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## HEIFER PASTURE 2024

The Gateway Research Organization has long managed a quarter section as a pasture. Over the decades, different pasture improvements have been attempted, from various legume seeding methods to a number of pasture systems.

In 2024, GRO decided to take further steps in pasture management. In addition to the pasture rejuvenation trial, described elsewhere in this report, GRO decided to try to subdivide the larger three-acre paddocks into three smaller sections each to ensure all the areas are intensively grazed. This occurred in all pastures except for the mob grazing and continuous grazing paddock, both of which were maintained as they have been for a number of years. There was one more paddock that was not grazed at all, but rather it was split up into a number of strips where a variety of forage rejuvenation procedures were attempted from the very uninvasive fertility treatment to a few strips that were rototilled and seeded in different ways to determine the best way to reestablish forage production on local soils.

This left thirteen paddocks to be divided into three single acre strip each to be grazed by nearly one hundred heifers and bulls. With the two days of mob grazing added into the rotation, this led to a rotation of roughly 41 days on average. The heifers quickly got used to the daily moves involved in this new system. The theory behind this daily move system is that the small paddocks encourage better utilization of all forages in each paddock rather than spotty usage of preferred species. This practice did, however, entail daily trips to the pasture and regular trips to move the electric fences, so was the improved utilization actually worth that travel and personnel time? For the GRO pasture in 2024, it is difficult to determine, due to the fact that we cannot simply compare the labour bill for each year and come up with a cost per animal unit. Many factors come into play, including:

- A solar pumping system was installed in 2024, which allowed for less time required to ensure sufficient water. In 2023, a gas pump was used and the pasture manager or someone had to stay at the pasture the whole time to turn the pump on, make sure it was pumping sufficient water and to turn it off when the water tank was filled. This practice usually took about two hours every few days. The continuously available solar pump only needed to be checked on to ensure it was working and refilling the water tanks when there was a need. This reduced the water labour bill considerably.
- One less paddock was used in 2024 than in 2023. With the need to test a variety of methods to improve the pasture being required, paddock 12 was taken out of the grazing cycle to be used for rejuvenation trials, so the actual acres were reduced in 2024. There was ten acres less that year than in 2023, so this needs to be taken into consideration when calculating the cattle grazing days per acre.
- Slightly lower numbers of heifers were present in the rotational grazing herd, from 100 in 2023 to 96 in 2024. This difference in numbers is also taken into consideration in the utilization calculations.
- Differing weather conditions. While both grazing seasons had periods of extreme heat and some moisture, they occurred at different times, and that had a major impact on forage production each year. The early dry period of 2023 may have had a greater negative impact on the pasture than the heat in 2024, but that cannot easily be calculated.
- Differing amounts of post-season residue. While it is true that plant matter left over has value in future years, if it is not calculated on a paddock-by-paddock basis in the fall, there will be some impact of this material in subsequent years which should be included in calculations. This was not completed in the fall of 2023.

Given all these considerations, the rough results are as follows:

- 2023: 100 heifers grazing 141 days, with an average daily gain of 1.58 lbs/day
- 2024: 96 heifers grazing 121 days, with an average daily gain of 1.14 lbs/day

With the daily moves in 2024, one would have to consider the labour would be higher for pasture management in that year. Again, with the very different weather in the two years the rough calculation comparisons of these two systems cannot be considered particularly valid, especially with this being the first year of the

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change. Further studies in subsequent years will need to be calculated to help determine if this more intensive procedure is worth the work.

**Going forward:**

One major drawback of the current set up at the heifer pasture is the difficulty in collecting data on growth with different grazing systems. Weighing the heifers on a regular basis through the current platform scale set up is time consuming and could have a major negative impact on the gain for that day. With the possibility of the purchase of an in-pasture, self-service, mineral attractant auto-scale, the amount and ease of collecting rate of gain data throughout the grazing season should be greatly increased in 2025, and GRO can use information from its heifer pasture and any rotation to a much greater capacity.

Additionally, moving forward plants counts will be taken over the next couple of years to monitor the effects of the various grazing systems and the rejuvenation demonstration strips. Soil sampling will continue to occur in various locations across the pasture to monitor soil health. Having a more complete understanding of the current plant inventory and the associated soil interactions should assist in determining the overall effectiveness and cost-benefit of each practice.

