

6. None - advise slaughter or not rearing offspring because of genetic nature of cystic ovaries in many affected cattle and cow families. Breed affected cows and daughters of affected cows to bulls from families with no history of cysts in the female line to reduce the incidence of cystic ovaries in severely affected herds. Bane reported that when A.I. bulls in Sweden siring daughters having a higher than normal incidence of cystic ovaries were culled the frequency of cystic ovaries declined from 10.8 to 5.1 percent over a

seven year period.

7. Terminate lactation in a valuable brood cow and avoid other stressful conditions. Breed affected cows in the temperate zones during the summer months.

References

Bane, A. (1964), Fertility and Reproductive Disorders in Swedish Cattle, Brit. Vet. J. 120, 431. – Kikkok, R. J., Britt, J. H., and Convey, E. M. (1972) Effect of GnRF on LH and Progesterone in Cystic Cows, J. Am. Sci. 35, 5, 1120. – Roberts S. J. (1971) Veterinary Obstetrics and Genital Diseases (Thesiogenology), published by the author, Woodstock, Vt. p. 421-433.

A Wisconsin Practitioner's Approach to Retained Placentae

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If you'll take a firm grip on your seats we'll move into a discussion of one of the least sophisticated problems of bovine reproduction - the management of retained fetal membranes. However routine the subject may seem, it is a common complication in the reproductive process and the forces which initiate release of fetal membranes postpartum is a subject that still defies factual explanation.

Those of us middle-aged—and perhaps a few younger with farm backgrounds—can still envision the local veterinarian, or occasionally a neighbor, bare shouldered and working a retained placenta. When one arm tired the other was used and their worth was often judged by the amount of placenta that eventually lay behind the cow. Farmers had their pet approaches to prevention of the problem and immediately after calving they might give the cow warm water to drink, or feed her soaked oats, and/or rub her back or her udder with a burlap and so on! The retained placenta itself might have had a brick or similarly weighted object attached to the exposed portion to apply tension, occasionally to the point of uterine prolapse! Often the exposed portion of placenta was twisted on the tines of a fork and tension applied. All of this relates, of course, to the prevailing attitude of the time: that we remove that placenta soon and completely. Today the bovine practitioner still responds to that familiar call: "Doc, I've got a cow to clean." However, the veterinary approach to a retained placenta in the dairy cow has become increasingly

conservative in recent years. Our concern has shifted from the placenta, *per se*, to the subsequent breeding efficiency of these animals. This is perhaps because maintaining reproductive efficiency has become increasingly a concern and responsibility of the bovine practitioner. We are not unabashed at leaving the placenta slough through natural processes of resolution—concerning ourselves primarily with control of infection. I interpret a conservative approach as attempting removal of retained fetal membranes only to the point that it causes no damage to the uterine lining and little discomfort to the cow. The cotyledon should separate from the caruncle with little finger pressure or it might be best left alone to avoid tearing of endometrium and causing hemorrhage.

Most Wisconsin dairy practitioners have their clients call them in for retained placenta from 36 to 48 hours after calving. From this point each case must be handled individually. The uterine cavity and vagina are routinely palpated following appropriate cleaning of the perivulva area; the degree of infection is determined and an attempt is made to free the cotyledons. In our practice five to six minutes would be the maximum amount of time spent in the uterus and an average is about three to four minutes.

I'm sure intrauterine medication of retained placenta runs the gamut of preparations available to practitioners. Commonly used are the tetracyclines, neomycin, and furacin. In our practice

and in many other practices in Wisconsin, we have had the most consistent results through the years using tetracycline powder. We use this in No. 11 gelatin capsules. Initial medication of a uterus with retained fetal membranes will vary from 1.5 to 4.5 grams active tetracycline depending on the individual case. One perhaps unusual uterine medication being used successfully by some Wisconsin veterinarians is Massengill's human douche powder and this is used alone or in combination with an antibiotic.

Follow-up medication of retained placentae is often indicated, particularly where removal of membranes is incomplete, and this may be done by the client or the veterinarian as circumstances exist. In some herds, particularly those on routine reproductive examinations, the client will be instructed to medicate any uterus in which the membranes are retained for 24 hours and he will then re-medicate at 48-72/ hour intervals for two more times. No attempt is made to manually remove the membranes and these animals are, of course, examined on the subsequent routine herd fertility check. Our clients are informed that any abnormal discharge after two weeks postpartum will merit our attention.

In the frequent instances in which the placenta cannot be easily removed manually, the exposed portion of the placenta is cut off so it will not act as a wick to carry infection into the vagina and uterus.

Placentae which cannot be removed easily on our initial call are usually re-medicated in 48-72 hours, again depending on individual circumstances. Individual circumstances applying may be whether the herd is on a monthly schedule of reproductive examinations, the ability of the herdsman to manage and observe, and the individual cow's particular problems associated with the retained placenta, i.e., twinning, abortion, concurrent illness, malnutrition, etc.

I think the vagina and cervix *per se* are worthy of mention here, particularly in instances where the conformation of the pelvic area results in a lack of drainage from the vaginal vault or the reproductive tract is so pendulous the cervix remains suspended below the anterior brim of the pelvis. Suppositories, douches, lavages or surgical intervention such as Caslick's operation may be indicated at times to reestablish a sound reproductive tract soon enough to maintain breeding efficiency. The use of hormones in initial treatment and management of retained placentae is not common among Wisconsin practitioners. Reference to hormonal therapy in reproductive disorders will

be made in a later presentation this afternoon. Some practitioners do incorporate an estrogenic hormone in tablet or oil base in the capsule of antibiotic powder inserted intrauterine.

Nutrition and other cause-effect relationships associated with retained fetal membranes will not be discussed here.

My point today is the conservative approach being used by Wisconsin practitioners in handling retained placentas which avoids excessive trauma by manual removal and concentrates on maintaining a nonseptic environment as resolution of attachments and sloughing of the membranes progresses.

A cliché says the proof of a pudding is in the eating: in an analagous situation then the proof of a conservative approach to retained placentae should be a calving interval and breeding efficiency that is within economic norms.

I have reviewed the records of 32 random herds of the 51 herds I have on routine monthly reproductive programs and compiled the obvious retained placentae entered during the past 2½ years, and which were subsequently bred. These are retained placentae of at least 48 hours' duration and all treated with tetracycline powder in gelatin capsules—dosage varying from 1.5 to 4.5 grams active tetracycline initially and follow-up in all cases determined on an individual basis.

Tables 1 - 3

Breeding efficiency subsequent to retained placentae at full term gestation (8½ mo. +) on 76 cows from 32 dairy herds on routine fertility control programs (2½ year period).

Table 1

53 Cows - Single Birth - Full Term - Retained Placentae			
Services To Conception	No. of Cows & (%)	Avg. Days To Conception	Other Complications
1	32 (59%)	85	1 - cystic ovaries
2	9 (17%)	120	
3	7 (13%)	152	2 - cystic ovaries
4	1	142	1 - cystic ovaries
	4 - open 6 months postpartum - repeat breeders		
	53		

Table 2

23 Cows - Twin Birth - Full Term - Retained Placentae			
Services To Conception	No. of Cows & (%)	Avg. Days To Conception	Other Complications
1	13 (56%)	86	
2	5 (22%)	136	1 - cystic ovaries
3	3 (13%)	131	1 - cystic ovaries
4	1	160	
	1 - open 6 months postpartum - repeat breeder		

Table 3

Retained Placentae – Single & Twin
Births Combined – 76 Cows

% Conception 1-2 Services	No. of Cows	Calving Interval (Mos.)	
		Range	Avg.
77%	59	11.1 - 14.2	12.8 mo.
% Conception 3-4 Services			
16%	12	13.2 - 16.2	14.0 mo.
% Open 6 Mo. Postpartum			
6.5%	5		

In conclusion, Wisconsin practitioners are aware that antibiotics and other chemotherapeutic agents can be used so effectively that forceful manual removal of retained fetal membranes is of

dubious value in management of the problem and indeed may reduce subsequent breeding efficiency.

A 12 month calving interval on a herd average is considered optimum efficiency in a well managed dairy herd. With 77% of our retained placentae in this report averaging a 12.8 month calving interval this condition is not one which need cause a serious problem in maintaining a 12 month interval on an individual herd basis, assuming overall management keeps the incidence of retained placentae to a minimum. We should remember that this group of cows came from the varied management levels of 32 herds.

The 6.5% of the group which were repeat breeders and not pregnant after six months postpartum also does not stray far from what could be expected in any randomly selected group of 76 cows.

A Practitioner's Approach to Anestrous

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This is a little bit awkward because Dr. Zemjanis, in his lucid, knowledgeable and comprehensive way, has covered anestrus very ably as he always does. I suppose this was intended to be the egg-head approach to anestrus and now you have a practitioner. I suppose I am supposed to tell it as it is and this is awkward because you know Dr. Zemjanis is also my boss and I am going to have to face him tomorrow and the day after; however, I think that probably the practitioner does have a little different attitude about problems such as anestrus. I think that it is one thing to know that functional anestrus is essentially a management-created problem. It is another thing to deal with it every day as a very real problem and still function effectively in the eyes of the people with whom you work. I think that practitioners regard anestrus as essentially a problem that is short lived, or quiet or invisible heats, or failure to observe, or failure to record. Even though we know this, we still have to approach it like the Rock Island Line—you know we have to ride it as we find it just as we do so many clinical situations in practice. Therefore, I think it is fair to say that as far as the practitioner is concerned, anything that we can do to increase our clients' attentiveness

toward observation of heat and then anything that we can do to direct this increased attentiveness toward an animal is ethical and fair. Now, I am really qualifying what might be some deceitful attitudes—practice attitudes—about how we can con our clients in some situations into observing and, after observing, recording heats.

There are essentially two situations in which we observe anestrus in practice: the first is the sporadic, occasional situation where we are called to take care of a cow, or two or three that are not coming into heat. This may be a rare isolated experience which we have to handle as such. The other situation is one in which we have a little bit more flexibility and control. This would be the so-called "controlled program approach" where we deal periodically with a herd where we have established a system of records and a set of criteria that allows us to select cows for examination at our discretion. I think that our approach in these two different situations varies considerably. I disagree with my respected teacher, Dr. Zemjanis, in one respect. I think that too often the statistics tend to give us the impression that these 90% of individuals that are in anestrus so to speak, are almost always invariably either the fault of the