Reconditioning: The Immunization Component

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Immunologic preparation of calves facing uncertain futures at unknown destinations is an economic, and technologic dilemma involving professional, ethical, and scientific considerations.

Professional judgment reinforced by contemporary scientific knowledge, experience with local production-management economics, and a keen conscience is needed to select the most appropriate products from among many brands of vaccines for infectious bovine rhinotracheitis (IBR), bovine viral diarrhea (BVD), parainfluenza-3 (PI-3), bovine respiratory syncytial virus (BRSV), pasteurellosis hemophilus somnus (hemophilus), various clostridial infections, and *brucella abortus.*

Most veterinarians can design a program that suits regional needs and matches the large farmer or rancher's time table for assembling and weaning calves. However, many calves are marketed in lots of less than 10 and arrive at assembly points without preconditioning. Therefore, it must be assumed that most preconditioned calves will contact unpreconditioned calves and probably be vaccinated again at assembly points, or feedlots. Preconditioning immunization may increase likelihood of healthy arrival but the economic advantages (if any) to the owner must be carefully evaluated.

Vaccine decisions for preconditioning programs must protect the calf from discomfort or death from specific infections and their sequallae, increase profits for the rancher, and provide reasonable income for the veterinarian while enhancing his professional credibility.

These objectives are not mutually supportive and are so closely co-mingled that controversy arises from confusion about which point needs emphasis.

Ignoring the economic and professional welfare of owner and veterinarian, the calves well being is best served by vaccination with every potentially beneficial and safe product. Safety considerations support use of bacterins and inactivated viral vaccines which usually require repeated vaccinations. Efficacy emphasis points toward avirulent bacterial cultures and modified live virus (MLV) vaccines. Among live IBR-PI-3 vaccines, the intranasal (IN) vaccines are generally less virulent and eliminate risk of abortion if vaccinated calves somehow contact pregnant cattle.

Protecting the calf begins with consideration of the vaccination or exposure status of the cowherd, potential effects of colostrally acquired passive immunity on the calves' response to vaccinations, and admonitions regarding contact between pregnant cattle and calves receiving abortifacient (MLV) vaccines. These thoughts must be tempered by report of immunosuppression following MLV vaccines and the familiar dangers of postvaccination mucosal disease associated with MLV BVD vaccines. Only a knowledgable veterinarian on the scene can plug these factors into the local equation. Certainly BRSV vaccine should be added to the American Association Of Bovine Practitioners (AABP) recommendations for IBR, PI-3, Pasteurella and hemophilus vaccinations. For female calves of unknown destination or use, official calfherd vaccination for *Brucella abortus* and appropriated identification may expediate intrastate movement and subsequent marketability.

Unless there is some guarantee that preconditioning and assurance of vaccines administration will yield a market premium for the owner, there's no economic incentive for these procedures. Organized preconditioning programs meet these needs for forward-looking large producers but calves in small lots or from reluctant owners still arrive at markets ill-prepared for the stresses facing them. These deficiencies cannot be overcome by hastily applied haphazard vaccination of stressed calves passing through assembly points. Because the likelihood of changes in the marketing system is small, the cattle industry and veterinary profession together face considerable challenges and millions of calves will continue to suffer.

Professional credibility is the most cherished possession of individual practitioners and veterinary medicine collectively. The current public image of the veterinary medical profession is largely unblemished by major scandal, allegations of gross incompetence or suggestions that profit is the overriding consideration.

A substantial portion of livestock-related veterinary litigation involves alleged vaccine misuse. Veterinarians can be hauled into court or otherwise discredited when label instructions are not followed to the letter, when unwarranted or exaggerated claims of vaccine benefit are offered, when vaccine risks are not clearly detailed, to owners, where unlicensed products are used, where illegal or unapproved products are used, where recommended withdrawal times are not observed, where state and federal regulations are not followed and when self-proclaimed experts cannot document formal training, national aclaim or published works indicating greater competency and skill than most veterinarians.

Now more than ever, there should be reliance on the veterinarian-client-patient relationship. Today, pressures

for deregulation, delays in modernizing archaic veterinary biologics legislation, and interagency arguments over definition and jurisdiction provide an environment conducive for livestock vaccine flim-flams. In this kind of traffic, veterinarians must drive defensively because they are far more vulnerable than manufacturers and livestock owners, and they have the most to lose, their credibility.

In choosing vaccines for preconditioning, DVMs can best serve the public, the profession and themselves by using only federally licensed products, by strictly following label instructions and by keeping constantly updated on rapidly advancing technology. These guidelines and constantly acquired new knowledge must be applied to meet the specific preconditioning needs of a variety of programs.