Using Operant Conditioning to Train Cervus Canadensis

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Introduction
To protect the animals at the Willow Park Zoo from disease, veterinarians must vaccinate the animals. Large mammals, like Elk (Cervus canadensis), can be difficult and dangerous to work with but can be trained to make the task easier and safer. One trainable behavior is walking into cattle chutes where they can be restrained without utilizing tranquilizers. The purpose of this study was to determine the most effective, positive reinforcement method to use to get the Elk to exhibit desired behavior.

Methods
Stage 1: While the Elk were hungry, they were given individual access to the chute to become comfortable with the area and the trainers. They were rewarded with various fruits and grains when they reached the restraining area using a continuous reinforcement schedule.
Stage 2: Once the animals were comfortable, a variable ratio schedule was applied to the training. The reward was modified to reflect the preference of each animal individually.

Results
The bull and cow Elk were very hesitant when presented with the opportunity to explore the chute area. However, both responded to apples, watermelon and sweet oats within three weeks of the first training session.
During the second stage, the bull was strictly rewarded with apples while the cow was rewarded with frozen watermelon based on their preference shown in the first stage.
The Elk now enter the chute without a guaranteed reward and without fear.

Conclusion
Because of the reward preference tests performed in Stage 1 and the variable ratio schedule applied during Stage 2, the Elk at the Willow Park Zoo were trained to enter cattle chutes without punishment or reward because of operant conditioning they were put through. By following a similar training method, other zoo animals may be trained to induce behaviors that will make the handling and care of those animals easier and safer.