



Living with Livestock and Wolves: A Practical Guide to Avoiding Conflicts Through Non-lethal Means



Fact Sheet 5:

Fencing, Fladry, and Night-penning

Fences make good neighbors, and so it is with livestock and predators. Fencing used specifically to deter wolves and other predators from livestock is most useful, practical, and cost-effective for small numbers of livestock, when installed around small pastures or acreage, or when stock is gathered in a reasonably protectable area. Types of fencing vary and may include multiple-strand electric, mesh, panels, or other hard barriers. To protect against wolves in some cases, existing fences may be augmented (e.g., by increasing effective height or by fladry) at a lower cost than new permanent fencing. Fencing may also be used to create small temporary or permanent pens to protect livestock at night and used in conjunction with other measures such as noisemakers, guard animals, or lighting.

Permanent Fencing

A properly installed high tensile electric fence provides the best permanent protection. Fence posts should be at least 40" above ground and a minimum of 6 strands of wire, equally spaced 6 to 8 inches apart. The spacing of wires for electric and non-electric fencing is important because wolves or other predators that do slip through the fence can become trapped and unable to get back out. Wolves and coyotes will also dig to reach their prey, which requires the bottom electric wire to be placed not more than 6 inches from the ground. Non-electric wire fence should be buried in a trench at the bottom and anchored. Since wolves and coyotes have very thick, insulating fur, a low impedance fence charger that can maintain 4,000 to 5,000 volts is recommended. Studies have shown that livestock fenced in pastures close to human habitations experience the least depredation from wolves. However, there are obvious drawbacks to permanent fencing, such as cost, maintenance and time to install.

Temporary Fencing

Permanent fencing is generally not a practical solution for preventing depredation on large grazing allotments or operations. Although a number of large-scale grazing operations have barbed-wire enclosures, that type of fencing is generally designed to keep livestock in, not deter predators like wolves from entering the pasture, as both wolves and coyotes can readily pass through or beneath the wire. Permanent fencing on open range creates a barrier to the migration or use of the area by native ungulates and other large mammals. However where barbed wire or other wire fencing already exists, the installation of fladry or turbo fladry along the fence line has proven to be an effective temporary barrier to wolves. Other kinds of temporary and/or portable fencing can be erected to protect vulnerable animals at critical times such as lambing. Like permanent fencing, temporary fencing can be enhanced by the addition of standard fladry or turbo fladry.

Fladry and Turbo Fladry

Standard **fladry** consists of polypropylene cording or similar material on which red or orange cloth flagging or taping is hung at 18" intervals and strung on temporary or permanent fence posts. First used in Europe to surround wolves in order to hunt them, fladry has now been adapted for use as a wolf deterrent. Something about the flags and their movement causes the wary wolf to stay outside the line of fladry. Washington Department of Fish and Wildlife even used this method successfully to protect a cow carcass for a prolonged period of time. Remote cameras showed wolves making frequent attempts to approach the carcass, but tracks and camera images show that the fladry was not breached.

Like standard fladry, **turbo-fladry** consists of cording with colored (usually red) flagging spaced evenly along its length. Turbo fladry is strung on electric fencing material, often PVC-coated for durability. The way turbo-fladry works is that it combines the effectiveness of non-electric fladry with the shock delivering power of an electric fence, so that if a wolf does overcome the innate fear of the



flagging, and attempts to pass, a shock is delivered which reinforces the avoidance instinct. The added “shock value” of the turbo fladry appears to enhance the avoidance time for wolves. It has been shown that a normal avoidance time of up to ninety days can be expected from standard fladry, and perhaps somewhat longer for turbo fladry.

Fladry of both kinds can be rapidly and easily installed. A number of producers have developed bagging systems for the fladry or reels that can fit on the back of a pickup or saddle for easy and rapid installation. Fiberglass poles can be carried easily as well and quickly installed with

the standard hammer or sleeve driver. The fladry can be strung through the metal clips normally used with such poles. Two drawbacks to turbo-fladry are that it only works where animals are contained, and it has to have a power source. Golf-cart type batteries have been used for this purpose. Both types of fladry are recommended for temporary use such as calving or lambing areas and should not be expected to be effective much beyond 90 days.

Night Penning

Bringing the herd or flock into small temporary (or permanent) paddocks for the night is a strategy that can reduce opportunities for depredation when the group is sufficiently small, or when the herd can be broken up into smaller groups. It requires that the herd or flock becomes habituated to night penning and requires the cooperation of good herding dogs that can move the animals. Eventually, the animals start sorting themselves out and head for the night pens willingly. Some producers have also expressed the added benefit of being able to keep a closer watch on the health of the herd and individual animals by use of night pens.

Birthing Pens

Birthing pens are simply another form of temporary or permanent fencing where cows or ewes are given extra protection during a very vulnerable time. Non-protected birthing on the open range is not recommended in wolf country. Not only are birthing animals and their newborn calves or lambs extremely vulnerable to depredation during and immediately following the birth, but the blood and afterbirth are strong attractants to all types of predators. Birthing pens and/or night pens can be augmented with fladry or turbo fladry.