

Calf vaccination is an important part of every herd health program. An effective vaccination protocol can be developed to fit most operation and management approaches. This guide describes three calf vaccination approaches that have been successfully implemented in cow-calf operations in New Mexico. However, producers should consult with their local veterinarian to design a vaccination program that fits their particular operation.

The foundation for each vaccination approach discussed below is the administration a 7- or 8-way clostridial vaccine at 2 to 3 months of age (branding), plus a modified-live virus (MLV) vaccine given at the same time for viruses commonly associated with bovine respiratory disease (BRD) complex. The viruses included in most MLV-BRD vaccines are: infectious bovine rhinotracheitis (IBR), bovine viral diarrhea (BVD), parainfluenza-3 virus (PI3), and bovine respiratory syncytial virus (BRSV). Vaccinations given at 2 to 3 months of age produce initial immunity. However, additional “booster” vaccinations should be administered at or near weaning so that the immune systems of the calves become even better prepared to fend off actual disease challenges. The difference in the three options described below is the timing of booster vaccinations at or near weaning. Producers should consult their veterinarian to determine which MLV vaccine to use at branding.

These are suggested guidelines to induce immunity in calves. Producers should be aware that many of the value added calf marketing programs have more specific guidelines that must be followed for enrolled calves to be eligible to receive price premiums (for more information see *Preconditioning Beef Calves*, New Mexico State University Extension Circular 637, available at http://cahe.nmsu.edu/pubs/_circulars/CR-637.pdf, and *Value Added Calf Programs for New Mexico Livestock Producers*, NMSU Extension Guide B-220, available at http://cahe.nmsu.edu/pubs/_b/B-220.pdf).

OPTION A

Option A describes the most effective protocol for developing immunity, but it may not be compatible with all ranch management systems. This option is for calves that will remain on the ranch at least three weeks after weaning (45 days is recommended). Research from New Mexico State University using data from over 800 calves from 48 sources showed that separating weaning and feedlot entry by 41 days or more produced greater net return in the feedlot than when calves were shipped to the feedlot less than 40 days after weaning. However, if the ranch does not retain ownership, this approach is only cost-effective when a sufficient premium is paid for the calves to offset the extra risk and costs of labor and management.

Vaccination Timeline—Option A:

- **2 to 3 MONTHS OLD:**
 - Clostridial 7-way
 - MLV – IBR, BVD, PI3, BRSV
- **WEANING:** (Let calves sit overnight before processing; this gives time for their cortisol levels to drop prior to vaccination, enabling a better immune response.)
 - MLV – IBR, BVD, PI3, BRSV
 - Pasteurella
- **POST-WEANING:** (3–4 weeks)
 - MLV – IBR, BVD, PI3, BRSV
 - Clostridial 7-way with *Haemophilus somnus* *H. somnus*
 - +/- Pasteurella (a pasteurella booster may be required by some marketing venues)

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OPTION B

Option B is designed for calves processed 3 to 4 weeks prior to weaning, then shipped the day of weaning. This option is preferable over Option C because it allows time for the calves to maximize immunity in response to the booster vaccinations they received 3 to 4 weeks before weaning. With this approach, calves are more capable of handling the stress from weaning and shipping combined with the stress and disease challenge inherent to commingling.

Note: Consult your veterinarian for specific health program recommendations and for guidance on choosing pharmaceutical products, especially when using modified live products. Always follow label directions and Beef Quality Assurance guidelines when processing calves.

Vaccination Timeline—Option B:

- **2 to 3 MONTHS OLD:**
 - Clostridial 7-way
 - MLV – IBR, BVD, PI3, BRSV
- **PRE-WEANING:** (3–4 weeks prior to weaning)
 - MLV – IBR, BVD, PI3, BRSV
 - Clostridial 7-way with *H. somnus*
 - Pasteurella

OPTION C

Using Option C, calves are processed at weaning. This protocol is a good approach to calf vaccination when it is not practical to gather prior to weaning. When employing Option C, calves should not be shipped until 3 to 5 days after weaning because it is not as effective to vaccinate calves if they are weaned and shipped on the same day unless an intranasal vaccine is used at least six hours prior to shipping.

Vaccination Timeline—Option C:

- **2 to 3 MONTHS OLD:**
 - Clostridial 7-way
 - MLV – IBR, BVD, PI3, BRSV
 - +/- Pasteurella
- **WEANING:** (Let calves sit overnight before processing.)
 - MLV – IBR, BVD, PI3, BRSV
 - Clostridial 7-way with *H. somnus*
 - Pasteurella

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