In the United States, animal predation accounts for approximately 11% of calf loss. While not as devastating as the U.S. average, Kansas still reports that 4.6% of calf loss is due to predators. Even at nearly 5%, deaths and injuries from predators in general cost Kansas cattle producers $4,000,000 on a yearly basis (Ricketts, 2021). The abundance and wide distribution of coyotes across the country and their ability to injure livestock make them the most common livestock predators that Kansas producers deal with in terms of size and death loss due to predation. Of those 4.6% of predation losses previously mentioned, 84% are chalked up to coyotes, specifically. With coyote population steadily increasing since the fur market crash in 1987, coyotes remain an area for concern in terms of livestock production and calf losses (Ricketts, 2021).

As mentioned, their size gives coyotes a deadly advantage. Coyotes range in size between 18 and 43 pounds depending on their location in the country, however a study conducted in Kansas recorded average weights of males and females at 30.7 lbs and 26.0 lbs, respectively. The oldest age of a wild coyote was recorded at 14.5 years, while a coyote in captivity reached an age of 22 years. This length however is uncommon as mortality rates of coyotes are rather high compared to other animal species with 50% of coyotes dying before they reach their first breeding season. Of that mortality rate, humans are responsible for 40-90% of death with other causes including things such as vehicle collisions and disease varying with location and environment. Considering all of the death loss that coyotes experience although still surprising, 70% of wild coyotes in most population are less than 3 years old (Ricketts, 2021).

Some producers may notice that coyotes are more active during specific times of the year. For example, energetic demands of coyotes are greatest in spring and early summer making them much more focused on hunting during that time. This is due to the presence of pups as coyote breeding season occurs in January or February, when females exhibit a 4-5 day estrus. Interestingly enough, the resulting litter size is affected by resource abundance. For example, when resources are limited litter size on average is 3 pups, while when resources are high average litter size is 8 pups. The impact on resource availability is not limited to litter size, however.

Resources also impact the home range size, in addition to the social hierarchy of the coyote group. The social hierarchy includes the coyotes establishing and defending territories to maximize reproductive fitness and to ensure that they have food, water and shelter resources necessary for survival. When resources are limited, home ranges may increase in size. Coyotes belong to either family groups which position themselves near their resources, or transient coyotes which roam more freely causing a variation of home ranges dependent on their social status. To illustrate how many coyotes roam, a study by Kamler and Gipson found that 47% of coyotes were transients in a range in Kansas (Ricketts, 2021). The proportion of transient coyotes makes affecting population numbers more difficult due to the ability of transient coyotes to move in and continue reproduction in the area when coyotes in family groups are killed.

Although discouraging, statistical models show that 70% of the population must be killed for 50 consecutive years to eliminate coyotes in that area. However, if a producer wants to reduce the number of coyotes threatening livestock there are several methods of eliminating them. Shooting when the opportunity arises seems to be the most common method for producers. However, calling and shooting may be more effective during specific periods of time. If this is the method of choice, one should ensure that they are doing so legally following applicable regulations and restrictions. When calling, it is a good practice to find an elevated position, approach from downwind, make limited noise, and call into the wind towards a draw or other type of cover that holds coyotes. Trapping and snaring coyotes is another option for control. Dirt hole sets and flat sets are generally the two trapping setups that are recommended to producers by Drew Ricketts, KSRE Wildlife Management Specialist. Even if the offending coyote is not caught in the trap, the presence of coyote caught in a trap can successfully deter coyotes from the area.

Discouraging statistics that suggest that coyote elimination is extremely difficult may support a co-existence approach. To reduce coyote kills, remove dead livestock and avoid calving near the dead pile. Calve close to areas with high human activity, with lights, dogs, and tractors running often. Coyotes will still travel into those areas, but will be much less confident to hunt. Since open dead pits are far more attractive to predators, it is suggested to compost animals in dead pits as much as possible. Even guardian animals such as dogs, donkeys, and llamas can be implemented to deter coyote hunting, although this is a more common choice for small livestock (Ricketts, 2021).

Due to the range, social hierarchy, abundance, and persistence of coyotes it may be beneficial to view controlling coyotes from a co-existence point of view. However if a producer wants to “take” coyotes, this can be accomplished through shooting, calling and shooting, trapping, and snaring. Measures like calving location, dead pit management, and guardian animals can deter coyotes to kill if prevention is the preferred control method.

For more information on predator control, please visit or call the Cheyenne County Extension Office at (785)332-3171.

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