Vence Field Day

1/28/2026

The Conservation District's Board and staff got the opportunity to spend time at the Vence Field Day hosted by Jim Strickland and the crew at Blackbeard Ranch along with Vence representatives. It ended up being a great day where technology, land stewardship, and ranching all came together in a way that left us feeling excited for the continued growth of this technology. For many of us, "virtual fencing" was something we'd heard about but maybe never fully understood or seen.

Vence is a virtual fencing system by Merck Animal Health that is designed for livestock, most commonly cattle, that allows ranchers to manage where animals graze without relying on traditional fences. Instead of miles of wire and posts, ranchers can draw boundaries digitally using a computer or tablet. The cattle wear GPS-enabled collars that communicate with base stations set up around the ranch. Those collars help guide the animals and teach them where they are allowed to graze and where they are not.

The way the system works is surprisingly straightforward. Solar-powered base stations are installed across the property and act as communication hubs, covering large areas of land that would normally be difficult or could be expensive to fence. Each animal wears a collar that tracks its location and responds when it approaches a virtual boundary. As a cow nears that boundary, the collar emits an audio cue. If the animal continues forward, it receives a mild, animal-safe electric pulse. Over time, cattle learn to associate the sound with the boundary and adjust their movement before the pulse is needed. According to what we learned, most animals adapt quickly, often within just a few days.

One of the most impressive parts of Vence is how flexible it is. Because the fences are virtual, boundaries can be changed at any time without stepping foot on the land. A rancher can move cattle to fresh pasture, rest overgrazed areas, or temporarily protect sensitive land with just a few clicks. This makes

rotational grazing much easier to implement, which is widely recognized as a key practice for maintaining healthy soils, strong plant growth, and long-term pasture productivity.

From a conservation perspective, this flexibility is a big deal. Traditional fencing can unintentionally create barriers for wildlife, disrupting natural movement patterns and migration routes. Virtual fencing removes many of those physical obstacles, allowing wildlife to move freely across the landscape while still keeping cattle where they need to be. The system can also be used to protect riparian areas, springs, and other environmentally sensitive zones by keeping livestock out during critical periods without the need for permanent structures.

At the event, we heard a lot of thoughtful questions from people who work closely with the land. How do the collars perform in hurricanes or rain? What happens in areas with thick vegetation? How much labor does this save? The answers made it clear that this technology is being designed for real ranch conditions, not just ideal scenarios. The ability to monitor cattle location, movement patterns, and grazing behavior in real time also adds a layer of insight that simply isn't possible with traditional fencing alone.

This technology isn't about replacing ranchers' knowledge or work but about giving them another tool to work more efficiently and sustainably. For many large operations, reducing the time and cost spent building and maintaining fences could free up resources to focus on herd health, land improvement, and long-term planning.

Whether the goal is improving pasture health, supporting wildlife movement, or simply finding more efficient ways to manage large areas of land, this system offers a flexible approach that meets practical and environmental needs. It's definitely a technology worth paying attention to as ranching and conservation continue to evolve together.

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