



# Western Dairy News

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## Training tomorrow's bovine health professionals

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Livestock production systems have changed dramatically in the last several decades and continue to evolve. This has led to a much greater diversity in the potential demands for animal health care delivery, assurance of production animal well-being, and delivery of safe food products to the consuming public.

One response to these changes is the current discussion about the potential need for more food animal veterinarians. However, trying to provide more licensed veterinarians is only one of many ways to meet this need. The salient question is how to provide for appropriate livestock health and well-being in a changing agricultural production environment. The veterinary profession needs to consider not just how to improve the supply of veterinarians, but also how to incorporate animal health paraprofessionals into a more diversified healthcare delivery system.

During the latter part of the 20th century dramatic changes began to take place in our agricultural production systems. Traditional diversified family farms declined in number as agribusinesses developed larger and more efficient production systems. Rural economies and the locations of livestock production operations have changed. Food processing, transportation, delivery and demand have changed. Human demographics, human experiences with animals, societal expectations about food, and livestock production have changed. The role of the food animal practitioner has continued



Dr. Cecy Rosas (left) of Colorado State University instructs a dairy worker how to evaluate sick cows. Training veterinary paraprofessionals to handle many livestock health care duties may help ease the shortage of large animal veterinarians in the dairy industry.

to change, as has the need and the supply of professionals who fill these roles.

### The shortage of food animal veterinarians

Is there a shortage of food animal veterinarians? Ten years ago veterinary organizations commissioned a study by market experts that was commonly called the "mega-study". These marketing experts analyzed numerous issues affecting supply and demand of veterinary services. Overall they concluded that the future demand for food animal veterinarians was relatively flat. It is interesting to note how sharply this contrasts with some of the current concerns about a shortfall in the supply of food animal veterinarians that have received so much attention.

The analysis for the mega-study was based on perceived market forces and demand for veterinary services. Definitions of the services veterinarians provide and the

alternative sources of such services can make a big difference in how much demand is perceived as needing to come from veterinarians. For example, we may believe that veterinarians with appropriate training would be ideal dairy nutrition consultants. But if there are few such veterinarians available, and there are well-trained PhD level dairy nutrition specialists, then dairy producers will easily move towards seeing their nutritional consulting service needs provided by non-veterinarians, and there will be little market demand for veterinary nutritionists.

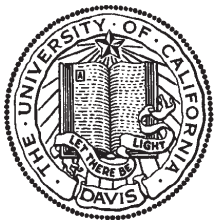
Market demand depends on numerous features, including perception by the consumer (in this case dairy producers) of the usefulness of a service and the perceived value of that service. It is important to know who the consumer thinks is capable of providing that service to better understand where they will look for it.

Looking at current dairy producer use of veterinary services we can see a mixed message and thus a very different market demand than existed several decades ago. Several recent surveys of dairy producers suggest that they respect their veterinarian as a source of information, and they see animal health as an important issue. But this does not mean they see veterinarians as the providers of all their animal health service needs.

Consider that on most dairies vaccination, sick cow identification, most cow and calf treatments, and most calf delivery problems are performed by the owner or dairy workers. Professional veterinary ser-

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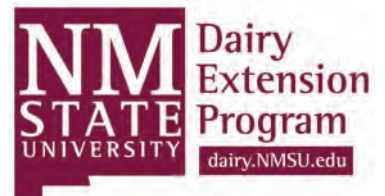
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vices are typically seen as a last resort. Indeed, on many dairies the primary responsibility of the veterinarian during a farm visit is reproductive management, with a small amount of time dedicated to sick cow work. On many dairies, even some of the technical aspects of reproductive management are not performed by a veterinarian.

In other words, while producers see the importance of animal health, they see the value of many animal health services as being low enough that they are better assigned to non-professionals. Unfortunately there is a wide gulf of difference in expertise between a veterinarian and a farm laborer without advanced training, and many dairy health problems originate from a lack of good health oversight.

There are numerous examples of pursuits that could logically be included as part of a veterinarian's work, and yet there seems to be little demand for these services. These include the development, implementation and monitoring of integrated infectious disease control programs, or the development and conduct of livestock worker training programs.

On one hand, dairy producers have delegated to non-professional workers many of the technical tasks that were formerly the role of veterinarians. On the other hand, we have not made great progress in decreasing the occurrence of some significant health problems of dairy cows, such as lameness, metabolic diseases, infectious diseases, non-selective culling for health reasons, and dairy death losses.

Many dairies have people doing animal health work who are too poorly trained to perform the service adequately. At the same time we are failing to employ qualified professionals to oversee really effective health programs. Is there a big market demand for more veterinarians, or for other professionals who can bridge the gap between veterinarians and non-professional workers?

## Framing the right questions

If it is indeed true that there is market demand for more food animal veterinarians, then there are many questions to resolve and some of them are very complicated. There is not a single simple reason that relatively few new veterinary trainees choose to go into food animal or rural livestock veterinary practice. Therefore it is also true that there is not a simple way to increase the supply of these individuals. If we pursue an increased supply of food animal veterinarians as the answer to livestock health program needs, then we have a difficult and maybe impossible task.

Do we need more recruits with the right historical background, more exposure of veterinary students to livestock experiences, more training of students while at school, more postgraduate training to enhance their capabilities, more debt relief for these students, and a higher proportion of males in the veterinary classes? Do we need more good food animal University programs, more food animal role models, more externship experiences during vet school, and more food animal teachers? Do we need



Well trained dairy employees can evaluate sick cows and work with a veterinarian to improve diagnostic skills and modify treatments.

higher salaries for new graduates, larger group practices with less emergency work, more responsive communities to lure new graduates there?

Arguably, we need all of these things to accomplish the goal of increasing supply of livestock veterinarians.

These types of questions address some of the things we might need to do to increase the number of food animal practitioners. We should also address many other things we might need to do to increase veterinary involvement in food animal research, government programs, work with allied industries, and work with global trade, developing economies and food safety.

I believe all of these are good questions worthy of discussion, consensus building, and directed action. There are many stakeholders who rely on the veterinary profession and who should expect that we can continue to educate and train competent individuals to fill a variety of employment niches that involve livestock production.

Our counterparts in human medicine have had similar problems in the training and supply of primary care and rural family physicians for decades. It is noteworthy that they have dealt with human healthcare delivery not only by trying to increase the number of physicians, but by redefining the roles that various healthcare professionals fill.

While we are trying to solve a valid and important problem, we are failing to ad-

dress our most important challenge. I believe the question we should be asking is, "How do we provide for appropriate livestock health and well-being in a changing agricultural production environment?"

## Providing health care for optimal livestock health and well-being

Many of us agree that it would be a worthwhile effort to increase the supply of competent and well-trained food animal veterinarians. I do not, however, believe this is the only, or even the best, way to provide for optimal livestock health and well-being. There are many places that we could employ animal health paraprofessionals, much as our colleagues in human medicine do, and substantially improve the delivery of livestock health care. We need to reconsider the roles of veterinarians and the roles of paraprofessionals and develop a system to deliver this care.

What could paraprofessionals do in the dairy industry? Many animal health needs are met by untrained or poorly trained workers. Many of the issues that arise with animal health and well-being stem from inadequacies in diagnosis and treatment or other decision-making processes. Considerable effort is expended correcting problems that may not have arisen if addressed properly from the start.

What if we developed a model that includes the equivalent of human nurse practitioners or physician assistants? Would they be employed by the operation? Would they be employed by the veterinary practice and assist in the delivery of lower-cost care? Could we develop a business model that delivers optimal care while veterinarians play a role that oversees multiple aspects of animal well-being that are currently underserved? Shouldn't a well-trained paraprofessional be far preferable to poorly trained laborers in the conduct of diagnostic sampling, on-site diagnosis, necropsy examination, some surgical procedures, reproductive manipulations, calf delivery and postpartum care, etc.?

Consider all the myriad places that knowledge of animal production, animal health, and veterinary perspective could be employed for the well-being of our livestock populations and our society. Have we been too protective of the role of a licensed veterinarian and not open enough to the potential roles of other animal health professionals? Is it really true that we need more food animal veterinarians, or is it more likely that we need to carefully think through different models for how animal healthcare is delivered and veterinary expertise is employed?

I believe there are a large number of competent, intelligent, hard-working young people who may not serve best as veterinarians, but in a different professional animal healthcare role. I also believe we could devise training programs that would develop skills and a knowledge base necessary to fill these roles. To do this will require producers and veterinarians to rethink the healthcare equation in a changing world of animal health and food safety needs.

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