

PRODUCT GUIDE



Pictured: Roger Hovde
Corn Ranches Ltd
Camrose, AB

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www.advantagefeeders.ca



**ADVANTAGE
FEEDERS**

WELCOME

Advancing ruminant production

Advantage Feeders' single focus is designing livestock feeding equipment and systems to maximize efficient feed and pasture utilization.

Our strong results-based and customer-focused approach requires us to regularly conduct experiments as well as analyze and improve our offerings to ensure farmers continue to profit from their investment.

We stand by our products, offering a market-leading two-year warranty on all feeders. Our products must be simple to use and maintain because "if it's easy, it gets done". We strive to ensure every farmer that invests in our products has a great experience using them and we relish the opportunity to serve new customers.



Gerard Roney, Founder of Advantage Feeders

Ration control: The key ingredient for maximizing production and profit

Most pastures can be complemented with a supplement to improve rumen function which leads to higher livestock production. The quantity of supplement in most applications is small. This makes the function of ration control crucial to realize the benefits of improved rumen function.

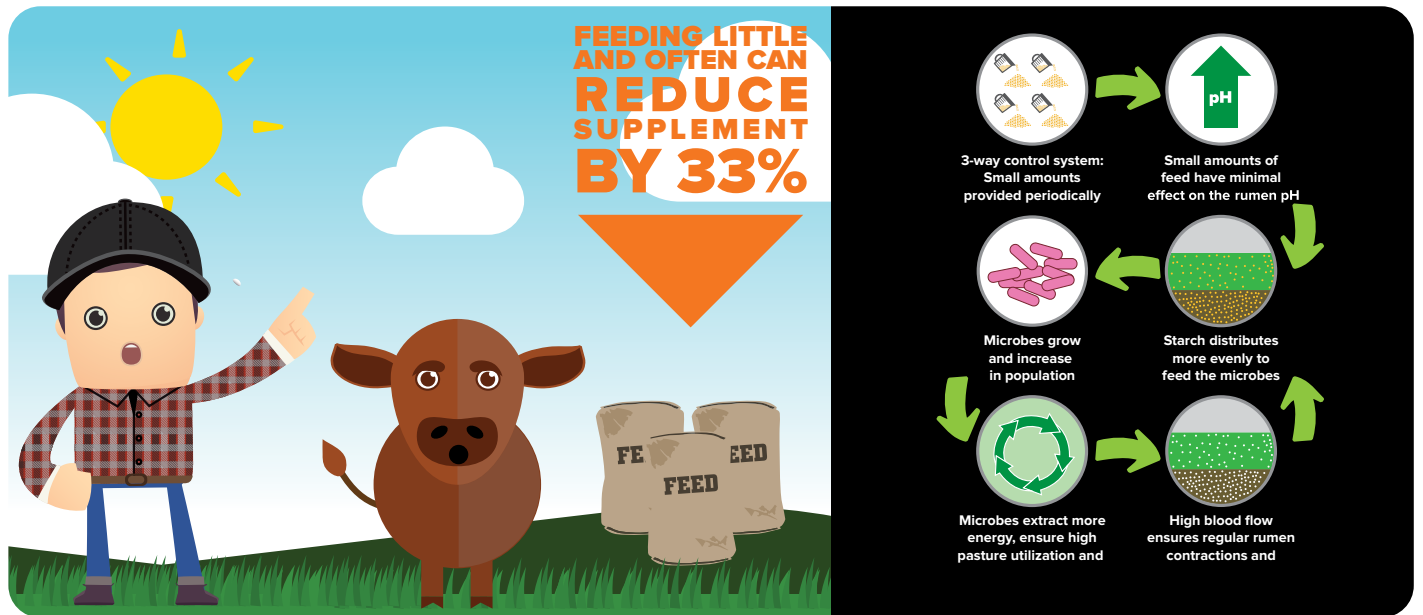
If rationing is only limited by animals tiring of licking, it offers minimal control, as they may not stop feeding. The Advantage Feeders 3-Way Restriction System is different from any other feeder on the market. We offer you control over the height, depth and width of the feed access area with the Upper Adjuster, Lower Adjuster and the Adjuster Guard.

When our 3-Way Restriction System is set in a limiting position, the animal's tongue can only touch a few grains or pellets with each lick. The animal accesses the feed using saliva to stick feed to its tongue and bring it into its mouth. After approximately five minutes of licking, the animal's tongue becomes dry and it can no longer access the feed. Depending on the paddock environment, livestock come to the

feeder 6-8 times/day. The numerous visits each day create a system of providing their supplement in little and often amounts.

Subject to the size of the animal, in a five-minute licking period, a sheep may consume a heaped tablespoon, or 0.7oz and cattle may consume a cup, or 5.28oz. A feeder that relies on an animal tiring of licking cannot offer such a strict ration.





Getting the most out of your pasture

Four information sheets have been compiled that cover important situations where pasture can be complemented to maximize production:

1. Utilizing more dry pasture with an efficient rumen
2. Managing excess protein in pastures
3. Increasing utilization of high moisture pastures
4. Converting more pasture with rapid rumen development

The following pages provide a brief overview of each of these complementary feeding applications.

Each information sheet explains:

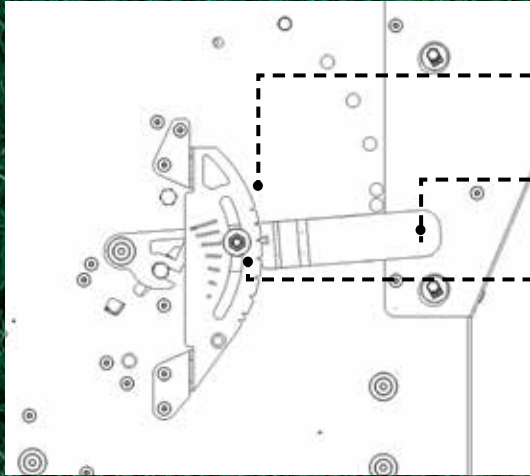
- How pasture is limiting production
- The latest science about how to rectify pasture issues
- Quantifying potential gains from complementary feeding
- All the practical things to know:
 - Feed ingredients to overcome pasture issues
 - The quantity to feed per head per day

- How to limit the quantity of feed delivered to the desired ration
- Evaluating the most cost-effective feed
- When to start and finish supplementation
- How many livestock per feeder
- The priorities of stock groups to supplement
- Training livestock to use feeders



**INFO SHEETS ARE
AVAILABLE ON OUR WEBSITE
www.advantagefeeders.ca**

HEAVY DUTY FEATURES



A. GAUGE SYSTEM

B. STRONG HANDLE

C. LOCKING NUT

1. SIGHT GLASSES

2. STRONG
ROOF PIVOTS

3. ADJUSTER
GUARD HOUSING

4. UPPER
ADJUSTER
HANDLES

5. SIDE WALL
GUTTERS

6. HEIGHT PINS

7. STAINLESS
STEEL FEED AREA

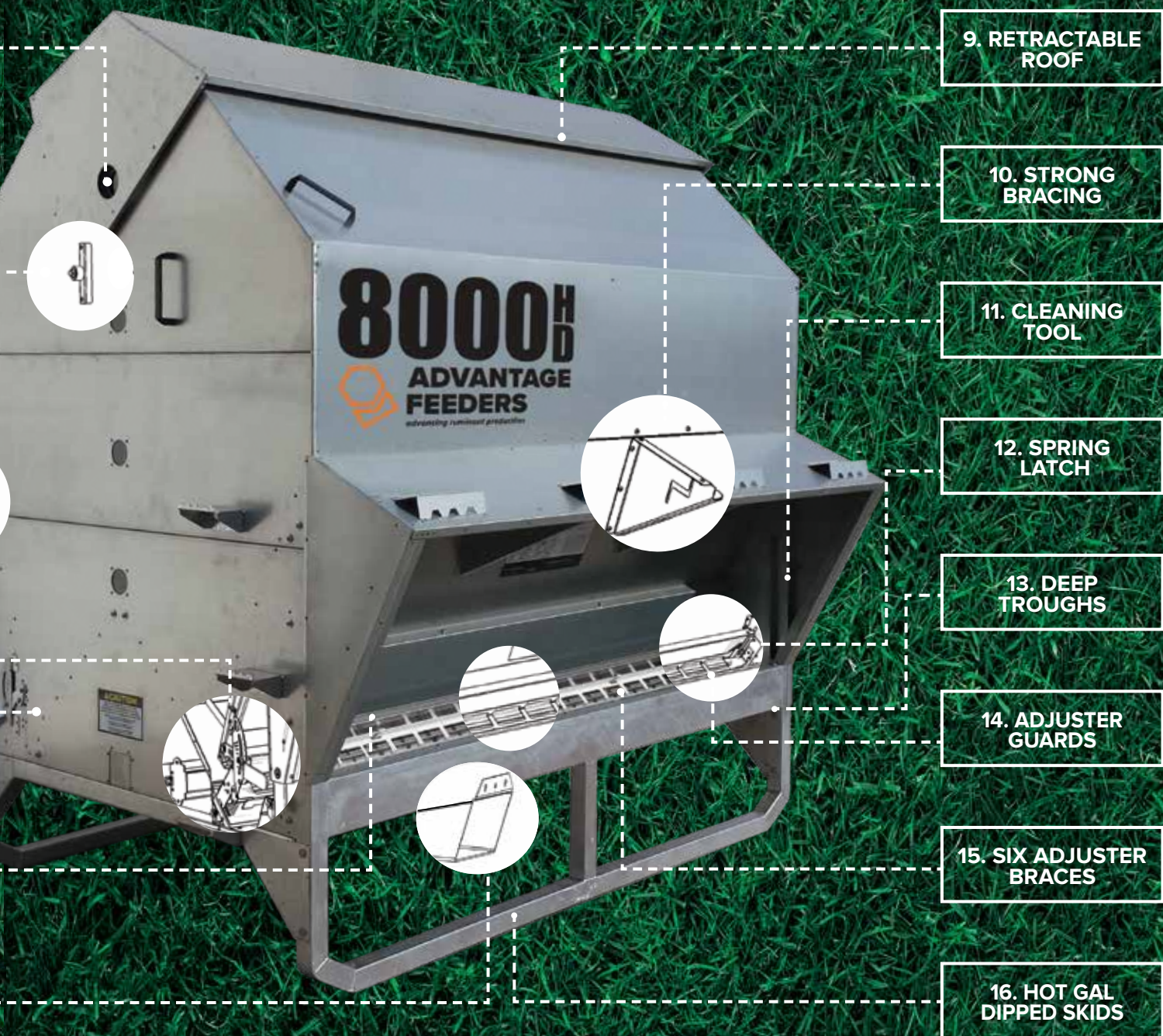
8. ADJUSTABLE
TINE GUIDES

- A. Our notch and dot system provides consistent settings when set by multiple users
- B. The leverage of the 5mm thick handle allows the Upper Adjuster to be moved in small, accurate increments
- C. The nyloc nut locking system makes it much faster to reposition the Upper Adjuster
- Adjustments are made from the end of the feeder, alleviating the need to kneel down (potentially in mud)
- Feeders require less cleaning because clumps of built-up feed can be removed by fully opening the upper adjuster

1. Large sight glasses both ends
2. The roof pivot has a solid lug welded to a channel to withstand robust use
3. The Adjuster Guard can be housed under the weather protection to prevent it being lost when not in use

4. Upper Adjuster Handles
5. Side lower wall gutters prevent moisture running into the feed area
6. Chassis designed so the feeding height can be easily changed to suit all types of livestock on 5300HD, 2500HD and 1200HD models.

7. Reinforced stainless steel troughs and adjusters
8. Large 8"x4" adjustable tine guides make moving the feeder safe and easy
9. Retractable Roof
10. Rain protection bracing increases the weather protection strength



11. Cleaning tool and tube spanner are stored where stock can't access them

12. Spring clips allow the Adjuster Guards to be easily removed and replaced for cleaning

13. 5" deep troughs prevents waste. Designed for front end loader use

14. Adjuster Guards stop stock bull-dozing feed out

15. 6x Adjuster braces with dual tabs to prevent stock forcing access to additional feed

16. 2x hot gal dipped skids provides superior longevity

- Add-ons including Creep Gates for cattle, and Mineral Attachments
- Weather protection reduces the frequency of cleaning
- User guide and volume stickers make the feeders easy to use

PRODUCTS

8000HD



| | |
|------------------------------------|----------------|
| Volume (bu) | 160 |
| Product weight | 1270lbs |
| Feed weight (wheat/corn) | 4.9 tons |
| Feed weight (barley/pellets) | 4.1 tons |
| Feed weight (oats) | 3.4 tons |
| Dimensions | 8'0"x8'0"x8'6" |
| Cattle, yearlings or calves/feeder | 50 |

5300HD



| | |
|------------------------------------|----------------|
| Volume (bu) | 108 |
| Product weight | 930lbs |
| Feed weight (wheat/corn) | 3.3 tons |
| Feed weight (barley/pellets) | 2.8 tons |
| Feed weight (oats) | 2.3 tons |
| Dimensions | 8'0"x5'5"x7'1" |
| Cattle, yearlings or calves/feeder | 50 |

2500HD



| | |
|------------------------------------|----------------|
| Volume (bu) | 51 |
| Product weight | 750lbs |
| Feed weight (wheat/corn) | 1.5 tons |
| Feed weight (barley/pellets) | 1.3 tons |
| Feed weight (oats) | 1.1 tons |
| Dimensions | 8'0"x5'5"x4'9" |
| Cattle, yearlings or calves/feeder | 50 |

1200HD



| | |
|------------------------------------|----------------|
| Volume (bu) | 24 |
| Product weight | 420lbs |
| Feed weight (wheat/corn) | 0.7 tons |
| Feed weight (barley/pellets) | 0.6 tons |
| Feed weight (oats) | 0.5 tons |
| Dimensions | 4'0"x5'5"x4'9" |
| Cattle, yearlings or calves/feeder | 25 |

All measurements are length x width x height

200HD

| | |
|------------------------------------|----------------|
| Volume (bu) | 4.25 |
| Product weight | 70lbs |
| Feed weight (wheat/corn) | 240lbs |
| Feed weight (barley/pellets) | 200lbs |
| Feed weight (oats) | 165lbs |
| Dimensions | 2'6"x1'6"x2'4" |
| Cattle, yearlings or calves/feeder | 8 |

Note: Brackets come standard with the 200HD to hang the unit on gates, fences or steel posts.

M8000HD

| | |
|------------------------------------|-----------------|
| Volume (bu) | 160 |
| Product weight | 1500lbs |
| Feed weight (wheat/corn) | 4.9 tons |
| Feed weight (barley/pellets) | 4.1 tons |
| Feed weight (oats) | 3.4 tons |
| Dimensions | 12'0"x8'0"x8'6" |
| Cattle, yearlings or calves/feeder | 50 |
| Axle suspension | No |
| Tire size | 235/75R16 |

M2500HD

| | |
|------------------------------------|-----------------|
| Volume (bu) | 51 |
| Product weight | 1100lbs |
| Feed weight (wheat/corn) | 1.5 tons |
| Feed weight (barley/pellets) | 1.3 tons |
| Feed weight (oats) | 1.1 tons |
| Dimensions | 12'0"x5'5"x4'9" |
| Cattle, yearlings or calves/feeder | 50 |
| Axle suspension | Yes |
| Tire size | 195/55R13 |

MINERAL ATTCHMENT

| | |
|-----------------|----------------|
| Product weight | 23lbs |
| Dimensions | 2'6"x1'3"x1'9" |
| Minerals weight | 240lb |

Note: Brackets come standard with the Mineral Attachment to hang the unit on gates, fences or steel posts.

RAPID RUMEN DEVELOPMENT

Transitioning young animal's rumen to eat pasture at a much younger age allows them to grow faster, increasing the chance of them reaching target weights from pasture before its quality deteriorates. This often removes the need to transition livestock to a higher cost finishing system.

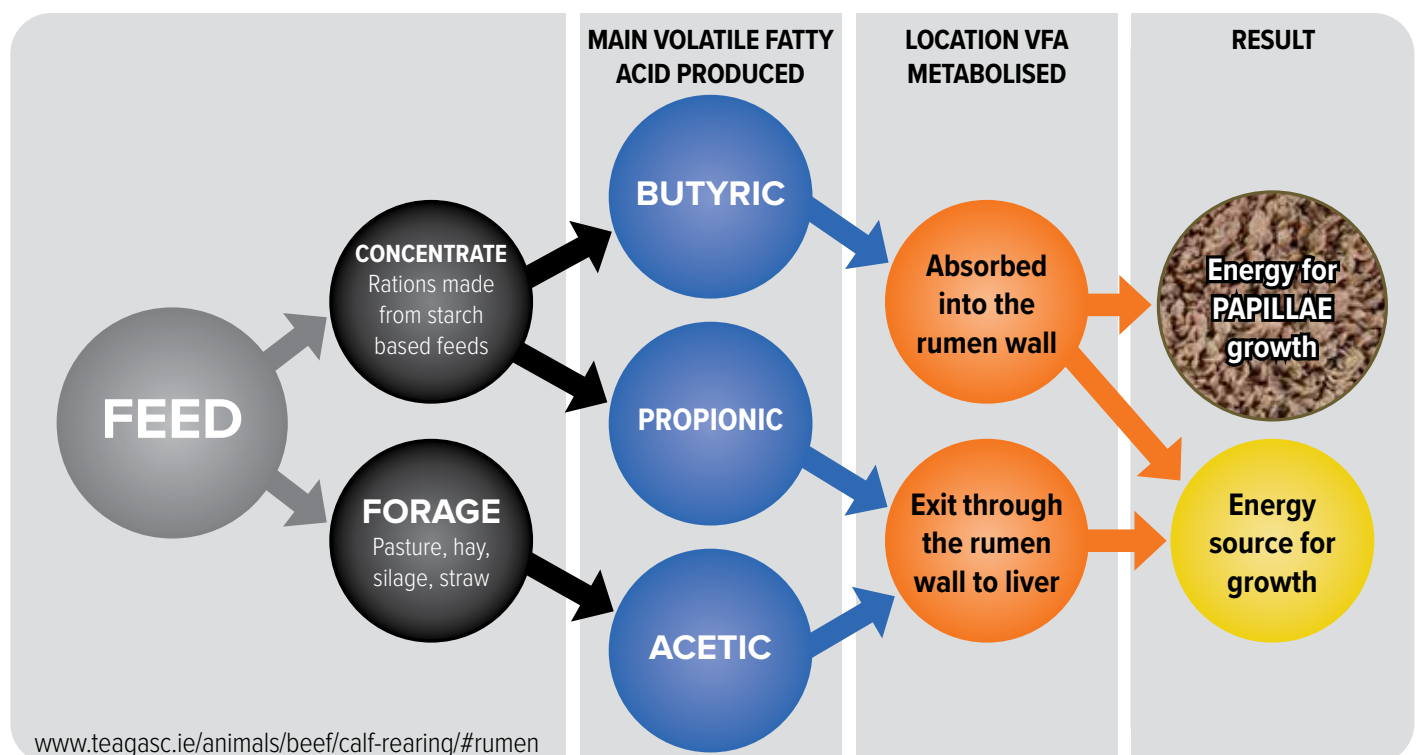
The primary objective of creep feeding is to transform infant calves' and lambs' rumens to have the ability to convert pasture, other forages and supplements into nutrients they can utilize. They are not born with this ability.

As pasture is the most cost-effective source of energy and protein, once the rumen is developed, livestock can efficiently digest this feed source, growing fast despite having minimal feed inputs. Done correctly, supporting pre-ruminants to more rapidly transition to mature ruminants is a very profitable exercise.

Creep feed rations contain carbohydrates in the form of starch which are fermented by bacteria producing propionic and butyric acids. When forages are fermented by bacteria, the primary output is acetic acid. Acetic and propionic acids are absorbed

through the rumen wall and are taken up by the blood, through the liver to be made into metabolites. These are used as an energy source by the lamb or calf. Importantly, butyric acid is not absorbed through the rumen wall, rather it is used in the cells of the rumen wall. An alternative metabolic process occurs that allows butyric acid to be converted into an energy source for use by the cells of the rumen wall and as an energy source for the animal. Source: Penn State University

Acetic and propionic acids provide energy for the entire animal, part of which is shared to the rumen wall, but overall, compared to butyric acid, much less is used to transform the rumen. Butyric acid produced in the rumen from supplemented carbohydrates, and is the primary source of energy for rapid development of the rumen wall.



Starch based feeds lead to accelerated papillae growth

The internal surface of a developed rumen is covered with tiny projections, called papillae, which increase the surface area of the rumen and allow increased absorption of digested nutrients. The image from Penn State University below, shows the rumens of

three different calves at the age of 6 weeks that have been fed three different rations. Like creep fed young livestock, image 3, shows that adding grain to the diet of an infant calf has a dramatic change to the development of the rumen wall.

Source: Penn State University



1. FED MILK ONLY

2. FED MILK AND HAY

3. FED MILK AND GRAIN



CREEP FEEDING

CREEP GATE LARGE



Product weight
Dimensions

160lbs each
8'2"x4'7"x4'5"

Note: This product is sold singularly and feeders can accommodate two Creep Gates for 8000HD and M8000HD Feeder.

CREEP GATE NARROW



Product weight
Dimensions

130lbs each
4'1"x4'5"x4'5"

Note: This product is sold singularly and feeders can accommodate two Creep Gates for 1200HD Feeder.



Advantage Feeders Creep Gates allow for calves to eat ad-lib, while excluding the cow.

All measurements are length x width x height

PASTURE SUPPLEMENTATION

Compared to supplement feeding every second day, feeding little and often through Advantage Feeders has been shown to reduce the amount of supplement required by 45% when stock graze pasture and still achieve the same production results.

Microbes are most effective at converting forage (grass, hay and straw) into energy when the rumen's pH is between six and seven.

Starch based feeds can be a cost effective supplement to forage, however they increase the production of volatile fatty acids, which lowers the rumen pH. The more starch based feed the ruminant eats, the more severely the pH level drops. If fed too much at once, the sudden shock to the rumen reduces the pH to well below 6 which leads to a reduction in the microbe population and reduced ability to digest dry pasture.

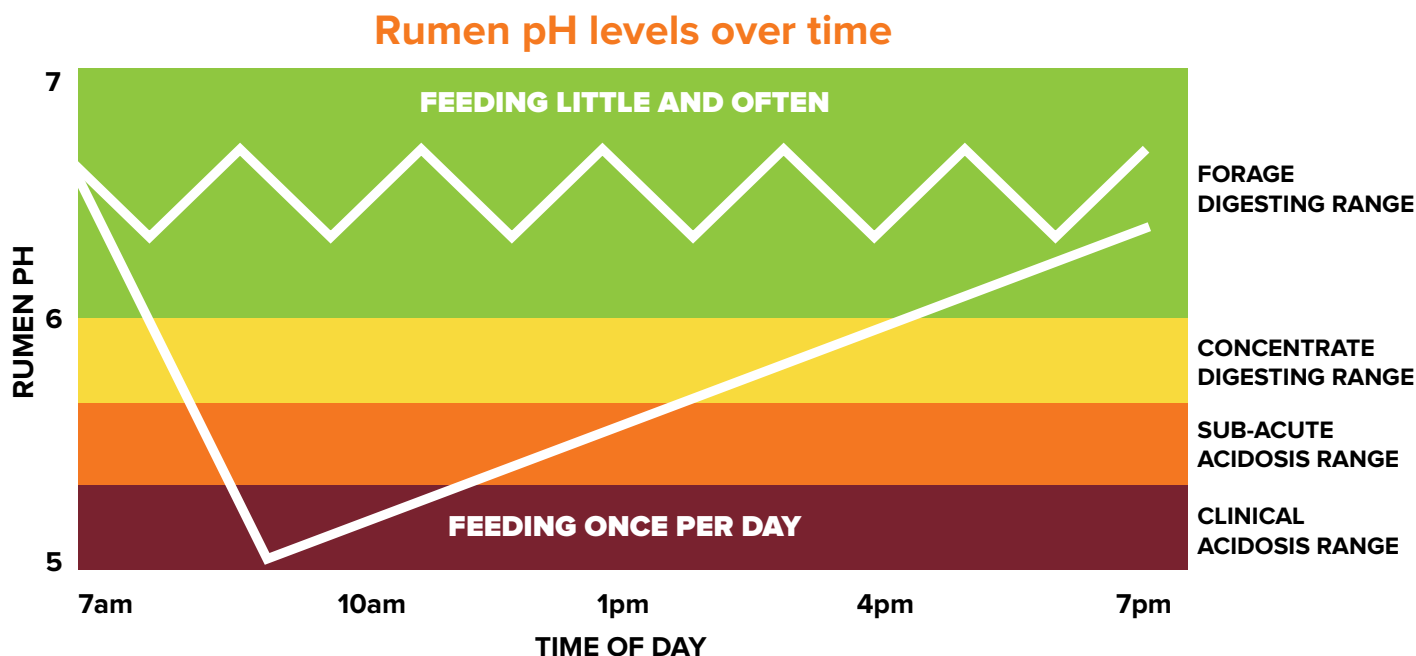
The reduction in pH also suppresses the animal's appetite for 1-2 hours. This limits consumption of pasture, the cheapest source of energy and protein. It can take 24 hours for the rumen pH to return to the optimum level for pasture digestion.

A large amount of supplement feed can also cause acidosis. Acute acidosis causes damage to the rumen wall, affecting the lifetime productivity and health of the ruminant. This is especially important in maternal animals.

Feeding small amounts 6-8 times per day using the Advantage Feeders 3-Way Restriction System ensures the rumen pH remains in the optimal range of 6-7 where microbes operate most efficiently. Supplementing in this rumen friendly way provides the microbes with a constant source of energy and protein. This increases their population, allowing the animal to digest more forage, while decreasing the amount of supplement required to meet production targets. The reduction in supplement feed was quantified in the Leaver experiment.



EXPERIMENT: LEAVER



HIGH MOISTURE PASTURES

Supplementing with starch and effective fibre when pastures are new and in their vegetative state allows farmers to drastically increase their stocking rates and carry more livestock year-round to increase total production.

Winter pastures have two main issues. Firstly, pasture growth rates in most locations slows in winter, limiting the number of head that can be run due to feed availability. This in turn can result in there being too few livestock to fully utilize spring growth and dry pasture, particularly stubbles, over summer and autumn. Secondly, the low neutral detergent fibre (NDF) in the pasture means that it breaks down in the rumen quickly and a large component of it is passed before the microbial population have utilized its nutrients.

Because of these issues, supporting the rumen with the correct supplement feeds can reduce grazing allowing an increase in stocking rates and improving annual farm production. This has been quantified in the Laidlaw, Wyeth and Veale experiments.

Two types of feed are required to improve pasture utilization and livestock production. The first is a source of fibre, such as hay, straw or silage. This improves the functioning of the rumen by slowing the passage of feed allowing the microbial population to better utilize the nutrients within the pasture.

In addition to fibre, a source of starch, such as grains or pellets will increase rumen efficiency. This

is because supplementation using a fermentable carbohydrate allows more of the soluble protein within the pasture to be converted into microbial protein which contributes to a large proportion of the protein requirements of the ruminant.

Supplementary feeding should commence shortly after the break of the season and can continue until the faeces firm with the increased fibre present in spring pastures. Addressing the issues posed by high moisture pasture also resolves the excess protein (explained on the following page) occurring in spring pasture and summer crops.



EXPERIMENT: VEALE



EXCESS PROTEIN PASTURES

Supplementing high protein pasture with starch manages excess protein, reducing energy losses in livestock, improving growth rates and meat production per unit of grass.

Most actively growing pastures are high in soluble protein which can reduce the production potential of livestock because they far exceed the requirement of the livestock. A common example of the imbalance is seen in young growing livestock which require a diet of 14-16% crude protein. The actively growing pasture they are grazing is often above 25% crude protein.

Soluble protein is the nitrogen in plants that has not yet been converted to protein. Rumen microbes change soluble protein into a form of protein that can be used by the animal by converting it to ammonia and then use energy with it to create microbial protein. *Source: Feeding Dairy Cows, Campbell et al.*

During periods of active growth, pastures can be high in soluble protein, often above 25%, flooding the rumen with ammonia. Very often there is insufficient energy (sugars and starch) to combine with the ammonia to fuel microbial reproduction. Without sufficient microbial production a large surge of ammonia is absorbed across the rumen wall and taken to the liver where it is converted to urea. It is then excreted in the urine but also recycled in saliva and diffused in the bloodstream. This unnecessary process requires the animal to expend considerable

amounts of energy to expel the excess which reduces the productive capability of the animal. The lost growth rate potential can be estimated with a calculation outlined in the Excess Protein Pastures Information Sheet available from Advantage Feeders.

Supplementing fermentable carbohydrates, by feeding grains or starch-based pellets, allows microbes to capture more ammonia, converting it into microbial protein and avoiding wasted energy. The increase in growth rates was quantified in the Wright experiment.



EXPERIMENT: WRIGHT



TESTIMONIAL



My original reason for buying Advantage Feeders was to achieve better corn stalk cleanup in our winter grazed fields. I thought at the time I could level out the plane of nutrition between fence moves as well. I also wanted to keep costs and labor down while getting better cleanup of stalks and keeping cow health.

For years I walked past the Advantage Feeders site at trade shows without taking them seriously. It turns out I lost years!! They've changed our operation, like when we first took on a skid steer, or auto steer, or corn grazing.

We quickly found more year round benefits for our cow calf and back grounding operation. I now use them as creep for calves, weaning, breeding, extending or dealing with seasonal pasture gaps, for all classes of cattle.

Regarding corn stalk cleanup, the cost of grain and delivery matches our corn cost, that says a lot. I think I have increased a 275 cow day per acre corn crop to 325, get the cleanup, while cow condition stays or improves. This is on average 3 pounds grain and mineral stemming from the eating pattern feeding efficiency designs of Advantage Feeders.

We are big providers of grazing corn seed genetics and consulting in western Canada, and do a bit of custom planting. Believe me, corn emergence is now our key challenging yield determinant. Better stalk cleanup becomes cash, and I figure as much as 3 more ton of yield in the following year. If nothing else, it's risk insurance too.

The fun thing of all this is that payback on advantage feeders is real fast, and I watch my cattle do and perform how I want them to.

**Roger Hovde
Corn Ranches Ltd
Camrose, AB**

CATTLE RESULTS

Grain assist steer trial

OPERATOR: Matt & Lynley Wyeth

LOCATION: Spring Valley

BREED: Angus

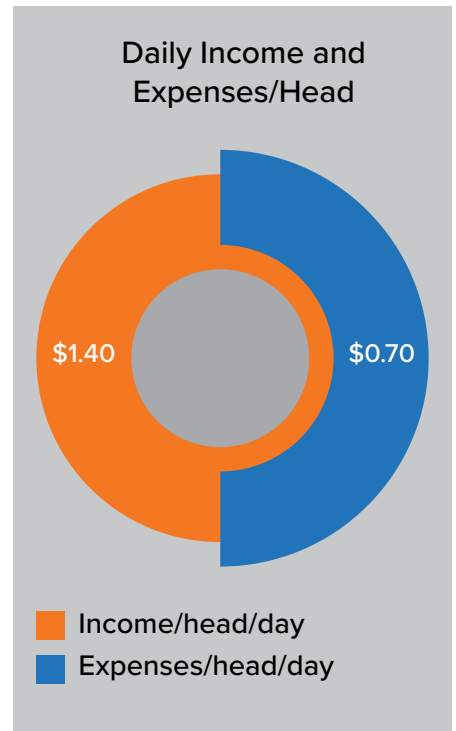
A mob of 60 rising two-year-old steers given access to 2.2lbs of grain for a 60-day period ate significantly less forage crop, compared to the control mob with no access to grain. The supplemented mob also grew an average of 1.1lbs/day more than the control mob.

The steers were break fed behind electric fences so the forage consumption was measured and compared. The mob using Advantage Feeders consumed 13lbs of forage, compared to the

19.8lbs the non-supplemented group consumed, simply because the forage was digested more efficiently.

COMMENTS FROM THE TRIAL

OPERATOR: Our aim is to breed young stock to 0.66lbs carcass weight, however a lull in autumn growth means hitting the contracted weights is always going to take something extra. We need to optimize the feed we have. While the extra weight gain in the trial group was a great result, the biggest surprise and benefit from the trial was the amount of crop saved.



Wagyu calf creep feeding trial

OPERATOR: Jeremy Cooper

LOCATION: Marulan, Australia

BREED: Wagyu

25 ten day old calves, creep fed for 213 days pre weaning. The average target fed quantity was 1.7lbs/calf/day until weaning and no feed after for 60 days. These calves were compare with 25 calves from the control group.

After weaning, the calves from the creep fed group were run together with the calves from the control group. Without any further supplement, the creep fed calves continued to grow an average of 3.5oz/day faster than the calves from the control group for the next 60 days. This is a highly profitable

benefit because there is no feed input costs to gain this benefit.

CONCLUSIONS

The experiment show that the creep fed group grew considerably faster than the control group and were more profitable in both the pre and post weaning periods. Using the values observed during the experiment and calculating the possible profit from feeding a commercial quantity of 50 calves, a return of \$4,223.39 is possible for a feeding period of only 213 days. This return would see an Advantage Feeders 5300HD with Creep Gates paid off in as little as 6.4 months.

Note: this is an Australian trial.



NOTES

CANADIAN DISTRIBUTOR
Myrna and Marlin Huber
Huber Ag Equipment
RR #3, Coronation,
Alberta, T0C 1C0



TWO YEAR WARRANTY
You can rest assured that your feeders will last a long time. A two year warranty on all feeding products guarantees that they will be fit for purpose based on them having fair treatment.*

FREE DELIVERY
Advantage Feeders prices include delivery to all current pick-up locations. Delivery to other locations can be arranged at local shipping rates.

See our website for current prices.

ASSEMBLY OPTIONS
Feeders may be purchased assembled or flat packed. This gives farmers the option to make savings on delivery and assembly. All products come with the relevant fasteners and instructions for full assembly.

*See www.advantagefeeders.com for the full terms and conditions.