

Multi-paddock grazing provides efficiency and profits for ranchers

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Short grazing periods on multiple paddocks within a pasture can not only restore forage conditions, but also profit margins, according to a Texas AgriLife Research scientist. Dr. Richard Teague, AgriLife Research range ecologist in Vernon, has been studying the benefits of multi-paddock grazing for the past eight years.

Ranchers need to know answers to practical questions such as: how good is this management option, where is it successful, and what does it take to make it work as well as possible, Teague said.

His research on ranches that successfully used multi-paddock grazing management compared the impact on the soil, vegetation, hydrological function and profitability to more traditional continuous grazing methods. Teague examined neighboring ranches to determine the impact of multi-paddock grazing by managers who achieved excellent livestock and vegetation results compared with areas grazed continuously at either light or heavy stocking rates.

He found the multi-paddock managers were able to carry many more animals, have more forage than their neighbors and have excellent wildlife habitat. They also achieved high levels of animal performance per acre while equaling the vegetation composition, soil cover, soil carbon, soil health and infiltration rates measured on ranches under light continuous grazing.

In contrast, Teague said, the ranches managed under higher stocking

rates with continuous grazing had a higher degree of [soil](#) compaction, more bare ground, lower [soil carbon](#), poorer grass composition, more weeds and lower forage production than those under multi-paddock management at high stocking rates or the continuous grazing at low stocking rates.

"The reason the multi-paddock grazers were able to achieve these positive results is they aimed at managing to give the best vegetation and animal performance," he said. "The key to doing this is to match animal numbers with available forage at all times to avoid overgrazing and poor animal performance."

Teague said to achieve top plant and animal performance, the time cattle are left on the paddock must be short enough to prevent a second bite, defoliate moderately during the growing season and allow adequate recovery time before grazing again. Using these guidelines, the range will improve over time so the highest possible condition is attained.

Research shows potential grazing income is four times higher on pastures with excellent range condition compared to that in poor condition, he said. The problem is, in order to maximize profits, pastures have to be stocked at a rate that will decrease range conditions; whereas to improved range conditions, pastures have to be stocked at a rate that will lower overall income.

Teague said past research has shown that to improve range condition under continuous grazing, at least 1,000 to 1,500 pounds of forage per acre must be left at the end of the season. At least 800 pounds per acre must remain just to maintain range conditions.

Multi-paddock grazing management offers a more sustainable and productive alternative, but it takes goal-setting, monitoring and flexibility, he said. It allows better distribution, better control of use of

palatable plants, adjustment of recovery periods, increased percentage of green leaf and less seasonal fluctuation in the diet.

Plan and manage for success by creating sound, achievable goals, Teague said. The plan should consider income and expenses, as well as a biological plan. It will take monitoring, control and replanning. Flexible stocking rates must be matched with forage availability.

Under continuous grazing in large pastures, cattle tend to concentrate on areas close to rivers or other sources of water and the more palatable plants, he said. Even under light or moderate stocking these areas are more heavily grazed while the rest of the paddock is under grazed during the growing season.

"This weakens the plants on these heavily grazed areas and plants so they produce less and are more adversely affected during dry years," he said.

Subdividing existing paddocks with electric fencing and providing water points is a modest investment that enables a manager to graze a larger portion of the ranch, Teague said.

"More of the ranch would be used, and the plants would not be overgrazed," he said. "This improves the rangeland if conducted properly and both productivity and profitability can be improved, as indicated by numerous ranchers."

Teague said successful multi-paddock managers plan grazing and finances to improve forage species composition and production, minimize impact of drought, reduce costs, improve work efficiency and increase profits.

Multi-paddock managers who have succeeded have received training and coaching and then practice to develop better skills, he said. They report

that changing to multi-paddock management has simplified their job and allowed them to be more efficient.

Producers considering multi-paddock grazing should base decisions on goals set in advance, Teague said. These need to include desired landscape, profit and quality of life elements to guide all management decisions. Land restoration, animal performance and wildlife needs should be incorporated into the grazing part of the plan each year.

The management plan must regularly assess forage on hand to adjust livestock numbers or area grazed, he said. Grazing periods need to be based on different recovery during periods of fast or slow growth.

"So in dry areas, the rest period will be 90 or more days, while in wetter areas, it will be 40 to 60 days," Teague said. "Such management can provide recovery on all areas of the ranch for 340 or more days each year."

By allowing only moderate defoliation during the growing season with short grazing periods, allowing recovery before regrazing, and grazing again before the forage gets too mature, animal performance can be high without damaging the grasses, he said.

Planned multi-paddock grazing, when managed to give best vegetation and animal performance, has the potential to produce superior conservation and restoration of resources, and to increase ranch profitability, Teague said.

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