

Extension Wildlife Damage Control

Contents

Early Wildlife Damage Concern	239	Add Wildlife Control Specialist—1968	247
Early Control Measures	239	Wildlife Damage Emphasis	247
Pocket Gopher Demonstration—1922	240	Damage Control Emphasis—1970	247
Coyote Control Legislation—1931	240	Damage Control Emphasis—1971	247
Jackrabbit Drives—1934-36	240	Damage Control Emphasis—1972	247
Rodent Control Specialist—1935-36	241	Damage Control Emphasis—1973	247
Shift To Predator Control—1939-41	241	Damage Control Emphasis—1974	248
Try Bounty Hunter System—1940-48	241	Damage Control Emphasis—1975	248
Norway Rat Control	241	Damage Control Emphasis—1976	248
State Predator/Rat Control Specialist	241	Damage Control Emphasis—1977	248
Coyote Control	242	Damage Control Emphasis—1978	248
Prairie Dog Control	243	Damage Control Emphasis—1979	249
Jackrabbit Control	243	Damage Control Emphasis—1980	249
Gopher Control	243	Damage Control Emphasis—1981	249
Raccoon Control	244	Damage Control Emphasis—1982	249
Bird Control	244	Damage Control Emphasis—1983	249
Rats and Mice Control	244	Damage Control Emphasis—1984	249
Deserted Cats and Dogs Control	245	Damage Control Emphasis—1985	250
Wildlife Conservation and Management	245	Damage Control Emphasis—1986	250
Grain Sanitation	246	Damage Control Emphasis—1987	250
4-H Club Activities	246	Damage Control Emphasis—1988	250
State-Wide Assistance and Cooperation	246	Personnel in Wildlife Damage Control	Ch. 6: 77–78
"Kansas Afield" Program—1959-88	247		

Early Wildlife Damage Concerns

Wildlife, or animal, damage control refers to efforts to understand, then to stop, reduce, or minimize damage to crops, livestock, and/or other property sustaining damage involving wild animals.

Kansas government has been involved for a long time in helping its people understand and minimize damage of this kind. In 1877, the Kansas legislature enacted a law requiring the county commissioners to pay bounties on certain animals believed to be harmful.

On February 12, 1901, the Kansas legislature appropriated \$5,000 to Kansas State Agricultural College for field work to study and describe methods to help farmers cope with prairie dogs and gophers.

The early work in rodent control was started, and continued until 1930, with the cooperation of the Bureau of Biological Survey, United States Department of Agriculture.

The Bureau paid the salaries of the person assigned to Kansas and the Extension Service paid their travel and subsistence expenses. Until 1930, rodent control in Kansas was done in cooperation of the Bureau of Biological Survey, USDA.

D.E. Lantz was the first person hired to work for the Experiment Station Council, on July 11, 1901. Lantz determined by a mailed questionnaire that there were approximately 2 million acres inhabited by prairie dogs in Kansas and that pocket gophers were in all counties except two.

Early Control Measures

The same state law that created this job also gave Kansas State Agricultural College the directive to prepare poison baits for townships boards to use in control of

prairie dogs and pocket gophers. This law began a long history of Extension involvement in wildlife damage control.

Lantz's booklet, **Destroying Prairie Dogs and Pocket Gophers**, was number 116 as published by the Experiment Station at Kansas State Agricultural College (KSAC) in January, 1903.

In Bulletin 129, published by the Experiment Station, Lantz wrote about an article entitled, **Kansas Mammals in Their Relation to Agriculture**.

He listed all the mammals thought to have existed, now or in the past, in the state of Kansas. Deer, elk, and buffalo were then extinct. Beaver were rare. Many of the wild mammals listed as extinct, or nearly so, are abundant today.

A compulsory extermination law was enacted in Kansas in 1905, and directed at the pocket gopher. Though the years it became clear that the provisions of this law could not be carried out.

Theodore H. Scheffer followed Lantz as Field Agent in 1909. Scheffer's publication, **Treating Seed-Corn to Protect It from Burrowing Animals**, was Circular 1 of the Department of Entomology at KSAC.

When a county bounty was placed on pocket gophers in 1909, Scheffer noted:

The principle of allowing the community at large to pay the expense of protecting the careless man's crop, while his thrifty neighbor looks after his own fields, is theoretically wrong. It imposes a double burden upon thrift.

Scheffer wrote two more publications in 1910, **The Pocket Gopher** and **The Common Mole**.

C. C. Deuber was assigned to Kansas during July and August of 1919. Walter Perry worked from September 16, 1919, to March 20, 1920.

Percy DePuy was assigned the job April 1, 1920, and stayed about one year. Otis Wade was assigned as state leader of rodent control works on December 1, 1921, and continued until June 30, 1923.

Pocket Gopher Demonstration—1922

The ultimate state goal in pocket gopher control was to drive the species from valuable and cultivated land, especially orchards, alfalfa, and other hay lands.

The year's efforts were centered on concerted action with the support of township and county officials, using approved methods under the supervision and direction of the Farm Bureau Agents.

This approach, using field demonstrations, showed the superiority of this system over the bounty and other makeshift systems, and that the cost would be less and the results more lasting.

Complete extermination of prairie dogs was effected in Harvey, Marion, and Sedgwick counties; 95 percent extermination in Ellis and Sumner counties.

More than 5,000 acres of infested lands were freed from prairie dogs at a cost of slightly less than 15 cents per acre. About 22,000 acres of gopher infested lands were successfully treated.

The work on prairie dog and gopher control continued during 1923, under the direction of A. E. Oman who was assigned to Kansas August 16, 1923.

Oman and his assistant, Roy Moore, continued the rodent control program through 1928. On July 1, 1929, Moore was transferred to Mississippi and on September 1, 1929, Oman was transferred to Texas.

The cooperative plan entered into by the Extension Service in Kansas and the Bureau of Biological Survey was discontinued in 1930, and the rodent control program was carried by the County Agent, for the most part without Specialist assistance.

In December of 1925, George E. Johnson, with the Department of Zoology at KSAC, wrote Circular number 120, a publication about rodent control in stored grains.

From 1923 to 1929, the value of the program conducted by these men was indicated by a gradual increase in the amount of poison bait used (64,144 pounds in 1929), a decrease in the number of acres infested with prairie dogs (from 150,000 down to 49,783 acres in 1929), and an increase in the number of acres of gopher infested land treated (24,069 to 127,101 in 1928).

Coyote Control Legislation—1931

In 1931, the U.S. Congress enacted legislation for a program intended to eradicate coyotes within 10 years. This legislation, known as the Act of 1931, still gives the Federal government authority to participate in animal damage control. The Kansas program was carried out by County Extension Agents.

Jackrabbit Drives—1934-36

Dr. E. G. Kelly, Extension Entomologist, originated the plan for jackrabbit drives in Western Kansas during the drought years (1934-36) when their crop destruction was most serious.

The Department of Zoology continued to assist in answering letters of a technical nature, preparing bulletins, and shipments of poison bait.

Rodent Control Specialist—1935-36

In 1935, because of the serious problems caused by pocket gophers in alfalfa fields, arrangements were made for the temporary employment of Percy DePuy as rodent control specialist. This position was discontinued in 1936.

In 1939, the U.S. Congress transferred the Federal Predator and Rodent Control from USDA to U.S. Department of Interior (USDI) where it was placed within the structure of the U.S. Fish and Wildlife Service.

Shift To Predator Control—1939-41

The emphasis at this time in Kansas moved from rodent control to predator control, and, for a limited time, from a State/Federal cooperation to County/Federal cooperation.

John Pickens, from the Oklahoma office of the Predator and Rodent Control Section of the U.S. Fish & Wildlife Service, was sent to Kansas on November 14, 1940.

Try Bounty Hunter System—1940-48

In November, 1940, the Comanche County Board of County Commissioners and the Southwestern Cattlemen's Protective Association jointly raised sufficient funds to employ a paid hunter for a period of three months.

The bounty on coyotes, in Kansas, had been in effect from 1877, and there was a strong sentiment in favor of the bounty plan and an equally strong sentiment against the paid hunter system.

There was no paid hunter contract in fiscal year 1941 in Kansas due to the strong local opposition.

In 1942 and 1943, proposals to start a Federal/State predator and rodent control program in Kansas failed. However, in 1942, sponsorship came from the Extension Service and in 1943 from the State Board of Agriculture.

On January 1, 1944, the County/Federal co-operative predator control program in Comanche County was resumed. On March 6, the hunter assigned to

the project resigned and the Cattlemen's Association suspended its support.

The Kansas State Board of Agriculture and the Kansas State College unsuccessfully attempted to procure enactment of a State, County, and Federal cooperative predator and rodent control law in 1945-47.

In 1946 and 1947, there were no State, Federal, or local formal predator or rodent control programs.

In January, 1948, the Kansas Forestry Fish and Game Commission authorized the employment of ten predatory animal hunters. This State agency agreed to pay the salaries and official mileage of the hunters. The Federal agency agreed to select, train, equip, and supervise the work of the hunters. The program started February 7, 1948, and was suspended June 30, 1948.

The legislature of Kansas enacted a law in 1949 that established the framework for a state program of predator control as follows:

Kansas State University is authorized and directed to supply to counties, upon request, information as to approved methods of control and to make available the services of its experts to demonstrate those methods and assist in organizing measures of control among counties.

It wasn't until 1953 that an appropriation was made that permitted Kansas State University to perform part of the function delegated by the 1949 law.

Norway Rat Control—1953-54

Kenneth Jamison, Harper County Club Agent, organized the first county-wide Norway rat control program in 1953.

In 1954, six counties—Cheyenne, Kearney, Kiowa, Sherman, Hamilton, and Wichita—cooperated with the US Fish & Wildlife Service in placing forty-five 1080 bait compound stations for gopher control. Finney County conducted a rat control program.

State Predator/Rat Control Specialist

The project, Rodent and Predator Control, was reactivated in April of 1954 when George Halazon, was employed as a State Specialist. The emphasis of the project was shifted from one of extermination to ecological control of damage. The project was also expanded to include all of wildlife management.

The program was designed to inform the public of the aesthetic and recreational values of wildlife as well as how to control damage caused by wildlife.

The program was organized with the following categories:

- 1) Coyote control.
- 2) Prairie dog control.
- 3) Jack rabbit control.
- 4) Pocket gopher control.
- 5) Raccoon control.
- 6) Bird control (such as black birds).
- 7) Rats and mice control, (with grain sanitation added later).
- 8) Deserted cat and dog control.
- 9) Conservation of wildlife.

The name of the project was changed to "Wildlife Management" on July 1, 1961.

Coyote Control

The coyote population in Kansas varies from year to year with weather conditions and the population of other wildlife upon which the coyote preys. When other wildlife is scarce the coyote will attack small domestic animals as a source of food. At such times, farmers desire to destroy the coyote by some means.

Around 1950, the Humane Coyote Getter, a cyanide gun, came into general use in the western part of Kansas.

An objection to this means of killing coyotes was that dogs or other small animals often became the victim of the cyanide gun.

Western Kansas ranchers had also developed working agreements with the Federal Fish and Wildlife Service for the use of the compound known as 1080. Opposition to this control measure also developed as some dogs were killed by it.

In a few counties, livestock associations or Boards of County Commissioners and professional hunters entered into "bounty hunter" agreements for hunting coyotes for a fee, with the hunter getting the bounty and pelt.

Men with hunting dogs opposed all of the methods as hunting for sport was somewhat reduced by any effective control measure.

After one year of work by George Halazon (1954-55), his recommendations for control of the coyote were trapping (using the 3N Victor foot-hold trap) and the use of the cyanide gun.

During the same period of time, the estimated losses to domestic livestock due to coyotes dropped from \$287,855 to \$187,000.

In 1956 and 1957, certain Western counties continued a cooperative program with the Federal Fish and Wildlife Service in the use of 1080. These

included Clark, Cheyenne Kiowa, Logan, Meade, and Sherman counties.

During these years the relationship between the population of coyotes and their damage to domestic livestock and the jackrabbit population became evident. A low jackrabbit population caused the coyotes to turn to livestock for food.

Estimated losses from coyotes killing livestock were \$112,000 in 1958, \$124,000 in 1959, and \$161,000 in 1960.

By 1960, 56 counties had revoked the bounty on coyotes. However, in 1961, all but four counties reenacted the bounty payments.

The 1960-61 coyote population in Kansas was at a ten-year high, perhaps the highest in history.

Halazon reported that bounty for coyotes killed has not been effective. The total amount of money appropriated by the State and County governments might be better applied to a carefully organized control program with greater beneficial results. The use of 1080, by 1961, was rare.

The trapper program has proven to be successful in controlling the damage done by coyotes, but is not designed to reduce the population of this predator.

Biologists have agreed that most damage to domestic livestock was by a few animals and that if those animals can be caught by trapping the losses will be eliminated.

In 1964, Halazon suggested guidelines for the Extension educational program regarding coyote control, similar to those of the Missouri Trapper program:

- 1) Our basic objective in Extension is to organize an educational program to limit the losses by farmers and ranchers. This means a control, not an eradication program.
- 2) In general, each individual operator must assume responsibility for coyote control on his individual farm or ranch.
- 3) Extension should offer a program of training to the individual farm and ranch operator in the control of coyotes. If an individual ranch or farm operator wishes to employ a trapper for control purposes, Extension would offer training to this person the same as to individual operators.
- 4) Extension suggests that the most suitable control methods, in general, are steel traps and cyanide guns. Under certain circumstances, however, other recommended methods may be desired.

- 5) Requests for training assistance in the county should be directed to the Kansas Extension Wildlife Specialist.
- 6) Extension agents and other staff members should make available to interested persons the background information upon the habits of coyotes, economics of the problem and available control methods.

Prairie Dog Control

The drought conditions in the early 1950's, and the accompanying over-grazing of pastures, were ideal for the increase in prairie dog population.

For many years the recommended control measure was the use of poisoned grain scattered about the entrance to the prairie dog burrow. This method did not prove most effective.

Halazon, in his annual report of 1955, changed the long-standing recommendation of using poison grain bait for prairie dog control to that of using fumigation.

He suggested this method gave complete control and soon thereafter, several counties initiated renewed efforts toward county-wide control programs to limit the spread of prairie dog colonies.

Halazon recommended the fumigation of the prairie dog burrows with a solution of twenty percent carbon tetrachloride and eighty percent carbon bisulfide.

In 1960, Halazon reported that a new fumigant, chlorofume, had been developed. Chlorofume is non-flammable and nonexplosive. The cost is no greater than the mixture previously recommended and is readily available in all counties of the state.

By consistent use of well organized county-wide programs, the prairie dog population was greatly reduced by 1960. Savings amounted to about one ton of hay per acre of the infested area.

Jackrabbit Control

The population of jackrabbits increases during dry years. The drought of the early 1950's brought about the usual increase in numbers. Landowners often were not fully aware of the possibility of damage to crops by jackrabbits until the damage had occurred.

No effective control measures were used during the winter months when the jack rabbits were looking for food.

In his report for 1957, Halazon stated:

The Kansas Forestry, Fish and Game Commission has cooperated in an educational program for jack rabbit control.

Where recommended practices were followed excellent control was obtained resulting in large savings. Some counties have ignored control measures and have substituted bounties with no results.

Jackrabbit carcasses are worth around 25 cents each if properly handled. Under extension-organized control programs some counties claimed to have killed over 100,000 jackrabbits. Haskell County claims to have saved over \$100,000.

During the more favorable crop growing conditions in the late 1950's and the early 1960's, the jackrabbit population became so low that losses to crops were practically nothing.

In 1960, Halazon stated:

If the population statistics of this animal follow previous experience, no more problems of any serious nature should be experienced until we have another period of extremely dry weather for the state of Kansas.

In 1963, the jackrabbit populations in Kansas increased to the extent that jackrabbits were sold for their meat and pelts. During the winter of 1963, fifty tons of jackrabbit meat were processed at a Wakeeney, Kansas plant. This was a decrease from 250 tons processed in 1960.

Gopher Control

The upheaval of mounds of dirt and the accompanying cutting off of roots of alfalfa and grasses is the most common form of damage done by the pocket gopher.

The early biologists recommended the use of poisoned grain placed in the runways made by the gopher. The control method did not always give satisfactory results.

Halazon introduced a new method whereby cubed root vegetables were dusted with strychnine alkaloid and inserted in the fresh runways. This method gave 100 percent control.

This treatment was limited, however, to the short time during which the gophers were active as evidenced by the construction of new mounds of dirt.

The vegetable root-strychnine bait has been recommended continuously since 1955 for the control of the pocket gopher.

Raccoon Control

In his annual report for 1955, Halazon made this

statement relative to raccoons:

Occasionally a raccoon raids a chicken house or gets into a silo where they cause considerable damage. Corn fields and watermelon patches are also subject to depredation.

Excellent results in control of this damage results from the use of a No. 1 1/2 steel trap. Poultry losses are easily controlled by proper management.

In 1957 the use of electric fencing proved to be 100 percent effective in protecting corn fields and melon patches against damage by racoons.

Bird Control

In 1958, additional control measures found to be effective included the Kaw Kaw Rope and Sentinel Exploder as used for controlling damage by birds. These control methods continued to be recommended to reduce crop damage by racoons.

Damage to fields of grain by migrating birds, especially blackbirds, often was considerable. Halazon, in his report for 1955, stated:

These birds can be kept out of the fields by using a fuse rope commercially called Kaw Kaw rope. This cotton rope saturated with black powder is suspended from a support in the field. Inserted between the twist of this rope are large firecrackers. The intermittent explosions keep the field free of birds.

The use of spiral twirlers (strips of revolving shiny material, such as items used by used car lots for advertising) suspended in fields, orchards, and berry patches have produced excellent results in the control of bird depredation.

In 1957, experiments with an acetylene exploder produced good results at a very low cost. And in 1960, the acetylene or butane exploders were reported to be of great benefit in removing concentration of roosting starlings and pigeons in urban areas.

Between 1962-1968, Halazon developed an urban wildlife damage control program for the first time in the history of Kansas.

He designed a benchmark program with the city-county office of the Sedgwick County/Wichita Health Department that enabled this urban area to cope with its pigeon, crow, and starling problems.

Rats and Mice Control

Previous to the early 1950's, traps and occasionally some form of poison material were used to reduce the rat population when damage became noticeable.

With the production of warfarin by the Wisconsin Alumni Research Foundation in 1948, a new and effective material came into being. Warfarin is an anti-coagulant which causes internal bleeding and eventual death of the animals consuming the product.

Kenneth Jamison, Harper County Club Agent, in organized the first county-wide rat control campaign in 1953. The 4-H Club members and leaders made available the mixed bait material at a reasonable cost, organized and carried out an effective educational program, and followed up to determine the effectiveness of the campaign.

Investigation following the campaign indicated that 90 percent of the farms and 100 percent of the urban areas were rat-free. Other counties organized campaigns with outstanding results.

Specialists in Grain Marketing and Veterinary Medicine assisted with educational materials for their campaigns in an endeavor to reduce the amount of rodent pellet contaminated grain and the spread of animal and human diseases which are commonly carried by rats.

In 1955, the importance of keeping grain in storage free from rat pellets was further emphasized by new regulations by the Food and Drug Administration which were very strict in that regard.

Kansas 4-H Clubs won over 40 percent of the National awards given by the Wisconsin Alumni Research Foundation for success in rat control campaigns.

About 30 tons of bait were distributed and 45,000 families were using warfarin bait for the control of rats and mice in 1956. In the same year, 65 national awards were made to the 4-H Clubs of Kansas.

In 1958, the Wisconsin Alumni Research Foundation started to sponsor a week-long camping trip to state winners in rodent control.

By 1960, rat damage control was widespread as about one-half of Kansas families were using warfarin for the control of rats and mice.

Deserted Cats and Dogs Control

In his report for 1955, Halazon made this statement:

Occasionally domestic animals are deserted and left to fend for themselves. These feral animals are often more destructive than wild animals and have little fear of man. Cats and dogs are the most frequent feral animals.

Because of misguided emotions on the part of some animal lovers control of these animals can often be a very controversial matter. Live trapping with the use of the so called Have A Hart trap is effective and is not objectionable to animal lovers.

In 1962, Halazon received a request for assistance from the Wisconsin Alumni Research Foundation in developing and testing a new additive to warfarin.

This material was an antibiotic which knocked out the flora of the digestive tract normally instrumental in manufacturing vitamin K, the antidote to warfarin.

As a result the Research Foundation made available to all formulators, a new anticoagulant bait, using the trade name Prolin.

Wildlife Conservation and Management

The background for the organization of a Wildlife Conservation and Management program was contained in the statement made by Halazon in his annual report for 1954:

A definite need exists for the farmer to be conscious of and reap some of the benefits of wildlife. To assist in this a number of model farm pond recreation areas have been set up.

These ponds consist of a fenced pond with piped water for livestock, picnic area for family recreation, wildlife cover for soil protection and wildlife, and are stocked with fish and game.

Far too many Kansas farm ponds are mere mud holes and breeding areas for livestock parasites and diseases. Fencing the ponds will help conserve water, provide more sanitary conditions for livestock, and create a desirable recreation area.

Halazon's philosophy of wildlife conservation and management was further illustrated in this statement in his report for 1955:

Wildlife has a positive as well as a negative value. The esthetic value of rural living cannot be expressed in dollars and cents. Few farmers take full advantage of the recreational advantage their land affords their family.

These recreational values can be realized without loss to agriculture and at no additional expense. As a matter of fact proper use often stimulates better husbandry methods. One such program is the multiple-use farm pond.

To stimulate the use of the multiple-use farm pond, the Kansas Forestry, Fish and Game Commission cooperated by supplying free planting stock. The following species were provided and planted in 1955:

Choke cherry, 500; Russian olive, 700; Nanking cherry, 200; Red cedar, 1000; Sand cherry, 300; Multi flora rose, 1500; American plum, 500.

The construction of multiple-use farm ponds has continued steadily. One cooperator in Johnson received more than \$4,000 in one year from his pond which cost under \$500 to construct.

A cooperator in Reno County rented his pond for \$5,000 to a group of sportsmen. The cost of preparing the site was under \$300.

One of the benefits of a well managed farm pond is the prevention of the spread of livestock diseases. In his report for 1958, Halazon stated:

The increase in Kansas of leptospirosis is directly attributed to cattle drinking contaminated water. This opinion was expressed by the Kansas State University Veterinary Department.

During 1960, County Agents reported assistance in construction and management of 2,870 multiple-use ponds.

By 1960, improvement in hunting and fishing was noticeable. The increase in the number of reservoirs and improved weather conditions contributed to this more favorable situation.

Quail and waterfowl hunting vary with the seasons. Reservoirs have also contributed to increased boating activities. The Kansas Forestry, Fish and Game Commission indicated that more than 70,000 boats of 10 horsepower or greater are now owned within the state.

For the first time in Kansas, Halazon suggested to the Extension Service employees and their co-operators:

A definite need exists for the farmer to be conscious of and reap some benefits of wildlife. Wildlife has a positive as well as a negative value. The aesthetic value of rural living cannot be expressed in dollars and cents.

Few farmers take full advantage of the recreational advantages their land affords their families. These recreational values can be realized without loss to agriculture and at no additional expense. As a matter of fact, proper use often stimulates better husbandry and methods.

Grain Sanitation

Grain sanitation is closely allied with the control of rats and with grain marketing and entomology. In his report for 1957, Halazon stated:

A new rodent repellent, Cafero, formulated by the Virginiacal Company, received its initial field testing in Kansas. Cooperating with the entomology Specialist, tests were conducted in elevators, chicken houses, wind ovals, truck farms, and in landscape plantings.

The results were excellent. Cafero promises to be the missing link, supplying temporary relief while the anti-coagulants reduce the rodent population.

Figures indicate that the Pure Food and Drug Administration seized 70 cars of wheat for non-compliance with the Sanitary Code. Not one of these car loads of grain originated in Kansas.

This is not to indicate that no work needs to be done on the Clean Grain Program but rather that the Kansas program is above the standards of other states.

The seizing of two cars of grain were seized in Kansas in 1958, and four additional cars in 1960, did, however, show a certain amount of complacency on the part of some grain producers or grain dealers.

4-H Club Activities

Halazon spent considerable time working with 4-H Clubs on the state and county levels on all phases of wildlife conservation management.

Between 1954 and 1964, he worked with 4-H, developing wildlife programs, and teaching wildlife classes at Rock Springs 4-H camps.

In 1954, \$600 in prize money was obtained for state-wide awards in rodent control work. Classes in wildlife subjects were popular among 4-H campers. A special effort was made (1954) to have Rock Spring Ranch comply with recommended wildlife management procedures.

The members and leaders of 4-H Clubs did an outstanding job in conducting county-wide rat control campaigns in the 1950's. For a year or two, Kansas clubs won almost one-half of the national awards for excellence in rat control campaigns.

The Wisconsin Alumni Research Foundation, in 1958, started to sponsor a week-long camping trip to state 4-H winners in rodent control.

Wildlife management areas have frequently been adopted by 4-H Clubs as a community project. Providing cover for birds and emergency feeding has been projects handled by 4-H members.

State-wide Assistance and Cooperation

Close contact has always been maintained with the research workers in the Department of Zoology, Kansas State University.

Agent and leader training programs have been correlated with Specialists in Entomology, Grain Marketing, Animal Husbandry, Plant Pathology and Forestry.

The State Board of Health representatives and the Kansas Forestry, Fish and Game Commission have cooperated freely. A four-day short course for State Game Department personnel was started in 1956, with an attendance of 75 persons.

A training school for state licensed pest control operators was conducted in 1957. Special control methods were organized to help the State Board of Health and local veterinarians control rabies and leptospirosis.

In 1960, a program of training Hunter Safety Instructors was started to help reduce the accident rate due to firearms. This program, in cooperation with the National Rifle Association, was designed to train and certify instructors throughout the state.

These instructors, in turn, were to train young people in their areas and issue Safe Hunter certificates. This program was especially popular with urban people.

Work in field testing chemicals for aquatic weed control and also repellants was done in cooperation with several chemical companies in 1962.

"Kansas Afield" Program—1959-88

In 1959, Halazon started a weekly radio program, known as "Kansas Afield," as a way to share his ideas

about wildlife control, conservation, and recreation. He continued this program for 30 years, over WIBW, Topeka and KSAC/KKSU.

In 1961, the title of Predator and Rodent Control Specialist, used by Halazon, was changed to Extension Specialist Wildlife Management.

Add Wildlife Control Specialist—1968

By 1968, concern about the state's coyote population contributed to new state funds for Kansas State University to hire an additional Predator Control Specialist.

When Robert Henderson was employed, he provided a new direction for the program. He responded to every coyote complaint within 24 hours. He then taught people who were experiencing a problem how to use control techniques.

Henderson left necessary equipment with the people following training so they could immediately put the equipment to work. Or he would help solve the problem by demonstration.

The first full year on the job, Henderson:

- 1) Trained 50 livestock producers who caught 520 coyotes, 21 wild dogs, and 8 bobcats.
- 2) Prepared and distributed 22,500 pounds of poison prairie dog and pocket gopher bait.
- 3) Wrote publications about How to Call Coyotes and Controlling Coyote Damage.
- 4) Compiled and delivered to every County Extension Office a two volume Wildlife Damage Control Handbook. This served as a ready reference for all Extension workers to use when advising about wildlife damage problems.

Wildlife Damage Emphasis—1969

1) Title of the specialist was changed to Wildlife Damage Control. This was the first time an Extension Specialist had that title, which is now a standard title used in most states.

2) Developed a broader view, showing that coyotes killing livestock was only part of the problem faced by Kansas livestock producers. Most economic loss surveys measure only animal losses to predators.

However, other losses can occur, such as, weight loss; poor reproduction; poor health; injuries; loss of time and money invested; additional labor and expense; inability to utilize some forages because of fear of predation; the producers, time and money expended on predator control; and other intangible losses that cannot be measured.

Producers themselves unknowingly set-up situations, where predation might be likely

to happen. And it became more apparent that it would be impossible to completely control the coyote population in an area as large as Kansas.

Damage Control Emphasis—1970

- 1) Legislature in Kansas abolished the bounty on coyotes and closed the poison station at KSU.

Damage Control Emphasis—1971

- 1) Conducted many prairie dog and pocket gopher demonstrations.
- 2) Started classes in the art of coyote calling.
- 3) Started urban rat control projects in cities such as Dodge City.
- 4) Held urban bird roost schools, and trained city officials in bird dispersal methods.
- 5) Studied bird damage to growing milo crops in Harvey county.
- 6) Henderson received the "Conservationist of the Year" Award from the Kansas Wildlife Federation for developing the WDC program.

Damage Control Emphasis—1972

- 1) Prepared 12 wildlife damage control leaflets.
- 2) Made 147 farm visits to places where coyote problems were reported.
- 3) Sold 337 coyote traps, following demonstrations.
- 4) Made 18 TV presentations.
- 5) Consulted City of Topeka in moving and cleaning up a large urban bird roost.

Damage Control Emphasis—1973

- 1) Negotiated Memorandum of Understanding agreement between the State Wildlife Agency and the Extension Service regarding Wildlife Damage Control.
- 2) Filmed a super 8 movie about WDC in Kansas.
- 3) Held the first Great Plains Wildlife Damage Control Workshop, an event for WDC professionals that has been held every two years since.

From 200-300 people attend these workshops, and travel from 12-15 midwestern states. The proceedings of these workshops are to be found in most major libraries.

- 4) Developed a 500 member volunteer group of coyote hunters and trained them so that livestock producers could receive the volunteer's assistance.

Damage Control Emphasis—1974

- 1) Started new Future Farmers of America WDC contest program and found sponsors for awards.
- 2) Kansas legislature enacted the Kansas Wildlife Damage Control Act to replace 1949 law.
- 3) Henderson awarded the "Wildlife Conservationist of the Year" recognition by the Kansas Wildlife Federation.

Damage Control Emphasis—1975

- 1) EPA re-made the coyote film, in a 16mm format, and distributed it nationwide under the title, "A Matter of Understanding."
- 2) KSU started a study to determine to what extent sheep husbandry methods relate to coyote problems. This was the first study of its kind ever conducted anywhere in the world.
- 3) Began study to evaluate use of a cyanide device called an M-44 for use in coyote damage control.
- 4) Henderson served as an expert for many states and at national meetings.
- 5) Estimated prairie dog population at 25,000 acres lowest ever reported.

Damage Control Emphasis—1976

- 1) Legislature provided appropriations for a second Wildlife Damage Control Specialist.
- 2) Ed Boggess accepted this job on July 1, 1975, and was stationed in Garden City. His area included the Western half of the state.
- 3) Survey showed falling coyote problems with 92 percent approval of the Extension WDC program among users.
- 4) Producers caught an average of 6 coyotes after training.
- 5) Sheep losses were down to less than 1% of all sheep lost to any reason.
- 6) Interest in coyote/fur trapping was building as fur prices were heading to all time high records.
- 7) Conducted study on use of electric fence to reduce coyote depredations. This study was in cooperation with USF&WSADC-Research. Federal grants for states to operate and expand their state programs were offered by Federal ADC.

Damage Control Emphasis—1977

- 1) Henderson and Boggess conducted Agent training schools after revising the WDC hand-

book and expanding its use to all the Great Plains States, selling over 3000 copies.

- 2) Taught 12 fur-trapping schools with 858 people in attendance.
- 3) Developed 4-H Furharvester project. There were 2,952 4-H members enrolled in Wildlife Projects.
- 4) Presented 16 radio programs about urban bird damage control situations.
- 5) Started offering three day furharvester training courses.
- 6) Henderson received EPA Award for assistance in developing the film about coyotes.

Damage Control Emphasis—1978

- 1) Developed working a relationship with Federal-ADC group in Nebraska. Held joint meeting on crow damage control.
- 2) Helped Wallace county start a county wide prairie dog control program. A survey showed prairie dogs increasing to 58,000 acres in 1977.
- 3) Boggess conducted 21 public meeting regarding prairie dog control.
- 4) Increased use of aluminum phosphide for prairie dog control by testing under a IR-4 project. Results of this study was registration of this product for general prairie dog control.
- 5) Conducted 15 four hour fur trapping schools around the state. In this winter Kansas people harvested an estimated 110,000 coyotes and sold the pelts. Furs sold in Kansas this winter brought in \$8.9 million to the furharvesters.
- 6) Conducted 14 state-wide educational programs aimed at reducing the TGE problem in swine herds due to starlings.
- 7) Worked with AS&I on campus to reduce rodent problem at swine research unit.
- 8) Developed, to date, 23 Wildlife Damage Control publications, and 9 slide-tape sets. Distributed over 100,000 copies of How to Call a Coyote. Several states use many Kansas materials in their own WDC programs.
- 9) Taught at 8 district sheep schools.
- 10) Henderson received National Award from American Motor Company for exceptional service in the cause of conservation.

Damage Control Emphasis—1979

- 1) Conducted 15 schools about prairie dog control.
- 2) Conducted urban WDC schools on bird damage control at airports, feedlots, cities and military installations.
- 3) Distributed 26,000 pounds of ZP prairie dog bait, and sold 122,000 gas cartridges

- 4) Published a booklet about how to prevent coyote problems, first of its kind. (Coyote pelt prices peaked at around \$100 each.)
- 5) Collected the jaw bones of 4250 coyotes and researched a new method of determining the age of coyotes.
- 6) Developed closer working arrangement with the Nebraska ADC group through several projects.
- 7) Conducted several beaver damage control schools.
- 8) Helped establish a state organization of fur harvesters.
- 9) Pioneered efforts in furharvester education which later resulted in the enactment of mandatory furharvester education course in Kansas.

Damage Control Emphasis—1980

- 1) Served as advisors to other states where fur-trapping educational programs were being developed.
- 2) Mississippi Kite problems increased for the first time in SW Kansas.
- 3) Educational materials were developed for the USF&WS-ADC group.
- 4) Held 8 schools on rodent control in stored grain areas.
- 5) Worked with nut growers in the control of crow and bluejay damage.
- 6) Held 12 schools about prairie dog damage.
- 7) Started range study to determine forage losses due to prairie dogs.
- 8) Participated in district sheep and lamb schools.
- 9) Produced a radio program once a month.
- 10) Held seven fur trapping schools.
- 11) Revised the WDC handbook.

Damage Control Emphasis—1981

- 1) Held Agent training around the state.
- 2) Developed a 24C label for use of DRC1339 in pigeon damage control so that there could be a product other than strychnine which often contributed to non-target kills.
- 3) Conducted 11 fur trapping schools, 15 prairie dog control schools, and 17 beaver damage problem consultations.

Damage Control Emphasis—1982

- 1) Conducted 11 prairie dog control schools.
- 2) Tested deer and rabbit repellent and provided information from these test to County Extension Agents.

- 3) Conducted three urban wildlife damage control schools.
- 4) Conducted agent training in five area meetings.
- 5) Taught a five day class to the sheep science class at Colby Jr. College.
- 6) Taught a WDC class at KSU on Saturdays for a semester.
- 7) Responded to 15 bat problems in urban areas.
- 8) Presented information on 20 TV programs and 20 radio programs.
- 9) Wrote parts of 8 pesticide training manuals.
- 10) The Kansas mandatory furharvester education act became law.
- 11) Helped prepare training material and certify instructors.
- 12) Created and gained sponsorship for County Extension Wildlife Award.
- 13) Developed skunk damage control programs for urban areas.
- 14) Traveled to six states to advise on WDC and fur trapping education.

Damage Control Emphasis—1983

- 1) Began approved M-44 program in coyote damage control.
- 2) Responded to problems with antelope, deer, beaver, pocket gopher, mole, birds in milo, and coyote problems.
- 3) Started a Wildlife Damage Information System. Up until this time no one ever tried to determine the extent of wildlife damage problems are in Kansas.

Asked County Extension Office workers to report, on a monthly basis, all the complaints they received in their offices.

From this, estimated that there were more than 3000 calls received in this one year in 105 county offices. The most frequent animal questions were about moles and pocket gophers.

Damage Control Emphasis—1984

- 1) Bill Andelt became the new Western Kansas Wildlife Damage Control Specialist.
- 2) During Kansas legislative Research Council studied Wildlife Damage Control in Kansas.
- 3) USF & WS-ADC recommended that Kansas should continue with its successful program of Extension WDC. The study was prompted by loss of tax dollars from Federal lands around Lake Perry Lake in northeast Kansas/ and with increasing deer and blackbird problems.

- 4) Other problems occurred with geese at Brown County State Lake, and blackbird problems on milo crops near Marion Lake.

Damage Control Emphasis—1985

- 1) Developed a WDC newsletter and renewed the WDC volunteer program.
- 2) Developed the WDIS program further and now receive WDC reports, and economic information on losses for Wildlife Conservation Office.
- 3) Wrote a manual for training users of toxicant in ag-related WDC. This training manual covers category I-C pesticide safety program.
- 4) Worked with 75 livestock producers on coyote problems. The number of coyote problems are increasing.
- 5) Henderson received the USDA Superior Service Award for the development of the Extension Wildlife Damage Control program in Kansas.

Damage Control Emphasis—1986

- 1) Mississippi kites attacked people on a golf course and near some homes of people during July and August, 1986.

The State Wildlife Agency requested assistance from the Federal government (USDI-USF&WS) because the birds are protected Federally and the Federal government refused to permit the state to destroy any of these birds even though particular birds were causing injury to humans.

The USDI-USF&WS contacted the USDA-ADC and requested that they respond to the State Wildlife Agency in Kansas and handle the problems. They responded to 16 Mississippi kite problems that July and August.

Damage Control Emphasis—1987

- 1) Developed a 640-page handbook about methods useful in increasing wildlife on farms and ranches.

Eighty people in 10 states working for 30 different organizations or agencies contributed to this task.

Over 3000 of these handbooks are now in use.

- 2) Started work on various video tapes to help increase our ability to teach some WDC procedures.
- 3) Began working with producers who obtained guardian dogs to protect sheep.
- 4) Hired the first Extension Assistant to help with the WDC program. Charles Lee received this appointment.
- 5) Started studies to determine what could be accomplished in reduction of bird damage at large cattle feedlots.

Damage Control Emphasis—1988

- 1) Worked with researchers from USDA-ADC to develop our studies of DMA as a repellent to birds.
- 2) Developed 11 video tapes in cooperation with 60 individuals from 24 organizations in 10 different states. The Kansas Department of Wildlife and Parks were a major contributor to the success of these videos.

These videos show how to increase wildlife on farms and ranches. These video are in use nationwide.

- 3) Started a prairie dog population study in 8 counties in western Kansas where the most land had been enrolled into the CRP program.

These acres planted to native grass may sometime in the future serve as prime habitat for prairie dogs. This study will provide benchmark information for the next 10 to 20 years.

Contributing Author. *The primary contributing author to this summary of the Cooperative Extension Service educational programs and activities in Wildlife Damage Control, from 1965 through 1988, was F. Robert Henderson, Extension Animal Damage Control Specialist.*

A complete list of personnel in Extension Wildlife Damage Control is included in Volume II, Chapter 6, Extension Personnel, pp. 77-78.

