

Bringing more preventative products to the market for producers

Cindy Wolf, DVM

wolfie229@gmail.com

507-450-5453

Rushford MN

First Place - Shepherd
Larry Blain, Utah
End of the Day



US Sheep

- ✓ Range
- ✓ Farm flock
- ✓ Solar grazing
- ✓ Show
- ✓ Hobby/Pet
- ✓ Types of sheep:
wool, hair, meat,
heritage breeds
- ✓ But some diseases
are common
across flock types

- Vaccination is intended to improve flock health, increase productivity and reduce inputs.
- ROI on an effective vaccination program is high.



Vaccine Approval

- Industry has to show a need, i.e. NAHMS data can assist
- Industry has to convince/work with a vaccine manufacturer
- Vaccine has to be approved by USDA-CVB to be licensed and widely available
- Vaccine companies have grown large and small industries with small sales are not attractive to them.



Vaccine Approval

- There are vaccine companies that will produce autogenous vaccines for a flock or epidemiologically linked flocks.
- The costs to the producer are affordable and the potential benefits can be great.
- There is less efficacy testing on autogenous vaccines.

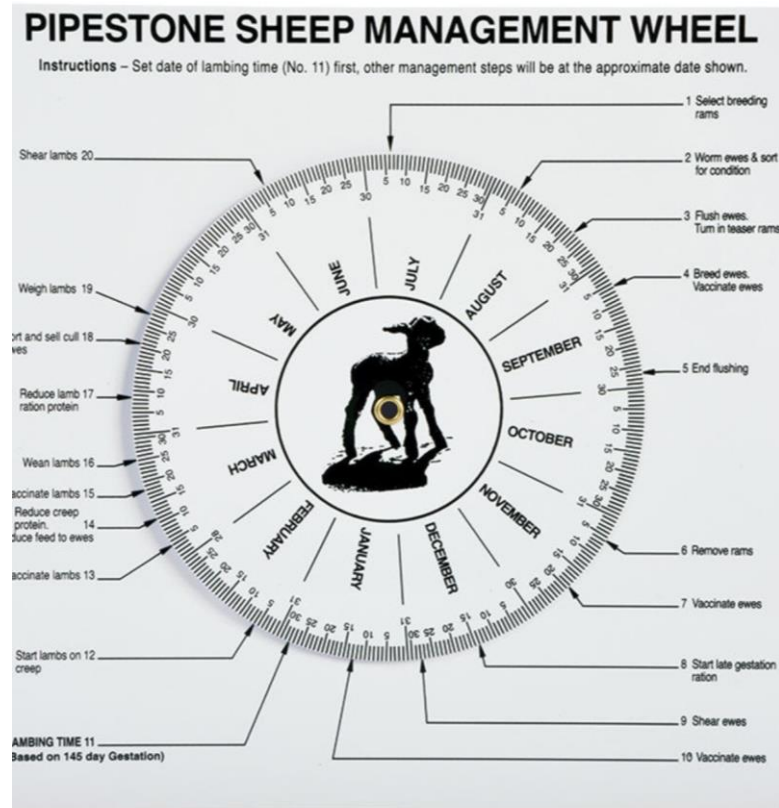
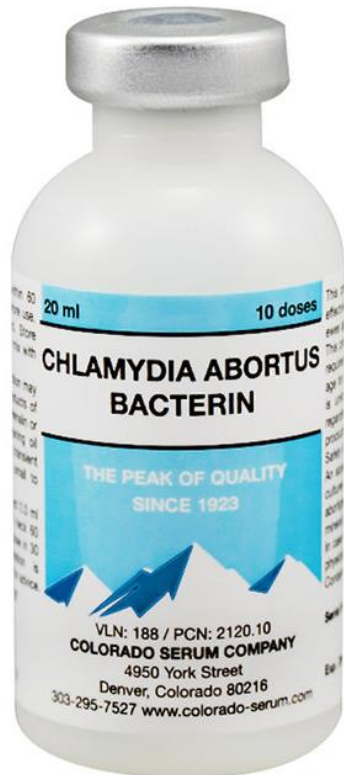


Vaccine Approval

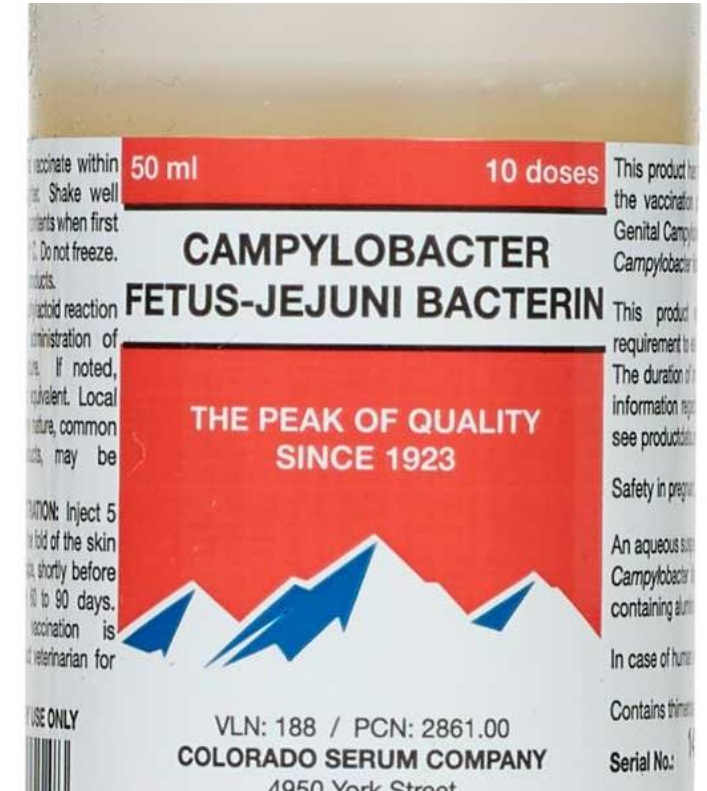
- In an ideal world where an autogenous vaccine seems to be helpful in reducing its targeted problem, then it is possible for the company to consider working with the USDA CVB to do the required testing to get the product nationally licensed.
- Vaccine technologies are changing fast which should be helpful in the future regarding developing new effective vaccines.



Currently Available Vaccines



- Or have an autogenous version made from isolate out of your flock or related flock



Pre-breeding vaccination
Repeat @ 90 days gestation

Why Use? History of late-term infectious abortions or at risk through purchasing



Commonly Used Clostridial Vaccines

ENTEROTOXEMIA

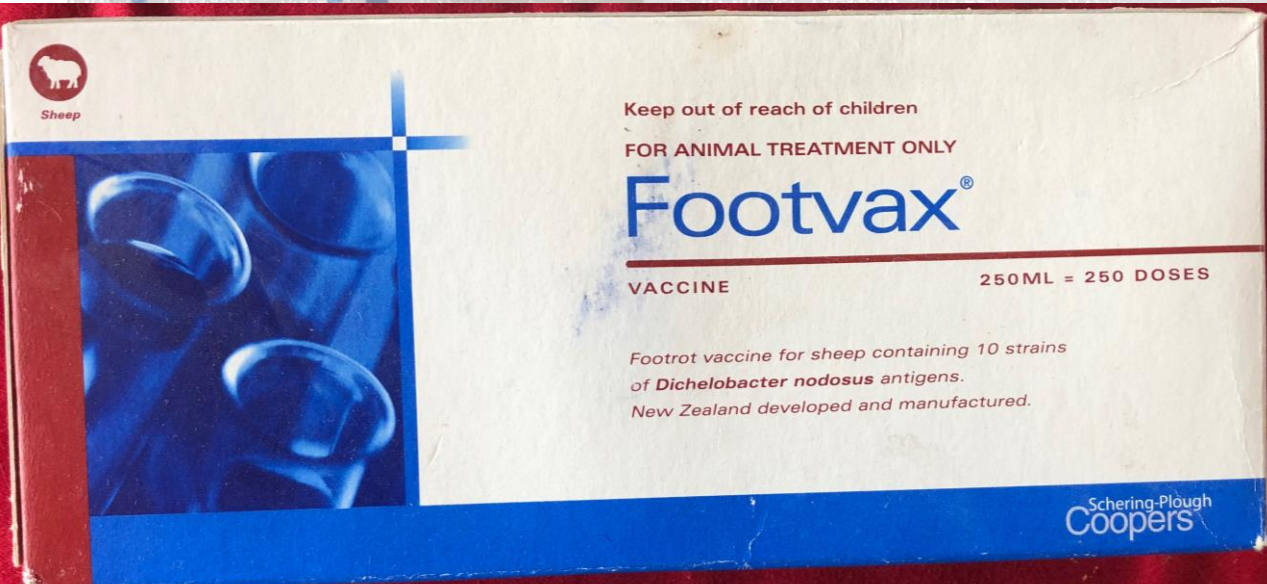
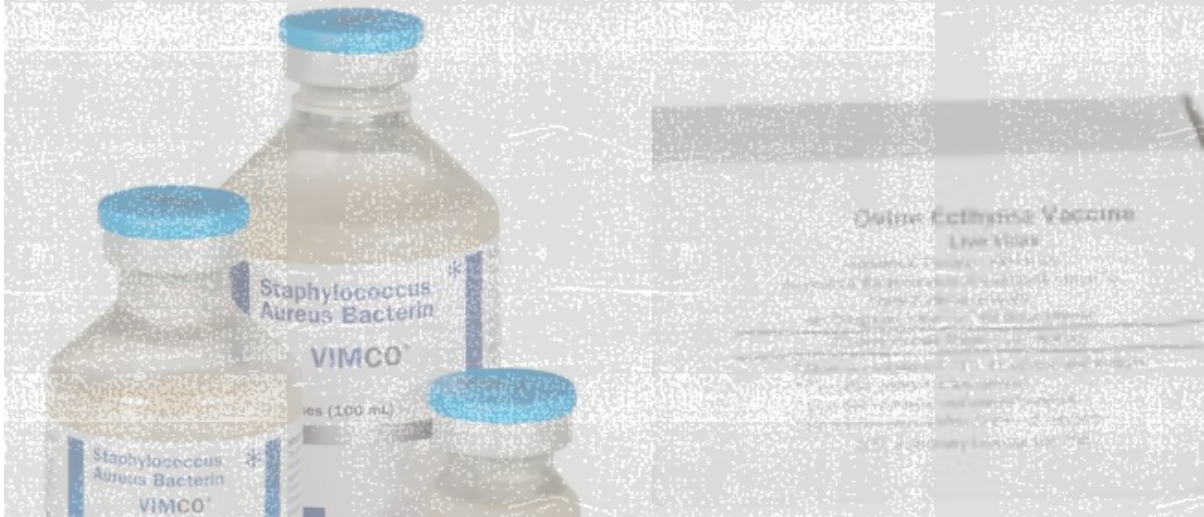
- Sheep need annual vaccination
- Ewes vaccinated pre-lambing after their initial series as lambs
- Lambs on well-milking ewes need protection
- Lambs on feed (grain or grazing) need protection
- Goats' immunity doesn't last as long as in Sheep
- Goats need to receive *Clostridium perfringens* type D vaccine 2 to 4x per year



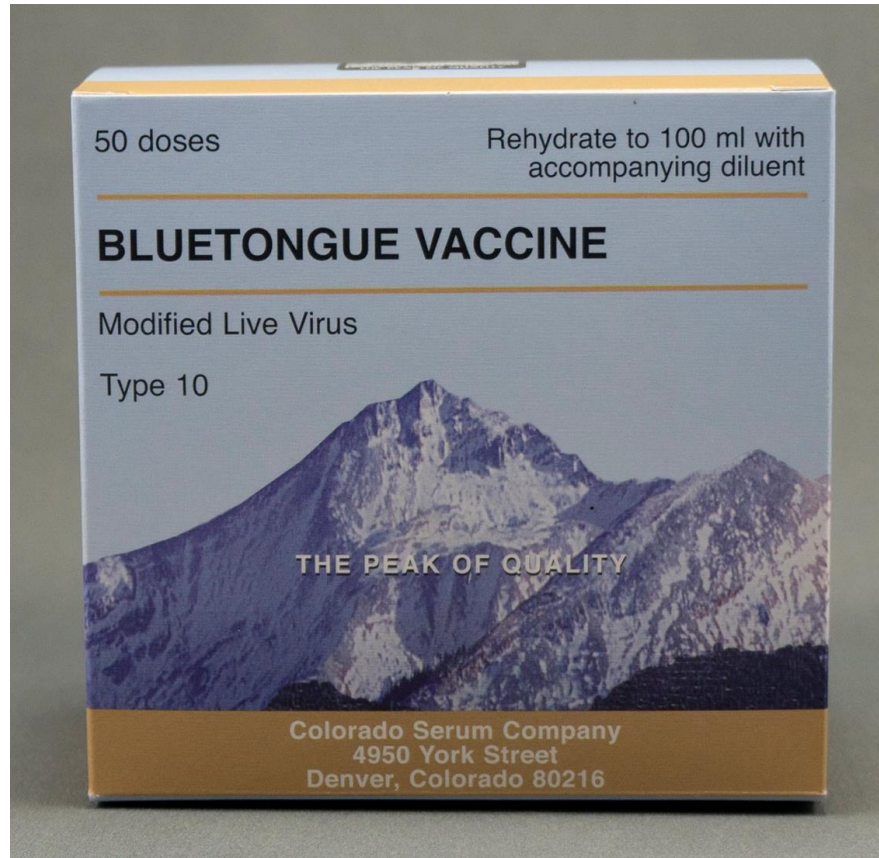
Passive or active tetanus prophylaxis needed



VACCINE CHOICES



Bluetongue



- Multiple serotypes infect sheep now
- Commercial vaccine has serotype 10
- California Wool Growers has a regionally specific vaccine produced by Hygeia lab, killed vaccine, serotypes 10,11,17
- With climate change, suspect more Bluetongue virus within the country

Caseous Lymphadenitis (CL)

Give vax. at weaning or dry-off in infected or high-risk populations



- Currently labelled for sheep, not goats
- Consider production of autogenous vaccine for use in goats as vaccination is useful part of control plan

Future Vaccine Needs

- We need vaccines for:
 - Anti-abortion vaccine that combines *Campylobacter jejuni* & *Chlamydia psittaci* +/- *Toxoplasma gondii*
 - Virulent footrot
 - Scald vaccine*
 - multiple serotypes of Bluetongue
 - Cache Valley Virus Vaccine*
 - Species-specific respiratory vaccine*
 - Anti-internal parasites
- We have vaccines for...
 - Clostridial species
 - Staph aureus (anti-mastitis)
 - Caseous Lymphadenitis
 - Soremouth



Key Future Vaccine Needs

Vaccines effective against:

- ✓ Internal parasites, primarily *Haemonchus contortus*
- ✓ Versus Coccidiosis
- ✓ Pathogens such as Bluetongue & Cache Valley Virus expanding due to climate/vector change
- ✓ Combined Campy. jejuni and Chlamydia sp.
- ✓ these would be my priorities as other important ones are available or almost available



Thank you!

