In the past few years, much has been written about the shortage of food supply veterinarians. Depending on one’s perspective, it is either a potential problem in the future or a very real problem at this moment, with no end in sight. In fact, it may get far worse before the situation gets much better. One thing that most veterinarians agree on is that US and Canadian colleges or schools of veterinary medicine do not have to completely revamp their curricula to address this issue. No matter which forecast one happens to believe, only a few additional good people are needed in each admitted veterinary school class to solve this projected shortfall. However, to accomplish this may require much effort, reallocation of resources, novel techniques, and innovative ideas.

Given the demographics of those who apply to and get admitted into veterinary school, it is naïve to think that anything will cause a dramatic change in the applicant pool. The harsh reality is that there has been, and will continue to be, a majority of applicants who are from urban backgrounds and have little or no food animal exposure before they apply. It should come as no surprise to anyone that the majority will be female. The real debate should not be who the applicants are, where they come from, or what their gender is, but how the veterinary educational system is going to provide for the projected additional need for food supply veterinarians.

It has been suggested that early exposure and recruitment of elementary, middle, and high school students will help to jump-start the thought process for potential career paths in food supply veterinary medicine (FSVM). However, the important question is: who is going to do this? A famous quote from the cartoon character Pogo states, “We have met the enemy, and he is us!” When one considers the need for veterinary involvement in elementary, middle, and high school programs, and even undergraduate college programs, the question arises: whose responsibility and obligation is it to accomplish the recruitment and mentoring necessary to foster an interest in food animals in these students? Busy practitioners and university faculty all find that their plates are full to overflowing, and it is far easier to say “I’m too busy” than to participate in career day or show-and-tell programs. In the end, few veterinarians in private practice actually take the time to make the contacts and provide the impressions that are needed to start youngsters thinking about career possibilities in FSVM. Many of us in food animal practice are part of the problem because we are all too busy, and as a result, we all think that someone else should do it, like the faculty at the veterinary schools…right? But given this mindset of passing the buck, we shouldn’t complain too loudly when veterinary schools do not have any FSVM graduates for us to hire.

There is also the perception that the veterinary schools are not doing enough to address this concern. However, try for a moment to place oneself in the shoes of the dean of any college or school of veterinary medicine. The once seemingly plentiful state, provincial, and federal support of veterinary programs is gone, and administrators are currently working against a backdrop of reduced funding. The cost of equipping, staffing, and maintaining a veterinary medical teaching hospital (VMTH) is skyrocketing. The euphemism popular with university provosts today appears to be “do more with less.” Most veterinary schools are analyzing budgets to identify extramural funding to support ongoing facilities and program needs. This means that faculty who are good grant writers (which translates into research and university overhead charges bringing much needed dollars to the program) or clinical faculty who can generate high caseloads (which translates into enhanced revenue for the VMTH) will receive the most emphasis and financial support.

The need for revenue, coupled with the fact that today’s commercial agricultural enterprises are often located far from the university VMTHs, with little or no premium affixed to individual food animals outside the context of population epidemiology, yields a net result of a greatly reduced food animal caseload at almost every VMTH. This makes it even more tenuous to recruit students into FSVM during veterinary school.

It is interesting that there is widespread consensus at seminars and task force meetings on this subject (ie, the earlier a student can be recruited and exposed to possible careers within FSVM, the more likely that the...
few additional needed positions within the discipline will be filled). If each new class admitted to veterinary school had but a few additional students interested in FSVM, the projected shortages would be eliminated. In fairness, there are some new programs that specifically reserve and guarantee spots in a veterinary school class for individuals who have met specific criteria during completion of the required food animal coursework in their undergraduate and prevetinary program. Not enough time has passed to determine whether this course of action will be successful in addressing projected future needs.

Those of us involved with food animal practice probably have the same tunnel vision that members of other disciplines or specialty areas of the veterinary profession have. For example, if one were to visit with a group of veterinary pathologists, parasitologists, or anatomists, I suspect that similar concerns would be voiced about shortfalls of veterinary graduates to fill positions within their discipline or specialty. Perhaps the difference in the case of FSVM is that the economic and political impacts of not addressing this shortfall of graduates are far more likely to be felt by the US and Canadian economies, as well as that of the world's, when a crisis inevitably occurs. Recall the impact on the Canadian, US, and UK economies when bovine spongiform encephalopathy was identified and subsequent eradication and surveillance programs were initiated. The same can be said for outbreaks of foreign animal diseases, such as foot-and-mouth disease. Contrast the economic impact of the most recent outbreak of foot-and-mouth disease in the United Kingdom, in which the epidemiologic control strategy of quarantine and slaughter was used, with the Netherlands' control strategy of quarantine, vaccination, and slaughter. Without adequate veterinary personnel, The Netherlands' control program could not have worked nearly as well as it did.

In times of emergency, it is never to a country's advantage to wish that proactive measures had been taken to deal with the crisis. What is difficult to do, however, is to envision clearly just how many scarce resources to dedicate to a potential problem when the certainty of it happening in the first place is of indeterminate probability. Who among us could have ever imagined that the world's economy would slow so measurably in response to the acts of 19 terrorists in just 4 airplanes on September 11? Those of us in food animal practice recognize that we must at least consider the possibility of a bioterrorism event and redefine our role as protectors of food and livestock supplies within the context of such an event. The consequences of not doing so would be unthinkable. The one thing that every member of our society must do is eat, and our role in ensuring the safety of food animals and the foods derived from those animals is a major task that the public has entrusted to the veterinary profession. Therefore, to not be proactive in anticipating the future need for an adequate supply of FSVM graduates would be the height of irresponsibility.

The three articles in the FSVM series published in this and preceding issues of the JAVMA were written by authors who are nonveterinarians and, therefore, not vested with the same biases that those of us with veterinary medical degrees tend to have. They set out to answer some questions about the factors that attract students to FSVM, the reasons that graduates remain in FSVM, and how the veterinary profession should address the future anticipated shortages of FSVM graduates.

In the first article, “Attracting students into careers in food supply veterinary medicine,” the authors delineate (by use of validated survey methods) the factors that influence veterinary school applicants to choose FSVM as a career path. Essentially, the more experience and exposure that an applicant has to an agricultural enterprise or agriculturally associated organizations (4-H and National FFA Organization), the more likely they are to pursue a career in FSVM. What I find interesting is that very few students change career direction once admitted to veterinary school. The authors conclude that there is a substantial opportunity to influence a veterinary student's choice of a career path by early exposure to enthusiastic faculty and interesting and stimulating course offerings. Such program offerings, although sometimes difficult to implement, are neither of high cost nor high risk.

Many surveys have evaluated the importance people attach to money as a measure of job satisfaction, and they have revealed that financial compensation is not ranked at the top of the list. Similar findings were reported for veterinary students, especially those with an interest in FSVM, who ranked future salary as less important than other factors, such as intellectual challenge, importance of their work to society, and rural lifestyle. The message that I believe comes through in the first article is that finding, recruiting, and, perhaps, reserving some space in an incoming veterinary school class for students with a stated and demonstrated interest in FSVM may result in a much higher probability of success than any other suggested solution to this problem.

In the second article, “Job satisfaction, changes in occupational area, and commitment to a career in food supply veterinary medicine,” the authors used three surveys to evaluate job satisfaction; factors that influenced veterinarians who changed careers within veterinary medicine; and career commitment among veterinary students, early graduates (five or fewer years after graduation), and long-term practitioners (≥ six years after graduation). The consistent findings among all three groups were that once committed to FSVM, there were very high levels of satisfaction with the job, very little tendency to switch careers, and a very high commitment to FSVM. This extremely high and consistent satisfaction with FSVM appears to reflect the values of today's veterinary school applicants and challenges veterinarians in private practice, animal science faculty, and veterinary school faculty with the opportunity to encourage students during their prevetinary coursework and early years of veterinary school to consider a career path in FSVM. The key appears to be getting students initially enrolled in an FSVM career because once there, the clear tendency is to stay on that course.

The authors appeared to be extremely concerned with statistical validation and justification of their sur-
veys, which made the article more technical and arcane than it perhaps needed to be. However, those same details are of great interest to those concerned with the statistical basis for the analysis of the problems.

In the third article, “Future demand, probable shortages, and strategies for creating a better future in food supply veterinary medicine,” the authors unearthed a significant difference of opinion among 13 panels of experts surveyed to determine their predictions on the future demand for FSVM graduates. The panels predicted that the demand for veterinarians in FSVM will increase or decrease for specific areas (e.g., private food animal practice, federal employment, industrial, or academia) within FSVM. However, they all agreed that there is an expected shortfall of FSVM graduates. Many of the problems delineated by the expert panels have always been there to one degree or another, and those problems will probably be there long into the future.

What I found disappointing about the article is the seemingly small emphasis on the solutions posited. In addition, the proposed solutions do not always seem to rank consistently with the same level of concern reported in the preceding articles in which veterinary students and veterinarians were surveyed as the “customer.” For example, one of the possible solutions posited by the expert panels was debt relief for students entering FSVM practice; however, this solution was ranked much lower in the survey responses of veterinary students. The solutions appear only in the final table, and there is no elaboration of the means by which these solutions can be accomplished. It is easy to describe problems, and most food animal practitioners and veterinary school faculty are extremely good at enumerating problems ad infinitum. However, it is quite another thing to formulate realistic and workable solutions, and in that respect, I found the third article to be a bit disappointing in its outcome.

Results of the studies that have been conducted to this point lend credence and support to the claim that currently, as well as for the foreseeable future, there is a shortage of veterinarians in FSVM. The debate must now go forward on how to provide creative solutions to the problem within the context and reality of budgetary and manpower considerations that can be brought to bear. The 3 articles on FSVM offer fodder for colleges and schools of veterinary medicine to use in devising strategies for prudent course revision in both preveterinary and first-year veterinary coursework and requirements.

In today’s culture, substantial monies are available from governments for use in the area of food safety, and many of the veterinary schools are scrambling to obtain them. On the other hand, veterinary schools are devoting most of the space, effort, and staff appointments for their VMTHs to other areas of emphasis. To me, it is completely hypocritical for the veterinary profession to declare that we are in the vanguard of ensuring and protecting the food supply of our nation and the world, while at the same time we do not require at least that all veterinary students have a coherent and competent working knowledge of food production practices and systems.

At this time, it is completely unknown whether there will be meaningful changes and outcomes within the veterinary profession. The only certainty is that there is a need for change, and the veterinary profession has a great opportunity to be in the vanguard of that change when it comes to protecting and ensuring our food supply. We need to be part of the solution, not part of the problem!

### References

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