A HALF CENTURY OF LEARNING

Third David E. Bartlett Honorary Address
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Mr. Chairman, members of the Society for Theriogenology and the American College of Theriogenology, it is indeed an honor to present to you the third annual David E. Bartlett Honorary Address. To adequately discuss the subject at hand, I do so in great humility, especially in view of the outstanding presentations given by my highly respected predecessors, Drs. David Bartlett and Stephen Roberts.

Furthermore, as I glance over the assembly, I see many distinguished and capable colleagues who might well have been selected or are more deserving than I to fulfill this special assignment. Drs. Bartlett and Roberts covered the subject of Theriogenology, its history and development so thoroughly that I would be at a loss to know what to add.

If I have words of wisdom to express at this time, they would primarily be directed to the younger generation of veterinarians whose intentions are to excel in some area of animal reproduction. I would feel this can be best accomplished:

1. By providing a brief outline of my learning experiences
2. By attempting to evaluate and predict future opportunities
3. By expressing a viewpoint on some goals that may be given consideration by our associations.

I was born on an old-fashioned Wisconsin dairy farm in what may be called a backwoods area in December 1897. Not unlike most youngsters, I wanted to do many things when I grew up. If a truck driver drove into the farmyard, I wanted to be a truck driver, etc. But most of all, I wanted to be a veterinarian, a goal which almost escaped me.

While I was still quite young, our family moved to a more modern farm near Watertown, a small city in Wisconsin. There, electricity and indoor bathroom facilities were available. The move also necessitated a transfer from a one room school house to an urban school where I was immediately moved back two years, apparently for some good reason.

During my senior year in high school, I contacted one of the local veterinarians to obtain information on Veterinary Medicine. I guess I talked to the wrong individual. He discouraged me from attending a veterinary school. He informed me that he was in the process of preparing a correspondence course and that he would be in a position to furnish drugs, syringes and instruments.

I was a pretty green kid at the time, but I thought I was intelligent enough to know that wasn't what I wanted. For the
time being, I put the idea aside and enrolled in the College of Agriculture at the University of Wisconsin from which I was graduated in 1922. During the next five years, I was employed as test cow milker, herdsman and showman.

One day in the fall of 1925, while herdsman of a large purebred dairy farm in Illinois, I was relaxing in the farm office reading an article about myself in a breed publication. I had recently returned from an extended and successful show circuit, and the article featured my winning the herdsman's award at the three largest cattle shows, namely the National Dairy Show, held that year in Indianapolis, Indiana, the Dairy Cattle Congress at Waterloo, Iowa and the Pacific International Livestock Exposition at Portland, Oregon. Just at this time, Dr. Caldwell, our veterinarian, drove up to the barn. Minutes later I found myself holding the tail of a cow while Dr. Caldwell proceeded to palpate her. As I stood there, an almost forgotten idea flashed through my mind. "Doc," I said, "how crazy would a fellow at my age (then 29) have to be to take up veterinary medicine?" He urged me to do so immediately. I followed his advice and applied at the nearest colleges, namely Iowa State, Michigan State, Ohio State and Cornell. I selected Cornell for the simple reason I was offered a scholarship.

I was fortunate to be able to work my way through school as I had done at Wisconsin. On weekends I spent time helping owners select bulls for breeding purposes and searching for show ring prospects. I also served as a trainer for the Cornell track team and during vacations exhibited cattle. Following graduation at Cornell, I accepted a position as Farms Manager and Veterinarian for H. P. Hood & Sons, the largest dairy distributors in New England. I served in that capacity for 14 years. During this period, we bred several state production leaders and developed herd health programs for the various farms. The position also provided valuable experience palpat- ing cows and developing infertility treatments. At this time our country was engaged in World War II, and it had a direct effect on two of the farms. On one farm, the government built an airport, on the other, a munitions dump. As a consequence of this development, I resigned and accepted a faculty position at the University of Illinois.

Several years later, I received an appealing offer from the then world-famous Pabst Farms in Oconomowoc, Wisconsin to become the vice-president and veterinarian. I served in this capacity for about two and one-half years when, by mutual agreement, I went into general practice and retained the farms as clients. In a relatively short time, my bovine infertility practice grew so rapidly that I was forced to make a choice. I chose the theriogenology and consultation route and haven't ever regretted the move.

Over the next 35 years, I experienced a very busy life in private practice and also had the privilege of serving on the
AVMA (American Veterinary Medical Association) House of Delegates, on the Executive Board, and as Chairman of the Professional Liability Insurance Trust for 13 years. For 30 years I served as the Veterinary Editor for Board's Dairymen and prepared articles for a number of other veterinary and farm journals. I also appeared on programs at 33 state veterinary meetings, several national conventions, symposiums, clinics and livestock meetings.

As a student and during my early years as a veterinarian, I had the good fortune of knowing and utilizing the knowledge of such noted predecessors in bovine reproduction as Drs. W. L. Williams, M. G. Pincher, Walter Gibbons, Earl Hopper, Herbert Lothe, Harry Caldwell and L. E. Casida. Peers I was privileged to call on for guidance were Ray Zemjanis, David Bartlett, Lester Larson, Stephen Roberts, C. (Bush) Bierschwals, Edward Mather, Lester Ball, Lloyd Paulkner, Payne Oberst, R. S. Youngquest, Marten Drost, Howard Whitmore, Charles Martin, David Morrow, and I am certain I have overlooked a number of other individuals from whom I have gleaned valuable information.

As you might suspect, the overall approach to the treatment of reproductive diseases was somewhat different in the 50s than at present. For example, brucellosis during that period was under fairly good control, but calfhood vaccination was a somewhat controversial subject. More common in those early years, or so it seemed, were such related bovine diseases as leptospirosis, infective pustular vulvovaginitis, and the various bovine viral diseases.

In my consulting practice, which included herds in many states, the most frequent diseases I encountered were the venereal infections—bovine trichomoniasis and bovine genital vibriosis (campylobacter fetus). These diseases have since been on the decline until very recently, when trichomonad infections have been re-appearing in some parts of the west and northwest. Due to the depressed agricultural situation, I am concerned that an increase in natural services may result in further outbreaks of venereal diseases in other parts of our country as well.

Believing it may be of interest, I would like to discuss very briefly a few experiences with these diseases. I vividly recall a visit to a large beef herd with breeding problems owned by a mineral manufacturing company. I was picked up at the airport by the manager of the farms, and after dinner we discussed the breeding condition of the herd. Before retiring that evening, I felt confident I knew the answer. The next morning we began by examining 20 heifers on farm #3, all of whom were supposedly bred. Two were found pregnant, one had a half pint of pus in her uterus, the rest were open. A small amount of pus was aspirated from the infected uterus and placed in a test tube. Typical trichomonad pus was evident.
The diagnosis was verified via the microscope. Practically the entire herd of about 200 head was infected.

Another herd in which all females were naturally serviced was experiencing early abortions, embryonic death as evidenced by prolonged intervals between heats, and pus discharges. After a review of the history and records, we proceeded to examine most of the females in the herd. The third animal palpated was a young cow that had been bred 28 days previously. She was observed in heat, so I proceeded to gently massage or milk her uterus and collect a few drops of a cloudy secretion in the region of the clitoris. When placed under the microscope, the small sample was found teeming with organisms. Samples collected from the sheaths of the five herd sires were also found positive to the infection. Since the bulls were considered valuable for breeding purposes, they were treated and eventually pronounced free of infection. The owner requested I prepare a brief description of the disease, which I did. He then sent copies of the report to all of his cattlemen friends and customers and emphasized that he would not sell a single animal until the herd was entirely free of the infection. Soon after that was achieved, he held a reduction sale of young bulls, bred and unbred heifers. The sale averaged $3200.00. At that time this was considered an excellent average. It was also a tribute to the owner's integrity and sincere regard for his customers.

Contrast this approach to another owner with a large, well-bred beef herd whose history and herd evaluation revealed a low conception rate and irregular heat periods. Vibriosis was suspected on the first visit. On my second visit the laboratory director of the Wisconsin Alumni Research Foundation accompanied me to the farm. It was a very cold, blustery day, but we were able to obtain cervical swabs and uterine biopsies from 20 selected females. Seventeen of the 20 cultures were found positive to vibrio infection. The owner was notified of the findings, and a few days later I received a letter from him stating my services were no longer required — that no one was going to tell him he had disease in his herd. He had a very capable manager whom he also fired. Unfortunately the owner died a short while later. His son assumed management of the farm, but within six month he was killed in an auto accident. The herd was sold at public auction. As you have already surmised, the infection was spread to many of the buyers' herds.

I would like to briefly relate experiences at one more farm, primarily because of its "story book" history. It was a purebred holstein herd; all females were being naturally serviced to one herd sire. Breeding problems were encountered, and as a consequence the owner henceforth had the females serviced artificially. The problem didn't improve, so the owner called for help. Trichomonad infection was readily diagnosed, but the source of the infection was quite difficult to obtain.
Briefly here's what happened. A fence separated the owner's pasture from his neighbor. One of the owner's heifers came into heat, got through a weak spot in the fence and was naturally serviced by the neighbor's bull which had been purchased at a stockyard sale. The heifer returned to heat and was naturally serviced by the owner's herd sire. Yes, the stockyard bull infected the heifer which in turn infected the herd sire. The herd sire then infected almost the entire herd.

In my early days, it was common practice for practitioners to resort to estrogen therapy or enucleation of the corpus luteum, as a way of reestablishing missed heat periods. With care and judgment, these procedures proved quite useful. Estrogen injections sometimes brought on cystic ovary development, whereas corpus luteum removal rarely caused excessive bleeding, anaphylactic reaction, or tissue adhesions. As you are aware, means and materials for correction of abnormal conditions today are safer and more effective. Owners, managers and herdsmen now are generally better informed and keep more meaningful herd records. They also seem to appreciate more fully the importance of watching for heat periods, observing abnormalities, and relying on their veterinarian to help them maintain a more healthy, efficient breeding herd.

Also during my early years of practice, there was relatively little attention given to reproduction problems. At the 1956 AVMA annual meeting in San Antonio, Texas, not one paper on reproduction appeared on the agenda. I invited the late Dr. Clyde Lyle, a colleague from Waukesha, Wisconsin, to help arrange a program on reproduction at the convention. Dr. Hardenburg, then Executive Secretary of the AVMA, provided a meeting place and had announcements made at the various sessions. We had an excellent meeting with an overflowing crowd in attendance. We received many congratulations including one from the late Professor Guard of Ohio State University. He said, "That was an excellent idea and in my opinion, it was the best session at the entire convention."

As was pointed out by Drs. Bartlett and Roberts, the Rocky Mountain Society for the Study of Breeding Soundness in Bulls, the forerunner of today's Society of Theriogenology, was organized during this period. Today, interest in bovine reproduction is more intense and many practitioners are conducting herd health programs. While I am not qualified to comment on the reproductive status in other species, I have reason to believe that interest and progress has been equally as great, especially in horses, hogs, sheep, goats and small animals.

What about the future? There is little question on-going and future research will necessitate new avenues of approach, and economic conditions will, temporarily at least, induce changes in practice methods. It appears farms will continue to decrease in numbers and become larger. There will be fewer cows and farm workers. Possibly this means there will be less
need for bovine theriogenologists. With all these changes, however, it is my opinion that the family farm will continue to play a dominant role in the agriculture of the future.

If I were asked to give advice to future theriogenologists, I would urge them to work hard, keep well-informed by reading appropriate literature, attend educational forums such as this, obtain as much clinical experience as possible. At the same time, I feel that we shouldn't overlook the importance of a caring, helpful attitude when dealing with our clients and that we should exhibit a respectful, ethical attitude toward our colleagues. Such an approach is bound to lead to satisfaction and success even under the most difficult circumstances. In my opinion, the future is bright for those who follow such guidelines.

During my senior year in veterinary school, I had the privilege of traveling with Dr. M. G. (Mike) Pincher, professor of Clinical Medicine at Cornell, on some of his consultation calls. It was his policy to always contact the local veterinarian if the call came from the herd owner or manager. I admired this policy and have tried to continue it throughout my own practice.

At the recent AVMA meeting in Atlanta, I was asked how many bovine females I had palpated. I couldn't give an accurate answer but estimated about a million. When I arrived home, I did some calculating. I came up with a figure of two million four hundred thousand. I believe I have encountered every conceivable normal or abnormal condition of the bovine reproductive tract. In no way do I intend to imply that to examine this number of cows is necessarily a criterion for success.

Finally, I wish to comment very briefly on our organizations. I certainly feel both the Society and College have important places in our profession and our overall society. Both associations have grown in membership and stature, and great credit is due the efforts of the officers and members. However, I believe our Society of Theriogenology is still youthful and must assume a more prominent, assertive role in the veterinary profession. Certainly we must continue our efforts to increase membership in the Society. I would also challenge both organizations to become more involved with and more cooperative with dairy and livestock organizations, law makers, and appropriate government agencies.

Possibly additional effort should also be directed toward having more members appear on professional, livestock, and public programs. It is also advisable to have more articles prepared and submitted to appropriate publications for educational purposes and for greater exposure of our organizations.

Do we need additional members in the College of Theriogenology? In my opinion the answer is "Yes!" for the simple reason it can strengthen our organization. Those responsible for the preparation of examinations for entrance into the College
have performed yeoman service in the selection of qualified teachers, research workers and practitioners. Credit for formulating the excellent method of selecting honorary members to the College also deserves our applause.

To increase the number of dues paying members in the College, however, I submit for consideration a new classification or method of selection. I believe there are active practitioners, educators and research workers in learning institutions, industry and the armed services who are exceptionally well-qualified and highly regarded by their colleagues, but who are not members of either one or both of our organizations. Shouldn't the membership requirements of the College be based on experience, as well as technical knowledge? I propose that experience, commitment to the field and endorsements by current members be given greater weight in the determination of membership eligibility. I sincerely hope that this proposal will be given serious consideration and that the College will offer encouragement to qualified individuals to become contributing members.

You have been a courteous and patient audience. I am proud to be one of you, and although I have about had my day, I would be happy and willing to be helpful in any way I can. Perhaps I can best summarize what I have been trying to say in the following quote by Henry Van Dyke:

Four things a man must learn to do, if he would make his record true:
To think without confusion clearly
To act from honest motives purely
To love his fellow man sincerely
To trust in God and heaven securely.

Before I relinquish the podium I would like to acknowledge the presence of the women in the audience. I have always felt that the women, be they wives of veterinarians or female veterinarians, always add character and dignity to our meetings.

Today I want to especially acknowledge the presence of my lovely wife Marian. She has been my full time partner and mother of our three lovely daughters. She has put up with me for nearly 53 years and has contributed much to our profession.

Among other things she has served as past president of our Wisconsin Auxiliary, past president of the AVMA Auxiliary and past president of the International Women's Auxiliary to the veterinary profession. Marian, will you please stand and be recognized.