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FORAGE SOLUTIONS

Successfully transition your cows from one silage to another

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Change is hard. Harder for some than others, but all of us go through some anxiety when change occurs. Livestock are challenged with the same stress over new things in their lives, and that includes their diet. The art of animal husbandry and raising livestock was developed from taking animals from a free-range environment centuries ago to the commercial care facilities we know today, where many of the decisions animals make are based upon our management.

Feeding dairy or beef cattle seems simple, but really, the diets formulated are for proper growth and performance on today's farms. Years of practice and research have molded livestock nutrition into a high-level science class of continual learning.

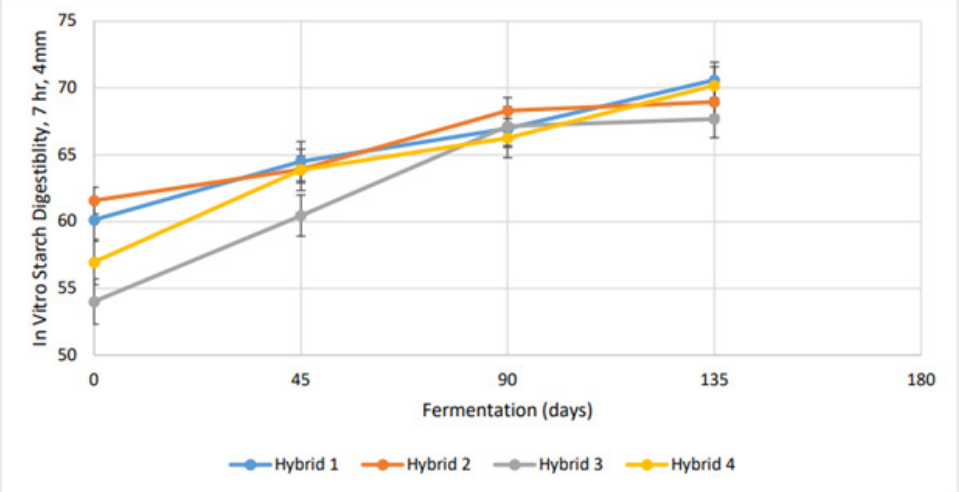
A particular chapter in livestock feeding that continues to be a hurdle is feed transitions. Both young and mature animals can struggle when presented with new feed, and it can take them some time to acclimate to the idea of something new.

Silage can be difficult to introduce into an animal's diet, but once it is established, moving from one crop to the next produces a new set of challenges. When changing types of silage, or from crop to crop, here are some things to consider.

- **Minimize change:** Make the change in silage gradually. To reduce the amount of change the animal must go through, plan pen moves, vaccinations, etc., for before or after the feed change. If possible, make one change to the diet at a time. Before the current silage is gone, mix in the new crop over the course of 7–14 days, giving the rumen time to adjust.
- **Toss bad feed:** Regardless of the type of storage there is on-farm, the beginning and the end of every silage has some spoilage. Switching from one feed to the next should be handled carefully so as not to include spoiled feed. Molds, yeasts, mycotoxins and decomposed silage drastically impact the rumen's ability to function, which can further challenge the change in feed. The goal is to maintain cattle intake, and spoiled feed — even at 5% of the ration — quickly spoils a TMR and lowers intake.
- **Silage carryover:** When possible, maintain some old inventory before the new crop is harvested. Many times, this involves planning, with measuring of silage inventory throughout the year. It is well known that feed quality, such as starch digestibility, improves the longer the forage ferments. Allowing new forage to ferment for three months untouched, while you feed older inventory, reduces the extent of the variation from fermented feed to freshly chopped forage. Figure 1, from Cornell Pro-Dairy, shows us from an *in vitro* study with multiple hybrids how starch digestibility significantly improves over extended periods of time. The extra feed required for carry-over inventory requires more harvested acres initially, but subsequent years will revert to typical acres, and there will always be fully fermented feed ready. The cattle will undergo less change, and the nutritionist can more closely match rations at the time of feed change.

FIGURE 1

Average change in *in vitro* starch digestibility for four hybrids over six site years.



Cornell Pro-Dairy, Kernel Processing Information Series, FACT SHEET 3: Impacts of Fermentation. Figure PD-2020-08-03. Joe Lawrence and Allison Kerwin.

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- **Feed testing:** Test the silage often. Old crop and new crop may fluctuate in quality and safety, given it is the end/beginning of that feed so test more frequently than you would in the middle of the feed. Some metrics to watch from one crop to the next are:
    - Dry matter
    - Protein
    - NDFD30 (30-hour fiber digestibility)
    - Starch
        - IVSD7 (starch digestibility)
        - % dry matter
    - Organic acids (lactic, acetic, propionic, butyric)

  Having a good baseline of the old crop and taking several new tests of the new crop can help paint the picture of the degree of change when switching feeds. Particularly in dairy cattle, where intakes are heavily monitored, going to a new feed with 5% swing in dry matter content or NDFD30 (% of fiber digested within 30 hours) can really change daily consumption. Weather conditions, fertility, soil type, time of harvest, and variety can dramatically change feed quantity and quality, keeping everyone on their toes from crop to crop.

- **Risk management:** Mycotoxin risk may not be a new problem, but it is one the industry can now measure. Take advantage of today's forage labs and get a baseline for your area on what to expect for new crop forages. A test such as Alltech 37+® mycotoxin analysis can assess the risk from over 50 different mycotoxins and their impact on livestock. NIR digestibility rates have long been useful, but now, testing the whole TMR in an *in vitro* fermentation model can tell us how the ration digests within the cow, rather than evaluating each ingredient individually. Advancements in testing allow us to manage risk and evaluate new feeds without having to wait weeks to know whether the nutrition is correct.

- **Moderate the rumen:** The key to top-performing cattle is intake. When high intakes are achieved, generally the animals feel well and efficiently convert feed to milk or meat. Yeast additives have long been the solution to stabilizing the rumen, protecting it from digestive upsets and through transitions or stress. Feeding to completely protect the gut from overwhelming bacteria like *E. coli* or *Salmonella*, mycotoxins, and wild yeasts is a positive strategy. Spectrum DH has been shown to support intake and animal health, especially during times of less-than-optimal feeding conditions. Yeast, direct-fed microbials, or a more encompassing product like Spectrum DH can help stabilize the rumen, preventing subacute acidosis through feed changes.

If you haven't already, take a spring inventory of current feeds on-farm and start evaluating how much time is left before new-crop alfalfa, small grain, corn silage, or high-moisture corn is ready to be harvested. Consider allocating more acres to this year's harvest so that there is extra silage left over at the end of 2024, to allow for proper fermentation of this year's harvest. Also, consider where silage harvested this growing season is going to be stored on-farm and whether more harvested tons is an option.

Early planning allows for preparation and smoother transitions for inevitable change. Contact your Hubbard Feeds representative anytime to learn more about feed transitioning and feed planning.