The Public is Attracted by the Use of Repellents

Cathy A. Liss, Animal Welfare Institute, P.O. Box 3650, Washington, DC 20007

ABSTRACT

Americans have long been in favor of humane treatment of animals. Increasingly, the public is involved in dictating acceptable wildlife management practices. The U.S. Department of Agriculture's Animal Damage Control program has been the recipient of much adverse publicity regarding its killing of target and nontarget animals. Growing opposition to various methods of lethal control such as use of steel jaw leghold traps or poisons likely will result in continuing restrictions or outright prohibitions against their use in the future. Alternative methods of wildlife control are critical.

Nonlethal techniques are key to the future of the Animal Damage Control program. Repellents represent an area of great promise. There is much research which needs to be conducted in this area including continuing isolation and identification of natural repellents. The success with methyl anthranilate (MA) as a humane method of control demonstrates the utility of this approach. Just imagine the public's response to a switch from lethal methods of control to a new arsenal of tools which includes so gentle and environmentally harmless a substance as "grape juice" (MA) to repel birds.

KEY WORDS

public, humane, repellents, attitude

DISCUSSION

For decades the operations of the Federal Animal Damage Control (ADC) program have been controversial. Concerned citizens and animal welfare organizations, including the Animal Welfare Institute, have decried the large-scale killing of both target and nontarget animals by ADC personnel. The need to address serious wildlife damage situations is recognized and accepted. The problem is that, all too often, the methods used to attempt to achieve this goal are inhumane--causing unnecessary animal suffering and/or death.

The policy of the Federal ADC program is to resolve wildlife damage problems with nonlethal methods wherever possible (Ramey et al. 1994). Only if such methods are unable to address the problem are lethal methods used. It is hard to be certain of the extent to which good faith attempts are made at nonlethal control in ADC's operations. Historically, killing problem animals has been

the common method of control. An enormous number of animals continue to be killed by ADC employees: during the fiscal year 1994, nearly 800,000 animals were killed, and many of these suffered greatly prior to death. For a list of the animals killed most often by ADC, see Table 1, page 6. Attempting novel approaches requires a shift in attitude, a positive outlook, and a determination to explore new possibilities.

In recent years ADC has focused on what it terms "futuring," creating a comprehensive plan for the future (Acord et al. 1994, Ramey et al. 1994). Input has been collected from numerous sources both inside and outside the agency regarding demands on the agency's operations staff and on research and development needs. Public attitudes will have a strong impact on the loss of some current methods which are viewed as inhumane; therefore, these views are a critical component in preparing adequately for the future. This forward-thinking approach will help ADC best prepare for what lies ahead. A shortfall identified in ADC's 1989 Strategic Plan was that "...new methods which are more effective and socially defensible have not been developed, thereby limiting ADC's ability to control wildlife damage." Efforts must "focus on (1) diversity of effective tools and techniques, (2) social acceptance, (3) discovery research that involves the new sciences, and (4) a concem for the well-being of wildlife populations and animal welfare. " In response to these findings, ADC set the goal to establish, support, and implement "research and development priorities that will ensure the availability of a fully adequate range of effective and socially defensible methods" (U.S. Department of Agriculture 1989).

The American public is seriously concemed about the welfare of animals, about the environment generally, and toxic substances in particular. People are concerned with avoiding unnecessary animal suffering as well as animal killing. A phone survey conducted almost 20 years ago showed respondents felt that humaneness is the most important criterion for evaluating wildlife control methods (Stuby et al. 1979).

In 1985, Dr. Steven Kellert found that "Although the general public did not rank the coyote among their favorite animals, most opposed nonspecific or seemingly inhumane predator control methods." "A significant majority of the general public disapproved of shooting or trapping as many coyotes as possible, and over 90% objected to the use of poisons. Moreover, the informed general public disapproved of the shooting and trapping option to a significantly greater extent than the uninformed public" (Kellert 1985).

A review of public attitudes demonstrates an increasing concem with the well-being of wildlife. It is likely that these changing public views will lead to the restriction or elimination of various lethal control methods.

Of particular note is the growing dissatisfaction with the management of wildlife within the states. The public is beginning to take matters into their own hands--and they are succeeding. The decision-making regarding certain aspects of state wildlife management is being taken from the state game departments and is being mandated by the majority views of the general public within the state.

Back in 1979, Dr. Kellert confimmed what many humane organizations had long presumed: the vast majority of Americans oppose use of steel jaw traps (Kellert 1979). State game departments have failed to address this concem. In New Jersey, over the strong opposition of the state game department, legislation was adopted in 1984 banning the sale, use and possession of

steel jaw traps (whether "padded" or "unpadded"). Just last year in Arizona, again, over the objections of the state game department, trapping by any method other than box traps was prohibited on all public lands following a ballot initiative.

Similar opinion is simmering in many other states, including Colorado. A survey of public opinion within Colorado revealed that 91% of nonconsumptive users object to steel jaw traps by disagreeing with the statement, "I see nothing wrong with using steel jawed leg hold traps to capture wild animals." Most surprising of all was the finding that more than two-thirds of consumptive users of wildlife objected to steel jaw traps, too (Galloway Vigil and Associates and Market Analysis Professionals, Inc. 1986).

Changes in opinion are taking place, and ADC needs to be prepared to deal appropriately with these. Much attention has been focused on this topic in recent years; but action, not reaction, is necessary (Schmidt 1989). Research and registration for nonlethal methods will take considerable time and money, but these efforts must continue and be accelerated, or the ADC program will be unable to face future wildlife damage conflicts. The agriculture industry should support commercial and ADC research and development efforts on less cruel control methods. Problem wildlife situations abound--humane, effective solutions should benefit all parties. Whether or not one agrees with the public, it is necessary to recognize its impact if one cares about the long-term survival of the ADC program. Priority must be given to research on nonlethal solutions to wildlife problems.

The future requirements of Animal Damage Control are staggering. To assist in prioritizing research needs, the data on animals killed by ADC provides a useful guide. If ADC is seeking to be free of its dependence on lethal methods, it is best to look at where the greatest dependence lies. It is likely that these numbers are conservative; but for purposes of this exercise they are valuable. Following are the animals killed in the largest numbers in fiscal year 1994 (USDA-ADC, unpubl. data):

Table 1.

Species	No. Killed/year
Starlings	350,553
Blackbirds (all species)	150,350
Coyotes	85,571
Pigeons/Rock Doves	51,597
Beavers	22,022
Grackles (all species)	18,527
Rats (all species)	11,167
Foxes (all species)	8,973
Gulls (all species)	9,301

Not surprisingly, each of the species listed above was also listed as a priority for research needs by ADC State Directors in 1990 (Packham and Connolly 1992). The Directors identified blackbirds and starlings as problems in 41 states; and, as a result, they were ranked as the most important research priority overall. With the exception of rats, all of the other animals mentioned above are listed within the top 8 of 32 identified priorities. (The rat scored 23d.) Thus it would appear that my thoughts on research priorities closely parallel those of the ADC staff, though our reasons may differ.

All animals are repelled by something. Finding out what repels wildlife species, what their response to repellents is, and employing this into a workable tool is a mighty task. Pursuit of this line of research does enjoy public support. In fact, it has been shown that the greatest public support for a method to control coyotes is use of repellent chemicals (Arthur 1981).

Repellents represent a major area of interest for providing new wildlife management tools. The benefits of repellents include (1) a reduction in the number of animals which will be killed, (2) strong public support, (3) environmental soundness, and (4) unlike lethal methods, repellents will not trigger increased reproduction.

Repellents, including fright devices and guarding animals, have already proved useful as part of a variety of control methods. Research efforts on repellents need to continue and be expanded. The recent results of research on methyl anthranilate are quite promising. Repellents will not be the answer to all wildlife problems, but they will continue to be an important and valuable tool. My hat is off to those of you involved in this progressive pursuit. You have the ingenuity, a worthy goal, and our support for your efforts. Though time and money are short, with the addition of both, the research will surely bear fruit.

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