passage. It probably isn't perfect and has several gray areas but I think it is workable. Nevada and Arizona at this time have not passed any legislation.

District XI

Dr. John Schmitt Bozeman, Montana

You can see from these reports that many practitioners' consciences are in direct conflict with their D.V.M. In my area, Montana, the practitioners primarily relate to their clients on a profitability basis. I think in some ways that the results that I got on this questionnaire indicate that practitioners relate to their technicians on a profitability basis. Not only on the profitability of the technician in his particular practice, but on the profitability of the client he's using the technician for. In my district there are essentially two types of bovine practitioners. One is the beef cattle practitioner in large range areas, and the other, a dairy cattle practitioner. In thinking of profitability, I've heard that the easiest way to lose money is gambling; the most enjoyable way to lose money is with women, and the surest was is in the cattle business! Essentially, the results of this questionnaire in my area indicated the same results that Dr. Larry Rice reported in his area of the Rocky Mountain states except that it indicated that there may have been a division between the beef cattle practitioner and the dairy cattle practitioner. I had a definite division in salary. I had a group of practitioners whose technician salary ranges were in the \$400-\$500 area, and then I had a definite salary for technicians in the \$800 and above group. It may indicate this because we do have one accredited school in the dairy area, the northwest, and those people may be the graduates of that particular school. Also, as Larry's results indicated, the practitioners in our area may conflict with practitioners in other areas because almost 50% of our practitioners indicated that technicians are doing emergency treatments-50%-OB assistance; 50%-anesthetic administration; 50% in surgical procedures. We have a considerable number of technicians employed in our area, and in each case where they are not employed, it was based on profitability. The practice just could not justify the inclusion of a veterinary technician.

In beef cattle situations, and I'm sure it's true in dairy cattle situations in our area, the owner is almost always present for emergency help, and this is the reason for not being able to justify technicians in a lot of our situations. One of the problems with this conflict between conscience and D.V.M in our area is the inability to accurately describe surgery. Also the inability to accurately describe diagnosis. This is one of the conflicts that our range area practitioners seem to be having. In the northwest states, we have three states that are approaching the Practice Act and the

technician problem from the standpoint of registration and that registration being tied to the employment of the technician to a veterinarian.

We have another state that is attacking the problem from the licensure standpoint. I happen to be from that state, and I disagree strongly with that approach. In several situtations we had some disagreement about how veterinary technicians could be used, but I don't want to relate to those. One practitioner said that it was impractical for him to hire a formally trained technician because 85% of them were very unattached females and they were not stable to one location. They generally performed more sevices than those restricted to surgery, prescription and diagnosis.

District XII

Dr. Otto M. Radostits Saskatchewan, Canada

As usual Canada is last! Just remember it is bigger than all these twelve districts put together. What I want to do is show you some slides that we made with the help of Drs. Hamilton and Paul Greenough of the kinds of things that technicians do in our veterinary college in which we are helping to train veterinary technicians or animal technicians in conjunction with the Institute of Technology in Saskatoon. I am not sure how many accredited schools we have in Canada. Probably six or seven. I think there are three in Ontario, perhaps two in Alberta, one in Saskatchewan. Most of the animal technicians that are being graduated in Canada are not going into large animal practice. They are going into animal science departments, biology departments, small animal practice. A very small number are going into large animal practice. With respect to licensing, we have a little different situation in Canada. Maybe the difference does not apply. The right to practice according to the British-North American Act was given to each province and in turn they gave the right to practice by the veterinary act to the veterinary practice. So we, the Veterinary Association, police our Veterinary Act. We tried in Saskatchewan five or six years ago to register our assistants, our animal technicians, and while we have written into our Act that we can employ technicians I don't think we're going to be able to legislate them. I have been thinking about this for a few years. I think that is probably right. It would avoid more problems if you would ask government to legislate them on their own rather than a professional body trying to legislate them. I don't think it would work in the long run. In the interest of time, I'll read the information we have on these two slides. The work of a fully trained and experienced veterinary assistant can be extremely varied. He or she-and there are many shes-can provide many tasks that would constitute an inefficient use of a veterinarian's time. We shall see in the future a widening role and an increasing importance attached to this type of workers who are increasing in numbers. Qualifications are improving year by year as the ever improving training program is demanding greater technical skills and a more profound scientific knowledge.

The technical assistant's ability to handle people is of primary importance, particularly the farmer clients of an agriculture practice. Telephone messages have to be dealt with using patience and tact while at the same time eliciting information that will be of importance to the veterinarian. By the use of the radio-telephone they will have to relate this information clearly and completely to the veterinarian who may be working many miles from home. This not only calls for sound knowledge of practice organization, but also requires the ability to differentiate the urgent from the less important demands of the public. The veterinary animal health technician will also come into direct contact with the farming community when the livestock owners bring their animals to the clinic. It is important, under these circumstances, to record the facts associated with any case and not to be misled by the farmers. Under these circumstances, tact is also necessary in handling checks or any disputed accounts. In addition, of course, some accounting knowledge is necessary if the financial side of the practice is going to be run without confusion. In larger practices where case records are kept and scientifically filed, the technician must be fully familiar with the procedures required for retrieving case histories and collating all the documentation relating to any one patient. Efficient record keeping can be of tremendous value if it is run essentially as a clinic operation. The technician's ability to handle animals is, of course, of considerable importance because on many occasions he will be called upon to carry out many basic procedures on his own. This gentleman is of tremendous help to us (slide picture). He was an orderly in a hospital for 10 years. We now have him giving paravertebral anesthesia blocks, and we have full confidence in him. He will receive animals into the clinic and carry out preparatory procedures necessary for surgery. In some situations he may even be required to perform some quite difficult preparatory procedures such as applying regional anesthesia. A veterinary technical assistant will be the person primarily responsible for the cleanliness of the clinic whether it be the surgery floor, radiograph machine or surgical instruments.

Assisting with radiography is another important service that a technician can render to a veterinarian-positioning the animal and loading the various types of film prior to use. As far as the actual operation of the equipment is concerned, the technician will be able to recognize malfunctions of the equipment and learn techniques involved in trouble-shooting. In most cases the operation of the darkroom

and the processing of the film can be left entirely to the lay veterinary staff. Although a technician is not expected to read X-rays, he is to be able to fully evaluate radiographs in respect to its technical quality and to estimate whether or not the developer is at fault and needs changing or whether he should anticipate further radiography because the animal moved or because the exposure was incorrect. Again, a knowledge of filing systems will enable the technician to run an efficient radiographic recording system. He will be in a position to rapidly retrieve a patient's radiograph whenever they may be required by the veterinarian. The technician will administer treatments to animals whenever they are kept in the clinic. These will consist of applications of various injections or other procedures such as the bandaging of limbs of large animals. Of course, once again, he will be familiar with the procedures required for maintaining accurate records of surgical treatments that have been made as well as noting the progress the animal has made. From time to time it will be necessary to take various biological samples from animals such as samples of blood. He will be able to examine such samples and to carry out the various staining and microscopic procedures that are necessary.

Anesthesia can be another important area of work in which a veterinary technician functions very adequately. With experience, even such difficult procedures as passing the intratrachial tube can be mastered without difficulty. Apart from the anesthesia itself, it will be the technician's responsibility to maintain the equipment and be sure that an adequate supply of gas cylinders are always available. During actual surgery the assistant is of considerable value in the preparation of surgical sites in preparing the surgeon for his work.

In the small animal clinic, too, the veterinary assistant will play an equally important role starting with the reception of patients and carrying through with the care of patients in the awards. Technicians will perform time-consuming procedures such as bandaging, giving injections or other medications. Whether it be a large or a small animal clinic, the veterinary technical assistant will be involved in much of the book work involved in maintaining medical supplies and seeing that the veterinarian is supplied with the drugs that he needs when he wants them. There is also a considerable amount of work involved in receiving and checking drugs as they are delivered and ensuring that they are properly stored. On many occasions it is necessary to dispense drugs, and this is a task that can be left quite safely in the hands of trained technical help. One of the main tasks of the technician is to be sure the equipment is in good working order. Routines are established for the sterilization of surgical packs and for the laundering of protective clothing. The practice vehicle shall also be maintained by the veterinary medical assistant who will be responsible for checking the supplies at regular intervals.

Finally, where necropsies are carried out the veterinary technical assistant can save the veterinarian a great deal of time by preparing the cadavers, whether they be large or small animals, for the morgue under detailed scrutiny of the veterinarian. This slide series has attempted to demonstrate the varied nature of the tasks that can be performed as efficiently and successfully by the veterinary technical assistant who can play an important role by easing the burden of the tasks performed by many veterinarians and which will contribute substantially to the overall profitability of a practice.

I Believe in Animal Technicians

R. L. West, D. V.M. AVMA Chicago, Illinois

Do you believe in loxatrema ovatum? Do you believe in phalocrosis? I can't answer those questions because I don't know what the words mean. When a veterinarian tells me he doesn't believe in animal technicians, I have to wonder if he really understands the terminology.

The definition of an animal technician as accepted by AVMA is as follows:

"An animal technician is a person knowledgeable in the care and handling of animals, in the basic principles of normal and abnormal life processes, and in routine laboratory and animal health care procedures. He or she is primarily an assistant to veterinarians, biological research workers, and other scientists."

Actually, the animal technician is the assistant the veterinarian has always employed. The veterinarian's ten-year-old son holding the ether cone or delivering pigs, the veterinarian's wife giving first-aid advice as she takes a call on the telephone, or helping with the surgical preparation of an after-hours emergency case, and the retired farmer who goes along on calls to hold the halter rope or assemble the calf-puller are all animal technicians. Thinking in those terms, who is the practitioner who doesn't believe in animal technicians and can't see any use for one in his practice?

Formal training for animal technicians is the new part of the picture. The grade-schooler and the wife and the retired farmer are trained by the veterinarian, and the longer they stay on the job the more useful they become. When a new employee without any training is hired, the long slow process starts anew each time. When a graduate of a two-year college program designed for such training is hired, the training process may be equally long, but it starts and ends at much higher levels.

The newly-trained technician doesn't know the veterinarian's clients, but she knows the basic principles of handling clients. She doesn't know where you keep the ophthalmoscope, but she knows what it

is. She knows what a hematocrit and a fecal examination and a B.U.N. are. She can spread milk on an agar plate and set up an antibiotic sensitivity test. She knows the relative importance of the call from the lady whose bitch is stuck to a male dog and the call from the farmer whose cow is gushing blood from a punctured mammary vein.

If you have more veterinary work to do than you can handle, you probably need an assistant veterinarian. If you are spending too much of your time doing things other than veterinary work, you need another animal technician. The vetermarian's day should be occupied with examining patients, consulting with clients, prescribing treatment and doing surgery. Your technician should collect samples of feces, blood, milk, or urine, and perform routine tests on these specimens. She should administer medications; keep the premises clean and sanitary; obtain and record such information as the client's name and address and the patient's temperature, pulse, and respiration and the general nature of the complaint; prepare the patient, equipment, and medication for surgery; load, expose, and develop Xray films; properly package and label the drugs you prescribe; monitor anesthesia; administer enemas; apply bandages; keep stalls, cages, runs, and feeding equipment clean and in repair; prepare surgical packs and sterilize them; prepare food and feed patients; apply proper first-aid measures to hemorrhage and fracture cases; prepare specimens to send to the laboratory; perform routine bacteriological procedures; clean teeth and trim nails; order drugs, and fill shelves and grips; answer the telephone, screen calls, and make appointments; operate the EKG; administer IV fluids; handle the laundry; keep case records; hold patients; perform euthanasia and open cadavers for post mortem examinations.

Any time you spend doing any of those things you are working at a rate of something less than \$10,000.-00 per year. If you don't mind working for that salary, you probably don't need a technician. If you can earn more than that at veterinary work, you shouldn't be doing the technical jobs.

Animal technicians are not taught to do veterinary work in accredited programs. They are taught to assist veterinarians and follow directions, but not to make decisions. They are taught that veterinarians help clients and patients, and that technicians help veterinarians. In any instance of an animal technician attempting to practice, the individual has been taught to do illegal things by his veterinarian employer, not by the school. Practice laws were being violated long before the first animal technician was trained in a college. The ultimate control of the activities of animal technicians is in the hands of the veterinarians who employ them. A scalpel, a hypodermic syringe, or an animal technician in the hands of an unscrupulous practitioner can be dangerous, but all three are essential adjuncts to good veterinary practice.

I believe in animal technicians.