

A Midwestern Practitioner's View of What Is in Store for Food Animal Practice

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I see the future of food animal practice as a bright one indeed. In our own practice area, the farm animal census is decreasing, and the neighboring practices are moving closer. There are increasing numbers of graduates, and competition for providing health care to these animals is increasing. These combine to provide our challenge in meeting our agricultural industry's needs for the future.

Changes are occurring in America's agriculture. Technological changes are manifold. Rapid increases in conservation and minimum tillage methods and the tremendous increases in labor saving machines are contributing to our increased productivity. Greater concentration of our animal population profoundly affects production and health. There are even profound changes in a more health conscious consumer. They want increased convenience foods with less waste, as well as a safe and wholesome product. This is readily apparent to even a casual observer looking at nutrient information included on most foods now. It is almost ironic that most consumers are both unaware and uninformed of food production methods in America.

In the near future, we will be increasingly called upon as advocates of the food industry to answer, "Why are we feeding animals products that could be used to support humans?" Remember the reasons for man's long and fruitful relationship to his animals. They convert low quality and unavailable plant materials (cellulose) into highly usable animal protein. For approximately every unit of grain produced, there is an equal unit of roughage waste produced. Should this resource be wasted? Certainly Not! It is worthwhile to note that while the man-animal bond has been a fruitful one, the same cannot always be said of government agricultural policies. I predict a continued cyclic fluctuation in agricultural commodities for the foreseeable future due in no small part to governmental interference. Americans do not have a monopoly on the government's influence on agriculture. It appears to be the same worldwide.

Practitioners will find the need to change to meet new demands. The foundation of any successful practitioner will still be the need for individual animal diagnostic and therapeutic skills. We all know the satisfaction that comes from relieving a particularly difficult dystocia or diagnosing correctly an obscure disease condition. This is where the client develops confidence and respect for our professional talents. I always tell students that ride in our practice that they must be able to do the common, uncommonly well. At

the same time, future needs will place an ever increasing emphasis on records interpretation for problem areas and disease trends. By not helping to identify problems and recommending solutions, we may be contributing to our own loss statements.

With the growing trend to litigation in our society, especially as the popular press gives notice to increasingly large claims and settlements, the need for two items seems apparent to me: 1) Better client education and 2) More complete animal health records.

Client education seems to pay dividends in more ways than can be counted. Our best informed clients use us the most and misuse us the least. We all probably have more clients in the 14000 to 17000 lb herd average than any other. It is these clients that have the greatest potential to increase their profitability, and hence, our own, through adaptation of proven techniques. It is however, impossible to help someone who does not believe that they have a problem. Until they are convinced that they have a problem, they do NOT have a problem! We have many clients that have not adopted already proven techniques, seemingly simple things such as dry cow treating and teat dipping, or using calf hutches to reduce calf mortality. We have tried to improve on this using several methods. Our monthly statements contain a one sentence management message. We write articles for the county Cooperative Extension Service-DHIA newsletter. We speak at Cooperative Extension Service meetings as well as hold client education meetings on our own, and we are spending more time with individual clients discussing various problems and possible solutions. It is my belief that this area is probably the single most important one that a successful practice must come to grips with. As new methods come along, they necessitate continued dialog with clients.

Anyone vaguely familiar with a lawsuit is well aware of the importance of good records. They often can make the difference between winning or losing. More importantly, they can help us to be more effective in diagnosing and preventing herd problems. Multiple-man practices know how nice it is to have good treatment records when following up a case that a colleague has treated previously. Eventually, I believe that records are going to be more the responsibility of the practitioner. Recent edicts from the FDA-CVM may change the way some practices generate income. Will they be able to continue selling drugs with the current definition of a client-patient relationship?

The means of record keeping will almost certainly be

electronic, coupled with the billing system of a practice to keep the administrative time to a minimum. Computer data loggers will almost certainly be as commonplace as today's two way radio or radiotelephones. To be successful, these systems must be simple to keep the tedium of entry to a minimum.

In the near term, practices will be placing increasing emphasis on three areas: nutrition, reproduction, and mastitis prevention. These three will form the core of herd health programs because they represent the greatest opportunity for either money saved or increasing income.

Nutrition represents the greatest single cost in producing milk, therefore, it also is potentially the area with the opportunity for greatest savings. Good nutrition reflects heavily as well on the cows' ability to respond to disease challenge.

Reproduction is the one area that allows for rapid genetic improvement in the cows ability to produce milk. For the foreseeable future, calving will still serve as the basis for lactation as well. Reproductive failure will continue to be a major reason for culling on many farms.

Mastitis prevention deserves increased attention since the act of milking is where virtually all of the labor on the farm is harvested. Future emphasis will be on quality milk with a premium paid for low SCC Milk. The "cure" for mastitis will be prevention. (More and more work is accumulating to question the true worth of lactation therapy.)

These three areas will comprise the bulk of routine herd visitation. Fees will be charged for professional time rendered in interpretation of herd records for performance and disease trends in each of these areas.

Another major area of future change that I see will be in diagnostic tests. We will see many new tests marketed for food animal practice similar to those being used in small animal practice. Perhaps cow-side Johne's and BVD will be seen in the near future.

The area of genetics represents, in my opinion, the next biological revolution. For the near term, I see problems for the average practitioner and client utilizing embryo transfer to maximum advantage. It is too time consuming for most practitioners. The birth of a heifer calf, (70% are bulls when heifers are desired), on most average farms does not insure that she will live to produce milk. Therefore without other managerial changes first, widespread use of embryo transfer has strong limitations.

Further into the future, as methods improve to the state of the art that AI is today, there will be a huge market for frozen embryos. Even further in the future is sexing, splitting, and cloning of certain crosses. The scheme that I envision might go something like this.....A desired cross is made and the nuclei are implanted in donor ova, some of these are frozen

and approximately 4-6 are implanted into recipients and calved out. These calves are then grown to maturity and their production as well as other desired traits are duly noted. If they lived up to or exceeded expectations, then the whole process could be repeated again from the remaining frozen cloned embryos. As one might imagine, the capability to produce any number of genetically identical offspring is basically limitless. Environment and nutrition would then be in theory the only limiting factors in production. If these schemes do come to pass, they have the potential to greatly reduce the gene pool.

Recombinant DNA research will undoubtedly generate special products such as reproductive and growth hormones, and vaccines. We will likely see a phase out of MLV products in favor of surface antigen only vaccines. Further down the line, according to Dr. Charles Muscoplatt, plants will have animal disease agent antigens incorporated in their structure so as to immunize our livestock while feeding them. This same technique holds equally great promise for developing crops that fix their own nitrogen and are drought and disease resistant. Scientists are finding it more difficult and complex than first envisioned however.

In education, I see a renewed trend to the basics. Hopefully the colleges of veterinary medicine are recognizing the limits of being a specialist within a four year curriculum. Sound examination skills will help to prepare any student for any field of his/her choosing. Many educators seem to feel compelled to hold students responsible for all current knowledge in their special area of interest, which will likely be outdated or rethought in 5 years. There will be ample time after graduation to cultivate detailed specialty skills. How many of us today are doing exactly what we had envisioned ourselves doing when we were seniors in veterinary school? For us older graduates, continuing education will be the foundation of all our career success.

Hopefully some of the means of information transfer will become more commonplace and available for busy practitioners. I can hardly wait for the day when I can finally walk into my study and not knock over piles of journals scattered in disarray, but will be able to go to a terminal hooked via a phone modem to the university veterinary school library. There I can review all of the titles published in the last 2 years regarding any subject of interest and then read them on the video screen with the capability to make hard copy if necessary. What about the possibility of reading the necropsy, pathology, and microbiology reports as soon as they are completed, totally bypassing the postal service? The possibilities are endless. We are only limited by our imagination.