

USE OF STIMULANTS IN REDUCING MORTALITY IN NARCOTIZED TURKEYS¹

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ABSTRACT

Use of lethal dosages of tribromoethanol-treated grain in wild turkey trapping operations, followed by prompt use of two stimulants (pure caffeine in sodium benzoate and amphetamine sulfate) and other treatment procedures improved capture success and minimized mortality.

In the last decade L. E. Williams and colleagues (1966, 1967, 1970) in Florida reported increasingly improved success in capturing wild turkeys by means of oral drugs. In recent years other states—among them Massachusetts, North Carolina, South Carolina and West Virginia—have used the technique. North Carolina turkeys are often so wary at trap sites that drugs offer the most effective means of capturing them, particularly in winter and early spring. In North Carolina, where wild-trapped stock is difficult and expensive to obtain, 27 turkeys were captured by means of tribromoethanol in 1971 and 37 in 1972, following generally the procedures described by Williams *et al.* (1970). Loss from overdosage totalled three (11 percent) in 1971 and many turkeys escaped as a result of underdosage. It was concluded that higher dosages would enable a large number of captures if means could be found to minimize mortality.

In 1972, following consultation with veterinarians and with biochemists at the University of North Carolina, a decision was made to use higher dosages of tribromoethanol to increase the efficiency of trapping operations and stimulants to curtail mortality. Tribromoethanol dosage levels used were 11.0 to 13.0 grams per cup of grain for hens and 13.0 to 18.0 grams per cup for males. These levels were all regarded as potentially lethal under the aforementioned procedures of Williams; however, allowance must be made for the large number of variables influencing any attempt to capture turkeys with oral drugs. The stimulants used were pure caffeine in sodium benzoate (normally used intramuscularly, occasionally intravenously) and a 5.0 percent parenteral solution of amphetamine sulfate (amfetasul) injected intraperitoneally. Both drugs have long been used as stimulants in human and veterinary medicine. Mammals and birds apparently have a very wide tolerance to caffeine, but amfetasul must be used with care, as an overdose can lead to kidney damage. We used no more than 0.25 cc for an adult male, half that amount for a female. In one case an adult male received 0.5 cc in two equal doses 12 hours apart. We normally used amfetasul only when response to caffeine was negative or low, or when caffeine was unavailable. Caffeine was usually injected 0.5 cc at a dose, some birds receiving as much as 3.0 cc in a 12-hour period. Three hens received intravenous injections as well as intramuscular ones.

Stimulants were used only on turkeys in coma and obviously in danger of death. About one-half of those captured were in this state. When a bird in deep coma was picked up it was first given 0.5 cc caffeine (1.0 cc if an adult male) intramuscularly. Its crop contents were then removed by manually manipulating or "kneading" the crop and esophagus in a manner that eased the grain out of these organs and into the mouth, a procedure not possible in all cases. (A few birds in deep coma recovered almost immediately when this procedure was applied and no stimulant used.) If, after 5 to 10 minutes, the bird showed no response, or only a fleeting response, amfetasul was administered. The turkey was

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kept in a warm place and frequent handled to elicit muscular response; also, it was held head-downward by its feet to facilitate drainage of the white, frothy mucous usually evident in heavily narcotized turkeys. This mucous was removed from the bird's throat with tissue paper, cloth or finger. If the turkey failed to respond satisfactorily after an hour or two, 0.5 cc caffeine was given intravenously. Subsequently, intramuscular injections of caffeine were given every two hours until the bird showed signs of recovery.

Most turkeys recovered within 10 hours; a few required 20 to 25 hours; an adult male required 40 hours. It is believed that mortality would have been high if the treatments described had not been used.

Under these procedures and dosage levels turkey captures increased one-third in 1972 with about the same amount of effort applied as in the previous year. Only one loss (2.7 percent) occurred, and that death was believed to be the result of a human error in administering a stimulant.

LITERATURE CITED

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