VACCINE PROGRAMS FOR YOUR HERD

JEN TAYLOR DVM

GOALS

- Produce a good immune response
- Provide protection against clinical disease
- Give long lasting protection
- Result in minimal side effects or reactions
- Provide a positive cost/benefit ratio compared to risk of disease

DIFFERENT CLASSES OF CATTLE

Calves

Stockers

Replacement Heifers

Cows

Bulls

- Challenge
  - Environmental
  - Neighborhood
- Class of Cattle
- Source of cattle
- Marketing
- Stressors
  - Nutritional
  - Weather

VACCINE TYPES

- Intranasal
  - Inforce 3 (IBR, BRSV, PI3)
  - TSV-2 (IBR and PI3)
  - Nasalgen IP (IBR and PI3)
  - Once PMH IN (Pasteurella and Mannheimia)
- Modified Live Injectable
  - Viral
  - Viral and bacterial (killed) combined
- Killed
  - Viral
  - Bacterin
  - Protozoal

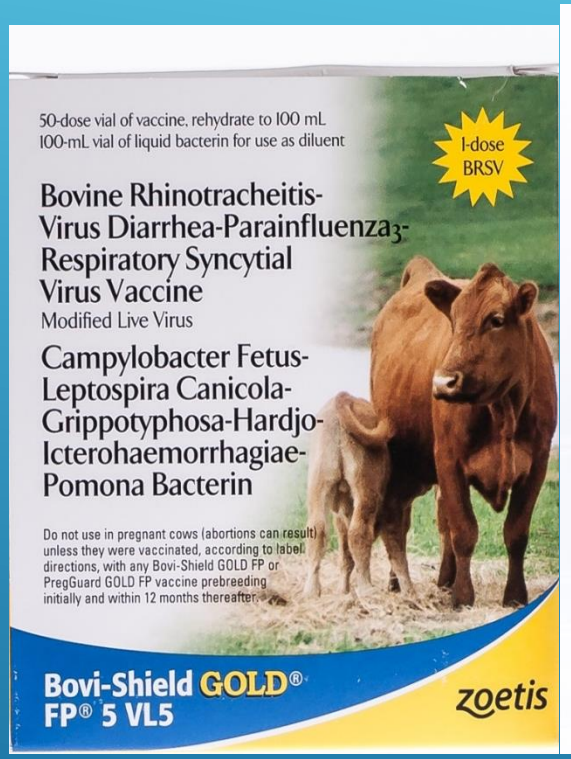
Differences in Vaccine Types		
Characteristic	MLV	Killed
Duration of Immunity	Longer	Shorter
Spectrum of Coverage	Many Strains	Narrow
Need to Booster	Less	Yes, Required
Amount of Antigen	Less	More Vaccine Reactions
Safety	Can Cause Disease	Safer

COW CAUSES OF REPRODUCTIVE FAILURE

- Bacterial
  - Brucellosis (Bang's)
  - Leptospirosis (Lepto)
  - Vibriosis (Vibrio)
- Viral
  - IBR
  - BVD type 1 and 2
- Protozoal
  - Trichomoniasis (Trich)
  - Neosporosis (Neospora)

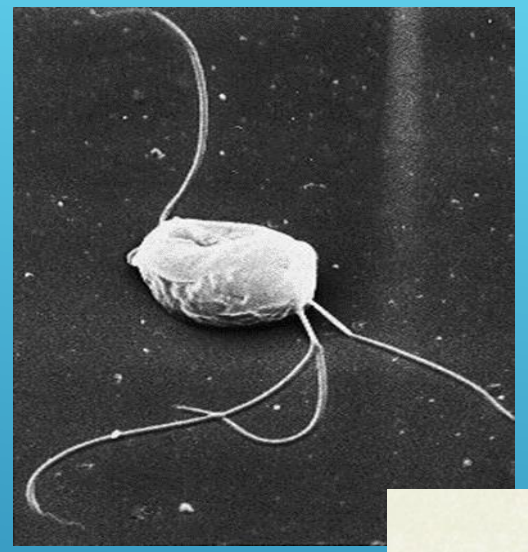
MY MINIMUM FOR ANY SITUATION

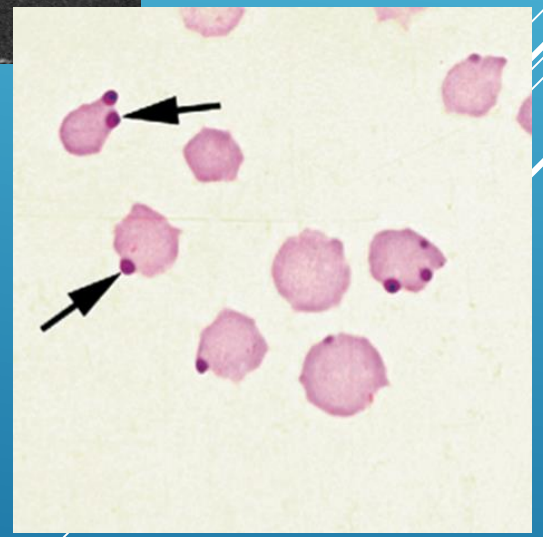
- 5 way viral (IBR, BRSV, PI3 and BVD type 1and 2)
- Lepto 5
- Clostridial
- Vibrio



COW VACCINES BASED ON NEED

- Trich
- Anaplasmosis
- H.somnus
- P. multocida
- M. haemolytica
- Scours (E. coli, Rota, Corona, Salmonella etc.)
- Neospora
- Pinkeye





REPLACEMENT HEIFERS

- Transition from calfhood vaccine
  - Lepto
  - MLV Respriatory/Reproductive- 2 doses
  - Booster Clostridial
  - Vibrio
  - Foothill Abortion
  - Anaplasmosis

CLOSTRIDIALS –ALL CLASSES

- Blackleg -C. chauvoei
- Red Water- C. hemolyticum
- Enterotoxemia- C. perfringes types B,C and D
- Malignant Edema –C. septicum
- Black liver- C. novyi
- Black neck C. sordelli
- Tetanus- C. tetani

CALF AND STOCKER VACCINE WHY?

ANTIMICROBIAL TEST-KIRBY BAUER (KB) MAMMALIAN

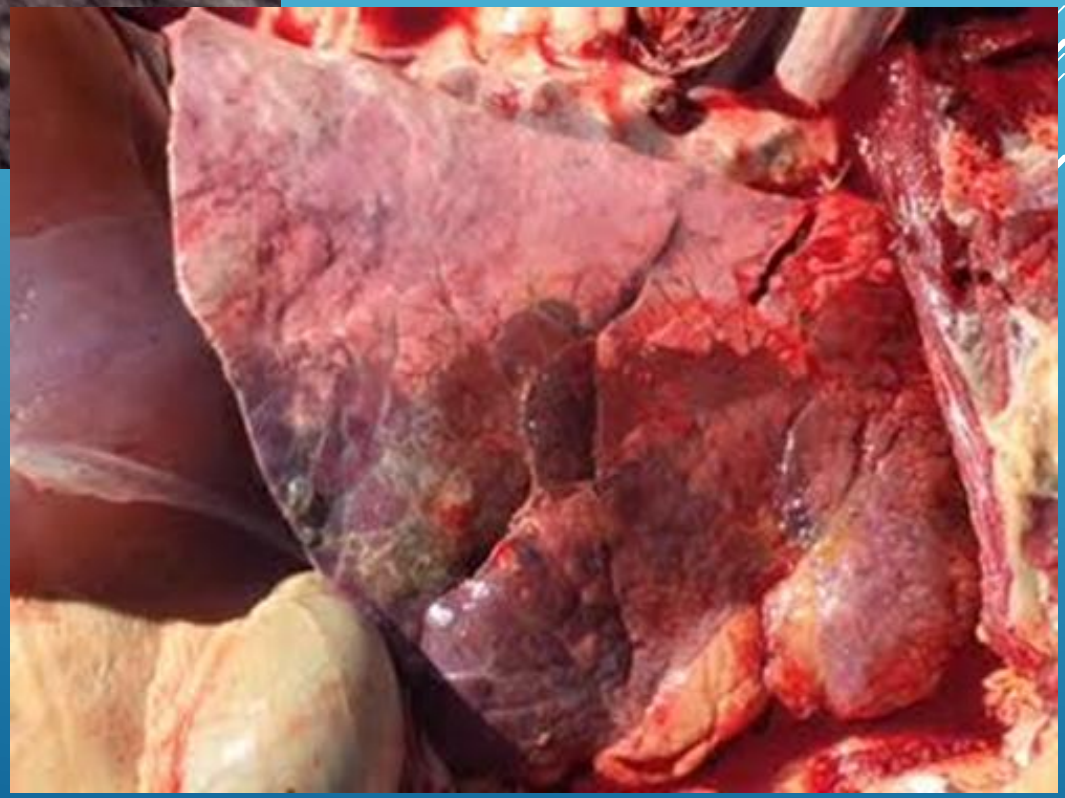
Animal/Source	Specimen	Specimen Type	Isolate
Steer black	Site 1	Lung Tissue	Mannheimia haemolytica complex

U.S. - FDA APPROVED ANTIMICROBIAL AGENTS -- Approved for use in this animal species --

Antibiotic	Reading	Interpretation
Ceftiofur	32mm	sensitive
Erythromycin	6mm	resistant
Penicillin	28mm	sensitive
Spectinomycin	20mm	sensitive
Tetracycline	10mm	resistant
Sulfonamides	6mm	resistant
Enrofloxacin	24mm	sensitive
Ampicillin	32mm	sensitive
Tilmicosin	6mm	resistant
Florfenicol	6mm	resistant
Tulathromycin	6mm	resistant

PNEUMONIA

- Viral
  - IBR
  - BRSV
  - PI3
  - BVD type 1 and 2
- Bacterial
  - Pasteurella multocida
  - Mannheimia haemolytica
  - Haemophilus somnus



PINKEYE

- Commercial
  - Piliguard- trivalent M. bovis single dose
  - Pinkeye shield XT4 M. bovis single dose
  - 1-Site XP- 8 strain M. bovis single dose
  - Ocu-guard MB-1 M. bovis single dose
  - SolidBac Pinkeye IR/PR M. bovis single dose
- Autogenous
  - Moraxella bovoculi
  - Strains of both M. bovis and M. bovoculi specific to your herd
  - Time to culture and produce vaccine
  - Drift
  - Cost and scale

CALF SCOURS

Bacteria	Calf Ages
E. coli	<5 da
C. perfringens B, C	5-30 da
C. perfringens D	>30 da
Salmonella	>15 da
Viruses	
Rotavirus	5-15 da
Coronavirus	5-15 da
BVD	>30 da
Protozoa	
Cryptosporidia	5-30 da
Coccidia	>15 da

SCOURS VACCINES FOR CALVES

- Calf-Guard (Rotavirus and Coronavirus) orally newborn
- Bovine Ecolizer (C. perfringens type C and K99 E. coli) orally newborn
- First Defense (Corona virus and K99 E. coli) orally newborn
  - Practical?
  - Is there a better way?

VACCINATE THE COW

- Scourguard 4K and 4KC (2 doses 3 weeks apart, 2nd dose 3-6 weeks pre-calving. Annually 3-6 weeks pre-calving)
- Scour Bos 4 and 9 (8-16 weeks prior to calving, booster in 4 weeks, 8-10 weeks prior to calving annually)
- Guardian (3 months pre-calving, 2nd dose in 3-6 weeks. Annually 5-7 weeks pre-calving)

  Vaccinate the pregnant cow/heifer

  First year requires a booster

  Requires good colostrum intake by newborn

BULLS

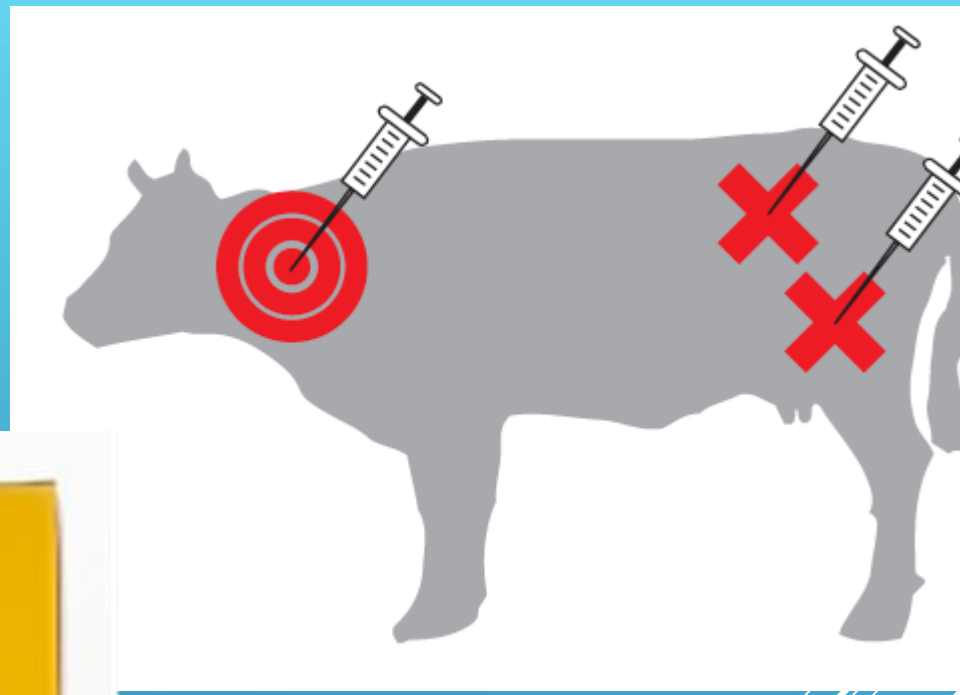
- Vaccinate like the cows with these exceptions
- Vibrio –Vibrin 2x the dose
- Trich???
- BVD Status
- Anaplasmosis

IMMUNE FUNCTION

- Nutrition
  - Immune response to challenge changes requirements for nutrients
  - Deficiencies increase susceptibility to disease
  - Once developed deficiencies lead to increased severity of disease
  - Mineral deficiencies depress immune function and resistance to stress even with sufficient energy and protein

BQA- BEEF QUALITY ASSURANCE

- Storage
- Handling
- Mixing
- Dose
- Route



Merced-Mariposa Cattlemen's Association

Please Join us on
Thursday March 16, 2017

Annual Spring Tour Dinner

Social Hour - 5:30pm
Dinner & Presentation - 6:00pm

Speakers will include:
CCA Representatives
Turlock Livestock's Steve Faria
Dr. Randy Anderson CDFA Veterinarian on New Trich Regulations
Guest Speakers from our Sponsors

Henderson Park
Community Recreation Building
3335 E. Merced Falls Road
Snelling, CA

Sponsors: John Garino – Cargill Animal Nutrition, Craig Edling – Animal Health International Inc., Zinpro, Altosid IGR

RSVP to Jen Taylor (530) 514 - 1610 or Liz Reyes (209) 480 - 5561 by Thursday, March 9th

QUESTIONS?