

1999 SENATE AGRICULTURE

SB 2193

1999 SENATE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. SB 2193

Senate Agriculture Committee

Conference Committee

Hearing Date 1/21/99

Tape Number	Side A	Side B	Meter #
1	X		2494-END
1		X	
2	X		0-145
1/22	1 X		2761-5798
Committee Clerk Signature <i>Maria Jorgensen</i>			

Minutes:

Senator Wanzek called the meeting to order. Roll call was taken, all were present.

Senator Wanzek opened the hearing on SB 2193.

Senator Solberg introduced the bill. He felt the ultrasound was an exciting prospect for the livestock industry; thought there would be a marketing advantage to using it; would like to see more availability to farmers and ranchers.

Senator Urlacher: Ultra sounds are complicated to read, would people take them and then have a technician read them?

Senator Solberg; I think with proper training a lay person could read them.

Senator Klein: These technicians will work indecently and not through or with the help of a qualified veterinarian?

Senator Solberg: Yes.

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Senate Agriculture Committee
Bill/Resolution Number Sb 2193
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Senator Sand: Most veterinarians will have this ultra sound machine, could that be a parallel career along with their vet. clinics.

Senator Solberg: Yes I think it could be.

Senator Sand: There are other areas where vet support is shaky, I look on this as a means for if a vet became more viable financially to his own betterment, it that a good possibility with this bill?

Senator Solberg: Yes I believe so.

Senator Klein: Has there been a problem where vets don't have time to handle all the ultrasounds plus their clinic?

Senator Solberg: I don't think anyone is going without is who doesn't want it.

Senator Mathern: Has there been any discussion on issuing licenses to make sure the people doing this are qualified?

Senator Solberg: I thought about that when I had the bill drawn up, I certainly did not have the expertise to set the standards in this bill. I think they can set standards and implement them by rule.

Senator Mathern: Do you have any concept of what the cost of the equipment is?

Senator Solberg: Somewhere between \$15,000 and \$20,000.

Senator Wanzek Is there anything that prohibits 4 or 5 ranchers from getting together and purchasing a machine?

Senator Solberg: I don't think so.

Wade Moser from the ND Stockmen's Association spoke in favor of SB 2193. He felt the bill was pretty standard, that no one would go out an buy the equipment and not know how to use it.

He felt that there would be a lot more interest in it and that it was very accurate and could be very helpful during calving season.

Senator Urlacher: Are we over regulating here?

Wade Moser: If you mean by keeping people out of the business I would say yes, by regulating requiring a license no.

Senator Sand: I think the cost for these machines is going to get cheaper down the road, what do you think?

Wade Moser: You could be right.

Senator Wanzek: The procedure, is it essentially a radio active wave that passes through?

Wade Moser: I'm not sure about that you will have to ask the experts.

Arlyn Scherbenske, from the NDVMA, spoke in opposition of SB 2193. Testimony enclosed.

Senator Mathern: Looking at this magazine article, it says they charge \$10-\$20 per head and you only charge \$5, that's a pretty good deal.

Arlyn Scherbenske: Some of the other guys may charge more, that's just what I charge.

Senator Wanzek: You made a comment that you might not be object able if the ultrasound is done by a lay person to find back fat.

Arlyn Scherbenske: I feel there are a lot of veterinarian in the state who aren't qualified.

Senator Wanzek: Which section is the veterinarian act in?

Arlyn Scherbenske: Chapter 43.

Senator Wanzek: Do most vet. carry malpractice insurance?

Arlyn Scherbenske: I don't think we have to but I don't know of any that don't.

Senator Klein: When you go in are you looking for other things?

Arlyn Scherbenske: There are some infections that we need to be aware of.

Dean Christianson, Veterinarian from Ashley spoke in opposition of SB 2193. Testimony enclosed.

Senator Wanzek: If this bill was passed it still wouldn't preclude you from seeking ultra sound would it?

Dean Christianson: No, my concern is not with the competition it's that the technique will get a bad rep.

Senator Sand: Can you comment on the economics on machine this expensive?

Dean Christianson: One way I get return is because I was able to hire another vet to work with me so we can take care of more clients.

Don Beck, a vet from Baker, MT spoke in opposition to SB 2193. Testimony enclosed.

Senator Wanzek: Did they ask you back because the service wasn't good enough?

Don Beck: Yes.

John Boyce from the Veterinary Medical Examiners spoke. Testimony enclosed.

Senator Wanzek: If I wanted to invest in a machine and do it myself I could work with one of the vets here and they could train me?

John Boyce: Yes, if the vet or tech would agree.

Senator Wanzek: Before they took me on wouldn't they want to know that I was qualified?

John Boyce: Yes.

Jim Club from the NDVMA spoke in opposition of SB 2193. He felt this procedure was not something that could be learned overnight, and that it was not only an issue of cost but of technique too.

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Senate Agriculture Committee
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Senator Klein: I think that the biggest concern that people have is not just the cost the reputation of the technique.

Senator Wanzek closed the hearing on SB 2193.

January 22, 1999

Senator Wanzek called the committee to order. Roll call was taken, all were present.

Senator Wanzek opened the discussion on SB 2193.

Discussion was held.

Senator Klein made the motion for Do Not Pass. Senator Kroeplin seconded.

ROLL CALL: 7 yes, 0 No

CARRIER: Senator Kroeplin

FISCAL NOTE

(Return original and 10 copies)

Resolution No.: Senate Bill No. 2193 Amendment to: _____

Requested by Legislative Council Date of Request: January 8, 1999

- Please estimate the fiscal impact (in dollar amounts) of the above measure for state general or special funds, counties, cities, and school districts. Please provide breakdowns, if appropriate, showing salaries and wages, operating expenses, equipment, or other details to assist in the budget process. In a word processing format, add lines or space as needed or attach a supplemental sheet to adequately address the fiscal impact of the measure.

Narrative: The bill will require the North Dakota Department of Agriculture to allow the licensing of individuals to operate ultra sound equipment in determining the existence of a livestock fetus, sex of fetus, and approximate birth of livestock fetus for a fee. The bill does not provide for any license fee so all cost of the license such as printing, postage, copying, and labor will be from general funds of the Department of Agriculture budget. It is estimated that 20 licenses will be issued. The approximate cost is \$100/ license. No county, city and school district direct funds will be affected.

- State fiscal effect in dollar amounts:

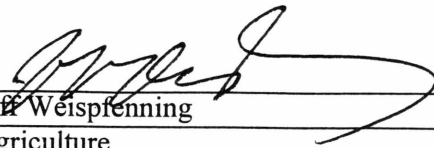
	1997-99 Biennium		1999-2001 Biennium		2001-03 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
Revenues	0		0		0	
Expenditures	0		2000		2000	

What, if any, is the effect of this measure on the budget for your agency or department:

- For rest of 1997-99 biennium: 0
- For the 1999-2001 biennium: 2000
- For the 2001-03 biennium: 2000

- County, city, and school district fiscal effect in dollar amounts:

1997-99 Biennium			1999-2001 Biennium			2001-03 Biennium		
Counties	Cities	School Districts	Counties	Cities	School Districts	Counties	Cities	School Districts
0	0	0	0	0	0	0	0	0

Signed: 
 Typed Name: Jeff Weispfenning
 Department: Agriculture
 Phone Number: 328-2231
 Date Prepared: 1/08/99

Date: 1/22
Roll Call Vote #: /

1999 SENATE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. 2193

Senate Agriculture Committee

Subcommittee on _____
or
 Conference Committee

Legislative Council Amendment Number _____

Action Taken Do Not Pass

Motion Made By Klein Seconded By Kroepelin

Senators	Yes	No	Senators	Yes	No
Senator Wanzek	✓				
Senator Klein	✓				
Senator Sand	✓				
Senator Urlacher	✓				
Senator Kinnoin	✓				
Senator Kroepelin	✓				
Senator Mathern	✓				

Total (Yes) 7 No 0

Absent _____

Floor Assignment Senator Kroepelin

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE (410)
January 22, 1999 11:12 a.m.

Module No: SR-14-1021
Carrier: Kroeplin
Insert LC: . Title: .

REPORT OF STANDING COMMITTEE

SB 2193: Agriculture Committee (Sen. Wanzek, Chairman) recommends **DO NOT PASS**
(7 YEAS, 0 NAYS, ABSENT AND NOT VOTING). SB 2193 was placed on the
Eleventh order on the calendar.

1999 TESTIMONY

SB 2193



North Dakota Veterinary Medical Association

921 South Ninth Street
Bismarck ND 58504
Phone: 701/221-7740
Fax: 701/258-9005

Senate Bill 2193

Ultrasound

Senator Wanzek and Senators of the Ag Committee

Presented by: Arlyn Scherbenske, D.V.M.
NDVMA President-Elect
Steele ND

As I read Senate Bill 2193, I have several concerns as a consumer, citizen of North Dakota, and as a veterinarian. Therefore, I stand before you in all three capacities defining each concern.

- I. As a consumer:
 - A. Qualification of the operator
 - a) What formal education (college) is required
 - b) What on-hand experience is required
 - c) Refer to Dr. Millers' statements
 - B. Liability
 - a) What if there is an injury (Even death, rectal tear)]
 - b) What if the fetus aborts one or two days after the procedure was done
 - c) What if a misdiagnosis of fetal age
 - d) What if the animal contains a dead fetus
 - (1) It is pregnant, however; the product has been misrepresented – this bill limits the Tech to identify live/dead
 - e) What if incorrect ID is determined
 - (1) Fetal age used to identify A.I. or ET calves
 - f) What if incorrectly ID fetal sex – financial loss to purchaser

The veterinary profession has malpractice insurance as well as an exam board to review and investigate complaints and can take action for irresponsible practice.

- II. As a citizen:
 - A. This bill is in conflict with Chapter 43
 - a) Diagnostic procedure
 - b) Invasive procedure which could be harmful and has the potential to spread disease
 - B. Who will examine the applicants
 - a) Who is qualified to write the exam
 - b) Who will fund the writing of the exam and the policing of violations. (At what cost)
 - C. What is the penalty for poor performance ie. Fraud, deception

- III. As a veterinarian:
 - A. Education which meets Chapter 43 requirements
 - a) Understanding: anatomy, physiology, embryology, etc.
 - B. Competition already exists (Cost-effective)
 - a) Professionally and economically
 - C. We have met the demand or request at a competitive price
 - a) Maybe as a profession we should be marketing who in the state are qualified

FALLON COUNTY VETERINARY SERVICE

D.L. BECK, D.V.M.
P.O. Box 494
Baker, Montana 59313
406-778-3532

My name is Dr. Don Beck. I have a large animal practice in Baker Mt. The practice area extends into North and South Dakota and is generally within a 50 mile radius of Baker. In 1994 I started doing bovine veterinary ultrasound work with Dr. Ralph Miller. At that time Dr. Miller had an ultrasound practice of sheep and thought the technology could be expanded to include cattle. Dr. Miller had taught himself the technique and offered to teach it to me.

There are two important parts to learning ultrasound. The first is looking at the screen and being able to identify the anatomy of a three dimensional fetus seen in a two dimensional black and white television monitor. In order to accurately age a fetus a very precise measurement of the fetal skull must be made. In order to sex the fetus by ultrasound you must be able to identify the sex organs of the fetus which at 60 days of gestation is about the size of a mouse. The second part of learning ultrasound is being able to manipulate the probe with your hand to be able to find the structures to determine sex and age.

In order to learn the technique, I watched the video scan of over 3000 head of cattle before I could say that I was proficient at reading the ultrasound. After that I had to perform the ultrasound on over 500 head of cattle before I could find and measure the structures needed.

Since 1995 I have been doing veterinary ultrasound work. I ultrasound about 12-15000 head per year from July to October. My ultrasound practice extends from Bozeman, Mt. to Gordon Neb. to Williston ND to Hettinger, ND This past year I taught my associate veterinarian Dr. Hovde the technique and invested in another ultrasound machine, portable hydraulic chute and vehicle. I have over \$100,000.00 invested in ultrasound machines, chutes, and vehicles for this part of my practice. There are more and more veterinarians investing in and learning this technique every year. It is however a technique that requires considerable effort to learn, a substantial monetary investment, and a commitment to providing accurate precise information. Every year I check herds with known AI dates in order to retest myself and check my own accuracy. These techniques are not being taught in veterinary schools. This past summer a veterinarian working on his masters degree in

reproduction worked with me for one day and his comments were that he hadn't received the training for ultrasound diagnosis. I have had clients that did not use me one year and the next year asked me to return just because they couldn't get accurate enough data from their local veterinarian. I think that ultrasound pregnancy diagnosis is an exciting useful procedure for the North Dakota cattlemen but, it will not be seen as useful unless it is accurate. Accuracy can only come from an adequate knowledge of anatomy, intensive training with the procedure and lots of practice. I personally claim 99% accuracy on sexing fetuses and I am generally within five days on determining age of the fetus when checking back to AI data.

I do not like line 12 of this bill . “ The approximate date of birth of a livestock fetus.” I will tell producers the age of the fetus and tell them that I am usually accurate within 5 days but I will not attempt to give the approximate date of birth of the livestock because of the tremendous individual and breed variation in gestation lengths of cattle.

I believe that ultrasound pregnancy and sex diagnosis should only be done by veterinarians that have had the adequate training and practice to do so.



North Dakota Board of Veterinary Medical Examiners

Post Office Box 5001, Bismarck, ND 58502, phone: 701-328-9540, fax: 701-224-0435

London J. Jacobs, DVM
Powers Lake, ND
President

James Clement, DVM
Mandan, ND
Secretary

Daniel P. Treat, DVM
Fargo, ND

John R. Boyce, DVM, PhD
Executive Secretary

Senate Agriculture Committee, Senate Bill No. 2193, January 21, 1999
John R. Boyce, Executive Secretary, North Dakota Board of Veterinary Medical Examiners

Licensure is a mechanism designed to assure the public that individuals who provide professional services meet certain minimum qualifications and are accountable for their actions. The North Dakota Board of Veterinary Medical Examiners is responsible for regulating the practice of veterinary medicine and veterinary technology in North Dakota. In order to be licensed to practice veterinary medicine in North Dakota, candidates must be graduates of accredited or approved colleges of veterinary medicine. This typically requires between six and eight years of college education (including four years of veterinary school). In addition, candidates must pass two national board examinations and a state board examination. Licensed veterinarians are also required to complete 24 hours of approved continuing education every two years. Veterinary technicians must have at least two years of college-level training, must pass a national licensing examination, and must complete eight hours of continuing education every two years.

The North Dakota Board of Veterinary Medical Examiners would like to share the following concerns about Senate Bill 2193:

First, the legislation, if enacted, would conflict with the existing veterinary medical practice act, Chapter 43-29 of the North Dakota Century Code. The practice act specifically includes within the definition of the practice of veterinary medicine "the use of any manual or mechanical procedure for testing for pregnancy." Senate Bill 2193 would create a separate licensing process through the Commissioner of Agriculture for persons desiring to use ultrasound equipment to diagnose pregnancy in livestock, a procedure already considered the practice of veterinary medicine in Chapter 43-29.

Second, the proposed legislation does not adequately address several essential components of a licensing system, including the composition of the licensing board, the qualifications of the individuals seeking licensure, the nature of the licensing examination, the cost of the license, and the mechanism for dealing with complaints from the public.

Third, the existing veterinary medical practice act (Chapter 43-29) already contains a provision allowing non-veterinarians to provide animal health services to the public, as long as they are doing so as employees of a licensed veterinarian and are under the direction and supervision of a veterinarian (Section 43-29-13, paragraph 8). The Board believes that this provision allows a variety of individuals with specialized qualifications and skills to provide needed services to animals and their owners, while maintaining appropriate accountability through the licensed veterinarian and the Board of Veterinary Medical Examiners. This accountability is, in the opinion of the Board, essential for public protection.

Thank you for this opportunity to address this legislation. I welcome any questions you may have.

Ashley Veterinary Clinic, Inc.

Dean Christianson, D.V.M.
P.O. Box 96
Ashley, North Dakota 58413
Phone: (701) 288-3234

5B 2193
A veterinary practitioner's view of ~~HOUSE BILL 1294~~ relating to the use of
ultrasounding equipment in determining pregnancy of livestock.

Introduction: Dean Christianson, D.V.M. Ashley, ND
Mixed animal practitioner working primarily with cattle.
14 years experience. I have also trained several veterinary students and
recent graduates in reproductive palpation.

Ultrasound experience:

I learned about this new technology and got excited about the potential benefits it
could provide to cow/calf operators as well as the beef industry as a whole.

I purchased my machine approximately one year ago and started training with it. I
soon discovered that this is a very difficult technique to perfect despite quite a lot of
reproductive experience. Small errors in technique lead to large errors in results.

My views:

This bill could lead to people providing inaccurate results which in turn will lead
to the practice of ultrasounding getting a bad reputation. This has already happened in
some areas of the midwest with lay people testing sheep for pregnancy. This will lead to
decreased usage of what could be useful technology for producers and the industry.

Problems with certification:

Nobody in the Department of Agriculture is currently qualified to certify anyone
in ultrasound technology.

Veterinary practitioners who are qualified cannot be expected to certify others.

Conclusion:

Veterinary practitioners in N.D. are more than able to handle the demand for
ultrasounding services. If the technology is used properly by experienced professionals
this technology can benefit beef producers as well as the industry.



North Dakota Veterinary Medical Association

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Chairman Wanzek and members of the Senate Ag committee. My name is Bill Rotenberger, I currently serve as President of the North Dakota Veterinary Medical Association. I wish to submit the following testimony in opposition to Senate Bill 2193.

Ultrasound technology in the livestock industry is relatively new. With the newness comes excitement and great expectations for both the producer and the veterinarian.

However, there are also precautions and concerns with any new technology. As veterinarians, by nature, we want to do what is best for our clients and their animals. Will the new technology produce more income and be cost effective for the producer? As veterinarians we are always cost conscience, because any procedure whether it be surgical, diagnostic or therapeutic it must be cost effective to the producer. That may be why some are taken in by new technology.

Those of us who are veterinarians have not chosen this field because of the financial rewards; it is for the love and respect for animals and to feel a part of our clients' livelihood. We accept the responsibilities of our profession with a great deal of pride and dedication.

There are a number of veterinarians and clinics in North Dakota which have ultrasound machines. (see attached list) There are also a couple of out-of-state veterinarians licensed in North Dakota who have made their services available to North Dakota Producers. (i.e. Dr. Ralph Miller, Livingston, MT and Dr. Don Beck, Baker, MT)

Because ultrasound technology is new, producers and veterinarians are still in an educational phase as to how best to use this technology. Also there is a time lag to be properly trained and become proficient.

I have attached a copy of a price quote to purchase an ultrasound machine. The machine, depending on the various applications, will cost from \$20,000 – 30,000. The question becomes; can I generate enough income to justify this kind of an investment. In visiting with our clients, some would like to have the service but there does not seem to be the demand at this point. One ultrasound company, Sound Technologies, stated they will not sell their equipment to anyone but veterinarians. Their concern is the improper use of this technology which could result in liability issues for them. They are concerned about misdiagnosis and injury or death to the animal or to the fetus.

There appears to be sufficient veterinary clinics providing the service. The North Dakota Veterinary Medical Association is assessing ways to get producers and veterinarians with machines together. We are also exploring whether there is a need to accredit veterinarians in this technology. You will hear testimony on the procedure, and how not everyone is capable of becoming proficient to do it. If veterinarians trained in anatomy, reproduction physiology, embryology and genetics can testify to the difficulties of perfecting the procedure, one can only wonder how a lay person could master this system.

Ultrasound technology for use in animals is specifically prohibited by the North Dakota Veterinary Practice Act Title 43.

I would raise the issue, if ultrasound technology for reproduction function were to be done by lay people, would it not be appropriate for it to be done under the direct supervision of a licensed veterinarian? Other allied medical fields require similar procedures to be under the supervision of a physician or dentist.

Is it really a benefit to the entire livestock industry to start a list of exempted practices of veterinary medicine? When I was the Executive Secretary for the North Dakota Veterinary Exam Board, many non-licensed individuals requested permission to

perform procedures that are protected by the practice act. The following is a list of some of those procedures: caesarian sections, acupuncture, Equine dentistry, chiropractic medicine and spay clinics to name a few.

We as an association and the state of North Dakota have made an extended effort to educate more of our young people to go to veterinary school. We want them to come back to rural North Dakota to help our struggling small farm families to survive. If we allow these specialized services to be done by anyone, there will be out-of-state and in-state individuals who are concerned about their own financial well being and not for the long term effects of potentially less veterinarians in the outreaches of rural North Dakota.

This legislation appears to be more for a few individuals wishing to generate a secondary income than to promote and benefit production agriculture for years to come.

Name: Dr. William Rotenberger
 Practice: Spruce Hill Angus
 Address: 8801 Highway 1804 N
 City: Bismark State: ND Zip: 58501-9
 Telephone: 701-258-9352

Classic Medical

Curt Hill
 Sales Rep.
10-26-98
 Date



19500 Mona Road. # 105
 Tequesta, Florida 33469
 746-9527
 FAX: 746-4212

Purchase Proposal

Quantity	Description	Price
1	Scanner 200SLC Veterinary Ultrasound System to include: Scanner 200SLC mainframe with 7" high resolution monitor Four user selectable focal zones Backlit, full alphabet keyboard Video and computer output ports Dual image display and multiple image memory Automatic date/time display on screen Built-in equine, bovine, sheep, swine, llama fetal age tables Trackball controlled measurements distance and area/circumference Padded soft sided carry case Acoustic standoff for superficial imaging Scan gel for external imaging Operator's manual Probe, <u>3.5 MHz ASP (Animal Science Probe)</u> Two year warranty on scanner and probes	QUIP Package Quality Ultrasound Index Program <u>23,900.00</u>
	a. <u>QUIP Software</u>	a. _____
	b. <u>Calibration Phantom</u>	b. _____
	c. <u>CART</u>	c. _____
	d. <u>ODT (Open data transfer)</u>	d. _____
	e. Video graphic printer	e. _____
	f. _____	f. _____
	g. <u>6/8 MHz Linear Array Probe List \$5,500.00</u>	g. <u>5,000.00</u>
	h. <u>Computer Disk Drive</u>	h. <u>990.00</u>
	i. Biopsy guide for _____ probe	i. _____
	j. _____	j. _____
	k. _____	k. _____
	Sub Total:	<u>29,890.00</u>

TERMS: Lease or on Delivery

Deposit Received \$ _____
 Freight FOB: Tequesta, Florida 75.00 in US

Approval: _____
Bid good until Nov. 16, 1998

Net due \$ 29,965.00

QUIP PACKAGE

VETERINARY ULTRASOUND SCANNING SERVICE

RALPH K. MILLER, DVM P.O. BOX 467 LIVINGSTON, MONTANA 406 • 222 • 7809
FAX 701 475 2770

TO Bill Rottenberger DVM - PLEASE NOTE THAT
ALL MY COMMENTS CONCERN THE USE OF ULTRASOUND
FOR REPRODUCTIVE DIAGNOSES ONLY.
KEY ISSUES TO CONSIDER FOR THE legislature -

Who will be responsible for monitoring the qualification
of lay technicians?

What recourse does THE PUBLIC HAVE in the event
of misdiagnosis; leading to death loss because of
mistaken fetal aging
leading to death loss because of
undetected pathology
leading to litigation because of
incorrectly identified AI or ET values,
AND incorrectly identified fetal sex

The VETERINARY PROFESSION HAS A BOARD TO
REVIEW AND INVESTIGATE COMPLAINTS AND TAKE ACTION
FOR IRRESPONSIBLE PRACTICE
VETERINARIANS CARRY MALPRACTICE INSURANCE,
WHICH PROTECTS THE PUBLIC IN THE EVENT OF MISDIAGNOSIS

HERE'S AN INTERESTING COMPARISON - VETERINARIANS
THAT HAVE WORKED FOR ME IN MY PRACTICE HAVE
ACTUALLY HAD TO EXAMINE 3500 FETUSES IN MY
PRESENCE, BEFORE WORKING SOLO ON A CLIENT'S
ANIMAL, SEVERAL VETERINARIANS THAT I HAVE

VETERINARY ULTRASOUND SCANNING SERVICE

RALPH K. MILLER

P.O. BOX 467

LIVINGSTON, MONTANA

406 • 222 • 7809

Trained, returned to their own practices and followed their diagnostic results for 2 yrs before practicing for the public. They are extremely accurate and quite successful.

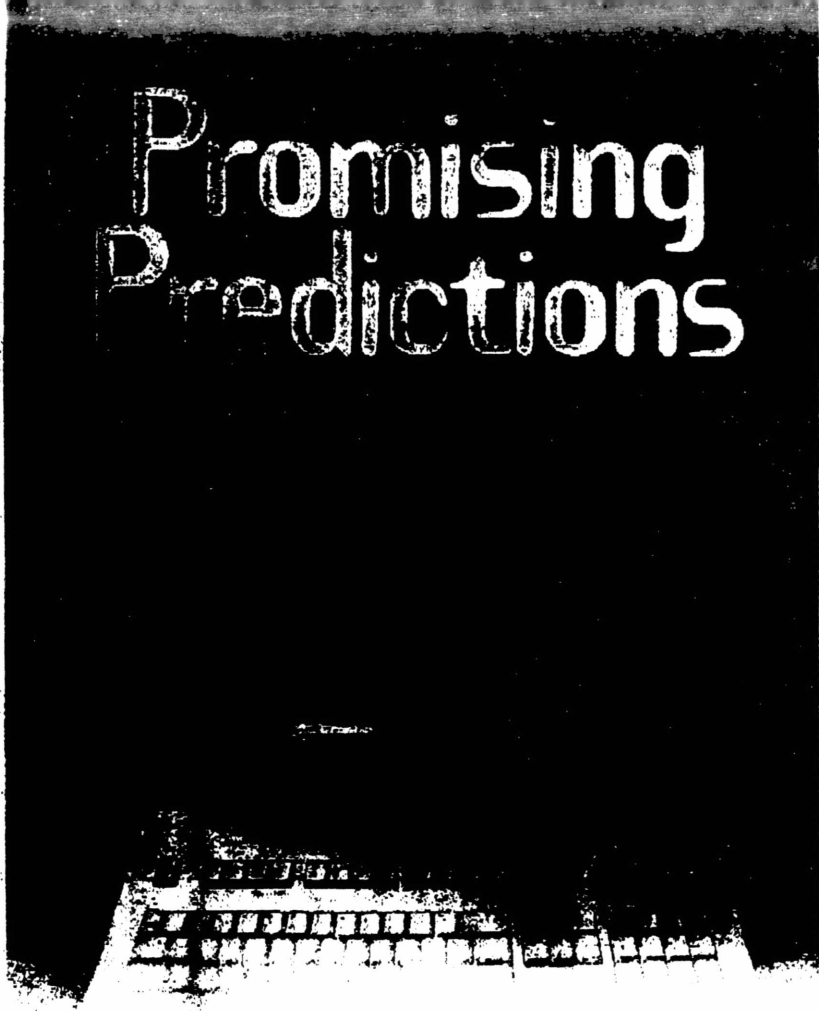
The comparison: Most large trucking companies require 2 yrs over the road experience, before hiring a driver.

So THE QUESTION IS does the legislature pass a law which in essence allows an ultrasound technician to practice with no guide lines for training, no liability for misdiagnosis, and no penalty for poor performance - OR DOES THE legislature pass a bill which delegates the responsibility for overseeing the training, expertise, and liability to the Board of Veterinary Medicine.

Will the legislature respond to the lobbying of a few self-seeking individuals interested in a short-lived financial gain, or will the legislature act for the good of the entire livestock constituency for years to come?

Ralph K Miller

Promising Predictions



Ultrasound gives producers a valuable peek at their future calf crop.

By Kindra Gordon
Managing Editor

There will be few surprises for Ole and Shirley Redland this calving season, thanks to utilizing ultrasound technology to pregnancy check their cow herd last summer.

For the past four years, the Hysham, MT, couple has been using ultrasound as a crystal ball to look into their future calf crop. But these Red Angus breeders have found that ultrasound offers benefits beyond the simple yes/no answer of whether a cow is carrying a calf.

With the help of veterinarian and ultrasound technician Ralph Miller from Livingston, MT, the Redlands are also using ultrasound to determine fetal age and sex of calves. And that has helped them add efficiency and prof-

itability to their cow herd.

"We sell commercial and registered females and have used ultrasound as part of our program to sell those cattle," says Ole.

By preg-checking with ultrasound, the Redlands are able to offer their customers the cow's expected calving date, sire information and the sex of her calf.

For example, by identifying females that are having heifer calves and females that will have bull calves, their customers have options to select what fits their operation. "This works well for those buyers wanting replacement females," says Ole.

How Ultrasound Works

Ultrasound pregnancy detection is accomplished by inserting a transducer into the cow's rectum and directing sound waves toward the uterus. An image of the fetus then appears on a small screen.

Fetal sex determinations can be made

between days 60 and 90 of gestation by locating the position of the genital tubercle, which will form the penis in males and the clitoris in females.

Fetal age is more difficult to determine, according to Miller. It is predicted by measuring body length between days 28 and 49 of gestation (see Figure 1) or dome width of the skull from days 50 to 90 of gestation.

Miller has been involved with ultrasound for over 12 years, and says the technique isn't something that's learned in a day. It takes finesse. The key is measuring the head in the correct place.

He worked with veterinarian Meg Cattel at Colorado State University to devise a chart correlating dome width of the head to days of age. Using artificially inseminated dairy cattle, Miller and Cattel compared dome width to fetal age on hundreds of cows until they felt their chart could accurately predict fetal age. (See Figure 2.)

Last summer, Miller used ultrasound to preg-check nearly 45,000 heifers and cows across the Dakotas, Montana, Wyoming and Idaho. He predicts within two days of actual breeding date 85% of the time. The other 15% are within four days of actual breeding date.

More Management Options

Being able to pinpoint breeding dates that exact has been valuable for Miller's customers, who are about half commercial producers and half purebred producers.

"I do a lot of ultrasound for people who've been hurt in spring storms," says Miller. Knowing the breeding date allows producers to group cows by calving interval. Then, they only have to watch those in a particular calving interval in the event of a storm, he adds.

Identifying later calving females, or open females, also allows producers flexibility in their management deci-





Ralph Miller

stones. Miller points out. For example, he sells the late calvers in his own herd. When he knows they're open, he tries to sell them early when the market is up.

The Redlands also have used the ultrasound

information to cull late calvers and shorten the calving season. "When you know how long your calving season will be, you can better spend your time on other things," says Ole.

Miller says producers that AI are also apt to use ultrasound to preg-check. Knowing the time frame of when a cow was bred can help producers determine if the cow was bred AI or by a clean-up bull, says Miller.

Redland says his customers like having insight into which sire lines the females they purchase are bred to.

Another benefit of ultrasound is determining if it's a nonviable pregnancy (i.e., deteriorated membranes, no movement

or heartbeat). "Were you to manually palpate you couldn't diagnose a nonviable pregnancy. You can diagnose those things with ultrasound," says Miller.

Ole admits ultrasound preg-checking is an extra step that requires handling the cattle in a hydraulic chute, record keeping and expense. Ultrasound pregnancy checking can cost \$3-5/head. "But the rewards are worth it," he says.

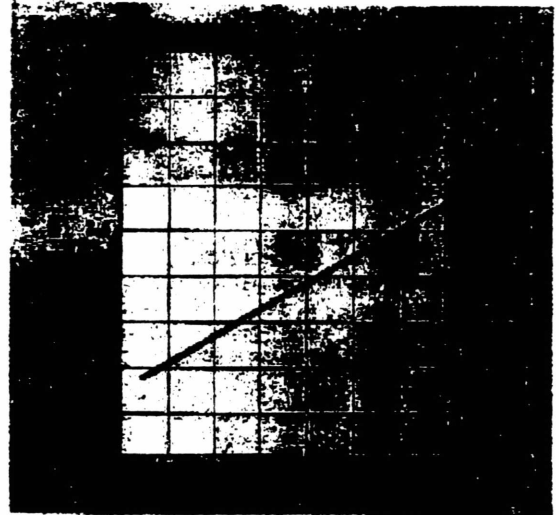
"There's no question from the way it's growing that it's a technology that can do the industry some good," Miller says.

But he cautions that ultrasound technicians have to have integrity. "Emphasis must be placed on accuracy," Miller says.

To keep his predictions calibrated, Miller still gets the actual AI breeding date back from his customers after testing and compares it to his predictions.

After 90-95 days, the fetus's head is larger and it's difficult to predict age accurately, he says. Therefore, he recommends ultrasound pregnancy checks shouldn't be done after 90-95 days gestation.

"If you're off a few days, producers won't be watching the right animals when the big storms hit," he adds. ♦



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