

Approved Mar. 15, 1989
Date

MINUTES OF THE HOUSE COMMITTEE ON AGRICULTURE AND SMALL BUSINESS

The meeting was called to order by Representative Susan Roenbaugh at
Chairperson

9:04 a.m./~~p.m.~~ on February 28, 1989 in room 423-S of the Capitol.

All members were present except: Representative Freeman.

Committee staff present: Norman Furse, Revisor of Statutes Office
Raney Gilliland, Legislative Research Department
Lynne Holt, Legislative Research Department
Marjorie Brownlee, Committee Secretary

PROPONENTS:

Conferees appearing before the committee: Joe Rickabaugh, Executive Secretary,
Purebred Division, Kansas Livestock
Association
Vernon Suhn, Brinks Brangus, Eureka, Kansas
John Oswald, Oswald Herefords, Hutchinson,
Kansas

OPPONENTS:

Dr. Keith B. Beeman, College of Veterinary
Medicine, Kansas State University,
Manhattan, Kansas
Dr. Glenn Engelland, veterinarian from
Salina, Kansas
Dr. Donald V. Atteberry, veterinarian from
Tecumseh, Kansas

Chairman Roenbaugh declared hearings open for House Bill 2385, a bill exempting non-surgical embryo transfers from the practice of veterinary medicine.

The first proponent recognized by the Chair was Joe Rickabaugh, Executive Secretary, Purebred Division, Kansas Livestock Association. (Attachment 1) He stated the fact that the Kansas Livestock Association had requested the bill as a result of an attorney general opinion (88-161) which stated embryo transfer constitutes a practice of veterinary medicine. Mr. Rickabaugh said his organization's seedstock producers are concerned that this restricts their right of choice.

Vernon Suhn, Brinks Brangus, Eureka, Kansas, was the next proponent acknowledged by Chairman Roenbaugh. (Attachment 2) He indicated that they have used non-surgical embryo transfer since 1976 as a management tool to accelerate the genetic improvement of their herd. Mr. Suhn also said that they are actively involved in training their own employees to put in frozen embryos to further reduce costs. It was expressed by Mr. Suhn that the biggest obstacle in the future of embryo transfer is keeping the cost to the consumer down so producers can use it as a management tool and still maintain a profitable operation.

Mr. John Oswald, Oswald Herefords, Hutchinson, Kansas, a member of the Purebred Beef Council, appeared and briefly spoke to the Committee in support of the proposed legislation.

The Chair introduced opponent Dr. Keith B. Beeman, College of Veterinary Medicine, Kansas State University. (Attachment 3)

CONTINUATION SHEET

MINUTES OF THE HOUSE COMMITTEE ON AGRICULTURE AND SMALL BUSINESS,
room 423-S, Statehouse, at 9:04 a.m. ~~p.m.~~ on February 28, 1989

On conclusion of his testimony, he said, "I urge you to consider this information and kill this bill on the grounds that there are presently many quality embryo transfer veterinarians and companies offering the service, the industry is policing itself, the quality control is high, embryos are being sold to other states and countries."

Dr. Glenn Engelland, veterinarian from Salina, Kansas, spoke to the Committee in opposition to the bill. (Attachment 4) He informed the members that embryo transfer is "a procedure which requires a thorough knowledge and understanding of anatomy, physiology, and pharmacology in addition to being skilled in the actual techniques involved." He also stated the fact that the drugs which are needed in this procedure are prescription drugs obtainable, by law, only by a licensed veterinarian.

It was Dr. Engelland's suggestion that with removal of all safeguards on an industry which has an inherent potential for fraudulent practices, we would encourage the illegal use of restricted drugs and allow anyone---regardless of education, knowledge, ability, or ethics--the right to legally perform a complicated procedure and make medical judgments.

The next conferee, Dr. Donald V. Atteberry, practicing veterinarian services in Tecumseh, Kansas, addressed the Committee in opposition to House Bill 2385. (Attachment 5) He outlined and discussed in depth the procedure for embryo transfer.

It was Dr. Atteberry's contention that in addition to the ability to perform this procedure, there is necessary also a knowledge of reproductive physiology---both endocrinology and anatomy of the reproductive system.

Inasmuch as time had run out and after inviting Dr. Atteberry to complete his testimony at the next Committee meeting on March 1, 1989, Chairman Roenbaugh adjourned the meeting at 10:02 a.m.

The next meeting of the Committee on Agriculture and Small Business will be on March 1, 1989, at 9:00 a.m. in Room 423-S.



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STATEMENT
OF THE
KANSAS LIVESTOCK ASSOCIATION
IN SUPPORT OF HB 2385
TO THE COMMITTEE OF
AGRICULTURE AND SMALL BUSINESS
Representative Susan Roenbaugh, Chairman
Presented by
Joe Rickabaugh
Executive Secretary, Purebred Division
February 28, 1989

Madam Chairman and committee members, I'm Joe Rickabaugh with the Kansas Livestock Association. I appear before you today in support of HB 2385. Our association asked this committee for introduction of this bill due to attorney general opinion 88-161, which stated embryo transfer constitutes a practice of veterinary medicine.

Our seedstock producers are concerned with the restriction of choice this opinion places upon them. There are presently many individuals, both veterinarians and non-veterinarians who perform non-surgical embryo transfers. Several of our producers have used non-veterinarians to perform these procedures with extremely successful results. Under the Attorney General's opinion, this would now be a violation of the Kansas Veterinary Practice Act.

Ag & SB
82-28-89

ATTACHMENT 1

Embryo transfer is a technique of transferring many embryos from one cow to several other recipient cows. This technology today is used primarily by seedstock producers to multiply quickly the offspring produced from a superior cow. The first embryo transfers were done surgically. Through the years, as the technology in this field has advanced, a technique of non-surgical embryo transfer has been developed. Non-surgical embryo transfer is simpler and less intrusive to the animal as compared to surgical embryo transfer. Non-surgical embryo transfer was developed and advanced by both veterinarians and non-veterinarians.

This same issue was studied by a Senate interim committee in Texas this past summer. Many of the points raised in their study paralleled the concerns of our breeders who use non-surgical embryo transfer presently, or plan to in the future. One of the primary concerns of our producers that was also addressed in the Texas interim committee report, is that by restricting embryo transfer only to veterinarians, a non-competitive climate is created. Restriction of certain procedures to veterinarians limits the number of people who can perform the procedure. A large supply of skilled non-veterinarians may serve to keep the market price for these services more competitive.

Secondly, embryo transfer is very much like artificial insemination in the sense that it is a skill that is perfected and advanced through repetition. A non-veterinarian doing this procedure on a full time basis may be more skilled in his technique than a veterinarian doing it once a month. It was also noted in the Texas report that a degree in veterinary technology or even veterinary medicine was not a prerequisite for this skill. Veterinarians do not receive training in embryo transfer or artificial insemination except by elective.

Another point that needs to be addressed is that if a producer has a cow that is valuable enough to warrant being placed in an embryo transfer program then he will more than likely "do his homework". It would

definitely be in his best interest to obtain an individual who will do this procedure in the most economical, professional and successful way. It stands to reason that a producer will not use a veterinarian or a non-veterinarian, if that person is too expensive or does not produce results. Non-surgical embryo transfer is a procedure that has been around long enough for a producer to figure out or ask other producers who can produce results and who cannot.

After the interim committee study it was their recommendation that the Texas Board of Veterinary Medical Examiners change their ruling that declares embryo transfer as a practice of veterinary medicine.

The Texas Board of Veterinary Medical Examiners on November 3, 1988 repealed embryo transfer from their Veterinarian Practice Act. The final paragraph of the research report compiled for this interim committee states it is important that adherence to the veterinary medicine definitions does not take precedence over growers needs and rights to choose their suppliers. The practical reality is that these procedures need to be done and there must be a cost efficient supply of skilled people to do them from an economic standpoint. Overly strict laws which limit grower access to competent non-veterinarians may hurt growers in the long run. Also, strict laws may not necessarily benefit veterinarians. For example, services may simply not be requested due to the higher cost or may force owners to do procedures themselves that they might otherwise pay a skilled non-veterinarian to do. Balance is an important concern for all involved.

EMBRYO TRANSFER HEARING

February 28, 1989

Brinks Brangus has been actively involved in the production of registered Brangus cattle since 1968. Our operation is located at Eureka, KS, on 11,000 acres, on which we maintain a cow herd of 1,200 females.

Non-surgical embryo transfer has been used at Brinks since 1976 as a management tool to accelerate the genetic improvement of our herd. It has evolved from its beginning of having a few embryo pregnancies each year, at a cost of \$300 per pregnancy, to its peak of producing 400 plus pregnancies per year in the period from 1980-1984, at a cost of \$500 per pregnancy. It is our goal at present to produce approximately 250 pregnancies per year by embryo transfer at an average cost of \$275 ^{or less}. We are also very actively involved in training our own employees to put in frozen embryos to further reduce our costs. We were very successful with this in our first attempt during the fall of 1988.

I might add that the costs I have mentioned only include technician fees, drug costs and travel expense. They do not include the recipient cow purchase and maintenance costs.

Throughout our involvement in embryo transfer, we have used the following criteria in selecting the technician who will do our work:

- 1) What our cost will be per pregnancy:
- 2) Degree of experience (This includes not only how many transfers made, but pregnancies per cow flushed, pregnancy rate, success rate flushing virgin heifers, and experience and results freezing embryos):
- 3) References and results they have had with other breeders we know and respect:
- 4) Their commitment to working cattle within our schedule, not theirs.

Since the beginning of our embryo transfer work, we have used seven different organizations; four of which were veterinarians, three were not. However, I might add, the four licensed veterinarians we used depended solely on embryo transfer work for their livelihood.

We have also had the misfortune during this time of through ET. ~~receiving~~ a few donor cows unproductively. Something we expected yes. However it was also ~~no~~ something these specialists in this field would not guarantee as would not his peers.

Our goal at Brinks has been, and will continue to be, to produce bulls of superior genetics, for both the registered and commercial breeder, which can be merchandised to sustain a profitable operation.

We feel that we, as well as other seedstock producers, will definitely need embryo transfer as a tool ^{to attain our goals and} to change our genetics at a pace rapid enough to keep our customers supplied with the highest quality ^{product} genetics.

We feel, through advancement in technology, that embryo transfer has a very bright future in the cattle industry. We predict it will become even more commonplace in much the same way artificial insemination has evolved; not only for within herd use, but as a means of merchandising genetics to domestic and foreign markets. *especially in the case of frozen embryos*

We do, however, feel very strongly that the biggest obstacle in the future of embryo transfer is keeping the cost to the consumer down so producers can use it as a management tool and still maintain a profitable operation. Restricting the use of embryo transfer to licensed veterinarians, thus reducing the supply of qualified people, will most definitely have an adverse affect on its cost. This action has the possibility of not only reducing the amount of work for those who are legally qualified, but also having a negative affect on cow numbers. ^{and also parties interested in establishing purebred herds in Kansas.} If the process becomes too costly, breeders would not be able to utilize embryo transfer as a tool to advance their genetics at the rate necessary to maintain beef's competitiveness. The effects of this proposal could ^{quite} possibly produce a negative affect on all veterinarians.



Department of Surgery and Medicine

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MEMO TO: The Agricultural and Small Business Committee of the House
FROM: Keith B. Beeman, DVM
RE: House Bill 2385
DATE: February 27, 1989

EMBRYO TRANSFER

Overview

A superior cow is selected as a donor and physical and reproductive examinations, and health tests done to identify that she is free of disease. This superior cow is given follicle stimulating hormones starting at day 10 of her reproductive cycle. She is then caused to ovulate with another controlled hormone (Prostaglandin F₂). At estrus she is inseminated 3 times at 12 hour intervals and 7 days later when the fertilized embryos are in the tip of the uterine horn, an instrument covered by a catheter is inserted through the not-in-estrus cervix and a sterile flushing solution of Phosphate Buffered Saline, Fetal Calf Serum, and an antibiotic/antifungal mixture is introduced into the uterus. A highly skilled veterinarian or reproductive physiologist then manipulates the uterus to suspend the embryos in the flushing solution and they are massaged from the uterus into a sterile container. All of this procedure is done aseptically. This container is then placed under a special microscope and the embryos are identified, graded, and washed in a cleansing solution. These embryos are then placed in a special instrument for transfer to a recipient cow that was also synchronized to be in estrus at the same time as the donor or frozen by a special process with sophisticated machines.

The procedure for implanting the embryo is aseptically done and requires a high skill level to pass the instrument through the not-in-estrus cervix and placed in the tip of the horn without introducing bacteria, causing bleeding or injury which results in prostaglandin release and termination of the pregnancy.

Purpose

The purpose of the embryo transfer is to speed the dissemination of improved genetics to potential buyers.

Ag: SB
02-28-89

A few Kansas veterinarians have developed the high skill levels necessary to perform this service and offer it commercially. This has shown potential for economic development to the livestock industry and is working well.

Two organizations have developed standards for health certificates, grading embryos, and quality control. They are the American Embryo Transfer Association and the International Embryo Transfer Society.

At the present time, veterinarians specializing in embryo transfer offer this service as well as embryo transfer companies throughout the United States. A livestock owner is free to use this procedure on their own cattle at the present time.

Our ultimate goal is the dissemination of quality genetics and successful embryo transfer resulting in high conception rates for purchasers. At present the embryos are sold in a recipient cow or as guaranteed pregnancies when placed in the purchaser's cow by the seller's veterinarian.

Consider the Following:

1. The drugs used in embryo transfer are controlled drugs. They are used by or on the order of a licensed veterinarian.
2. Embryos are regarded as live animals and must have a health certificate certifying freedom from disease when transported interstate or internationally.
3. Embryo transfer procedures are done aseptically. Education in sterile surgery techniques is a must for good results.
4. Animals being embryo transferred are required by breed associations to be blood typed and the blood drawn and submitted by a veterinarian to a laboratory to certify parentage.
5. Veterinarians are required to be licensed and if incompetence or untrue statements are made, their license or accreditation can be withdrawn.
6. Certification, grading, and quality control is presently being provided for.

Putting this procedure in the hands of non-licensed individuals would allow them to start embryo transfer companies without quality control and has the potential of destroying the confidence of domestic and international purchasers and restricting the progress of genetic improvement.

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I urge you to consider this information and kill this bill, on the grounds that there are presently many quality embryo transfer veterinarians and companies offering the service, the industry is policing itself, the quality control is high, embryos are being sold to other states and countries. If we allow non-licensed individuals to enter into the process of delivering this service, what will be gained. The competition is intense, the cost is reasonable, embryos are being sold. If it works, don't fix it.

Futuristic thinking may imply that this procedure is like artificial insemination. This is definitely not true. The procedure is difficult as demonstrated by the fact that only a few veterinarians in the state do the procedure. Many veterinarians have started doing the procedure only to find that it requires intense attention to detail and superior locomotor skills. The delivery of this service is evolving to embryo specialists.

KBB:as

To: House of Representatives
Agriculture and Small Business Committee

From: Glenn Engelland
3769 West Shipton Rd.
Salina, Ks. 67401
913-825-7600

SUBJECT: House Bill 2385
Removal of embryo transfer from Veterinary Practice Act

POINTS TO REMEMBER

1. Veterinary Practice Act is a consumer protection document.
2. Embryo transfer is a procedure which requires a thorough knowledge and understanding of anatomy, physiology and pharmacology in addition to being skilled in the actual techniques involved.
3. The drugs used are prescription products. The label will read:
"Caution-Federal law restricts this drug to use by or on the order of a licensed veterinarian."
FSH-PTM, Cystorelin^K, Lidocaine, Estrumate^K, Lutalyse

IF THIS BILL PASSES

1. It will remove all safeguards on an industry which has an inherent potential for fraudulent practices.
 - a. In most cases, the consumer must be able to trust the practitioner with such responsibilities as:
 1. Embryo quality and quantity (usual basis for fee structure).
 2. Proper identification of embryos (especially frozen).
 3. Diagnosis of proper hormone stimulation.
2. It will encourage the illegal use of restricted drugs. Embryo transfer is not economically feasible without their use.
3. It will allow anyone regardless of education, knowledge, ability or ethics the right to legally perform a complicated procedure and make medical judgements.

CONCLUSION

In my practice of veterinary medicine, there is no other aspect that requires the depth of knowledge and the mastery of skills as does embryo transfer. I hope you will not let simple sounding words in this bill such as "non-surgical" lead you to believe this is not a complicated medical procedure. Finally, I hope the consumers in the state of Kansas can expect a basic level of competence in the practitioners of embryo transfer. I hope you will defeat House Bill 2385.

Ag. SB
02-28-89



*Veterinary
Services

*Embryo Transfer
Services

*Purebred Cattle
Services

DONALD G. ATTEBERRY, DVM

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Outline for Presentation

Opposition of Bill 47817

- I. Knowledge of Reproductive Physiology
 - A. Endocrinology
 - B. Anatomy
- II. Detailed Description of ET Procedure
 - A. Donor cow control
 - 1) Drugs: FSH, Prostaglandin—Prescription drug, Lidocaine, Tranquilizer.
 - 2) Dosage
 - 3) Susceptibility of donor cows to infertility
 - Caused by problems related to collection procedure:
 - a. Ruptured uterus leading to infection
 - b. Scar tissue
 - c. Endocrine burnout
 - d. Cystic ovary disease
 - B. Laboratory Procedures
 - 1) Sterility and clean environment
 - 2) 10x Embryo washing and trypsin washing
 - a. Export procedure
 - b. Health requirements via DVM
 - C. Recipient Requirements
 - 1) Synchronization—Prostaglandin prescription drugs
 - 2) Palpation for non-pregnant cows
 - 3) Diagnosing recipient cows for usefulness
 - a. No scar tissue
 - b. Endometritis
 - c. Plugged oviduct
 - d. Polycystic oviduct
 - e. Good CL
 - f. Cystic CL
 - g. Cystic follicle
 - h. Determine side CL is on
 - 4) Sterile and clean technique for embryo passage and implantation
 - a. Susceptibility to infection at 7 days post estrus

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*Veterinary
Services

*Embryo Transfer
Services

*Purebred Cattle
Services

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D. Cryobiology

- 1) Proper dilution of Cryoprotectant leading to embryo freezing and identification
- 2) Embryo thawing and dilution of cryoprotectant

E. Pregnancy checking of recipient cows at 60-90 days post transfer

III. Comparing ET to AI

A. No comparison

- 1) AI only goes to distal end of cervix
- 2) No correlation to anatomy of the rest of the reproductive tract

B. AI-Thaw semen 30 seconds in 96°F warm water then breed (<5 minute total procedure)

ET-Transfer frozen embryo has a minimum 1 hour set up time and dilution time

C. Consumer protection number one concern

- 1) Expensive, high quality cows rendered infertile
- 2) Recipient cows rendered infertile
- 3) Embryos purchased by producers then transferred with no results or poor results

IV. Definitely opposing bill 47817