PRODUCT GUIDE

MULTI PURPOSE FEEDERS FOR SHEEP / CATTLE / DEER / GOAT

M1000



WELCOME

Advancing ruminant production

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

Our strong results-based and customer-focused approach requires us to regularly conduct experiments as well as analyse 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 maximising 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 realise 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 to 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 20 grams and cattle may consume a cup, or 150 grams. 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 maximise production:

- 1. Utilising more dry pasture with an efficient rumen
- 2. Managing excess protein in pastures
- 3. Increasing utilisation of high moisture pastures
- 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.co.nz

HEAVY DUTY FEATURES



- 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



- The roof pivot has a solid lug welded to a channel to withstand robust use
- 2. Large sight glasses both ends
- 3. Upper Adjuster Handles
- Side lower wall gutters prevent moisture running into the feed area
- Chassis designed so the feeding height can be easily changed to suit all types of livestock
- 6. Reinforced stainless steel troughs and adjusters

- 7. Roof latch uses reliable drop lock pin locking system
- Rain protection bracing increases the weather protection strength
- 9. Cleaning tool and tube spanner are stored where stock can't access them



- 10. Adjuster Guards stop stock bull-dozing feed out
- Spring clips allow the Adjuster Guards to be easily removed and replaced for cleaning
- 12. Large 200x100mm adjustable tine guides make moving the feeder safe and easy
- Add-ons including Creep
 Panels for sheep
- Weather protection reduces
 the frequency of cleaning
- User guide and volume stickers make the feeders easy to use

MOBILE FEEDERS





M1000HD

- Tow with any size vehicle
- Adjustable height pull bar
- Flotation tyres travel over soft ground

Weight:	265kg
Feed volume:	1000 litres
Feed weight – wheat/lupins:	770kg
Feed weight – barley/pellets:	650kg
Feed weight – oats:	520kg
Cattle/calves (paddock):	40-50
Dimensions at cattle height:	3465x1200x1325

Note: On-farm towing only



M1800HD



Weight: Feed volume: Feed weight – wheat/lupins: Feed weight – barley/pellets: Feed weight – oats: Cattle/calves (paddock): Dimensions cattle height: Flat-packed dimensions: Filling height:

Note: On-farm towing only

500kg 1800 litres 1400kg 1150kg 900kg 40-50 3660x1650x1925 2440x1160x420 150mm < height

GRAIN FEEDERS

1800HD



Weight:
Feed volume:
Feed weight – wheat/lupins:
Feed weight – barley/pellets:
Feed weight – oats:
Ewes/lambs (paddock):
Cattle/calves (paddock):
Dimensions sheep height:
Dimensions cattle height:
Flat-packed dimensions:
Filling height:

350kg 1800 litres 1400kg 1150kg 900kg 200-250 40-50 2440x1650x1435 2440x1650x1635 2440x1160x280 150mm < height

800HD



Weight:
Feed volume:
Feed weight – wheat/lupins:
Feed weight – barley/pellets:
Feed weight – oats:
Ewes/lambs (paddock):
Cattle/calves (paddock):
Dimensions sheep height:
Dimensions cattle height:
Flat-packed dimensions:
Filling height:

200kg 850 litres 600kg 500kg 425kg 100-125 20-25 1200x1650x1435 1200x1650x1635 1200x1160x230 150mm < height

150HD



Weight:	33kg	
Feed Volume:	150 litres	
Feed weight – wheat/lupins:	110kg	
Feed weight – barley/pellets:	90kg	
Feed weight – oats:	75kg	
Ewes/lambs (paddock):	25-30	
Cattle/calves (paddock):	6-10	
Dimensions:	820x388x790	
Note: Brackets come standard with the 150HD to hang		
the unit on gates, fences or steel posts.		

HAY FEEDERS

TRAY HAY FEEDER



Weight: Bale capacity: Gap between bars: Cattle/calves (paddock): Dimensions - highest: Dimensions - lowest: Flat-packed dimensions: 200kg 1x 4'x6' round bale 300mm 30 2000x1400x1700 2000x1400x1200 2000x1160x200

Note: Gaps between bars are not suitable for bulls. Additional bar kits available to reduce bar width to 135mm. This product is not recommended for sheep.

CRADLE HAY FEEDER



Weight: Bale capacity: Gap between bars: Ewes/lambs (paddock): Assembled dimensions: Flat-packed dimensions: 105kg 1x 4'x6' round bale 200mm 150 1900x1380x915 1900x915x140

Note: This product is not suitable for cattle.

HAY FEEDER ROOF



Weight: Assembled dimensions: Flat-packed dimensions:

33kg 900x1400x220 1400x700x30

Note: When using large diameter bales, a gap may initially exist between the two roof sections until some of the bale is consumed.

Measurements are length x width x height (mm)

ACCESSORIES

MINERAL ATTACHMENT



Feed loose lick without waste

Weight:	12kg
eed volume:	85 litres
eed weight – minerals:	110kg
eed weight – pellets:	50kg
Dimensions:	760x400x550

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

AIR RIVET TOOL



Weight: Dimensions: 3kg 200x100x300

Measurements are length x width x height (mm)



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 utilise. 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 acceleratated 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.



- **1. FED MILK ONLY**
- 2. FED MILK AND HAY
- 3. FED MILK AND GRAIN



CREEP FEEDING

CREEP PANELS



Weight: Assembled dimensions: Flat-packed dimensions: Compatible models: 17kg 2380x180x50 2380x200x50 3800HD 1800HD M3800HD M1800HD

Note: This product is sold as a pair and feeders can accommodate two Creep Panels. The 800HD comes standard with Creep Panels.

Measurements are length x width x height (mm)

LOOKING FOR MORE INFORMATION? See the Creep Feeding explainer vided advantagefeeders.com/resources



DRY FEED 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 dry 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.



Rumen pH levels over time



Source: www.milkproduction.com/Library/Scientific-articles/Animal-health/Digestive-Physiology-of-the-Cow

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 pasture 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 utilise 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 utilised 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 utilisation 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 utilise 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 all.*

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



NEW ZEALAND DISTRIBUTOR

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FREE FREIGHT

We offer free delivery to pick-up locations throughout New Zealand. Check the locations to the right for the one closest to you.

Please note: some collection locations will require the customer to organise a local business to receive the products on their behalf.

LOYALTY PROGRAM

We reward loyal customers. When you reach a certain number of products you are entitled to retrospective discounts.*

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.*

*See www.advantagefeeders.co.nz for the full terms and conditions.

COLLECTION POINTS

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