Grazing in the Jungle

From time to time I receive emails from Frank Egan, a livestock producer from Australia. He sent me the photo and the following email:

I am attaching a couple of photos of what I refer to as "jungle grazing," its a new area I am exploring. As you can see the lambs graze areas almost taller than themselves, (common Bracken Fern, *Pteridium esculentum*) without any apparent fear of predators.

The understory is Microlaena stipoides, a native grass with the protein/feed value similar to alfalfa. The bracken is quite poisonous to stock but our sheep make "no" attempt to eat it.

The environment wins as it provides feed and shelter for all manner of native wildlife. I believe this is a behavioral change in the stock different to the "norm". I think it's a result of generation-to-generation transfer of feeding behavior.

-Frank Egan

What Affects Meat Quality and Flavor?

Grass-fed livestock may provide health benefits of milk and meat from grass-fed ruminants, but little is known about how PSCs (plant secondary compounds) in various forages affect the color, flavor, and health properties of meat. Recent evidence suggests PSCs can positively influence the flavor, color and health properties of meat and milk. For instance, tannins positively influence meat color and quality, as well as milk yield and protein content, and they markedly improve meat fatty acid composition, a major concern for consumer health. Saponins have both anticancer and immunomodulatory properties as well as cholesterol-lowering activity. Saponins in the diet can be traced in the meat.
warmers are keeping the cows warm at night in all the right places - and boosting milk yields first thing in the morning.

There was a notable decrease in the amount of milk being produced during the colder weather so this also became a productivity issue. The idea of creating udder warmers started as a bit of a joke, but turned into a 'cool' idea.

Each udder warmer takes between two and seven days to complete and staff are being paid over-time to meet demand.

The udder warmers are fitted after the evening feed and are elasticated and fully adjustable to ensure a comfortable, snug fit for each cow that stretches to allow for milk build up.

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Diet also affects the palatability of meat and "off-flavors" are due in part to fatty acids in the meat of cattle fed forages. Herbage quality, fatty acid composition, rates of microbial fermentation in the rumen, microbial hydrogenation of double bonds, and rates of passage through the rumen all affect flavors of meat from cattle finished on pasture. Interestingly, supplementing lambs with tannins reduces the concentration of skatole (3- methyl-indole) in their back fat, which diminishes the unpleasant "sheep" and "off-flavors" flavor in meat.

Taste panel results from our studies show high liking for beef samples obtained in both groups of cattle (fescue/alfalfa and fescue/sainfoin). From 25% to 45% of consumers liked the beef moderately, 35% to 25% liked the samples very much and 2.5% to 15% liked the beef extremely well. The effects of secondary compounds (tannins and saponins) in reducing the population of bacteria that produce off-flavors like skatole may explain these high scores for grass fed beef given by consumers, when scores for standard grass-fed beef are generally lower. Polyunsaturated fatty acids (C 18:3 n 3) were also higher in animals grazing sainfoin than in animals grazing alfalfa, presumably due to the effects of tannins on ruminal biohydrogenation. These results suggest animals are able to mix forages of different qualities -- fescue, sainfoin, alfalfa -- in ways that produce tastier and healthier meat.

Let me know what I can do to improve the newsletter!!

Sincerely,

Beth Burritt
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