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7L Farms & Land Co.

# Consider a Forage Focus

With feed, fuel and fertilizer costs on the rise, the beef industry may be well served to take a step back and remember one of bovines' greatest attributes — the ability to convert high-cellulose feedstuffs into a complex protein source for humans. Grain has done wonders for increasing the industry's output and efficiency, but it may now be time to return to a forage focus.

"Feedlots now want heavier cattle at entry, but with input costs as they are we need to re-evaluate our feeding programs to maximize weight gain in an economical way. For us that means experimenting with alternatives to corn and grain," says 7L Farms managing partner Michael Bishop, who holds a doctorate in animal genetics. Here Bishop shares some of 7L's tips for developing cattle on forage-based diets.

### Combine forages for maximum effect

Combine several planted forages in one field, such as rye, wheat and oats. Because they grow at different rates, this combination can increase acreage efficiency by extending grazing days from 120 days to 160 days in the same field. Sweet peas and intermediate crab grass (also called buffalo grass) are another good combination. Or consider mixing Bermuda grass, Bahia grass and clover to create a symbiotic relationship between the plants, cattle and the soil. While increasing the nutritional value of the cattle's diet, this mix also improves grass and soil health because the clover is a nitrogen-fixing legume.

### Select the right varieties

If you are going to feed corn, choose a variety that more effectively puts on weight with higher carbohydrate levels. Consider growing high-sugar content corn or brown mid-rib (BMR), which has less lignin but more of the pounds-adding sugar and carbohydrates. Grazing brassicas (turnips) can also increase a diet's carbohydrate content. At first cattle may just graze the tops, but Bishop says they'll soon figure out to pull the plant up to eat the root underneath.

### Fine-tune your management strategies

- Use body condition scoring (BCS) to determine when to increase or decrease available forage. Take advantage of the system's consistency and train your staff to score cattle too so that you can evaluate cattle on the same terms.
- Despite fertilizer's increasing costs, prioritize maintaining and improving soil fertility to receive the best possible feed that you can afford to produce.
- Complete a nutritional analysis of all raised forages for protein and total digestible nutrients (TDN).
- Re-evaluate your mineral program when transitioning from a grain-based diet to a forage basis since cattle won't have the luxury of receiving supplements directly in their feed. Add lick tubs and other supplements as necessary.
- Take advantage of products such as Rumensin® to improve forage conversion by 15% and Multimin® to ensure reproductive efficiency and quality growth rates.
- Grind and mix forages to create a total mixed ration (TMR) that optimizes the diet's energy and palatability, such as Rumensin added to corn silage, dry hay and high-moisture rye.

## The Bull Factor

Bishop also suggests selecting for bulls that are genetically predisposed to put on gain most efficiently and developing them on forage-based diets.

*Genetics.* Residual feed intake (RFI) is one way to evaluate and select for feed efficiency. A highly heritable trait (40%), RFI is the difference between an individual animal's actual feed intake and their expected feed requirements. If consumption is less than anticipated, meaning feed efficiency is more than anticipated, it yields a negative RFI value.

Genetic markers for feed efficiency are also emerging. "Right now it's still hard to validate them, but I think it's time for us to take a leap of faith and start using these markers. Seedstock breeders must be forward-thinking in applying this new technology to build better animals," Bishop says.

He advises that seedstock producers can help improve the tools we have to identify feed-efficient genetics by collecting and tracking feed conversion data on their individual animals.

*Diet.* It's true that forage-developed bulls have lower body condition scores than most of the industry is used to seeing with grain-raised bulls. But Bishop says they have their advantages.

"With our forage-developed bulls we see improved fertility in the form of better testicular development and increased soundness on their feet and legs. These bulls are better able to handle the pasture breeding environment because they're used to grazing and foraging for themselves," Bishop says. "That translates to better performance for our customers."

**Share *YOUR* thoughts on these topics. E-mail 7L managing partner Michael Bishop at *e-source@7LFarms.com.* *Responses will be shared on the 7L web site and in future E-Source issues as appropriate.***