

REPRODUCTION PART I; THE BROOD BITCH Barbara Schwartz

(This is a revision of an article I wrote for the GAZETTE column during the early 1980's)

“ If only I had known...” familiar words to most of us that breed dogs. They often tell the story that “between failure and success, the point is so fine, men seldom know when they touch the line.” So one teeters on the line when going into breeding a new litter.

The birth of a new litter of puppies can be the most marvelous and exhilarating experience. The hopes for the future, the culmination of past work and study, the wonder of the birth and the mothering process: all can happen in one whelping box. But that is true only if the puppies neonatal and the bitches postnatal periods are easy. If not, it can be sheer torture. The most valuable asset is a good brood bitch. The care of such an important element in a kennel must be of major concern..

Surveys taken in the United States and in other parts of the world show that 1/3 of all puppies born alive, die by weaning. Most deaths occur within the first two weeks of life. However, with proper care and management, there seems to be no reason why this high percentage cannot be lessened. There are many reasons given for high mortality rates. Most of these are identified only upon autopsy.

The procedures and ideas enumerated in this article are the practical ways that I have used to save puppies. They incorporate the practices of breeders I have known over the years: from marvelous veterinarian like Dr. Jacob Mosier, Dr. Stewart Harvey, Dr. Elizabeth Trainor, Dr. Mary Wakeman and Dr. Robert vanHutchison. Ideas have also come from some obstetricians, pediatrician and some well known horse and cattle breeders.

Why try to save a weak puppy? If breeding were based solely on science, one should adhere to the scientific philosophy of the survival of the fittest. But since all dog breeds are artificially created, and very few of these are still doing the task for which they were created, (in which case they would be judged by their performance of a task,) one must use another scale to evaluate them. Today most purebred dogs are bred to conform to a physical scale to evaluate them. This standard of evaluation is equated with beauty. T.S. Elliott defined art as “ the artificial creation of beauty.” Thus breeding dogs for the show ring becomes an artistic endeavor. If it is an art form, then one may justifiably use artificial means to try and create a perfect work of art, (within the legal limits of the AKC.) One of the tools in this is the use of science.

A must have is a veterinarian that is sympathetic to the irrationalities that make up a breeder. In addition to his own medical training a breeders vet, must possess the psychological knowledge, ESP, and physical fortitude that can enable him to decipher whether the hysterical 4 AM telephone call requires immediate action, or will it wait until 9AM. This person must be self-confident enough to be able to say “I don't know. Let's call an expert and get another opinion.” This willingness to acknowledge a limit is the sure sign of a great veterinarian. This type of relationship is difficult to develop and invaluable if achieved.. This “Tower of Strength” must be notified and fortified for the impending disaster.

Healthy puppies only come from healthy mothers. A look to what makes a healthy mother and what constitutes good prenatal care is essential. Timing is important. A Cornell University study reports that “the percentage of puppy losses was highest in young bitches, gradually diminished as the bitch approached three, then increased after the four-five years of age.” Dr. Stewart Harvey (past president of the American Equine Practitioners and the first veterinarian I knew that worked with canine reproduction problems) insisted that a bitch should not be bred until at least two years of age. He felt a bitch younger than that was reproductively immature. Those bitches that were bred earlier than that age, tended to have subsequent reproductive problems. In my own breeding program I have found this to be true. Antidotal evidence has shown bitches bred earlier than 2 years of age often produce puppies that develop generalized demodectic mange in that first litter. These same bitches, when bred to same stud dogs, did not produce generalized demodectic mange in subsequent litters. Dr. Harvey strongly suggested that breeding bitches on their third and fourth seasons and then skipping them produces less uterine problem and easier and healthier litters.

Over the years I have found several procedures that have been helpful in reducing reproductive problems in my bitches. Prior to breeding, each bitch is given a physical examination to be sure that she is in the best possible shape. At that time she is given a Brucella Test. This is a true venereal disease. Bitches will abort litters. Unless artificial insemination is a certainty, or even if just normal teasing behavior is anticipated, this test is necessary to protect the stud dog and any future bitches he might breed. It is a highly contagious disease and will dogs infected with it to go sterile.

At this examination, the bitch should be checked for parasites. If there is even the slightest chance that she may have been exposed to hook worms, she is wormed. Any bitch that has EVER had hook, even if she is now show negative, is treated as if she were positive prior to breeding. Subsequently all of her puppies are treated for hook at 3 weeks of age. The bitch and her puppies are rewormed they are 5 weeks old. Among the other tests given is one for mycoplasma. This too, can cause pups to die and stud dogs to go sterile.. The bitch should be up to date on all of her vaccinations. If not, they should be given at least 1 month before she comes in season.

At this examination a thyroid blood test is taken. The blood is sent either to Michigan Sate University Laboratory or to Dr. Jean Dodd's Laboratory for testing. Dr. Mary Wakeman of the Canine Fertility Center in Ashford, Connecticut, says, "In order for all of the more specific reproductive hormones to play their proper role in the very complex series of events resulting in successful production of a litter, thyroid must be present at an adequate level"

She goes on to say:

Thyroid requirements vary with age and with stress and with disease demands.

The bitch for whom we may recommend 1-thyroxine supplementation to assure that low T4 is not the factor preventing a breeding from being successful, is not

generally a bitch which we would say had abnormal thyroid function. If the dog

were exhibiting clinical signs of a true thyroid deficiency, she would not be the one you would be proposing to breed anyway...Many of the normal breeding animals I check have a T4 in the low normal range. I feel...that we should try

to have bitches in the upper third of the normal range to assure that thyroid is not a limiting factor. In addition, almost every bitch of 5 years or more will have a measurably low thyroid—and this is a normal affect of aging. As human women

should reproduce before 40, bitches should reproduce before 5. Yet through the

simple agency of supplementing l-thyroxine, we are most often able to extend that breeding range to 9 years, all other things being equal. The argument as to whether we should be breeding bitches with low thyroids is..of limited relevance until we take a better look at the validity of published normal ranges. Ranges should be reported by both breed and age group to be useful...Often once a successful pregnancy has been established on l-thyroxine supplementation, and the bitch is checked again after she has finished with weaning and shedding, she may be able to go off supplementation and maintain higher T4 levels on her own. Again, rechecks are necessary to determine needs, if any as the bitch's age and circumstances change. It is not a certainty that a bitch with a low normal T4 can't have a normal heat, become pregnant and whelp a litter. Rather, we are trying to cover the bases and eliminate areas where potential problems can occur in order to enhance our chances of producing a litter."

PRE BREEDING EXAM FOR THE BITCH

Mary C. Wakeman DVM

Dr. Harvey always insisted that all my dogs be exercised heartily. This is very important for a bitch that is to be bred. Muscle tone is important for carrying puppies and whelping.

The bitch is again taken to the veterinarian on her third day of season. At that time a Cervical culture is done. This is difficult to do and requires great experience on the part of the veterinarian. A blood test is given to determine her base progesterone level. Dr. Mary Wakeman wrote "The most common causes of missed litters are bacterial infections in the uterus and a failure to breed on the appropriate days. To determine if a uterine infection exists, a bacterial culture and sensitivity should be done. The culture is taken high in the vagina, near the cervix. Often even young bitches that have not been bred before have a significant numbers of bacteria which are capable of causing problems. If 'vaginitis' is present, when her cervix opens as she goes into heat and when the ability of her white blood cells to fight infections is reduce, the infection will often gain entry to the uterus where it may become endometritis or a pyometritis. A white blood count is done at this time . A normal to slightly elevated count with a positive culture usually indicates a vaginitis. A moderately elevated white count implies a severe vaginitis or an endometritis, and a white count of 30,000 and above is a severely affected uterus is a pyometra" She goes on to say: These bitches will either exhibit no signs or a mild depression as perhaps some loss of appetite. There may be a thick creamy discharge, but just as often there is not."

According to Dr. Wakeman, "One way to monitor your bitch and avoid the problem is to do a white blood count about 3 weeks after each heat period whether or not she has been bred. If an infection exists and the white count is high it is often necessary to administer prostaglandin therapy. Those bitches with a frank pyometra and an extremely high white blood count may become septicemic toxic, shocky and die. Of those which are followed in a routine manner and which receive early treatment, we should preserve about 80% of useful breeding bitches."

Dr. Stewart Harvey routinely infused each bitch that had this problem with furacine or a 1% solution of Novasan at this appointment. This really cut down on my puppy loses. If the culture came back positive for a specific bacteria, the appropriate was subsequently infused. Depending upon the outcome of the culture and blood counts the bitch was bred. Uterine infections do not seem to respond to systemic antibiotic treatment. They seem to need infusion.

Lately I have been monitoring for the LH surge to decide the optimum time to breed. Four days after the LH surge, is when we breed the bitches. This is especially helpful with bitches that have silent or unusual seasons or who never flag.

The bitches weight and muscle tone must be kept up. She is given hard exercise up to, including her whelping and through her lactation periods. Clip the hair around the vulva and anus. This is essential to maintain proper hygiene so that the bitch does not self infect.

Another hint for the prevention of uterine troubles is to make sure that a bitch can urinate at will while in season. Dr. Harvey felt that, "All uterine infections are proceeded by some sort of urinary problem." Collie puppy bitches mature early .. Often they come into their first season as early as 6 or 7 months. They are confined at this time, only being let out to urinate 3 or 4 times a day. Thus they get vaginitis, predisposing them to problems. Dr. Jacob Mosier has shown that "the causative agents of vaginitis are usually E coli, Hemolytic Steptococcus and Staphylococcus Aureus. These are the same infective agents found in the Pyometra-Metritis complex." Restraining the urinary habits of bitches, especially when the cervix is open can cause problems. Thus, any bitch that is in season should be confined in an environment in which she feels free to urinate as often as need requires. The bitch that has just whelped also has a dilated cervix and should be offered the same chance to urinate at will. This requires a schedule of walks or exercise right after whelping, even though she will probably object to leaving her pups. We usually urge our bitches to run or move the day after whelping. This insures that the cervix continues to contract.

The feeding of the pregnant bitch is of utmost importance. In addition to her regular well-balanced food, I supplement. All of my dogs are given Dynamite Showdown, Apple Cider vinegar, 400iu of Vitamin E ,500 mg. Vitamin C, Fish Oil capsule and Folic Acid daily. As soon as a bitch is confirmed to be bred, I add Lactobacillus and a Raspberry Leaf capsule.

I routinely do ultrasounds on my bitches at 28-35 days after the first breeding. I like to know if they are pregnant and about the number of puppies I can expect. However, a good sign that the bitch is in whelp is the waxing around her nipples at this time.

Do not be surprised if a bitch becomes finicky during the later part of her pregnancy. Tempt her with all types of goodies. I give a little raw liver during the last few weeks of the pregnancy as well as some natural yogurt. It is important that she eats. If she stops, I stuff her with either her own food or with Satin balls. As the pregnancy progresses, the bitch will often become very loving, wanting to spend all of her time gazing up at you. She will have lost her girlish waist line. We clip all the hair around the nipples, skirts, tail and feathering on the front legs. I wash her vulva and nipples with warm water and Ivory soap and rinse well with warm water. Be sure that there are no flea sprays, flea colors or bug strips around her.

Now you are ready to whelp.

END of Part I