Quality breeding practices

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The ultimate goal of breeding is to produce the best dog or cat that fits the breed standard or the desired purpose. In cats that may mean hair length or quality, eye color, hair color or even body structure. In dogs, we expect perfection not only in physical traits but also in their abilities to hunt, retrieve, point, show, herd, race and more. As most breeders know, producing these high quality animals requires hard work and dedication that starts well before the actual breeding.

The environment in which the breeding animals are to be raised and bred is very important. Breeding rooms and areas should be kept quiet, bright, clean, and well ventilated. Lighting is especially important when breeding cats, as insufficient lighting leads to suppression of heat cycles. Overcrowding leads to disease outbreaks because the animals are stressed. Cleaning agents need to be carefully evaluated, as they may be toxic, especially for puppies and kittens. Beds, bins, cages, runs, and whelping boxes are chosen that can be sanitized easily and that are safe with no possibility of injuring the mother or the offspring. Breeding animals should not be exposed to feral, wild or homeless animals (e.g., for runs that are outdoors, an extra chain linked fence about two yards away from the actual enclosure prevents wild animals from coming into contact with the breeding dogs and their offspring). Especially during whelping or queening and when puppies and kittens are present, visitors should be kept at a minimum, as people may unintentionally track diseases in with them. Lastly, when breeding dogs, it is important to know the state laws. Some states have caps on how many dogs are allowed in a breeding kennel; some states have flooring requirements (grates vs. no grates); and some states have different designations for breeders depending on how many litters they produce per year (commercial vs. hobby breeder). The Law School of Michigan State University has a handy online tool to look at state laws:(www.animallaw.info/articles/armpusbreedinglaws.htm).

Puppies and kittens destined to become breeding animals should be raised with good quality American Association of Feed Control Officers-approved foods or foods that have been formulated to fit these high standards. It is sometimes difficult to understand pet food labels, even for those who are trained to do so. Explanations can be found on the Food and Drug Administrations webpage: www.fda.gov/animalveterinary/resourcesforyou/ucm047113.htm. Vaccinations and treatment for parasites, both internal (roundworms, tape worms, etc) and external (fleas, heartworm, ticks, etc) are important to prevent serious diseases and to maintain a healthy breeding stock. Vaccination guidelines are listed on the American Animal Hospital Association's website (www.aaha.org) for dogs and on the American Association of Feline Practitioners' site (www.aafp.org) for cats. These are all issues that should be discussed with your veterinarian.

Next, we want to make sure that we begin with high quality breeding material. All of the breed specific health checks should be performed before planning to breed. For example, most larger breeds of dogs should have their hips checked by either the Orthopedic Foundation for Animals or PennHip; Dobermans would be screened for von Willebrands disease; Portuguese Waterdog DNA is checked for juvenile dilated cardiomyopathy; DNA is submitted from a variety of breeds for different forms of progressive retinal atrophy; and the list goes on and on. Veterinarians cannot be expected to know all of the diseases that each breed should be screened for, but breeders generally are aware of their breed-specific diseases. For up-to-date information, there are resources for breed specific recommendations, such as the American Kennel Club's website (www.akc.org) or the Orthopedic Foundation for Animal's site (www.offa.org) for dogs and the Cat Fanciers Association (www.cfa.org) or the DNA testing laboratory at Texas A&M (www.catdnatest.org) for cats.

Now that we have successfully raised a female or male that we would like to breed and it has reached sexual maturity, a pre-breeding examination should be performed. This consists of testing for brucellosis in dogs (a disease that can shut down an entire breeding facility) and a good physical examination with special attention to the external reproductive organs. In male dogs, semen should be evaluated well before the dog is bred for the first time and around the time of breeding again. In female

dogs, breeding timing is a must, as improper timing is the most common cause of the bitches failing to "take". Our motto is: "Put excellent quality semen into a fertile female at the right time for the best results." Accurate breeding timing is achieved through vaginal cytology, progesterone measurements, and luteinizing hormone measurements if needed.

Once the bitch or queen has been bred, if desired, pregnancy can be determined after about 21 days by palpation, ultrasound or in dogs by measuring relaxin levels, although this may not be accurate this early in pregnancy or if only one pup is present. After 28 days, palpation is not easily possible in dogs, as the single fetal units can no longer be distinguished and the uterus "just feels big". However, at this time the relaxin test becomes much more sensitive and ultrasound is much easier. After 45 days of pregnancy, radiographs will help determine how many puppies or kittens are present, which is not readily possible with ultrasound. During pregnancy medications should not be given unless absolutely necessary. Towards the second half of pregnancy, the bitch's and queen's diet should be supplemented with puppy and kitten food, respectively, to cover the increasing needs of the mothers and their offspring, as well as future milk production. Raw food diets may not be the ideal choice, as parasites and bacteria may be present leading to fetal malformations, disease and death.

Lastly, keeping track of the offspring long after they have been sold or transferred provides useful feedback on soundness of the animals. If genetic diseases are detected down the road, it is helpful to seek discuss with a veterinary genetic counselor to avoid this from happening again. Most important though, finding that the animals that were bred produced a healthy and long-lived pet that has become someone's family member and has provided the family with years of happiness is priceless.