Pet Population Control

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Conservative estimates indicate that there are between 65 and 110 million cats and dogs in the U.S. today and that about 200,000,000 are born annually (2,000–10,000 per hour). To provide a home for every dog and cat, each household would need to own 30 pets. This overpopulation of companion animals warrants investigation in four specific areas:

1. Causes of uncontrolled breeding.
2. Effects of overpopulation monetarily, on public health, and on the fates of these millions of animals.
3. The role of the veterinary profession in control of the pet population.
4. The development of acceptable and effective contraceptives for pets.

The source of the problem is obviously unchecked and irresponsible breeding. The following statistics demonstrate the geometric, rather than arithmetic growth theoretically possible in an uncontrolled breeding situation.

A small percentage of breeding animals are purposely bred by reputable breeders. A larger percentage are purposely bred by less reputable "puppy mill" operators. The "puppy mill product," providing it survives to a salable age (the mortality rate due to poor conditions and genetic defects is quite high), is usually sold to pet stores or research facilities.

The majority of breeding animals, however, are "accidental" breeders. Some of these "accidental" breeders are feral, leading lives of disease, injury, starvation, and predation. A conservative estimate puts the number of feral dogs in this country at 15,000,000; that of feral cats at 25,000,000.

The greatest number of breeding animals are neither feral nor bred for profit; they belong to owners who are either irresponsible or simply uneducated regarding the problems of uncontrolled breeding. The pets belonging to irresponsible owners, or those belonging to owners who simply decide the pet is no longer wanted, often end up "dumped" on the highway (over 2,000,000 dogs alone are killed on the highways each year) or in the country, or left behind in an empty house when the owner moves.

The more responsible but uneducated pet owner will usually try to give away surplus pets, or take them to an animal shelter where they join many strays abandoned by the less responsible owners mentioned above. Unfortunately, a "free" pet often receives little care, breeds freely, and is as easily discarded as obtained. Some "free" pets are "adopted" by animal dealers who sell them to research facilities, dog fight promoters, etc.

For every ten pets that come into a shelter, one may be turned over to a research facility, one may be adopted by a new owner, and the majority will be euthanatized. It is estimated nationally that shelters may destroy as many as 100,000,000 pets a year or 12,500 per hour. The ironic incongruence of these mass killings is that they constitute worthless efforts to attack the consequences, but not the cause of the problem, in a losing battle against the ever burgeoning number of unwanted pets.

The costs for capturing and disposal of unwanted dogs alone was estimated to be 450 million dollars annually in 1974. This figure does not include damage to livestock and property, the pollution of parks and recreation areas, the medical care of people bitten or injured, and certainly does not reflect the imponderable costs of psychological trauma suffered by a victim of a dog bite nor the value of a lost life.
An important question that must be asked is: who is responsible for educating the public on responsible pet ownership? Certainly many animal welfare organizations have risen over the years and are now the main proponents of pet care and control. These groups, however, were formed in answer to an already existing problem. Whose responsibility was it to prevent the problem from arising? Fingers point in several directions.

Some point to the government. Many city mayors list animal control ahead of crime among community concerns. The funds from all levels of government spent each year in maintaining animal shelters and disposal are phenomenal. Yet the USDA Animal Health Research Program has not allocated funds for research in the area of contraception for companion animals.

Interest groups such as kennel clubs should be encouraged to become actively involved in the pet population crisis. Certainly they are instrumental in educating the public on pet care. Yet while funds are often available from them for research on methods conducive to increase fertility, these groups offer very few funding opportunities for development of contraceptives for pets.

Perhaps the segment of our society that many people feel has a definite responsibility is that element which profits the most from America’s love for dogs and cats—the pet industry. The sale of pet products is a multimillion dollar industry. The pet food market alone has been growing at the rate of 10% annually since 1971. Pet food sales amounted to approximately two billion dollars in 1977; and for each dollar spent on food, pet owners spend at least an equal amount on other products and services. The costs of dog and cat licenses, inoculations, and veterinary care need to be added to these figures.

As veterinarians, as professionals who are concerned about the future of companion animals in our country, we must first acknowledge the rapidly growing problem of overpopulation; and secondly, we must take active and positive steps to remedy the situation. We have three primary vehicles at our disposal:

1. Education: As veterinarians, we can educate and counsel our clients individually in the question of whether to breed their pet. We can provide facts and dispel myths about spaying or neutering. We can also be active supporters/advisers of local animal shelters and societies.

2. Provision of services: We can perform surgical methods of birth control (ovariohysterectomy, tubal ligation, castration, vasectomy, etc.) for a reasonable fee, encouraging and enabling pet owners to utilize these methods to control unwanted breeders. Here it should be noted that spays and castrations are often requested primarily to eliminate parasexual traits (i.e. vaginal discharge, attraction of male dogs, spraying, roaming) and not as methods of birth control. It has been expressed by certain groups that the purpose of a spay/neuter clinic, often funded by tax money or donations, should be to prevent reproduction only, and that the elimination of parasexual traits should be relegated to private veterinary care. One proposed procedure along these guidelines is oviduct destruction using electrocautery, which is claimed to be 100% effective, yet involves little or no abdominal bleeding and requires a shorter post-operative observation period.

This procedure terminates reproductive capabilities but does not affect parasexual traits since the bitch has the ovaries in situ and does cycle. The long-term effects of tubal ligation or cauterization on uterine pathology (pyometra for instance) have not been determined.

Why, with increasing public awareness of pet overpopulation, and given the safe and effective methods of spaying and castration, do so few people sterilize their pets? One factor, of course, is cost. Another is that there are many myths still circulating on the detrimental effects of spays and neuters. But possibly the greatest obstacle to the generalized use of these established surgical methods involves both their irreversibility and the hormonal physiological changes that may occur. It has been suggested that there is a certain anthropomorphism involved in which the pet owners transfer their personal uneasiness or fears about this type of operation to their pet, and thus cannot neuter their dog because it would be “cruel”.

3. Research: Research is necessary to develop new means of contraception that are not only
effective in controlling reproduction, but that are also acceptable to, and will be utilized by, a large segment of the public. The following are two fairly new developments analyzed from a consumer viewpoint:

1. Oral contraceptives:
   a. form: drops or tablets
   b. administered by: owner
   c. frequency of administration: once daily
   d. permanency/effectiveness: non-permanent, but effective when used daily, as directed
   e. side effects: possibly long term effects such as metabolic disturbances
   f. cost: somewhat expensive
   g. impact on population: effective in preventing specific animals from breeding during time of proper administration; could limit number of fertile females reaching estrus in any one cycle

2. Chemical vasectomy:
   Soon to be marketed for dogs; effectiveness in tom cats being evaluated at ISU
   a. form: simple non-surgical procedure on a sedated animal involving only a percutaneous injection of 0.5 to 1.0 ml of 4.5% chlorhexidine digluconate into each tail of the epididymis, forming scar tissue and thus preventing the passage of sperm from the epididymides to the vas deferens inducing azoospermic ejaculates
   b. administered by: a veterinarian or paramedical personnel under veterinary supervision
   c. frequency: done once in a prepubertal or adult animal
   d. permanency/effectiveness: likely irreversible, 90–95% effective or more, depending upon expertise of the individual performing the injections
   e. side effects: none—parasexual traits intact
   f. cost: inexpensive
   g. impact on population: intact sterile males are able to mate with fertile females but no offspring are conceived; this impact may be even more pronounced in felines, who are induced ovulators. The mating of a queen with an intact sterile male results in a pseudopregnancy lasting an average of 41 days, effectively removing the mated queen from the breeding population for that period of time. Unfortunately, little research has been done on the feline to establish this.

Developments like these reflect the society's desire for non-surgical effective, inexpensive, and simple methods of birth control for pets. Research along these lines is imperative. Even the most clinically perfect procedure can only be as effective overall as the pervasiveness of its use allows.

As veterinarians, we have both an exciting opportunity and a civic obligation to confront the tragedy of unwanted pets with a positive action program. Only through the cooperative efforts of pet owners, breeders, veterinarians, the pet industry, humane agencies, and federal and state governments can our country look towards an optimistic future for our companion pets.

References