Troubleshooting Nutritional Disorders

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Take Home Messages

- Digestive disorders, sub-acute rumen acidosis and displaced abomasum, cause economic loss in dairy herds through treatment costs, production loss, and premature culling.
- Evaluate ration formulation, feed quality and physical form, feed delivery, bunk management, cow comfort, and animal performance parameters when troubleshooting digestive disorders.
- Herds with inadequate feeding and management programs for transition cows are at an increased risk of developing nutritional disorders.

Introduction

A scheme for troubleshooting nutritional disorders in dairy herds will be outlined in this paper. The focus of this paper will be on the digestive disorders, sub-acute rumen acidosis (SARA) and displaced abomasum (DA). These digestive disorders cause economic loss in dairy herds through treatment costs, production loss, and premature culling.

What's On Paper?

Formulated rations should be evaluated relative to NRC (2001) or industry standards for the following nutrients, ingredients, or parameters:

- dry matter (**DM**) content,
- DM intake (**DMI**),
- forage:concentrate (**F:C**) ratio,
- neutral detergent fiber (**NDF**) content,
- NDF from forage content,

- effective and physically-effective NDF content (**eNDF** and **peNDF**, respectively),
- non-fiber carbohydrate (**NFC**) content,
- starch content, and
- buffers (yes or no?) and feeding rate (?).

■ How Do The Feedstuffs Look?

The feedstuffs should be evaluated for the following:

- DM content of wet ingredients,
- nutrient composition,
- processing of grains and protein supplements,
- particle size of forages and grains,
- smell and fermentation analysis of silages,
- spoilage,
- bunk stability (i.e. heating),
- molds, and
- mycotoxin analyses.

■ What's Coming Out Of The Mixer?

The total mixed ration (**TMR**) should be evaluated for the following:

- DM content,
- errors in ingredient feeding rates,
- errors in wet ingredient DM measurements or ration adjustments,
- scale calibration,
- nutrient composition, and
- particle size.

■ What's In The Bunk?

The bunk mix and bunk management should be evaluated for the following:

- type of bunk,
- separation during TMR dispensing,
- sorting during eating,
- feed availability (refusal-yes or no? and percentage refusal?),
- feeding frequency,
- feed access time,

- variability in feeding schedule,
- feed push up,
- bunk space,
- bunk competition (i.e. grouping), and
- slug feeding.

What Does The Cow Say?

Cow groups should be evaluated for the following:

- incidence of DA, SARA, sole ulcers and laminitis,
- milk yield and fat test,
- body condition,
- cud chewing,
- manure consistency, grain passage, and passage of large forage particles,
- lying in stalls versus standing in stalls and alleys,
- how lock-ups are managed, and
- heat abatement.

Do Not Overlook Transition Cow Feeding And Management!

Herds with inadequate feeding and management programs for transition cows are at an increased risk of developing nutritional disorders.

Conclusions

Troubleshooting digestive disorders involves the evaluation of ration formulation, feed quality and physical form, feed delivery, bunk management, cow comfort, and animal performance parameters. Close attention must be paid to transition cow feeding and management programs, as this is the major risk period for nutritional disorders.