



the

January 1968

BOVINE practitioner

Volume 2

American Association of Bovine Practitioners

Number 1



FEMALE INFERTILITY

is the Front Page Story... because it is the number one problem confronting cattle veterinarians. Nutrition and Mastitis are rated next in importance. See page 2.

Also in this issue

- 5. Trichomoniasis
- 6. Splinters from the Board
- 10. World Association for Buiatrics
- 11. Functions of Rumen Microorganisms
- 12. Bovine Bedside Tricks
- 16. Open Teat Surgery
- 16. Immunity and Vaccine Properties
- 17. Prolonged Sulfonamide Levels
- 20. Preconditioning for Health
- 21. AABP District Meeting in February
- 22. Certified Preconditioning

COMING MEETINGS AABP Western States

Las Vegas Jan. 1968

National

Chicago Dec. 1968

World Assn.

U.S.A. Aug. 1970



**American Association of
Bovine Practitioners**

OFFICERS

DON E. WILLIAMS, D.V.M.
President
Ada, Oklahoma

R. A. IVIE, D.V.M.
President-Elect
Follett, Texas

PHIL HINZE, D.V.M.
Past President
Logan, Utah.

HAROLD AMSTUTZ, D.V.M.
Secretary-Treasurer
West Lafayette, Indiana

the 
BOVINE
practitioner

The **Bovine Practitioner** is published by the American Association of Bovine Practitioners Inc. This issue was mailed to 6,000 veterinarians engaged in some form of cattle practice.

Editor

Ray H. Bradbury, DVM
Mt. Vernon, Washington

Publications Committee

Irvin Collinge, DVM,
Chairman
Emporia, Kansas

George Crenshaw, DVM
Davis, California

Don Spangler, DVM
Olympia, Washington

Phil Hinze, DVM
Logan, Utah

FEMALE INFERTILITY

Female infertility is the front page, number one problem confronting bovine practitioners of the nation.

A survey conducted by our president, Dr. Don Williams, revealed that the top three problems on which practitioners wished more coaching included infertility, nutrition, and mastitis.

The veterinarians submitted forty-eight different subjects for future presentation in our new publication. These included information on the treatment of creeper cows, practical laboratory procedures and useful practice tips. Your publication's committee will attempt to make such information available.

Carl Sandburg found Chicago interesting! You will enjoy the "Windy City" and also the AABP'68.

**American Association of
Bovine Practitioners**
presents

Current Concepts in Bovine Medicine & Surgery

The program for the first annual, national meeting of the AABP is in the hands of a past master. Dr. Maurice Weldy already has talented experts scheduled to speak. The meeting, entirely devoted to the bovine, will surely include some suggestions on handling problems encountered in larger herds. Cattle practitioners are urged to send suggestions for subjects or speakers to Dr. Maurice Weldy in Wakarusa, Indiana or to any member of the program committee. The able group includes Dr. Wilson R. Haubrich, Claremont, N.H.; Dr. Charles B. Plummer, Jr., Gainesville, Florida; Dr. August Krause, Cherokee, Iowa; Dr. V.L. Tharp, Columbus, Ohio; and Dr. William Harris, Puyallup, Washington.

Veterinarians engaged in some phase of cattle work either full or part time will find AABP' 68 worthwhile.

**MEET US IN CHICAGO
DECEMBER 8, 9&10, 1968.**



about the Cover

Practitioners attending an informative course on bovine infertility at Columbus, Ohio compare their notes made on the living animal with their findings on the dissected organs. The group included practitioners of from one to twenty years experience in dairy practice. Many of them recognized twins in a seven weeks pregnancy. The least experienced were occupied in the tricky differentiation of the mature follicle and a soft luteal mass. The one day program was supplemented by lectures on hormonal physiology and therapy by Dr. Phillip Murdick. Practical routine procedure for infertility control was demonstrated by Dr. Vernon L. Tharp. The combination of lecture and laboratory session are popular with practicing veterinarians. The course was informative to even the more seasoned cattle practitioners.



An excellent brochure on "Start with Healthy Feeder Cattle" has been published by the Ohio Veterinary Medical Association. It describes three plans for improving the health of feeder cattle. It is available from **O.V.M.A., 1350 W Fifth Ave., Columbus, Ohio 43212.**



MESSAGE FROM THE PRESIDENT

Don Williams DVM President, AABP

Greetings to the bovine practitioners of the nation. My message consists of five questions to stimulate your thinking and motivate your activities for the coming year.

What is the half-life of a veterinary education today?

How much time should a practitioner spend each year in continuing education?

Are we as veterinarians keeping pace with other advancements in agribusiness?

Do you know of a better place to keep up with cattle diseases than within the framework of the American Association of Bovine Practitioners?

Have you started making your plans to attend the AABP meeting in Chicago, December 8, 9, and 10th?



The editor wishes to announce:

MASTITIS CONTROL by testing and treating during the dry period

is being published and will soon be available.

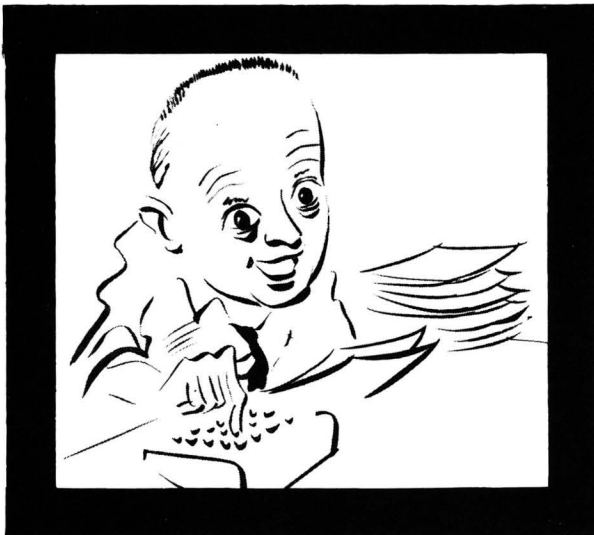
A simplified yet very practical procedure for the veterinarian enabling him to conduct his own determinations on which quarter to treat during the dry period. This book includes the preparation of therapeutic agents. The procedure is profitable to both the dairyman and the veterinarian.

R.H.B.

Paid advertising

FROM THE SECRETARY'S DESK

**Harold Amstutz, D. V. M.
Secretary-Treasurer AABP**



"in the black"

As of October 1, 1967 the American Association of Bovine Practitioners had 438 members and a bank balance of \$4659.07. These figures indicate phenomenal growth and support the vision of a few far-sighted men who founded the organizations.

Although we are tempted to boast of past accomplishments, pride quickly changes to humility when one compares what has been done with what needs to be done. We really haven't scratched the surface. Members and money are, of course, not an end in themselves; they are the means by which we will attain the following AABP objectives:

AABP Objectives

To endeavor to do all things necessary to promote the interests, to improve the public stature, and increase the knowledge of veterinarians in the field of dairy and beef cattle practice.

To elevate standards of bovine practice.

To attract attention to the relationship between bovine practice and the public interest.

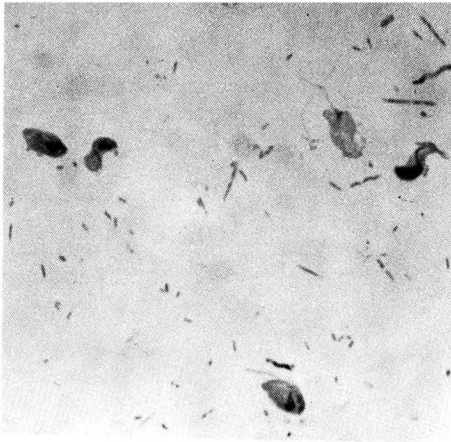
To promote understanding and good will among its members.

To cooperate with veterinary and agricultural organizations and regulatory agencies.

ALL POWER CLAUSE: To do everything and anything reasonably and lawfully necessary, proper, suitable, or convenient for the achievement of the purposes above stated, or for any of them, or for the furtherance of the said purposes.

If you are already an AABP member and have not paid your 1967 dues, do so at once and then encourage your neighboring bovine practitioner to become a member.

If you are not a member, join immediately and become an active member of the only organization that is specifically attempting to elevate the status of the bovine practitioner.



Trichomonas fetus. Five organisms are seen. Note flagella and undulating membrane. Stained sediment of bulls sheath.

TRICHOMONIASIS IN CATTLE AND ITS CONTROL

Phillip M. Hinze, D. V. M. Logan, Utah

A recent report by Johnson (1) revealed that Trichomoniasis is widespread in beef herds in the Rocky Mountain West. The disease is still encountered occasionally in dairy herds where natural breeding is practiced and is also found in a few bulls selected for use artificially in an organized bull stud. Unfortunately, range herds harboring this disease experience a low or a delayed calf crop and *Trichomonas fetus* survives current semen processing methods. Artificial insemination can be responsible for spreading the disease if semen becomes grossly contaminated with the organism. For these reasons, bovine practitioners should continue to be on the alert for this disease.

DIAGNOSIS

Diagnosis is not always accomplished from the cow herd with ease and more accurate results are obtained by testing the bulls. Several technics have been successful in collecting trichomonads from the sheath and glans penis of the bull but the preputial douche method is preferred in this area. About 100cc of saline solution is injected into the sheath, the preputial opening is squeezed shut to retain the saline, then the sheath area is massaged briskly about 100 times with emphasis on the glans penis. The saline solution is then collected, centrifuged immediately and the sediment examined microscopically for trichomonads.

The remaining sediment is then placed in modified Plastridge's media for culture. The culture is read following four to four and one-half days incubation at 37 degrees centigrade.

Confirmation is based entirely upon identification of the organism, i.e., its pear-shaped form (10 to 15 microns long and 5 to 10 microns wide), its rapid forward movement, interuped briefly by a halting or resting phase, and, of course, the undulating membrane. This characteristic movement disappears rather quickly in

saline and at three hours post collection, movement has almost stopped. On the other hand, recognition of the undulating membrane is enhanced when the trichomonad comes to a halt. The membrane continues to "flow" and the flagella still beat after forward movement stops. Cultured trichomonads are pleomorphic and not entirely similar to the ones in their natural environment. Mature organisms are larger, more rounded and are seen to have a "tumbling" action. Immature forms are small, irregular organisms and if observed long enough, cell division can be observed as one cell divides into two.

TREATMENT

The disease is generally self limiting in the female if 90 to 100 days complete breeding rest is allowed. The bull is not as fortunate and treatment becomes necessary. Past therapy has been tedious and not always successful. McLaughlin (2) however, has recently eliminated trichomoniasis from six bulls by the oral administration of dimetridazole* at the rate of 50 mg/kg body weight daily for five days. One Charolais bull in Utah was recently cured by this method as were three bulls in Washington. If this drug continues to show such promise, it will rapidly become the drug of choice for trichomoniasis therapy in bulls.

REFERENCES

- (1) Johnson, A. Earl, M.S.; Incidence & Diagnosis of Trichomoniasis in Western Beef Bulls Jour. A.V.M.A. Vol 145 No. 10 (Nov. 15, 1964) pp 1007-10.
- (2) McLoughlin, D.K.; Dimetridazole, A Systemic Treatment for Bovine Venereal Trichomoniasis. 1. Oral Administration. The Jour. of Parasitology, Vol. 51 No. 5 (Oct. 1965) pp 835-836.

* Dimetridazole-Rhodia, Inc., New York, N.Y.

"I have seen nothing in the literature"

"Last fall (1966) we had losses in newly shipped in calves that reached 20-25% of the herd. Most of these losses, it was determined after the big siege was over, were due to the Diptheroids and Pastuerella.

The so-called SF3 virus has been incriminated as the triggering agent for the two above named bacteria.

I have seen nothing in literature regarding treatments for the above. If there is any, I feel sure all the veterinarians in Iowa would appreciate hearing about it."



A. W. KRAUSE, D.V.M.
6th District, 1968
Cherokee, Iowa

Splinters from the

"seems to be another virus"

"The Preconditioned for Health program is having a definite impact in our area. IBR appears to be established and BVD appears to be in the process of becoming established as a clinical disease entity in cattle areas of higher concentrations. Also there seems to be another virus or so that doesn't fit in any common category. The C-PH program will tend to help these problems.

The 7th District meeting of the AABP was held in conjunction with the annual conference for Kansas Veterinarians in June. Very excellent and useful information was presented at the Manhattan meeting. There were 35 new applicants for membership into the AABP."

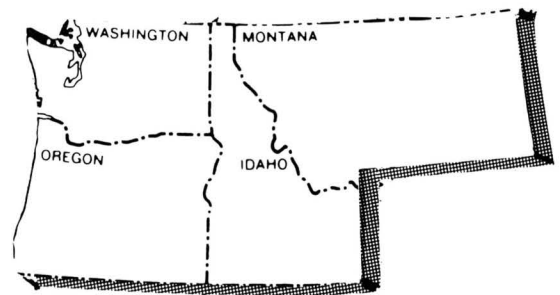


IRVIN COLLINGE, D.V.M.
7th District, 1969
Emporia Kansas

as told to the Editor via lon

"they seem to have the impression"

"When I have had an occasion to speak with groups and individuals, they seem to have the impression that our organization deals with Beef Cattle and Feed Lots only. We should emphasize the fact that the A.A.B.P. deals with all facets of the Cattle Industry. Dairy practice is an integral part of our interests."



GEORGE DUBY, D.V.M. 11th District, 1967
Centralia, Washington



T. A. CLOWER, D.V.M.
3rd District, 1968
Millen, Georgia

"I believe the egret"

"We are seeing more B.V.D. Anaplasmosis is spreading farther north. I believe the egret, a migratory bird that feeds on cattle parasites, is a vector. All of my dairy practice is now on a contract basis. Nutrition is important in our area. I run chemical analysis on the blood and write prescriptions for mineral supplements."

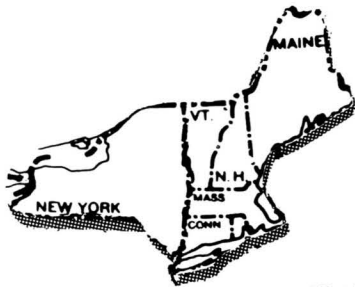
BOARD

"one of the most costly"

"The IBR syndrome seems to be increasing in occurrence during each winter season. In this regard the facts that we do not have a safe vaccine to use on pregnant animals and that there are undoubtedly other viral diseases which give similar appearance clinically to those of IBR makes this a continuing challenge to handle satisfactorily.

More unaccounted for abortions have been recorded by our Diagnostic Laboratory this year than during any previous pasture season. The field is still fertile for more study on the various possible causes.

One of the most costly diseases to the Northeast dairyman year after year continues to be that of winter dysentery. Hopefully, a well qualified graduate student will obtain funds in the near future to study this problem on a full time basis. We wish him well because this has been long neglected."



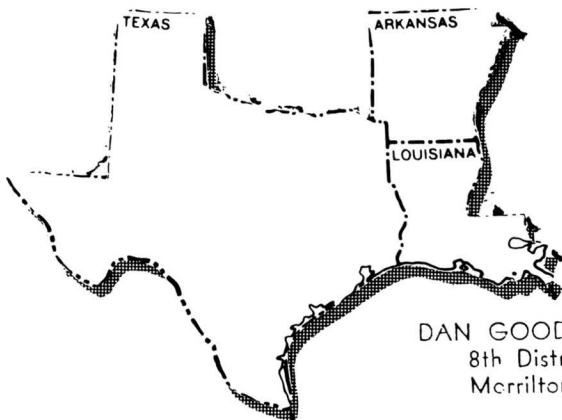
FRANCIS H. FOX, D.V.M.
1st District, 1969
Ithaca, New York

distance telephone

"the big question is who is going to pay"

"Parasitism continues to be a serious problem because of our warm, humid climate. Phenothiazine is used a lot since it is relatively cheap. When our clients find Thiabendazole to be more effective, they prefer it, even if it costs more.

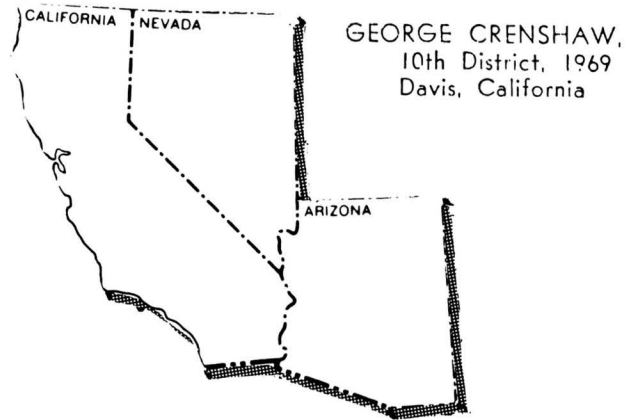
"The big question is who is going to pay for the pre-conditioning service. The producer feels the feedlot people should pay. Since both benefit, the cost should be shared. If a feeder gets a better calf, he will pay a better price. Supply and demand will iron it out."



DAN GOODWIN, D.V.M.
8th District, 1970
Merrilton, Arkansas

"cattle show by their high titre"

"Cattle moving into California feedlots show by their high titres that IBR is present. There is no confusion about it. This indicates definite losses. There is a need to initiate preventative programs. These programs applied to cows give higher dividends. By immunizing the dam, the calf will benefit. There are better weights at weaning time and higher breeding efficiency. We are approaching the requirement for **C-PH** but haven't met them yet. I am all for this concept. We are way overdue on it. We must be aware of all it entails. Livestockmen must see what he gains compared to what he lost before **C-PH**. The producer must be psychologically, economically, and physically prepared."



Splinters from the

"semen must be up to par"

"Infertility problems haven't changed much except we are more aware of them due to better records and artificial insemination. The owners and managers of the herds are more alert as to what's going on. There are fewer cases of contagious breeding diseases. The hormones used properly in therapy are effective.

The biggest problem for the owners are the repeat breeders that the vet says are normal. Some owners tend to blame the cow but the semen may be at fault. There is a tendency to choose a bull because of his performance regarding production with too little regard to the quality of his semen. The semen must be up to par, properly frozen, and still be viable on thawing out.

We don't know enough about IBR and these other viruses yet. Are the vaccines safe? Practitioners should report their experiences with them. These should be published in "The Bovine Practitioner."



ARTHUR BARDENSLAGER, D.V.M.
2nd District, 1970
Churchville, Virginia

"Those from Kentucky are authentic"

"We are seeing lots of interest in the **C-PH** program. Many cattle now coming to our feedlots in Illinois have incomplete certification. Those from Kentucky are authentic because **C-PH** is tied to the health certificate and signed by a veterinarian.

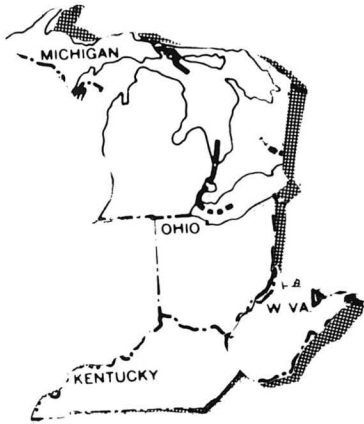
We welcome all practitioners to attend the national convention of the AABP in Chicago in December, 1968. The LaSalle Hotel offers great hospitality."



HERB MARSH, D.V.M.
5th District, 1970
Princeton, Illinois

as told

"diagnose pregnancy at 35 days"



V. L. THARP, D.V.M.
4th District, 1969
Columbus, Ohio

"I believe one of the most critical conditions in many high quality dairy herds is the post parturient syndrome.

It is very important that all veterinarians engaged in a cattle practice, take advantage of every opportunity to up-grade their proficiency in all aspects of the problems of reproduction. The use of computers to report the Herd Reproductive status with the monthly DHIA reports makes it essential for veterinarians to diagnose pregnancy at 35 to 42 days in order to supply the input for the computer. For the most satisfactory herd reproductive program, early diagnosis is quite essential. Cooperative Extension Service is promoting the program. In some areas, programs are being instituted to train dairymen to do their own artificial insemination and pregnancy diagnosis. Veterinarians must provide a superior reproduction program or lose certain portions of this area of veterinary practice.

I recently appeared as a witness for the state of Wisconsin, Board of Veterinary Examiners who were seeking an injunction against the Wisconsin Herd Breeding Association, who employs three laymen to diagnose pregnancy for private herds. The board contended this violated their Veterinary Practice Act and were seeking an injunction."

"abortions that must go undiagnosed"

"Bovine abortions, whether it be in dairy cattle or range cow calf operation, are of a great economic importance to the livestock industry in the Rocky Mountain area. One must be half detective to find the cause. In many instances an accurate diagnosis cannot be made. The bovine practitioner has to use the process of elimination in arriving at a proper diagnosis and then about 33% go unanswered.

The proper use of leptospirosis, vibrio, Brucella Abortus, I.B.R. and B.V.D. vaccine will help reduce the incidence. Nutritionally, plenty of Vitamin A Palmitate should supplement the diet. If nitrates are suspected, increasing the amount of grain and reducing the roughage, plus good water and the addition of 3-4 grs. daily of organic iodine, will correct the condition.

The abortion that must go undiagnosed is a problem that the American Association of Bovine Practitioners should make a concerted effort to solve. This can be done either as an association or as individuals using all the laboratory techniques available. The Association might also use its influence to get research grants for use in this area."

DON MACKEY, D.V.M.
9th District, 1968
Greeley, Colorado

WORLD ASSOCIATION FOR BUIATRICS

H. E. Amstutz, D.V.M.
Secretary-Treasurer, AABP

Joint AABP and WAB meeting

The AABP is planning to host the World Association for Buiatrics (WAB, Cattle Diseases) meeting in 1970. The WAB is affiliated with the World Veterinary Association and has objectives very similar to the AABP. Past meetings have been held biennially in Europe—Hannover, 1960; Vienna, 1962; Copenhagen, 1964 and Zurich, 1966. Opatija, Jugoslavia has been selected as the site for 1968.

The AABP voted at Dallas, with approval of the AVMA Board of Governors, to invite the WAB to the United States in 1970. Hosting a world meeting should stimulate the AABP in many ways and should inform the whole world that we are a potent organization. Initial plans were to hold the meeting in conjunction with the 1970 AVMA meeting at Las Vegas. The last day of the AVMA was to be the first day of the joint AABP-WAB meeting which would then continue for two or more additional days. The inaccessibility of Las Vegas to foreign participants and instant translation problems plus the growing strength of the AABP has encouraged us to consider a separate AABP-WAB meeting in Chicago after the AVMA meeting.



Mastitis has been tentatively selected as a major topic because of its world economic importance plus current interest of veterinarians, animal scientists, milk processors, drug manufacturers, equipment manufacturers and public health officials. It is hoped that a world meeting dealing primarily with mastitis will interest many people and attract some funds.

Realizing that mastitis will not be of major interest to beef cattle practitioners, we plan to devote a sizable portion of the program to topics that will interest them. Suggestions on any aspect of the proposed meeting are solicited, but we especially need ideas on financing at this time.

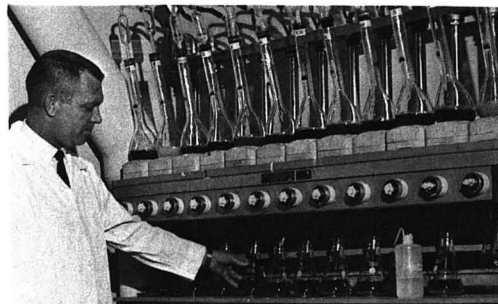
THE FUNCTIONS OF RUMEN MICROORGANISMS

V. F. Colenbrander, Ph. D.

Department of Animal Sciences Purdue University

The ruminant animal is unique in that its rumen performs functions of which the monogastric stomach is incapable. This is made possible by the large rumen which serves as an ideal fermentation vat teeming with a multitude of very specialized anaerobic microorganisms. The chemical reactions catalyzed by the microbial enzymes make possible the rumen's unique functions; digestion of large amounts of fiber (cellulose and hemicellulose), synthesis of high quality microbial protein from non-protein nitrogen or low quality protein and the synthesis of B complex vitamins and vitamin K.

Rumen microorganisms can be classified as bacteria or protozoa with a limited number of yeasts being present. The bacteria greatly outnumber the protozoa, but because of protozoal size the two may be equal in mass. Bacteria have been found to be essential to the host, but protozoa, although similar in function to bacteria, have yet to be proved essential. The most prominent species of rumen flora are Streptococci and Lactobacilli as well as numerous cellulolytic type bacteria. The concentration of a specific bacteria type may vary according to dietary substrate. Some being in greatest concentration on grain or succulent grass ration, while others may predominate with a hay and concentrate ration. The cellulolytic microorganisms are of the most important order to the ruminant animal because of their ability to enzymatically digest the cellulose from fibrous plants. This capability is not possessed by any enzymes secreted by the digestive tract; only by those enzymes of microbial origin. Volatile fatty acids, the end-products of cellulose and other carbohydrate digestion, are valuable in the metabolic economy of ruminants. The major volatile fatty acids (acetic, propionic and butyric), though they can be involved in further rumen reactions, are largely absorbed through the rumen mucosa into the portal blood circulation. The absorbed volatile fatty acids serve as the major source of energy for ruminants.

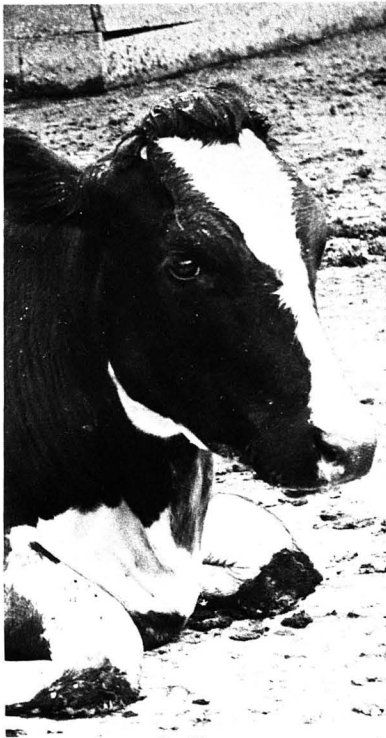


Dr. Vernon Colenbrander, Lafayette, Indiana, has been conducting research on ruminant nutrition in the area of rumen physiology. In this brief article he discusses the role of rumen micro-organisms in the nutrition of the bovine. He is shown here operating a digestion and distillation apparatus in the determination of Kjeldahl nitrogen.

The knowledge that protein synthesis can be achieved by the microorganisms of the rumen has been known for considerable time. The discovery that the rumen microorganisms could utilize non-protein nitrogen in the synthesis of high quality protein was probably one of the most significant contributions to ruminant nutrition. Because of this phenomena non-protein nitrogen products such as urea, when fed at recommended levels, have approximately the same value as proteins for ruminants. Therefore, urea, a low cost source of nitrogen, has been used as partial replacement for higher cost plant protein. A brief look at the manner in which nitrogenous sources are utilized by the animal shows why either non-protein nitrogen or protein can be used. Proteins are first broken down by proteolysis and deamination with the release of ammonia. Non-protein nitrogen, such as urea, is degraded to ammonia by hydrolytic deamination. From this point the pathway to utilization of various ammonia sources is the same, with ammonia recombining with carbon compounds to form amino acids which are the building blocks for microbial protein. When digested and absorbed in the lower tract, this microbial protein supplies the ruminant with all the physiological essential and non-essential amino acids.

Produces Vitamins B, C, and K

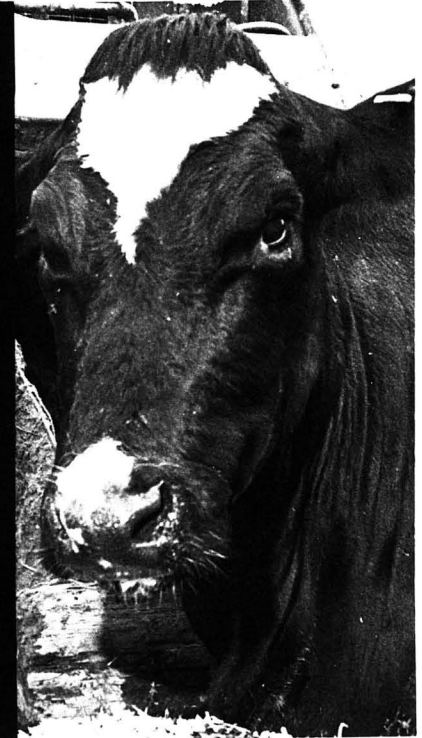
As a result of microbial activity in the rumen, no dietary source of the B complex vitamins and vitamin K are needed by the functional ruminant. The ability to synthesize these vitamins in adequate amounts is acquired at an early age and this ability is enhanced by the consumption of hay. The remaining vitamins are available to the animal by various means. Vitamin C is produced by the body tissue. Vitamins A and D are dietary essentials, but when the diet is low in carotene (precursor of vitamin A) or sunlight is inadequate, the ration needs to be supplemented with these vitamins.



Cow A

**Summary of Laboratory Tests
and the Clinical Picture**

6	Serum Cal. Mg/100 ml	15
100	Urine Chlorides mEq/L	3
10	Urine pH	6
0	Urine Pro. Mg/100 ml	50
Neg.	Urine WBC & Bact.	Neg.
1.015	Urine S. G.	1.030
3 gal.	Water intake, 24 hr.	0
Fair	Appetite	0
Bright	Attitude	Depressed
100	Body Temp.	98
Good	Skin Turgor	Poor
Normal	Eye Socket	Sunken
0	Urine Ketones	S



Cow B

BOVINE BEDSIDE

Both of these cows went down after calving two days ago. Each was given intravenous calcium therapy. They were up briefly yesterday. They are still down today.

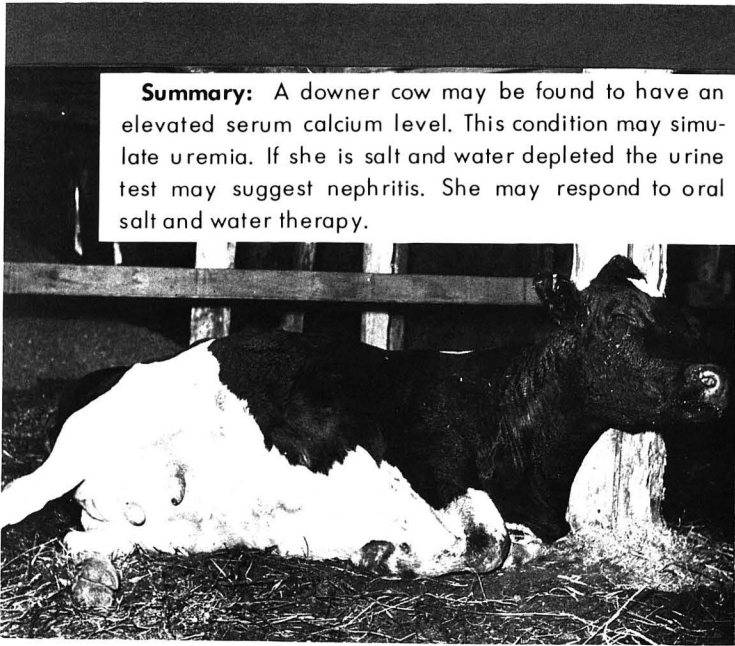
The cows pictured above each have a similar history. Their clinical picture today, however is different. This is further substantiated by the results of rapid tests performed at their sides. This article describes a rapid test for serum calcium and urine chlorides. These tests are useful for different diagnosis and as guides to therapy. They should be performed daily until body chemistry returns to normal levels.

Guide for Salt and Water Therapy

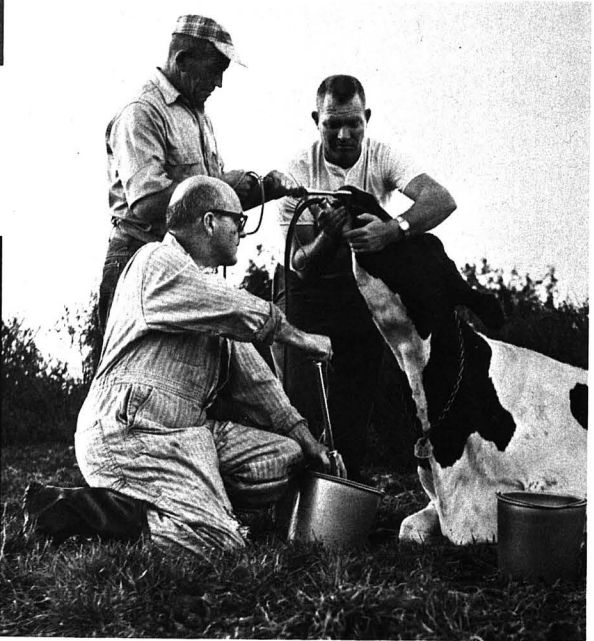
A good guide for veterinary practitioners in applied therapy is; "Sodium (salt) determines the size of the extracellular space and water determines the osmolarity of this space. (7) This applies to a cow in Wyoming, a cat in California, or a Jack ass in Washington.

Ray H. Bradbury, D.V.M.
Mount Vernon, Washington





Summary: A downer cow may be found to have an elevated serum calcium level. This condition may simulate uremia. If she is salt and water depleted the urine test may suggest nephritis. She may respond to oral salt and water therapy.



The typical cow requiring calcium therapy is usually recumbant, has a subnormal temperature, and reacts poorly to physical stimuli. A serum calcium test should be performed on those not responding to initial calcium therapy.

If a downer cow has a normal or above serum calcium level, the salt and water needs should be evaluated. If the clinical picture and rapid laboratory tests indicate sodium (salt) and water depletion, the needs are conveniently supplied by stomach tube.

RICKS

Section I Serum Calcium and Urine Chloride

Part A - Serum Calcium

The dairy practitioner is often confronted with the "Downer Cow" syndrome. His first therapy for this condition, and often his best, is the use of calcium therapy. However, all cows do not respond to initial calcium therapy and further treatment becomes necessary. After eliminating other possible causes for her failure to respond, such as obturator paralysis, metritis, mastitis, or enterotoxemia, he usually resorts to further calcium therapy on a "let's give her another shot and see how she looks tomorrow" approach. Much witchcraft could be eliminated if more practitioners would test serum calcium levels before continuing treatment. A simple, rapid, field test, using a chelating agent to tie up remaining serum calcium is now available to the practitioner and is very useful. The original report recommended the use of graduated amounts of EDTA in each of three vials and the introduction of a fixed amount of blood.(1) This may be simplified by using a fixed amount of EDTA and varying the amount of blood in each tube. The test is performed in 4 tubes, using a 5th tube as a control. (See next page.)

Calcium Levels

The serum calcium in normal cows is between 9 and 11 mg/100 ml. In typical milk fever it may be from 3 to 6 mg/100 ml. Toxic levels up to 24 mg/100 ml. may be found in cows receiving calcium therapy for three days in succession with no water intake.

Clinical Evaluation

You will note that in cow A the serum calcium is found to be below the normal level indicating the need for calcium therapy. In cow B the serum calcium level is higher than normal. Therefore, intravenous calcium therapy is contra-indicated. Additional calcium without the consideration of her other needs would only worsen her condition or even be fatal. Hypercalcemia may impair renal function sufficiently to contribute to the development of uremia. (4) The phosphate and sulfate blood levels may also be elevated and the serum bicarbonate decreased.

more Tricks, next page ▶



Fig. 1.1.
1 ml. urine
plus 5 drops
chloride indicator

plus 3 dropperfuls
.1N HNO₃

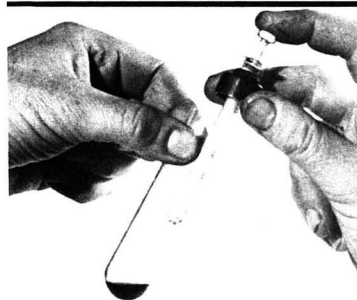


Fig. 1.2.
Titrate with
mercury reagent
to purple end point.

Part B - Urine Chloride

The low urine chloride in Cow B indicates she is conserving chlorides. This is interpreted clinically that she is also conserving sodium since the chloride ion is a companion of the sodium ion. We may assume, therefore, that the renal flow of urine (water) is decreased since water leaves the kidney only in the presence of adequate sodium. More important is the fact that she is water depleted. Since sodium acts as a sponge for water, the kidney flow will not increase until adequate sodium is available for renal excretion.

The urine chloride may be as low as 2 in salt depletion and be as high as 800 in salt excess. In normal cows the urine chloride ranges from 20 to 60 mEq/L. Always run tests on two or three normal herd mates to determine a normal range for the herd.

Clinical Picture

The best clinical observations to substantiate primary sodium depletion with the secondary water depletion is the observation of skin turgor and the eye socket. Grasp the skin on the neck. In severe salt depletion the skin fold levels out slowly. A slightly sunken or donut eye in the cow will further support the diagnosis of sodium depletion. This is due to the shrinking of the extra cellular space. This is confirmed by an elevation of the hematocrit.

URINE CHLORIDE TEST

(Scribner Method)

The fantus test has been proposed as a rapid test for urine chlorides. Its accuracy as well as its value in interpreting the test has been questioned by some. (2) Veterinarians familiar with the Faustus Test will find it adequate but less accurate. (3)

A preferred rapid test for urine chloride is in the Scribner bedside kit. It consists of:

- 1 cc urine
- plus 5 drops chloride indicator
- plus 3 dropperfuls, .1Normal HNO₃

Titrate with mercury reagent until end point of deep purple color. The urine chloride in mEq/L corresponds to the amount of reagent in hundredths. In other words, if .10ml of reagent are needed to reach the end point the urine chloride is said to be 10 mEq/L.

The Scribner Bedside Kit is available from Rochester Products, Rochester, Minnesota.

Keep in mind that we are considering a cow with no other pathology. Surely we see this poor skin turgor and sunken eyes in the starving and chronically sick cow in other syndromes. Protein in the blood acts also like a sponge for water retention. In hypoproteinemia from excessive loss of protein in the urine the skin turgor is poor and eye socket is sunken. These cows, however, will not respond to simple salt and water therapy.

Differential Diagnosis

Salt depletion also simulates nephritis. (5) Observe that the urine test for protein is found to be 50 mg./100ml. A shift of the urine pH to the acid side of 6 also indicates a renal abnormality in Cow B brought on by sodium and water depletion. If sodium and water are not provided within 24 hours, epithelial casts will be seen in the urine to further substantiate the renal damage from salt and water depletion.

Downer cows heretofore diagnosed as albuminuria may fall in the above category. If the proteinuria continues after the sodium and water depletion has been corrected, steroid therapy is indicated. Steroids decrease the loss of protein in the urine following salt and water depletion. Steroids are contra-indicated if pyelonephritis, mastitis, metritis, or traumatic gastritis are present.

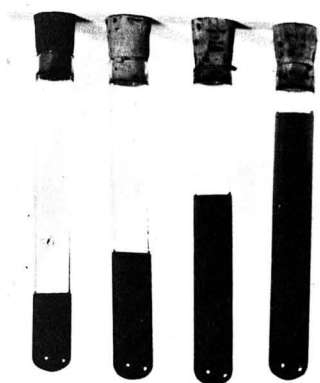


Fig. 2.1.

1 drop EDTA sol
Plus venous blood

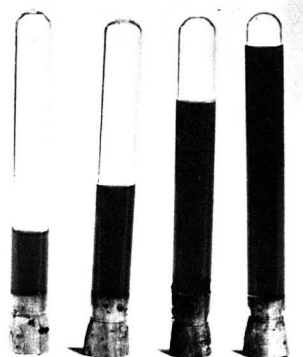


Fig. 2.2.

Low serum calcium

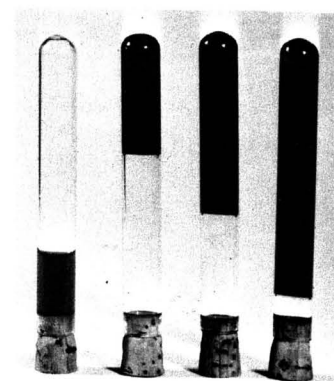


Fig.2.3.

- + + +
High serum calcium

SERUM CALCIUM TEST

(Modified from Mayer, Raggi, and Ramberg) ▽

Put 1 drop of 3.9% EDTA solution into each of four tubes. Using a clean needle fill tubes to levels shown in top illustrations. These are approximately one fourth, one half, three fourths, and nearly full. Mix by rotating 4 times. After fifteen minutes, or after blood has clotted in a fifth or control tube, invert the tubes and observe which tubes contain clots. In a typical case of milk fever clotting will occur in none of the tubes or only in the

full tube. (fig. 2.) If clotting occurs in the last two or three tubes (fig. 3) the serum calcium is above normal. Use standard 10 ml. test tubes. Since the size of drops may vary, one may use a titrating syringe for more accuracy. Experiment with amount of E.D.T.A. needed so that no clotting occurs with normal blood in the tubes 1/4 and 1/2 full. Clotting time is affected by temperature; hence, a control tube is always used.

Treatment

We surmise therefore that the greatest need for Cow B is sodium and its partner in this case, water. The recommended therapy for Cow B is the administration of 1 or 2 cups of salt in 10 gallons of water administered by stomach tube. After therapy she may respond within a few hours by getting up, eating, and even may drink on her own.

The diagnosis of salt and water depletion is confirmed by the improvement of cow B's attitude on the administration of salt and water into her rumen. This of course would be contra-indicated if she were in normal or hyper-salt balance. In that case additional salt and water would contribute to pulmonary edema. The salt acting as a sponge, retains water and the excess finds its place in a 3rd space such as the lungs. (4)

Potassium therapy would serve no useful purpose in a downer cow with sodium and water depletion. The plant fibres in the ingesta are rich in potassium and the latter will be available after the sodium and water needs are provided.

Conclusion

Cows require an intake of from one to two ounces of salt daily. (8) If kept on a salt poor diet at calving time their low reserves may contribute to the incidence of downer cows.

This contribution to the downer cow syndrome is the calling attention to the fact that sodium or salt deficiency can be part of her problem. The primary deficiency is sodium. The secondary deficiency is water since she will not drink water in salt depletion because she is not thirsty. Water therapy alone would contribute further to salt deficiency since the water on leaving the kidneys would take more sodium with it. There is no therapy that is less expensive and none so dramatic in results.

▽ My reason in simplifying the original procedure of Mayer Raggi, and Ramberg is to eliminate one step of transferring from syringe to tubes. Different concentrations other than 3.9% EDTA may be required. Clotting should just occur in the third and fourth tubes with blood from normal cows. The potassium salt of EDTA is used.



Summary of papers delivered to American Association
of Bovine Practitioners at Las Vegas, Nevada, January 21, 1967.

OPEN TEAT SURGERY

Richard F. Bristol, D. V. M., M. S.
Iowa State University
Ames, Iowa

Open teat surgery is a practical and important adjunct to therapy of mechanical and traumatic conditions of the bovine teat.

The limitations of this type of surgery are those of the tissues with which the surgeon has to deal, an intimate knowledge of the anatomy of the teat and a strict concept of asepsis.

Open teat surgery is particularly useful in removing large polyps, spiders, the repair of ruptured blood vessels and the repair of milk fistulas of the teat sinus.

Proper preparation consists of a thorough preparation of the teat. This consists of 2 scrubs with an antiseptic soap solution and a final application of a defatting agent. A teat tube is placed in the teat opening and all milk drained from the quarter. An incision is made parallel to the longitudinal axis of the teat down to the teat sinus. If a teat (milk) fistula is being repaired it is necessary to remove all of the old scar tissue surrounding the fistula. Other conditions to be corrected are repaired and the wound closed. It is important that sutures placed into the teat do not penetrate the mucous membrane lining of the teat cistern itself but are placed in the areolar tissue surrounding this lining. The incision line can be closed using a single line of stainless steel interrupted sutures or using a row of subcuticular 000 cat gut sutures and closing the skin with a vertical mattress stitch of nonabsorbant synthetic material. The stitches are removed after five days along with the teat tube. The after care consists of antibiotic (systemic) therapy for a period of 5 days after surgery.

IBR, BVD, AND P1₃

IMMUNITY, VACCINE PROPERTIES AND CONTROL

S. F. Rosner, D. V. M.
Midland, Michigan

Consideration of immunity in these diseases embraces the passive immunity of the dam, which transfers to the calf through the colostrum at about the same antibody titre level as occurs in the dam. This passive immunity is a necessary consideration in the application of the vaccines in a logical disease control program, since the vaccines should be used at a time when there is incomplete protection to the calf from the colostrum passive antibody and at a level where it is the least likely to interfere with the calf's response to the vaccinal antigenicity. For practical purposes in a given calf crop, it would appear to be at or near normal weaning time. It should be kept in mind, however, that some calves lose the colostrum immunity at an earlier age due to a lower level of immunity in the dam and biological variation in calves.

Testing of the vaccines was explained to demonstrate potency, safety, stability, and exclusion of passenger pathogens.

It was suggested that the optimum time at which to vaccinate against these diseases was at weaning time. At least two to three weeks should be allowed post-vaccinally before vaccines would be exposed to field viruses to allow sufficient time for a good functional immunity to be developed. In the event of imminent field exposure before weaning, all calves can be vaccinated; such calves should be re-vaccinated at weaning time.

Caution was expressed to avoid the practice of vaccinating pregnant cattle.

It was further pointed out that the vaccines are designed to prevent the diseases and not for treatment of the diseases. If some of the cattle are in a quiescent or incubative stage of disease, then one may expect some of the vaccines to develop the disease sometime post-vaccinally.

References:

Bovine Bedside Tricks

1. Mayer, G. P., Raggi, F., Ramberg, C. F.;
A Rapid Semiquantitative test for Serum Calcium Suitable for Field Use; JAVMA April 15, 1965, pg. 839.
2. Benjamin M. M.; Outline of Clinical Pathology Fort Collins, 1961.
3. Morgan H. C.; "Urine Chemistry III" Veterinary Medicine; Vol. 62, No. 9 Sept. 1967, pg. 841.
4. Cecil & Loeb, Textbook of Medicine; W. B. Saunders; 1959, pg. 1056.
5. Marriott, H. L.; Water and Salt Depletion; Charles C. Thomas, 1952.
6. Leaf A., Newburgh, L. H.; Body Fluids in Clinical Medicine; Charles C. Thomas, 1955.
7. Scribner, B., Marr, T., et al; Lectures on Fluid Therapy. School of Medicine. University of Washington 1960.
8. Crowley, J. W. Don't Overlook the Importance of Salt Hoard's Dairymen; July 10, 1967, pg. 844

PROLONGED SULFONAMIDE BLOOD LEVELS IN CATTLE

S. F. Scheidy, V. M. D.
Philadelphia, Pennsylvania

A sustained release dosage form of Sulfamethazine ('Spanbolet'-Norden Laboratories, Lincoln, Nebraska) has been prepared.

Pharmacologic studies were conducted in dairy, beef, and crossbred cattle. Boluses containing 22.5 grams of the drug were administered orally to fistulated steers and rate of disintegration was determined.

Blood level studies were conducted in many cattle of various sizes and ages. In these studies it was demonstrated that on the average, therapeutic blood levels were obtained and maintained for a period of approximately 120 hours following the administration of a single dose of the drug. Figure 1 illustrates the results of eight trials in ten head of cattle.

Results of tissue residue studies indicate that there is less than 0.1 ppm of the drug in tissues (liver, kidney, muscle, and fat) in treated cattle fifteen days after dosing.

A summary of prophylactic and therapeutic trials with the use of the 'Spanbolets' Sulfamethazine in the management of shipping fever, pneumonia, and bovine diphtheria indicates favorable results.

FREE FLOATING TISSUE

Practice tip



Large pieces of tissue removed surgically from the teats of dairy cattle. A double edge bistoury was used to lacerate the sphincter with two slashes at 90° angles to each other. The floating lumps of tissue were then expelled by manipulating them thru the orifice with fingers. The photo shows the tissue in their actual size (RHB).

An alternate method:

Formerly when I was confronted with a milk cow that had a chunk of tissue in the teat that was free floating and occluded the orifice, I tried to roll it out.

Now it appears to me that there are usually affected hemolytic staphylococci. Therefore, I now leave the chunk in the teat, discontinue milking the quarter and medicate periodically with appropriate antibiotics. Hopefully the quarter will be improved in the next lactation.

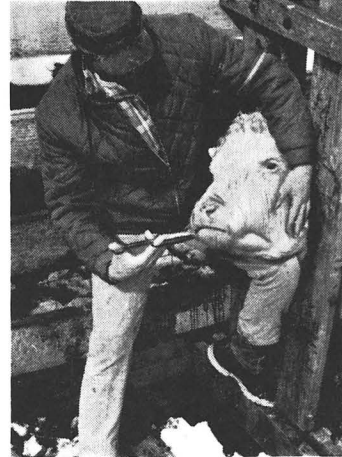
Irvin J. Collinge, DVM
Emporia, Kansas

Bovine Practitioners to meet in Las Vegas in January.

The AABP will convene during the Intermountain Veterinary meeting in January. Speakers include Dr. Eric I. Williams with an academic approach on "Downer Cow Problems". Dr. George Crenshaw will discuss the IBR Complex. Dr. Marcus Haggard will discuss the Nitrate Problem. Dr. Maurice Weldy will show his simplified method of foot trimming. Our president-elect, Dr. Ray Ivie is scheduled to demonstrate a successful method of correcting the prolapsed vagina. The program will be moderated by our past president, Dr. Phil Hinze.

Makes worming easy as

1. Shake 2. Open 3. Administer



...a new, exclusive veterinary formulation

A distinctive pink color identifies this professional wormer for cattle, sheep, goats and horses.

- *Saves time:* OMNIZOLE* Suspension comes ready to use.
- *Easy to dispense:* Tear-off label. Write instructions on plastic bottle.
- *Three sizes:* Comes in pints, quarts, gallons.
- *Highly effective:* Works against adult and many immature roundworms.
- *Wide margin of safety:* OMNIZOLE Suspension can be used to worm even pregnant mares as well as sick, heavily parasitized, pregnant, old or young cattle, sheep or goats.



OMNIZOLE (thiabendazole)
Suspension 4 Gm./fl. oz.

Crumbles too:

**OMNIZOLE (thiabendazole)
6.6% Wormer Crumbles**

for cattle, sheep and goats, can be topdressed or mixed with feed by you or your clients. It's palatable. Available in 2-lb. bottles and 25-lb. drums.

WARNING: (Cattle, Sheep and Goats) Milk taken from treated animals within 96 hours (8 milkings) after the latest treatment must not be used for food. Do not treat within 30 days of slaughter. (Horses) Do not use in horses to be slaughtered for human consumption.

*OMNIZOLE is a trademark of Merck & Co., Inc., for thiabendazole

See page at right for further information on OMNIZOLE Suspension.

OMNIZOLE exclusive veterinary wormers are made by Merck

PRECONDITIONING

Don Williams DVM
President, AABP

Introduction ... C-PH

The diseases of the respiratory complex have been a problem to the cattleman for many, many years; probably since the domestication of the cow. John Navin in his book "Veterinary Practice" 1888, goes to great length to differentiate Laryngitis, Catarrh (or Hoose), Epidemic Catarrh, Malignant Epidemic Murrain, Bronchitis, and Pneumonia. Regardless of the diagnosis, the disease was recognized as "inflammatory in its nature". Under treatment of this disease, "six or eight quarts of blood may be taken." The bleeding was supplemented by "sweats", physics, and occasionally blisters to the chest.

Though our knowledge of supportive treatment had improved, no great strides had been made in attacking this disease until the discovery of sulfa drugs and antibiotics in the early 1940's. Even with these newer methods of treatment, the cattle industry has come to accept 2 to 10% death loss when handling calves.

With the identification of some of the respiratory viruses and the production of vaccines, we have sharply decreased the morbidity and mortality in young cattle subjected to modern marketing and transportation procedures. The preparation of calves to face this respiratory complex has been termed **preconditioning**.

The full requirements of preconditioning can best be appreciated when the problem of shipping fever is considered to involve stress, viral infection, and bacterial infection. Stress of shipping, weaning, and dietary change permits a latent viral infection in a group of cattle to become active. The active multiplication of the virus within the cells of the respiratory tract produces extensive cellular damage. This in turn permits bacterial invasion. At the present time, three viruses head the list as to their importance in the respiratory complex. These viruses are Infectious Bovine Rhinotracheitis (IBR), Bovine Virus Diarrhea (BVD), and Parainfluenza-3 (PI3). Further research in the years ahead may add other viruses to this group. Pasteruella species are often the primary bacterial invaders, with Corynebacterium pyogenes being incriminated to a lesser degree with other bacterial species. To complete the listing of infectious agents which have been isolated from cases of shipping fever, the mycoplasma and psittacosis-lyphogranuloma organisms should also be included. In order to prevent shipping fever, one needs to prevent stress, viral infections, subsequent bacterial infections and parasites.

(Continued on page 22)



OMNIZOLE™ (thiabendazole) Suspension

INDICATIONS

For treating cattle*, horses**, sheep and goats*** infected with gastrointestinal roundworms.

DIRECTIONS FOR USE AND DOSAGE

Shake well before using.

CATTLE

OMNIZOLE is given as a drench. The dose is proportional to body weight and the severity of infection. The routine dose of Thiabendazole for *Trichostrongylus*, *Haemonchus*, and *Ostertagia* is 3 Gm. ($\frac{3}{4}$ fl. oz. OMNIZOLE) per 100 lb. of body weight. For *Cooperia*, or severe infections of other species, give 5 Gm. ($1\frac{1}{4}$ fl. oz. OMNIZOLE) per 100 lb.

HORSES

Give OMNIZOLE by stomach tube or as a drench. The routine dose of Thiabendazole is 2 Gm. ($\frac{1}{2}$ fl. oz. OMNIZOLE) per 100 lb. of body weight. A dose of 4 Gm. (1 fl. oz. OMNIZOLE) per 100 lb. is recommended for use against ascarids.

Note: Thiabendazole is inactive against *Gastrophilus* sp. However, the drug is compatible with carbon disulfide or piperazine - carbon disulfide complex and these may be given to horses with OMNIZOLE if desired. **Precautions ordinarily observed with carbon disulfide must be observed.**

SHEEP and GOATS

Give OMNIZOLE as a drench. The dose of Thiabendazole is 2 Gm. ($\frac{1}{2}$ fl. oz. OMNIZOLE) per 100 lb. of body weight. Examples of average total doses of OMNIZOLE are:

Lambs and Small Goats (under 50 lb.)	$\frac{1}{4}$ fl. oz.
Ewes and Does (50 to 100 lb.)	$\frac{1}{2}$ fl. oz.
Rams and Bucks (100 to 150 lb.)	$\frac{3}{4}$ fl. oz.

Sheep and goats with severe infections should be given 3 Gm. Thiabendazole ($\frac{3}{4}$ fl. oz. OMNIZOLE) per 100 lb. of body weight.

Note: Treatment should be repeated in 2 to 3 weeks in severely parasitized cattle, horses, sheep, or goats.

*Cattle - Members of the genera *Trichostrongylus*, *Haemonchus*, *Ostertagia*, and *Cooperia*.

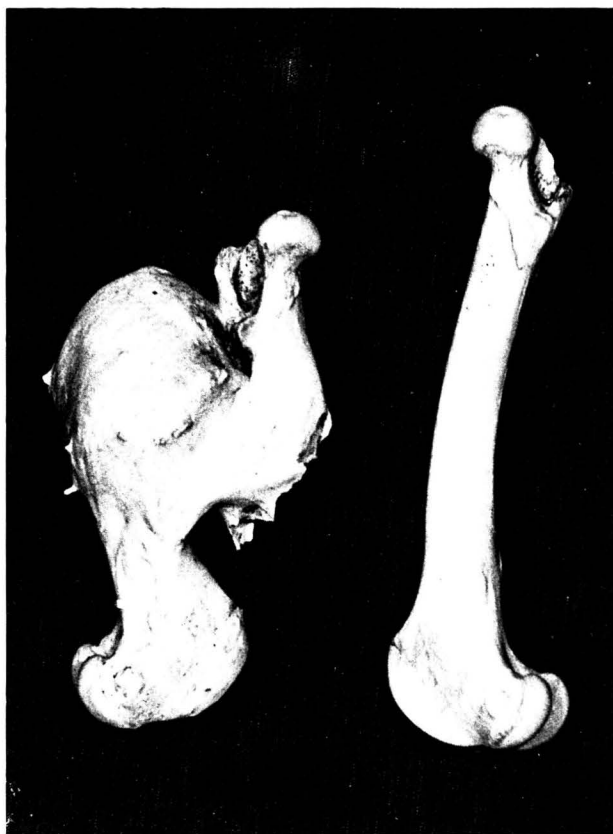
**Horses - Members of the genera *Strongylus*, *Cyathostomum*, *Cylicobrachytus* and related genera, *Craterostomum*, *Oesophagodontus*, *Poteriostomum*, *Oxyuris*, *Strongyloides*, and *Parascaris*.

***Sheep and Goats - Members of the genera *Trichostrongylus*, *Haemonchus*, *Ostertagia*, *Cooperia*, *Nematodirus*, *Bunostomum*, *Strongyloides*, *Chabertia*, and *Oesophagostomum*.

Animal Health Products
Merck Chemical Division
Rahway, N. J.



VETERINARY



Fractured Femur in a Wild Deer

A normal appearing deer was shot in a logging camp in British Columbia. The hunter on boning out the hind legs found evidence of an old fracture. Solid bone had joined the two fragments filling in a gap of about five inches. This is an amazing feat of nature. There was no aid to immobilization. The animal had to be active enough to forage and avoid predators. The photo shows the healed femur and the bone from the normal leg. (Photo courtesy **Wildlife Review**, Victoria, B.C., Canada.)

Whats New±

An emergency oxygen administering device coupled with an aspirator that was developed by practicing veterinarians for new born calves. Available from Dr. Joe M. Magrath, P.O. Box 148 McCook, Nebraska 69001.

Good Books!

Management of Bovine Infertility. A practical review with some new ideas. Order from Veterinary Medicine, Bonner Springs, Kansas.

Coming Soon:

Diseases of Cattle with a section on programmed management for the Bovine Practitioner. American Veterinary Publications, Wheaton, Illinois.

PAST PRESIDENT REPORTS ON PRECONDITIONING

Phillip M. Hinze, D. V. M.
Logan, Utah

I had occasion to attend a large cattlemen's meeting in Montana in October where "Preconditioning of Calves" received considerable attention. This was my part on the program and the group was really alert to it. Several pertinent facts came out of this meeting:

1-A large cattle feeder from Minnesota described his success with preconditioned calves, stating that he had made a profit at a time when many feeders had quit the business.

2-Those feeders not quitting the business have gone to feeding yearlings, because of the tremendous losses they have experienced in recent years with calves. If this should become a trend, many ranchers would be hurt badly because they are not adapted to raising yearlings. Urethral calculi terminated the yearling business on many ranches and they couldn't survive if they had to go back to it.

3-A banker from Minnesota made it quite clear that they would pay a premium for cattle properly preconditioned.

4-Dr. Richard C. Searl of Fort Dodge Laboratories (at the Washington State Veterinary meeting) made it quite clear that all of the present virus vaccines (I.B.R., B.V.D., PI3) could be given at once and produce adequate immunity. Also, a Leptospirosis vaccine and a new Pasteurella vaccine is available that is compatible with the virus vaccines. He says a vaccine that combines all of these is very near the marketing stage. This accomplishment will make it much easier to sell the preconditioning program.

If the facts of these meetings were representative of the entire industry, it is evident that calves will either be pre-conditioned to some degree or there will be a big upsurge in the feeding of yearlings, and perhaps even two-years-olds. The comments of Dr. Rosner, Dr. Searl and others gives assurance that these virus vaccines in combination with new bacterins involved in shipping fever, offers us our first real tool to combat this disease. I am having Dr. George Crenshaw of Davis, California recap his clinical experiences and the trials they have run with these vaccines, at the Las Vegas meeting.

continued next page

NEW VIRUS INFECTIONS

George L. Crenshaw
Davis, California.

Respiratory problems, particularly those related to the viral agents are of major importance in range, feeder and dairy cattle. Although the prevalence and incidence vary, IBR, BVD and PI3 each must be considered when respiratory problems are encountered in cattle. In addition, IBR virus is involved in Infectious Pustular Vaginitis and as a cause of abortions. BVD has caused some abortions, but is responsible more for weak calves.

The interpretation of serological results in a single animal even when paired samples are taken may be difficult. In order to evaluate the herd problem it is preferable to obtain blood samples (paired) from a representative number of animals.

EBA (Foothill Abortion) in range cattle continues to be one of the major causes for economic loss. As yet no satisfactory control methods have been devised, but research on this disease entity is being expanded.

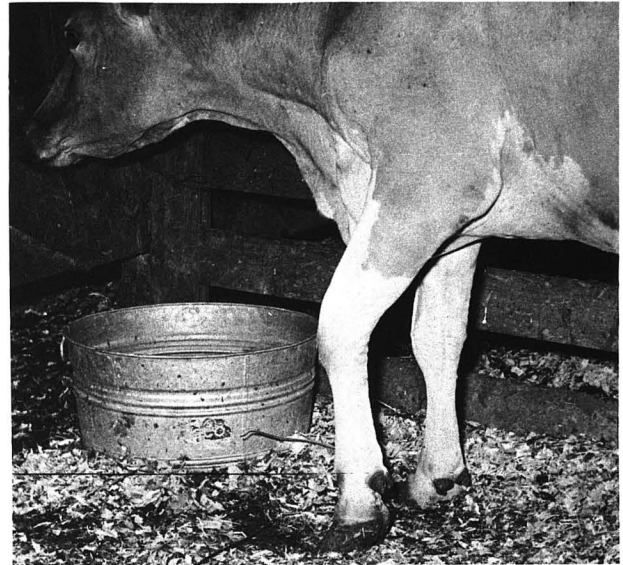
District Meeting in February

Dr. H.L. Marsh announces an all day meeting on February 17, 1968 on the subject "Bovine Practice Programming." Reproductive Herd Health Management in Beef and Dairy cattle will be presented by Dr. John Herrick. Reproductive Physiology and Reproductive Diseases will be discussed by Dr. L.C. Faulkner. Management of the Herd Sire and Semen Evaluation will be brought into focus by Dr. C.J. Bierschwal. The Fertility Problems of the Individual Cow will be handled by Dr. C. J. Callahan.

Dr. Marsh extends a genial invitation to all bovine practitioners to this February meeting in the La Salle Hotel.

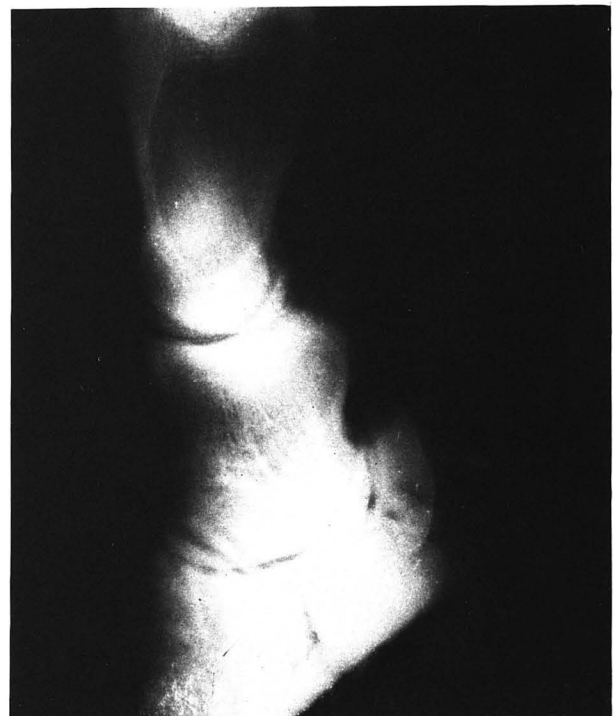
Past President cont.

Quoting Dr. Searl again, "IBR causes orchitis, epididymitis and balanoposthitis in bulls and semen quality may be affected for as long as six months following this disease. Local infections do not always cause a titer. Therefore, diagnosis depends upon both titer determinations and isolation of the virus from the sheath or semen. PI3 has also been isolated from the sheath of bulls. It may affect the germinal epithelium of the testicles and cause sterility. It can also be transmitted to the cow and cause infertility."



Fractures of Third Phalanx

Practitioners are often confronted with lameness of obscure origin. When pain appears suddenly in a fore leg and there are no signs of external lesions, a radiograph may reveal a fracture of the third phalanx. The fractures are usually confined to the medial digit of the foreleg. Lameness will last for three weeks. When a block of wood is cemented to the bottom of the lateral digit, the cow walks normally again.



Radiograph reveals fracture of third phalanx. Film made on portable 10 m.a. Xray unit with 1/2 second exposure.

CERTIFIED!

President Williams cont.

PRECONDITIONED for HEALTH

If these procedures are to be accomplished on the ranch, the rancher must receive compensation for same. However, if the feeder is to furnish this compensation, he must be assured that the procedures were actually performed and performed correctly. This assurance for the feeder requires that each animal be identified and the treatment certified by a reliable, disinterested party.

Your American Association of Bovine Practitioners has taken the stand that this can only be done by veterinarians operating under a national program. Such a national program has been designed by the AABP and will produce calves designated as "Certified-Preconditioned for Health" (C-PH). Preliminary steps have been taken to copyright this name.

C-PH calves will be identified by a metal chautreuse ear tag similar to the present tags used in Brucellosis and Tuberculosis testing. The first two of the nine digits will be numerals designating the state of origin by the code currently used. The next three digits will be letters with the first letter always a "P". The other two letters and the numerals in the last four digits will permit individual identification of 6,250,000 calves from one state without duplication. Such a tag might read 99 PAA 1234. On the back of the tag will be "A.A.B.P., C-PH" designating that this tag was applied in the Certified-Preconditioned for Health program as outlined by the American Association of Bovine Practitioners.



When an animal has been "preconditioned for health" it should mean more profits for the feeder. The animal maybe identified by a tag certifying it has been preconditioned according to the standards set up by the American Association of Bovine Practitioners.

In June, the American Veterinary Medical Association cosponsored a Symposium on Immunity to the Bovine Respiratory Disease Complex. At the conclusion of the Symposium, a panel was appointed to make recommendations in the prevention and control of the Respiratory Complex. The panel makes the following suggestions in preconditioning of calves on the ranch:

1. Accomplish castration and dehorning at approximately 2 months of age.
2. Give IBR, PI-3 and Pasteurella vaccines at approximately 4 months of age.
3. Give BVD and Pasteurella vaccines (PI-3 can be repeated if killed vaccine is used) at approximately 5 months. Treat for ecto-and endo-parasites as required at this time.

Attached to this metal tag will be a plastic tag which will hang down in front of the ear with complete information on immunizations received, the weaning, the date of immunization and the name of the certifying veterinarian. The plastic tags will serve as individual health certificates which will stay with the calves through the period of marketing and shipment.

We must admit that our knowledge of all the etiological agents in the shipping fever complex is incomplete. Consequently these immunizations as described will not include all possible causes. They should drastically reduce both morbidity and mortality when used in connection with sound management methods designed to reduce stress.

It is anticipated that the tags and certificates will be available for distribution by early summer. At this time, an announcement will be made as to how to obtain the needed supplies