DAIRY SOLUTIONS

Grouping strategies to maximize efficiency

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Strategically grouping cows on the farm can result in efficiencies and benefits. It can allow for improved cow health, increased production, reduced incidences of metabolic disorders and increased income over feed costs while also offering more efficient nutrient utilization across cow groups if multiple rations are implemented. However, grouping cows requires having adequate facilities, as well as the labor to move and manage multiple groups of cows and the ability to mix and feed multiple rations. As a result, producers often wonder if it pays to group cows on their operation and how those groups should be prioritized to get the greatest return.

Grouping cows has the potential to increase income over feed costs and decrease nutrient excretion into the environment. Typically, the same ration is fed to a large group of cows across various stages of lactation when cows are not grouped. The ration is usually formulated to provide adequate nutrients to the most productive animals of the herd, resulting in inefficient nutrient utilization due to lower-producing cows receiving excess nutrients. Splitting cows into groups and delivering a ration tailored to each group allows for precise nutrient utilization throughout lactation, providing an excellent opportunity to reduce your purchased feed costs while maintaining or even increasing performance. It also allows for the cows' body condition to be monitored and managed more efficiently and decreases nutrient excretion. Significant feed cost savings can also result from grouping cows, and although they will be dependent upon which specific grouping strategy is implemented, those savings could equal at least three cents per cow per day across the herd. However, this requires the ability to mix several different rations, which is not always easily implemented on-farm.

There are several options to consider when deciding which grouping strategy is best for your farm. Some benefits may be obtained by simply grouping similar animals together without providing a separate ration. Other times, a separate group — as well as a separate ration for that group — are required. Due to the unique nature of each farm, there is no one-size-fits-all option when it comes to determining which grouping strategy works best. The herd's size, the farm facilities and the available labor all play a role in determining which grouping strategy will work best for your farm. In order to successfully implement any grouping strategy, the size, number and condition of the stalls, bunk space, water space and cow flow must be considered first. Any benefits and efficiencies will be lost if a pen does not meet the needs of specific animals and the labor is not readily available to manage those animals.

Outlined below are six grouping strategies, along with the potential advantages and disadvantages of each:

Single dry cow or lactation group

- Advantages: Simple; easily implemented
- Disadvantages: Reduced income over feed costs; increased manure excretion of N and P; can lead to over-conditioned cows and reduced milk yields in first-lactation cows; elevated hierarchy of cows, with older boss cows pushing around timid cows

Far-off and pre-fresh groups

- Advantages: Ability to implement anionic diets and transition period additives to small groups of cows
- Disadvantages: Requires facilities and labor to manage two groups; requires the ability to mix two rations

Fresh group

- Advantages: Small groups allow for close monitoring and increased bunk space with less competition; high-priced ration additives are only fed to the target group; allows for greater dry matter intake in fresh cows
- Disadvantages: Requires facilities and labor to manage; could require a separate ration

Late lactation group

- Advantages: Tremendous opportunity to reduce purchased feed costs by lowering the protein and energy levels in the ration; the ability to monitor and manage body condition
- Disadvantages: Requires facilities and labor to move cows; requires a separate ration

Grouping by parity

- Advantages: Reduced stress for first-lactation cows; greater milk yields; potentially improved cow health; more consistent dry matter intake
- Disadvantages: Requires facilities and labor to sort cows

Grouping by milk yield

- Advantages: Increased income over feed costs; the ability to feed higher-quality forages to higher-production groups; the ability to better manage body condition; the ability to deliver precise rations for a specific plane of nutrition, leading to optimal production performance
- Disadvantages: Requires the ability to mix multiple rations; requires facilities and labor to manage and move cows with additional pen moves

If your facilities and labor are limited, there are still other opportunities that could benefit your herd. One opportunity would be to focus on reducing metabolic disorders. This strategy offers the greatest return on investment, as metabolic disorders are costly and can increase incidences of culling. Grouping cows into a pre-fresh group 21 days prior to calving would allow for anionic salts, amino acids or other additives to be incorporated into the ration of a group of targeted cows. In addition, a fresh group (i.e., up to 21 days post-calving) can allow for the better monitoring of cows, less competition at the feed bunk, greater lying time in stalls, and for more additives and concentrated nutrients to be added to the ration of the target group.

Another area of focus is separating first-lactation cows from older cows in the herd. When implementing this grouping strategy, the same diet can even be fed to both groups, as long as there is a consideration of the target dry matter intake. First-lactation cows that are grouped separately from their older herd-mates lie down more, eat more and have fewer aggressive interactions with other cows. This results in reduced stress, increased milk production and the potential for better cow health.

Grouping cows by stage of lactation or by parity has the potential to provide many efficiencies and benefits. These benefits include the potential for increased production, reduced incidences of metabolic disorders, increased income over feed costs, several increased efficiencies and improved cow health. However, it also requires producers to have adequate facilities, labor and, potentially, the ability to mix extra rations. Contact your Hubbard Feeds representative for help with assessing which grouping strategy would work best on your farm.

"Grouping similar cows has its benefits." Hoards Dairyman 25 March 2017. <u>https://hoards.com/article-20655-grouping-similar-cows-has-its-benefits.html. Accessed 6 July 2021</u>.

