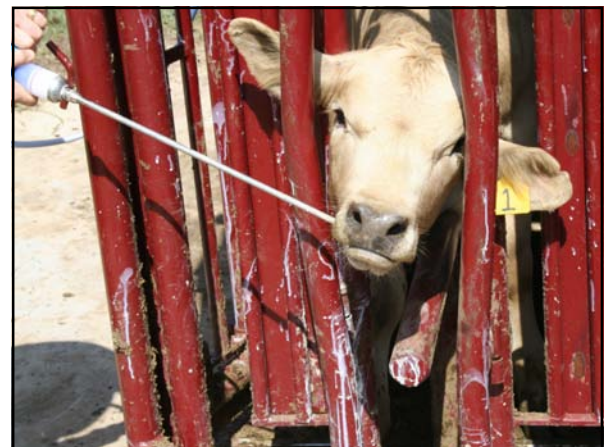


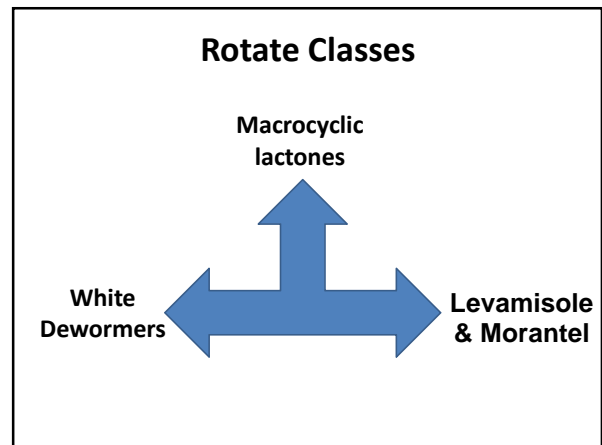


% Positive Fecal Samples

Parasite	Percent Positive Samples by Region			
	Central	Southeast	West	Average
<i>Strongyle</i>	87.7	89.9	77.5	85.6
<i>Nematodirus</i>	19.2	9.7	23.8	18.0
<i>Trichuris</i>	7.6	7.0	6.3	7.1
<i>Coccidia</i>	58.0	63.1	60.5	59.9
<i>Tapeworm</i>	11.9	13.0	17.5	13.7

Parasites on US Beef Cow-Calf Operations, 2007-2008; USDA-APHIS Dec 2009





Fall De-Worming Warning

- Cattle "grubs"
 - Heel fly larvae
 - Eggs laid in late spring; hatch; burrow; begin internal migration.
 - In fall, larvae are in neck region; grubicide can cause severe reaction.
 - Best treated July 1-October 1; no later
 - Earlier treatment more effective and allows more product choices in fall.

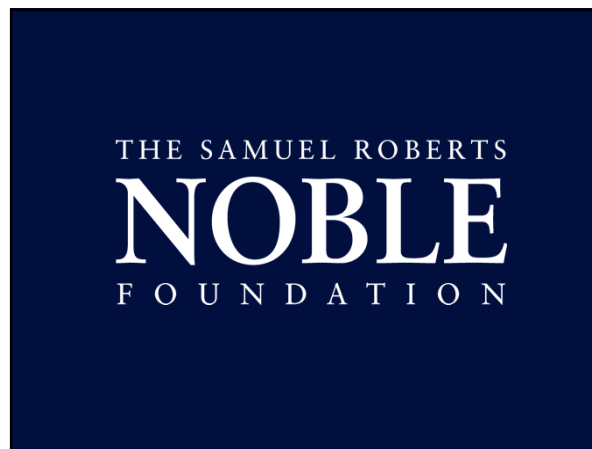
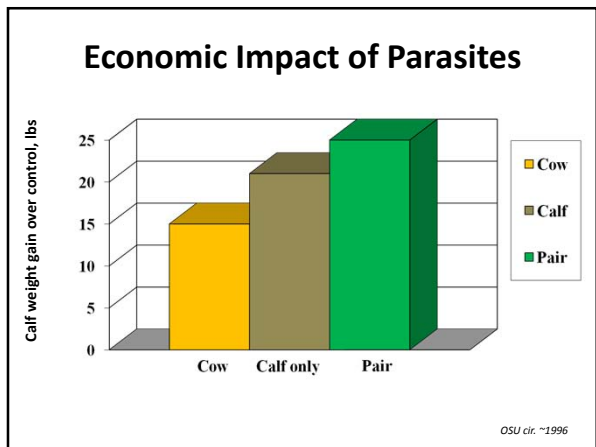


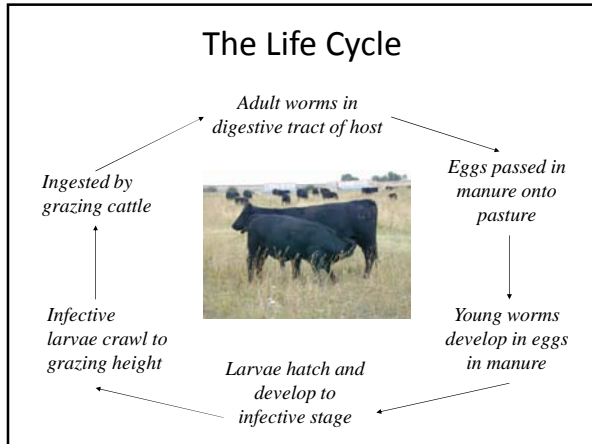


Annual Parasitic Control Program

Considerations

- **Time of application**
 - Management Practices (branding, before breeding season, weaning)
 - Environmental Conditions
 - Parasite Life Cycles
- **Parasite Resistance**
 - Alter *Chemical Classes* of compound used on an annual basis
- **Possible Negative Host-Parasite Reactions**
 - Grub treatment in late fall





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Designed by Amy, amystudio.com

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