

## ***Livestock Fencing Thoughts***

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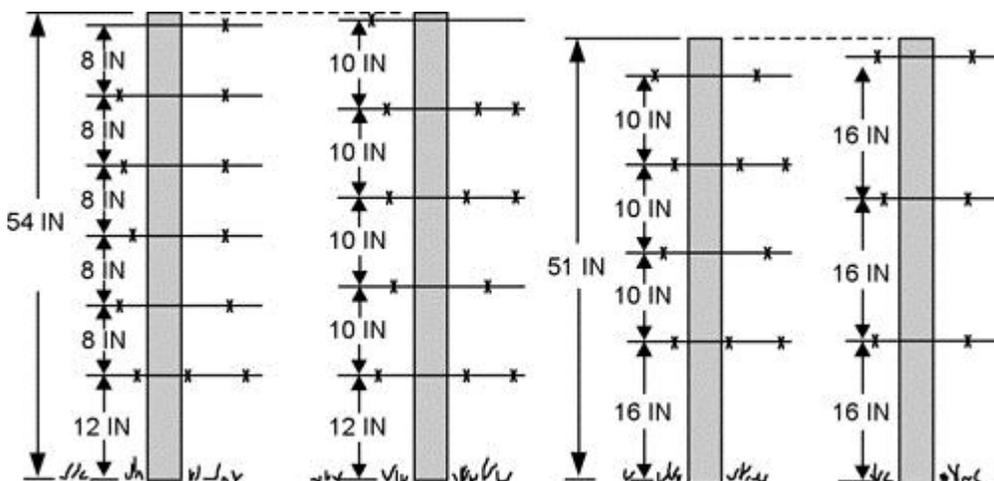
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Livestock fencing requirements vary by grazing/farming management objectives, species, age and sex of animals contained, topography, climate conditions, predation control, ecological restoration requirements, maintenance issues, aesthetic concerns and cost. In general, livestock fencing occurs as one of three types: 1) Boundary or perimeter fencing – used to keep livestock on site, with predation protection, and define a management unit that is spatially unique from other units; 2) Cross-fencing or paddock fencing – used to control livestock distribution and achieve grazing management objectives by controlling the space, density and duration of grazing; and 3) Enclosure fencing – used to protect temporarily or permanently resources that might be damaged by grazing or for monitoring by compare and contrast methods. Adequate perimeter fencing to contain livestock is also required by California law (Food & Ag Code 17121) as Mendocino or Lake Counties are not considered as “free-range” counties.

Traditional livestock fencing materials have included barbed, woven, mesh and electrified wire plus combinations of these materials. Different types of posts include treated wood, metal and fiberglass.

Barbed wire is the most commonly used material for cattle, but it can also be used for sheep and goats if properly spaced and will deter some predators. For sheep and goats the bottom spacing must be closer with the first wire no more than 6 inches off the ground and the second wire 6 inches up from that. If predators are a problem, the first barbed wire is placed practically on the ground (0 to 2 inches) to discourage coyotes or domestic dogs from burrowing under the fence. The remaining wires that follow will need to be spaced 8 inches apart. Typically sheep fences are only 4 feet high, but goats will need the same height as cattle. A drawback of barbed wire for sheep and angora goats is that their fleece often gets caught on the barbs. Barbed wire consists of two or more strands of smooth, galvanized wire twisted together with two or four sharp barbs spaced every 4 to 5 inches. Standard barbed wire fences usually have three to five strands of barbed wire stretched between posts. Typical fence height is either 51 or 54 inches. Spacing between wires depends on the number of line wires and fence height (Figure 2). Line posts are usually spaced 12 to 20 feet apart.



Suspension barbed wire fences consist of four to six strands of 12 1/2-gauge barbed wire stretched taut so no more than 3 inches of sag exists between posts. The wire strands are held apart by twisted wire stays or plastic battens or droppers spaced 16 feet apart. Line posts are usually spaced 80 to 120 feet apart.

Woven wire is more often used for sheep and goats as it is a tighter fence that prevents young lambs or kids from getting out. Heavy or extra heavyweight woven wire fences are excellent for non-horned sheep and goats. Fence height should be at least 48 inches high to prevent animals from climbing over the fence. Woven wire fence can be used with cattle provided there are several strands of barbed top wires used to prevent the cattle from rubbing the woven wire down.

Woven wire fences consist of smooth horizontal (line) wires held apart by vertical (stay) wires. Spacing between line wires may vary from 1 1/2 inches at the bottom for small animals to 9 inches at the top for large animals. Wire spacing generally increases with fence height.

Generally, where coyote predation is not a concern, stay wires should be spaced 6 inches apart for sheep and goats and 12 inches apart for large animals. Coyotes, however, can pass through openings as small as 4 1/2 inches, so if predation is a concern, woven wire fences with stay wires spaced close together will prevent predators from entering fenced-in areas. Some manufacturers produce fencing with bottom openings of 6 inch by 3 inch for predator control and 3 inch by 3 inch for predator proofing. Using one strand of barbed wire at ground level with woven wire above and two to three strands of barbed wire on top is the best non-electrified fence for sheep and goats.

If wildlife-friendly fences are required, typically the top most barbed wire is replaced with a smooth wire of similar gauge. Wildlife-friendly fences are not recommended if predation is a problem.

Fencing within many North Coast areas, such as the Little Lake Valley in Mendocino County for example, presents some unique challenges due to high water flows in the winter and because of wildlife migration patterns. Electric fences will not work there as the elk will walk through it. In addition East/West fences cannot be woven wire or barbed with very close spacing as the high water flows will fill these fences with debris and eventually take them out creating a maintenance nightmare. East/West fences in this area should probably use the minimum number of barbed wires to contain livestock. For cattle this could be as few as three strands. For sheep or goats four or five strands should suffice. North/South fences and most of the perimeter fence in this example can be either a combination of woven wire and barbed wire or more closely spaced barbed wire as in Figure 2. Always consider the unique environment that fences must accommodate and build accordingly.

End posts with H-braces made of 2 inch steel set in concrete will be stronger and last longer than wooden posts. Steel T-posts should be used for all line posts. Gates should be 16 feet wide made of 2 inch tubular steel for field equipment and for lime, hay or gravel trucks. For sheep or goats, the gates should have welded mesh wire welded to the tubular steel. This size will also allow adequate access for fire suppression equipment. When planning fences for the ranch's management units remember to include a gathering, sorting and loading corral each individual management unit. Size and shape will depend on the kind of livestock that the grazer will be running. Finally, remember the old saying, *"good fences make for good neighbors"*.