

GRAIN FEEDERS USER MANUAL



**ADVANTAGE
FEEDERS**

www.advantagefeeders.com

WELCOME TO THE TEAM

Advantage Feeders is passionate about helping farmers. We invest time and money into research and development and share the results from our existing customers with our new customers. We want to see farmers succeed in agriculture.

The aim of this guide is to provide you with a greater understanding of how Advantage Feeders can best operate on your farm. Our feeders aren't a "silver bullet" or a "set and forget" system. It is essential that stock are competent at accessing their supplement. Once stock are competent at eating from Advantage Feeders, the benefits are enormous and easily pay off the initial investment of training stock.

From communicating with our customers, we know they like to be updated about what has and hasn't worked. Sharing the problems people experience and their solutions, allows everyone to learn from what they have done.

Gerard Roney - Founder and Managing Director



YOUR STEP-BY-STEP GUIDE TO MAXIMISING THE RETURN FROM YOUR INVESTMENT

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TERMINOLOGY

Terminology varies from country to country. If you have any questions about the terminology used within the document, please feel free to contact your local Sales Manager or Distributor. There are numerous references to sheep within the document. In the majority of instances, goats have very similar results as sheep.

We encourage feedback as this benefits all users of Advantage Feeders.

MAXIMISING FEEDER USE

Many customers communicate to us that they purchase Advantage Feeders for one specific purpose, be it supplementary feeding in the drier months or creep feeding young stock. After they identify the products other capabilities and how their investment can be implemented in other applications or phases on their farm, they are often using the product for almost the whole year.

The effects of using the Advantage Feeders 3-way adjustment system in different phases open many additional benefits to farmers. Please be aware of them.



PHASES OF COMPLEMENTARY AND SUPPLEMENTARY FEEDING

Pre joining

Maintain your maternal stock in the condition to maximise your profit

Flushing

Provide high protein supplement to maternal stock at the leading to joining to increase conception rates and multiple fetuses

Joining & Pregnancy

Have your maternal stock on a rising plane of nutrition
Avoid health issues that have a high incidence in pregnancy from skinny or fat stock
Control the amount of supplement fed to reduce feed costs
Achieve desired birth weights

Calving/Lambing and Lactation

For cattle, ensure cows get rebred
Maximise milk production
Avoid health issues from maternal stock with multiple offspring

Preparation for Weaning

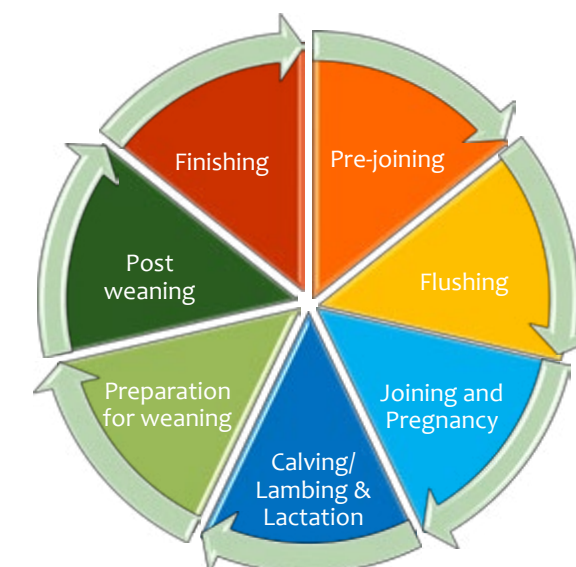
Accelerate rumen development and pasture intake from creep feeding
Imprint the young stock to consume a range of supplement feeds from their mothers training them

Post Weaning

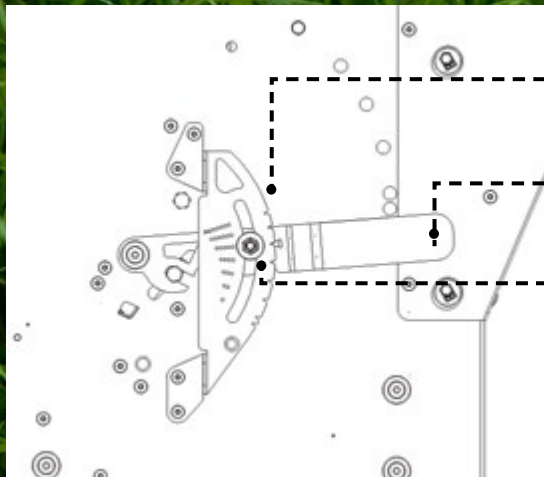
Reduce weaning stresses by having a consistent nutritional source
Prepare stock for feedlots with supplement feeds

Finishing

Improve growth rates by reducing the issues of excess protein in high quality pastures
Enhance the performance of microbes to decrease the amount of pasture consumed



GETTING TO KNOW YOUR FEEDER



A. GAUGE SYSTEM

B. STRONG HANDLE

C. LOCKING NUT

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

2. SIGHT GLASSES

3. STRONG ROOF PIVOTS

4. ADJUSTER GUARD HOUSING

5. UPPER ADJUSTER HANDLES

6. SIDE WALL GUTTERS

7. HEIGHT PINS

8. STAINLESS STEEL FEED AREA

9. ADJUSTABLE TINE GUIDES

1. UNIQUE ID CODE

10. DROP LOCK PIN ROOF LATCH

11. STRONG BRACING

12. CLEANING TOOL

13. SPRING LATCH

14. DEEP TROUGHS

15. ADJUSTER GUARDS

16. SIX ADJUSTER BRACES

17. HOT GAL DIPPED SKIDS



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

5. Upper Adjuster Handles
6. Side lower wall gutters prevent moisture running into the feed area
7. Chassis designed so the feeding height can be easily changed to suit all types of livestock
8. Reinforced stainless steel troughs and adjusters

9. Large 200x100mm adjustable tine guides make moving the feeder safe and easy
10. Roof latch uses reliable drop lock pin locking system
11. Rain protection bracing increases the weather protection strength

12. Cleaning tool and tube spanner are stored where stock can't access them
13. Spring clips allow the Adjuster Guards to be easily removed and replaced for cleaning
14. 110mm deep troughs prevents waste. Designed for front end loader use

15. Adjuster Guards stop stock bulldozing feed out
16. 6x Adjuster braces with dual tabs to prevent stock forcing access to additional feed
17. 4x hot gal dipped skids provides superior longevity and stability from erosion

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

USING THE FEEDERS

WHAT ARE THE RECOMMENDED NUMBERS PER FEEDER?

For farmers that are unfamiliar with the feeders, the following recommendations are suggested.

The number of stock per feeder depends on whether you are using the feeders to supplement or substitute the animal's diet. Substitute feeding is when stock is receiving most or their whole ration from the feeder. Stock receiving a substituted diet often need to access the feeder more often and for longer than stock receiving a supplement.

SUBSTITUTE FEEDING

	Trough space required	No. of stock for 1800HD & over Feeder	No. of stock for 800HD
Sheep	35mm	136	68
Cattle	150mm	32	16

SUPPLEMENT FEEDING

	Trough space required	No. of stock for 1800HD & over Feeder	No. of stock for 800HD
Sheep	24mm	200	100
Cattle	100mm	48	24

Ewes that have multiple lambs often receive a higher supplement and need to be at the feeder for longer than ewes with a single lamb and or a dry ewe being supplemented. During lambing, having fewer ewes and lambs around the feeder also makes it more likely that the ewe will leave the feeder with all their lambs. In this situation, they require about 40mm of trough space each. This equates to about 120 sheep per 5500HD, 3800HD and 1800HD feeders.

Weaners are more susceptible to being bullied and developing into shy feeders. When using the feeders with stock that are in their initial months of weaning, use the same number of stock per feeder as *substitute* feeding.

Farmers have chosen to put more or less stock with feeders than our recommended numbers. After using the feeders for some time, farmers are able to better assess whether to run more or less stock per feeder. It is important that the condition of the stock is regularly assessed as this will impact on future feeding requirements.



USING THE FEEDERS

WHAT INCREMENT IS USED FOR THE VOLUME SCALE?

The volume scale in the feeder measures cubic meters (or litres) and bushels. Different feeds have varying densities so volumetric measurement is the best system for calculating feed consumed.



WHAT SYSTEM SHOULD I USE TO MANAGE FEED OUTFLOW?

Consumption Table

The feeders come with stickers on the side walls above the trough area. This sticker has a consumption table that provides an estimate of what cattle and sheep can consume at each setting of the adjustment system. **IT IS IMPORTANT TO NOTE THAT THESE TABLES ARE ONLY A GUIDE.**

There are many variables that can influence the feed intake of stock. The tables provide a good starting point when setting the adjusters. (see page 12 for more information)

Advantage Feeders have had numerous methods on how to position the adjusters accurately over the years as we have upgraded our products, so please read the information on the sticker on your feeder for directions on how best to do this.

Measuring feed outflow

The hopper has a volume sticker in it. The level of feed in the hopper can be measured against this sticker to assess the consumption rate. Advantage Feeders has created a document, the "Consumption Log" which allows farmers to easily enter the date and feed level. This can then be used to calculate the average daily consumption rate. (see last pages of this brochure for your copy)

Filling the hopper for a set period

Another system that farmers use is to put a period, such as a week's supply, of feed into the hopper. After a week, if the feeder is empty, then the adjusters need to be closed slightly to reduce the outflow of the ration. If there is feed left, open the slides wider to increase outflow to the desired rate. Note: if stock are very reliant on the supplement and the feeder is empty for a considerable time, they may be aggressive and trample other stock.



Weighing the feed

Some farmers have access to equipment that can measure the weight of feed leaving a filling hopper. A piece of equipment that can do this will provide accurate information of the feed consumed.

USING THE FEEDERS

VARIABLES THAT INFLUENCE FEED INTAKE

The main variables to influence intake are:

- Feed size: the larger the feed, the more open the adjusters have to be set to allow the feed to flow under the Upper Adjuster and for stock to access the feed between the adjusters
- Breed of stock: some breeds are more intuitive than others and will learn how to feed quicker than other stock
- Age of stock: stock will increase the feed intake until they reach mature weight.



USING THE ADJUSTER GUARD

The Adjuster Guard is a part that limits stock "bulldozing" with their tongue and pushing other stock away from the trough. It forces the stock to stand still and lick from the one location which helps reduce bossy behaviour.

It can easily be placed in and out of position so the lick area can be cleaned quickly. It is important that the Adjuster Guards sit behind the brackets at each end and the brace/s and the brace in the middle of the trough.

For more information, see the 'When and how to use the Adjuster Guard' section of the Standard Operating Procedure on page 13.



WHAT'S THE SMALLEST FEED ACCESS AREA GAP STOCK CAN EAT OUT OF THE FEEDER?

Many users of Advantage Feeders assume that the minimum feed access area gap sheep and cattle tongues can fit in is 15mm and 25mm respectively. Having these narrow gaps will play an important role in restricting the ration and preventing over consumption issues.

For sheep, a 15mm gap compared to a 10mm gap can double the intake. The minimum feed access area for sheep is 8mm and for cattle, it is 15mm.



USING THE FEEDERS

FILLING YOUR FEEDER

Picking up the feeder, taking it back to a silo/bin, filling it and taking it back

The 1800HD and 800HD models can be picked up and moved full. The 3800HD can be moved with up to 2000kg of feed in it.



With 25kg or 50kg bags

Note: it is difficult to fill the 3800HD due to its overall height.



Front end loaders

Note: the opening width where the feed enters is 2320mm. Greedy Boards are available to prevent waste.



Dumpy/Bulka bags

It is important to know what height your front end loader can safely lift. If lifting height is an issue, some farmers have made a frame, like a pallet, that the bulk bag can be placed on so the front end loader doesn't have to reach as high.



Bulk hopper with auger

Note: if filling the 3800HD model, the auger height will need to be measured to ensure it is high enough.



USING THE FEEDERS

TRAINING STOCK OR HOW TO START STOCK ON A FEEDER



Receiving supplement feed can be critical to the productivity and profitability of an animal. Taking steps to train stock to Advantage Feeders ensures they become familiar with the system quickly and maximise profitability.

Some people have a misconception that because livestock like a certain type of supplement feed, they will automatically learn how to access feed through the Advantage Feeder system, without prior training. This is not always the case and this mindset can cause delays and inconsistency of use of the Advantage Feeders which can be costly in both production and labour.

Notes:

- Stock that have previously been supplemented with the Advantage Feeders system should not require re-training.
- If a maternal animal is being fed with a feeder while they have their offspring with them, the young stock should not require training because their mothers will train them.

Take the following steps to increase the use of feeders by untrained stock:

1. It is important that untrained stock receive a good reward the first time they visit the feeder. The reward will imprint on them that the feeder is a thing worth returning to.
 - a. Use an appetising and safe feed so the stock will like the feed and not be at risk of acidosis. A commonly used feed for this application is forage based pellets that have at least 16% protein.
 - b. Set the Upper and Lower Adjusters so that the feed is almost flowing into the trough. Depending on the feed, this can be position 7 on the Upper Adjuster and 7 on the Lower Adjuster. This allows stock to easily and quickly access the feed.
2. Inserting several previously trained stock into a flock/mob with untrained stock can reduce the time needed for stock to become familiar with the system as the trained stock will show the untrained stock how to access the feed from the feeders.
3. Train stock before they lose condition. It is more difficult to train stock if they are heavily reliant on supplement feed as their behaviour becomes aggressive towards other stock (bullying) around the feeder.



Please note:

The time period necessary to provide unrestricted feed (Step 1a. above) varies. Factors that influence the duration of this period are the stocks familiarity with supplement feeds, the maturity of the stock, stock breed, the number of stock per feeder and the flock/mob size. For example, it may take less than one day for mature stock to become familiar with the licking system, while it may take up to 10 days for weaned calves or lambs to learn.

USING THE FEEDERS

SAFELY FEEDING GRAINS TO STOCK AND AVOIDING ACIDOSIS

Cereal grains are frequently used to supplement livestock because they are often found to be the lowest cost energy feed available.

Care needs to be taken when feeding cereal grains to stock because the carbohydrates they contain are highly digestible and if precautions aren't taken, can cause acidosis in ruminants. Acute acidosis usually occurs when the pH in the rumen decreases to a level of 5.5.

A low pH changes the balance of rumen bugs, with acid-producing bacteria taking over from acid-consuming bacteria. The lowered pH of the rumen's contents is then absorbed through the rumen wall, causing acidosis which in severe cases can lead to death.

The following simple steps can be taken to reduce the risk of acidosis:

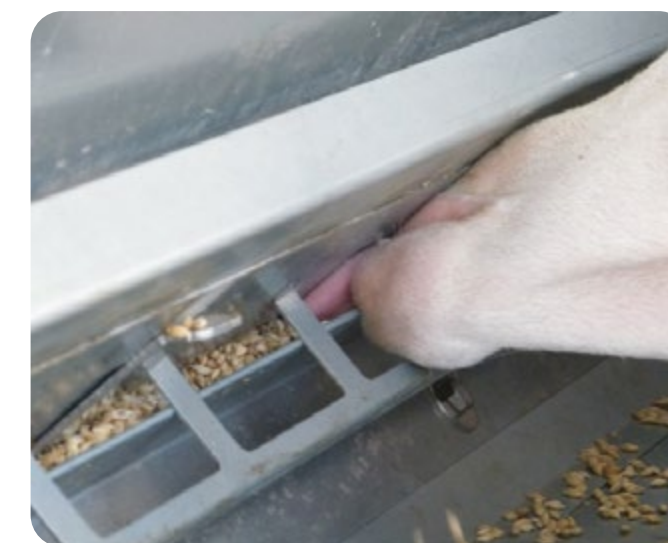
1. Ensure stock are trained onto the Advantage Feeders system before the feed type is changed to cereal grains.
2. Transition the feed from a safe feed, like hay-based pellets, to cereal grains over a period of time. An example for mature stock may be as follows.
 - a. Start by feeding 100% pellets. Fill the hopper with enough feed for roughly two days. Ensure the hopper is not emptied before the next load of feed is put in. If this does occur, put more of this ration into the hopper prior to changing the feed type. Fully open the feeding area by setting the Upper Adjuster to position 7 and the Lower Adjuster set to position 7. This will encourage stock to approach the feeder and be rewarded for their effort.
 - b. After a couple of days, you can alter the ration. Change it to ½ pellets and ½ cereal grain (by weight) for five days. Ensure the hopper is not emptied before the next load of feed is put in. If this does occur, put more of this ration into the hopper prior to changing the feed type. Be sure to close the Upper Adjuster to position 4 and the Lower Adjuster to position 4.

- c. After a week of using the feeder you are safe to alter the ration to 100% cereal grain. At this point it is imperative you close the Upper Adjuster to at least position 3 and the Lower Adjuster to at least position 3 and insert the Adjuster Guard.

Please contact your local Advantage Feeders representative to discuss your individual needs.

3. Ensure the rumen is full before cereal grain is introduced to the stock. If pasture quantity is limited, this can be achieved by providing hay or silage to the stock prior to the feeder being introduced.
4. Having fibre (including straw) in the diet, will improve rumen fill and require the animal to chew. Chewing increases saliva (a natural lactic acid buffer) production - reducing fluctuation of rumen pH.

It is rare for stock to gorge feed when they have access to a constant supply of supplement using an Advantage Feeder. If the supply is interrupted due to the feeder running empty, it can change the behaviour of livestock. Stock can become aggressive around the feeder, from the fear of running out of feed and visit it more frequently until their rumen is full. If the feeder does inadvertently become empty, the rumen environment will change. If this occurs, we recommend you follow the steps above to reduce the risks of acidosis.



USING THE FEEDERS

INITIALLY SETTING THE ADJUSTERS

The charts on the Gauge Sticker (image right) can be used as a starting point for positioning the adjusters.

It is best if the Upper and Lower Adjusters are both set on similar settings. Example: if you are aiming to feed 4 kg/head/day to cattle, set the Upper Adjuster at 3 dots and the Lower Adjuster at 3 dots.

Using the Gauge Sticker is only a starting point as daily intake varies based on a number of factors including; paddock/field size, age of stock, breed of stock, pasture quality, pasture quantity, etc.

To achieve the desired feed intake, see the 'Calculating feed consumption and altering the adjuster positions' SOP on page 14, for more information.

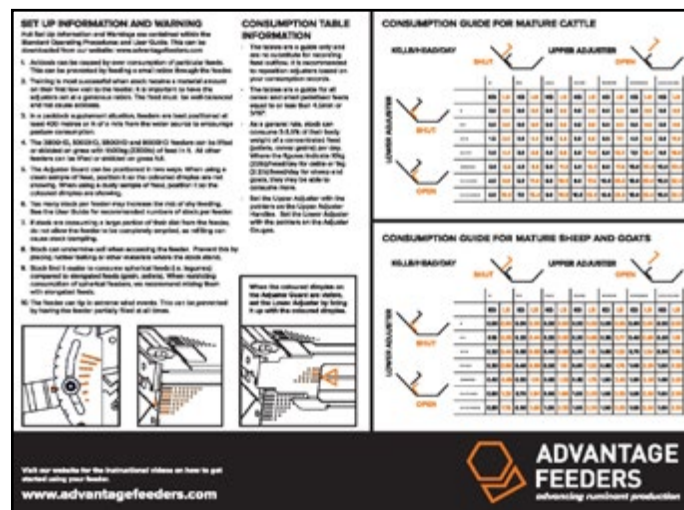


IMAGE RIGHT: USE THE DOT SYSTEM TO SET THE LOWER ADJUSTERS



ABOVE IMAGE: USE THE UPPER ADJUSTER HANDLES TO SET THE UPPER ADJUSTER

USING THE FEEDERS

WHEN AND HOW TO USE THE ADJUSTER GUARD

Using the Adjuster Guard is optional. It is designed to be used any time the feed ration needs to be controlled or when some stock are bullying others and preventing them from accessing the feeder.

The Adjuster Guard plays an important role in controlled feed intake as stock are forced to lick through small gaps at the feed access area. The purpose of the gaps in the Adjuster Guard are:

1. To prevent overconsumption as stock can no longer use their tongues laterally along the feed access area, preventing flicking/bull dozing feed in the trough.
2. To prevent shy feeders. Stock can only use their tongues in a lateral motion. This causes the saliva on the tongue to dry out, and once dry, feed no longer sticks to the tongue, so stock will walk away to graze or drink. When bossy stock have finished, shy feeders feel comfortable to approach the feeder knowing they are unlikely to be pushed around.

When the Adjuster Guard is in the 'Inverted' position, the feed access areas don't require cleaning as frequently. This can be very important when dusty or pelletised feed types are used. It depends on the user, but as a general rule, if the feed access area is blocking more than once a day, use the Adjuster Guard in the 'Inverted' position.

If the feed in the hopper is flowing consistently, the Adjuster Guard can be used in the 'Standard' position. In this orientation, the minimum achievable ration is lower than when the Adjust Guard is in the 'Inverted' position.

THE ADJUSTER GUARD CAN BE POSITIONED IN TWO WAYS

ADJUSTER GUARD STANDARD POSITION

The Adjuster Guard in the 'Standard' position, allows full access to the feed in the feed access area. Note: In this position the orange marker dots and lines are NOT visible.



ADJUSTER GUARD INVERTED POSITION

The Adjuster Guard in the 'Inverted' Position, restricts full access to the feed in the feed access area. Note: In this position the orange marker dots and lines ARE visible.



ABOVE IMAGES: WHEN NOT IN USE, THE ADJUSTER GUARD CAN BE STORED WITH THE FEEDER

USING THE FEEDERS

CALCULATING FEED CONSUMPTION AND CONTROLLING FEED INTAKE BY ALTERING THE ADJUSTER POSITIONS

Controlling feed intake is important to ensure stock receive the required supplement and to maximise profitability. It helps avoid over-consumption, where much of the supplement ends up passing through the animal and excreted to the ground, hence reducing profitability. Knowing the amount of supplement your flock/mob are consuming is critical information for a profitable enterprise.

Take the following steps to calculate feed consumption:

- Level the feed in the hopper and take a reading using the volume sticker.
Note: If the feed is peaked over the side panels and hard against the roof of the 2.4m or 8' long feeders, this amounts to an extra 0.2 cubic metres of feed.
- Every three days, level the feed and record the feed level in the Advantage Feeders Consumption Log (Appendix 1).
Note: Daily consumption can vary so it is more accurate to wait three days between readings.
- Use the formula on the Advantage Feeders Consumption Log to calculate the average intake of the flock/mob.
- After 12-15 days determine if the stock have been consuming the anticipated amount.
Note: The increments of volume in the feed are relatively sparse and interpretation of levels can vary so fluctuations in the calculation of 'Grams/head/day' can easily vary 50% from one period to another. It is recommended that values from at least the last three calculations of 'Grams/head/day' be used to evaluate average consumption.

Moving the adjusters

- Knowing the amount of feed you would like your stock to be having is the starting point. Once you have calculated daily feed consumption, compare this with desired ration. If stock are consuming less than desired, open up the upper and lower adjusters further. If consuming too much, close the upper and lower adjusters until desired level is achieved.

Notes:

Small movements of the Adjustment system can significantly change feed intake. It is best to make small and gradual adjustments over a period.

As a general rule, control over feed

consumption is more consistent when the Upper Adjuster and Lower Adjusters have similar settings. Example: both adjusters set at 3 dots.

When making assessments in feed consumption, it is important to take into consideration the impact from weather. On wet days, it is common for stock to want more supplement feed than grass and travel to the feeder more frequently, increasing their consumption. Conversely, warm and sunny days can make grass more desirable.

IMPORTANT

- To prevent feed falling behind the Lower Adjuster, it is best to undo the bolts half a turn and then assess if it can be repositioned. If it can't, loosen the bolts a further ¼ of a turn and assess. Continue this process until you can move the Lower Adjuster.
- Feed caught between the back of the Lower Adjuster and the hopper may create a pathway for feed to fall straight into the feed trough, meaning more feed than desired will be fed. It is therefore extremely important that if you are moving the Lower Adjuster when there is feed in the hopper, you first close off the Upper Adjuster as much as possible. This prevents large amounts of feed falling behind the Lower Adjuster. If feed does fall behind the Lower Adjuster, remove as much as possible, paying attention to the far left and right corners. When resetting the Lower Adjuster, we recommend it is lowered all the way down, before you push it back up to the desired position, helping to remove any residual debris that may have got caught behind the Lower Adjuster.

USING THE FEEDERS

CALCULATING FEED DENSITY

Feed value is calculated by weight however, the volume of feed per kg varies, making it impossible to have a weight sticker inside the hopper of an Advantage Feeder.

Advantage Feeders have volume stickers. The density (the relationship between the weight and how much space it takes up) of feed is required to calculate the weight of feed consumed.

General density of different types of feeds

Note: These figures are indicative only – feed densities can fluctuate considerably. It is recommended that you follow the Calculating Feed Density procedure (right) to determine the actual density of your feed. If you purchase feed from a commercial feed supplier, they may also be able to provide the density of the feed they have sold you.

FEED	KG/L	LB/L
Pellets	0.65	1.43
Barley	0.65	1.43
Oats	0.51	1.12
Wheat	0.77	1.69
Soya Meal	0.60	1.32
Peas	0.75	1.65
Beans	0.75	1.65

Take the following steps to calculate feed density:

- Find a bucket. It is best if the bucket is 10-20 litres
- Weigh the bucket. (As a guide, most 20L plastic buckets weigh about 0.9kg)
- Fill the bucket over the brim with the feed. Bounce the bucket gently onto the ground three times to have the feed compact. Level the feed off on the top of the bucket with a straight edge
- Weigh the bucket with the feed in it
- Empty the bucket and fill it to the brim with water
- Weigh the bucket with water in it

Calculations:

- Calculate the weight of the feed – Subtract step 2 from step 4
- Calculate the weight of the water – Subtract step 2 from step 6
- Calculate the density – Divide i) by ii)

Example:

- The bucket weights 0.9kg
The feed and the bucket weighs 14.5kg
The water and the bucket weighs 21.5kg
- The feed weighs 13.6kg (14.5 – 0.9 = 13.6)
 - The water weighs 20.6kg (21.5 – 0.9 = 20.6)
 - The density is 0.66 (13.6 / 20.6 = 0.66)



USING THE FEEDERS

THE IMPORTANCE OF MAINTAINING A CLEAN FEED ACCESS AREA AND AVOIDING CLOGGING

Maximising rumen production and efficiency requires rumen bacteria to have a constant supply of all their feed sources. If the feed blocks in an Advantage Feeder, it will limit how these bacteria perform.

There are several factors that influence the possibility of feed blockages. These include the type of feed, the cleanliness of the feed, humidity, amount of stock allocated to the feeder and the position the adjusters are in.

Over a period, all feeds will block in the feed access area (the area between the Upper and Lower Adjusters). Pellets tend to block the most. This is because they can absorb moisture from air which causes swelling and also often have high amounts of dust or fines.

Whole grains work better than cracked grains because the process of cracking seeds increases the amount of dust or fines.

Ways to reduce the frequency of cleaning the feed access area

1. If whole grain has adequate nutritional requirements, change the ration to this feed type. Replace cracked grains with 'bruised' grains. Bruised grain is squashed but unbroken whole grain.
2. Feed a mix of cereals and high protein pellets instead of standard pellets. The separation of the pellets in the mix with the whole grain prevents the pellets forming clumps and not flowing into the feed access area.

Note: Pellets are often fed because cereal grains can have an inadequate level of protein. A cereal grain and high protein pellet mix is also often more cost effective than a complete pelleted feed.

3. Change pellet supplier. Pellet quality can vary a lot between suppliers. Some pellet manufacturers are prepared to increase the integrity of their feeds by screening out dust,

increase the hardness of the pellets and/or increase the level of fat (to prevent moisture absorption).

4. Use the 'Inverted' position of the Adjuster Guard. Using the Adjuster Guard in the inverted position creates a larger gap between the Upper and Lower Adjusters while still providing the same gap where the animal's tongue licks. This larger gap means that it takes longer for clumps to form, allows feed to flow better for longer and reduces cleaning frequency. For more information see the '*When and how to use the Adjuster Guard*' SOP on page 13.

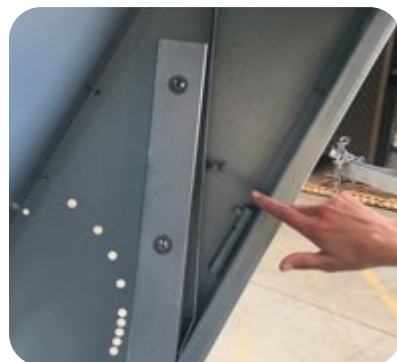


IMAGE: FEEDER CLEANING TOOL AND TUBE SPANNER STORAGE LOCATION

AVOIDING SOIL EROSION AND PUGGING AROUND FEEDERS

The foot traffic of stock can quickly erode soil around the feeder, with the severity of the erosion concentrated from the feeder skids to one metre out from the skids. The pace and depth of erosion will depend on the soil type however, if the feeder/s are fully stocked, topsoil can often be eroded in a matter of a fortnight.

A solution to these issues is putting a material on the ground over the area that is being eroded. A common and cost-effective material for this purpose is repurposed rubber conveyor belting that is 1.2m or 4' wide.



SHY FEEDERS

IDENTIFYING AND MANAGING SHY FEEDERS WITH FOOD DYE

Shy feeders are stock that do not consume their full allocation of supplement feed. Shy feeders are apparent in all commonly used feeding systems, including trough feeding and feeding on the floor/ground.

Several factors influence whether or not an animal is a shy feeder. These include: the amount of trough space available, the differential in size between the large and small animals with a flock/mob, the breed of the animal and the availability of other feed sources.

Depending on the number of animals and their place in the production cycle, it can be important to identify these animals and treat them uniquely.

BLUE FOOD DYE PROCEDURE:

1. Find an area protected from the wind.
2. Put a protective mask and body suit on.
3. Fill a 10-20 litre bucket with feed.

Important: Make sure the bucket has a lid!

4. Push the jar of blue food dye (with the jar lid remaining on) into the feed at the bottom of the bucket.
5. Open the lid on the jar and remove the food dye powder.
6. Put the lid back on the jar and dispose of it.
7. Slowly mix the feed and the dye in the bucket.
8. Put the lid on the bucket.
9. Ensure the feeder for the test is empty.
10. Position the feeder so that you can stand upwind of it being filled.
11. Put 50kg of feed in the feeder.
12. Evenly spread ½ the contents of the bucket.
13. Put 100kg of feed in the feeder.
14. Evenly spread the remaining ½ of the bucket.
15. Put 50kg of feed in the feeder.
16. Use a shovel to slowly mix the feeder contents.
17. After 24-48 hours, check the animal's noses.

What to do if shy feeders are identified

Assess the consequences, including the animal's welfare, of an animal not receiving supplement. Examples:

- If a weaned lamb doesn't consume its allocated supplement it may take longer to grow out to target weight – low profit consequence. The welfare of the animal is not affected if they are also grazing pasture.
- If a heavily pregnant ewe doesn't consume its allocated supplement, it may have difficulties with foetal development, birth and lactation – high profit consequence. Depending on the availability of pasture, this may be a risk to the welfare of the animal.



CREEP FEEDING

LAMB CREEP FEEDING

Advantage Feeders lamb creep feeding system, the Creep Panel, is an adjustable panel to prevent ewes from accessing feed that is being provided ad-lib. Like all creep feeding systems, the maternal animals will try to access the supplement feed their offspring have been allocated and steps need to be taken to reduce issues associated with this. Both procedures below address this.

Training lambs to Advantage Feeders and the Creep Panel isn't foolproof however, simple steps can be taken to increase the likelihood of great results.

There are two scenarios when training stock:

1. Lambs are being creep fed when their mothers are being supplemented and,
2. Lambs are being creep fed when their mothers are not being supplemented.

The preferred method is scenario 1 however, this isn't always cost effective if their mothers have adequate pasture and the cost of supplement is prohibitive.

SCENARIO 1: PROCEDURE WHEN EWES AND LAMBS ARE BOTH BEING SUPPLEMENTED FROM THE SAME FEEDER

1. At least one week before lambing, set both Creep Panels to POSITION 6. This position does not exclude ewe access to supplement feed.
2. When most of the lambs are two weeks old, set one Creep Panel to POSITION 3. This will be the side of the feeder allocated to lambs. Note: Although this Creep Panel position is narrower than required to keep the head of the ewe out, it imprints in the ewe's mind that they are unable get feed when the Creep Panel is later moved to POSITION 5 (if required).
3. Place the Adjuster Guard in the storage area, located under the weather protection (see image on page 13). Set the Upper Adjuster and Lower Adjuster on the lamb side so that feed is almost flowing into the trough. Depending on the feed, this is often at position 7 for the Upper Adjuster and position 7 for the Lower Adjuster. This allows lambs to access feed easier and their intake is increased at a younger age.
4. Sprinkle tablespoons of milk powder onto the feed access area and into the trough on the side allocated for the lambs to help attract them to the feed. Note: Repeat this step each time you enter the field/paddock until you consistently see lambs feeding under the Creep Panel.
5. Depending on the nutritional requirements of the ewes, when most of the lambs are around six weeks old, close the ewe side Creep Panel

set at POSITION 6, to POSITION 3, so the ewes are excluded from feed entirely.

6. When this side of the feeder is changed to POSITION 3, repeat step 3.
7. An average daily intake of 200g/day to weaning is often the most profitable supplement regimen. After the lambs are 6 weeks of age monitor their feed intake. Once daily intake for the lambs has increased to 200g/day, intake may be restricted by closing the Upper Adjusters and Lower Adjusters and by replacing the Adjuster Guards.
8. Monitor the lambs feeding from the feeders. When the lambs start using force to pull their head out from under the Creep Panel, move the panels up one hole to POSITION 4. Depending on the breed, this usually occurs at around 7 to 8 weeks old.
9. Depending on the breed, at approximately 11-12 weeks of age, the Creep Panel may be raised one more hole to POSITION 5.

Please note:

The timing of step 2 can be changed based on the nutritional requirements of the ewes. If the ewes don't require supplementation, put the ewe side Creep Panel down to POSITION 3 when most of the lambs are born. If the ewes are needing a supplement, move the Creep Panel down to POSITION 4 no later than 2 weeks after birth. Best results for lambs are achieved when creep feeding commences from birth.

CREEP FEEDING

LAMB CREEP FEEDING

SCENARIO 2: PROCEDURE WHEN ONLY LAMBS ARE BEING FED

1. Place additives for the ewes, including loose lick and mineral blocks, near the feeder to encourage them to come into close proximity of the feeder. This reduces the time it takes for lambs to learn how to feed.
2. When most of the lambs are born, set both Creep Panels to POSITION 3. Note: Although this Creep Panel position is narrower than what is required to keep the head of the ewe out, it imprints in the ewe's mind that they can't get their head in should the Creep Panel be moved to POSITION 5.
3. Place the Adjuster Guard into the housed area under the weather protection. Set the Upper Adjuster and Lower Adjuster so that feed is almost flowing into the trough. Depending on the feed type, this is often at position 7 for the Upper Adjuster and position 7 for the Lower Adjuster. This allows lambs to access feed easier and their intake is increased at a younger age.
4. Sprinkle tablespoons of milk powder on the feed access area and in the troughs to attract lambs to the feed. Note: Repeat this step each time you enter the field/paddock until you consistently see lambs feeding under the Creep Panels.

5. An average daily intake of 200g/day to weaning is often the most profitable supplement regimen. After the lambs are 6 weeks of age monitor the feed intake. Once daily intake for the lambs has increased to 200g/day, intake may be restricted by closing the Upper Adjusters and Lower Adjusters and by replacing the Adjuster Guards.
6. Continue to monitor the lambs feeding from the feeders over coming weeks. When the lambs start using force to pull their head out of under the Creep Panel, move the panels up one hole to POSITION 4. Depending on the breed, this usually occurs around at 7 to 8 weeks of age.
7. Depending on the breed, at approximately 11-12 weeks old, the Creep Panel may be raised one more hole to POSITION 5.

IMPORTANT:

In both scenarios, avoid the feeder becoming empty. If a feeder is filled after being emptied, it changes the behaviour of stock. They can be aggressive around the feeder and it may cause lambs to become trapped at the end of the feeder's troughs. If the feeder does inadvertently become empty, feed approximately 500g/head on the ground before re-filling the feeder.



CREEP FEEDING

CALF CREEP FEEDING

Advantage Feeders calf creep feeding system, the Creep Gate, is a deployable panel/gate to prevent cows from accessing feed.

Generally, any age calf will grasp the process of walking through the gates and accessing feed however, there are steps that can increase growth rates by having calves adapt to the system quickly.

It is rare that cows are supplemented from Advantage Feeders when calves are being creep fed. If you are wanting to do this, please contact your local Advantage Feeders representative to discuss the best way to achieve this.

SCENARIO 1: PROCEDURE WHEN COWS AND CALVES ARE BOTH BEING SUPPLEMENTED FROM THE SAME FEEDER

1. Place additives for the cows, including loose lick and mineral blocks, near the feeder to encourage them to come into close proximity of the feeder. This reduces the times it takes calves to go through the Creep Gates and access feed.
2. When calving commences, place the feeder in the field/paddock and lower the Creep Gates into position.
3. Place the Adjuster Guard into the housed area under the weather protection. Set the Upper Adjuster and Lower Adjuster so that feed is almost flowing into the trough. Depending on the feed, this is often at position 7 for the Upper Adjuster and position 7 for the Lower Adjuster. This allows calves to access feed easier and thus their intake is increased at a younger age.
4. Position the adjustable horizontal bar (below in orange) in one of two positions:
 - a. If the calves are over three months old, position the horizontal bar so they can walk into the creep feeding area without their back touching it.
 - b. If the calves are under three months old, position the horizontal bar so they can walk into the creep feeding area without their head touching it.
 - **Note: Although these horizontal bar positions are lower than what is required to keep the cows out, it imprints in the cow's mind that they can't get in even when the calves grow and the bar is raised.**
5. Sprinkle tablespoons of milk powder onto the feed access area and into the trough to attract calves to the feed. Note: Repeat this step each time you enter the field/paddock until you consistently see calves feeding.
6. An average daily intake of 1kg/day to weaning is often the most profitable supplement regimen. After the average age of the calves is 12 weeks, monitor their feed intake. Once daily intake for the calves has increased to 1kg/day, intake may be restricted by closing the Upper Adjusters and Lower Adjusters and by replacing the Adjuster Guards.
7. As the calves grow, keep adjusting the horizontal bar as per step 4a.



HEALTH PROTECTION

IS LAMBING RECOMMENDED IN CONFINED AREAS WITH FEEDERS?

It is not recommended, but if the situation demands this, it is best to have no more than 18 ewes per hectare. Lambing in confinement can lead to lamb stealing and mismothering, especially amongst twin-bearing ewes.

WHAT CAN I DO IF MY STOCK SHOWS SIGNS OF ACIDOSIS?

When used correctly, Advantage Feeders allows a safe feeding system for high acidosis risk feedstuffs. If the feeders are not used correctly and the stock do show some signs of acidosis, bi-carbonate soda should be immediately provided to stock along with a vet being contacted. Bi-carbonate soda can be provided by spreading it over the grain, in the feed access area and in the trough so the stock quickly consume it or mixed with water and administered orally with a large syringe or drench gun.

HOW DO I PREVENT EWES FROM BECOMING CALCIUM DEFICIENT IN PREGNANCY?

Calcium deficiency is a problem that generally affects older ewes and can lead to mortality. All grains are deficient in calcium so a high intake of grain through the feeders does not provide sheep with adequate calcium. The easiest way to prevent calcium deficiency is to supplement the grain with a suitable calcium source, like stock lime.

LATE PREGNANCY AND LAMBING PROBLEMS

It is important to monitor pregnant ewes to ensure they are not eating more or less than the ration allocated to them. The result can be undersized lambs with lower survival rates or oversized lambs with birthing issues.

CLEANING THE FEEDERS



To ensure the longevity and functionality of your investment, clean your feeder after each use. The best way to clean your feeder is to:

1. Remove the Adjuster Guard and Lower Adjuster.
2. Reposition the Upper Adjuster to the highest position.
3. Pressure wash inside the hopper.
4. Pressure wash the troughs.
5. Pressure wash the skids.
6. Wait for the feeder to dry.
7. For the areas of the feeders that had feed remains, pressure wash and spray the areas with a rust prevention liquid, like lanolin.

FREQUENTLY ASKED QUESTIONS

HOW DO I FEED AD LIB?

There is a perception that in order to feed ad lib, the feed must be flowing through the slides and into the trough. It is possible to feed ad lib if the adjusters are open at position 7 & 7.

This gap allows stock to scoop feed out of the feed access area with their tongue. With a gap of this size, stock have to still work to access the feed. This means less wastage as stock will not ignore the feed in the trough in favour of fresh feed from between the adjusters.

CAN “TOTAL MIX RATIONS” AND PALM KERNEL BE FED?

Farmers with mixing equipment often put a total mix ration in the feeders. It is best if mixes have less than 25% roughage. Palm kernel and other meals are commonly used. The peak of the trough is steep, being 45 degrees which allows this feed to flow if mixed with 25-50% of pellets or grain.

CAN THE HEIGHT OF THE FEEDER BE CHANGED?

All feeders can be used for sheep and cattle because the skids can be fastened at different heights. The height of the skids can be changed by lifting the unit up, talking the pins out of the skids, repositioning the skids and refastening the pins.

HOW DO I BEST MAINTAIN THE FEEDERS?

When feed gets wet and left for long periods, it can corrode galvanised sheet metal. Some feeds can simply become wet from the humidity in the air.

If a feeder is not going to be used for a period of time, it is best to clean it. Unbolt the adjusters and clean any feed, including feed dust, that is under them. If the adjusters are left loose, this will ensure they are better able to dry if they do happen to get wet.

Although the skids are hot gal dipped, it is best to keep these off the ground when not in use. A simple way to do this is to place some blocks of wood under them.

WHAT IS THE BEST WAY OF CHANGING FROM ONE FEED TYPE TO ANOTHER?

When you are transitioning to a high starch feed, it is recommended to change the feed incrementally over a period of time. A suggested ration when transitioning from a safe feed, like pellets containing sufficient rumen buffers, to acidosis prone cereal feed is as follows:

- All pellets for 5 days;
- 1/2 of the ration is pellets, 1/2 of the rations is a cereal grain, for 5 days;
- All cereal grain

It is best to have ad lib straw available during this time to enhance rumen function.

For more information, please see the ‘SAFELY FEEDING CEREAL GRAINS TO STOCK’ on page 11.

CAN MINERALS AND OTHER SUPPLEMENTS BE FED IN COMBINATION WITH OTHER FEEDS?

Yes. It is best if the minerals and/or other supplements are pelletised when fed with grains to prevent clogging. Some minerals contain corrosive substances, like salt, and can damage the galvanising. Advantage Feeders does not guarantee the use of these supplements in the feeders. The Advantage Feeders Mineral Attachment is an ideal product to put minerals in.

HOW CAN CORROSIVE SUPPLEMENTS BE FED WITH ADVANTAGE FEEDERS?

The Advantage Feeders Mineral Attachment ensures that your stock receives their nutritional requirements while reducing waste and labour and preventing corrosion of the feeders. The Mineral Attachment has the capacity to hold 85 litres or 110kg.

If the Mineral Attachment is used to supplement 200 sheep, consuming 25grams/head/day, it will take 22 days before it empties. It can be attached to the ends of a feeder or hung on gates or posts.

FREQUENTLY ASKED QUESTIONS

CAN LARGE PELLETS BE FED?

Yes, however the lowest ration that can be restricted with 6mm pellets is about 600g/head/day for sheep and 3kg/head/day for cattle because the adjusters need to be opened wider to allow pellets to flow.

WHEN THE FEEDER HAS FEED IN IT, WHICH ADJUSTER SHOULD I MOVE TO CHANGE THE RATION?

If the feeder contains feed, and you want to change the ration, it is recommended that you move the Upper Adjuster. If the Lower Adjuster is relocated, you risk having the feed getting under the Lower Adjuster. If this happens, it is difficult to resolve until the feeder is empty.

WHAT IS THE BEST WAY TO CLEAN THE FEED ACCESS AREA BETWEEN THE ADJUSTERS?

All Advantage Feeders come standard with a Cleaning Tool provided. It can be found on the handle side of the feeder, stored under the weather protection, on the right hand side (see image on page 16).

WHAT IS THE MINIMUM INTAKE THE FEEDERS CAN BE SET TO?

	Sheep	Cattle
Cereal grain	< 200g/day	< 1.5kg/day
80% cereral grain, 20% 3mm pellet or soya meal	< 300g/day	< 1.5kg/day
3mm pellets	< 500g/day	< 1.5kg/day
6mm pellets	< 750g/day	< 2.5kg/day
9mm pellets	Ad-lib	< 5kg/day
12mm cubes	Ad-lib	Ad-lib

WHERE DO I PUT THE FEEDERS IN THE FIELD?

It is recommended that feeders be situated as far away from the water point as possible. This encourages the stock to graze the pasture rather than staying near the water point and where they are being supplement fed.

If there is more than one feeder in the paddock, it is recommended that they are located far apart. This dilutes bossy animals across the feeders. If ewes are lambing, this will also reduce the number of sheep in an area and limit mismothering and lamb pinching.

CAN I GET PARTS FOR MY FEEDER?

Yes, Advantage Feeders holds replacement parts for all feeders. Contact Advantage Feeders directly for more information or to order.

ONLINE VIDEOS

Our standard operating procedures are also available to view online in video format.

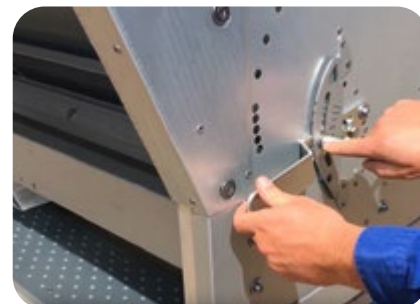
Visit www.advantagefeeders.com/resources or www.youtube.com/user/AdvantageFeeders/videos, to download.



Consumption guide



The Adjuster Guard



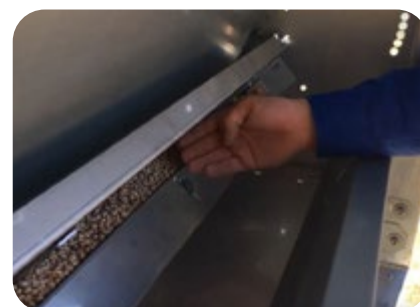
The Upper Adjuster



The Lower Adjuster



Inverting the Adjuster Guard



Training stock to the feeder



Tool housing



Adjuster Guard storage



Cleaning the feed access area



Adjusting the tine guides



Closing the lid



Alternate leg braces

Consumption Log

Flock/mob name		Feed type	
Qty of stock in flock/mob (d)			
Feeder number		Density* (b)	

[illegible]

How these calculations are performed

Volume = food level inspected against the volume sticker

$$\text{Kg Consumed} = ((a) - \text{current volume}) \times (b)$$
$$\text{Grams/head/day} = (c/\sqrt{d}) \times (a) \times 1000$$

Notes on the Calculating Feed Outflow SOP



ADVANTAGE FEEDERS

Consumption Log

Flock/mob name		Feed type	
Qty of stock in flock/mob (a)			
Feeder number		Density* (b)	

[illegible]

How these calculations are performed

Volume = food level inspected against the volume sticker

$$K_g \text{ Consumed} = ((a) - \text{current volume}) \times (b)$$
$$\text{Grams/head/day} = \left(\frac{c}{\sqrt{t}} \right) \times (a) \times 1000$$

Notice: See the Calculating Feed Outflow SOP



ADVANTAGE FEEDERS

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PLEASE NOTE: The consumption chart doesn't provide accurate consumption in all applications.

Key factors that impact consumption include other pasture and feed available, age of stock, paddock/field size, close access to water, density of feed, size of feeds, breed of stock, weather conditions, etc. Bearing these factors in mind, the consumption chart can provide a good place to start before calculating the actual average daily consumption and calibrating the adjusters to your unique situation.

CONSUMPTION GUIDE FOR MATURE CATTLE



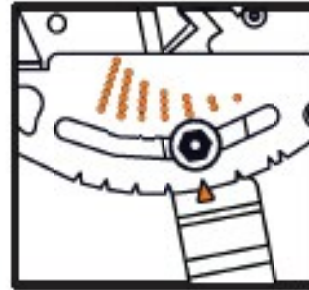
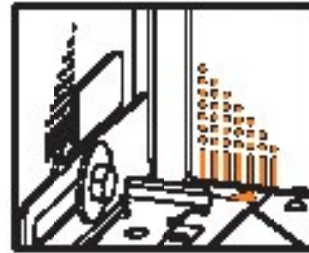
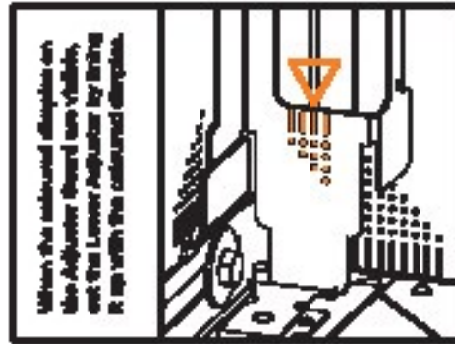
CONSUMPTION TABLE INFORMATION

- This table is a guide only and is no substitute for recording feed rations. It is recommended to repurchase adjusters based on your consumption records.
- This table is a guide for all cereal and small pelleted feeds equal to or less than 4,5mm or 3/16".
- As a general rule, stock can consume 3-5% of their body weight of a concentrated feed pellets several times per day, where the figure indicates kg (pounds) per cubic or kg (pounds) per day for sheep and goats. They may be able to consume more.
- Set the Upper Adjuster with the pointers on the Upper Adjuster Handles, but the Lower Adjuster with the pointers on the Adjuster Gauge.

GET UP INFORMATION AND WARNING

Full Set-Up Information and Manuals are available within the Standard Operating Procedures and User Guide. This can be downloaded from our website: www.adventsystems.com

1. Acidosis can be caused by over consumption of particular feeds. This can be prevented by feeding a small ration through the feeder.
2. Treating is most successful when stock receive a minimal amount on their first day out to the feeder. It is important to have the adjuster set at a minimum rather. The feed must be well-balanced and not cause acidosis.
3. In a paddock supplement situation, feeders are best positioned at least 400 metres or 1/4 of a mile from the water source to encourage pasture consumption.
4. The 2000H-D, 3000H-D, 4000H-D and 6000H-D feeders can be filled or added on once with 500kg (5000kg) of feed in 1. All other feeders can be filled or added on grass full.
5. The Adjuster Guard can be positioned in two ways. When using a clean sample of feed, position it so the coloured display are not showing. When using a dirty sample of feed, position it so the coloured displays are showing.
6. Too many stock per feeder may increase the risk of dry feeding. See the User Guide for recommended numbers of stock per feeder.
7. If stock are consuming a large portion of their diet from the feeder, do not allow the feeder to be completely emptied, as refilling can cause stock trampling.
8. Stock can undermine and when accessing the feeder. Prevent this by placing rubber bedding or other material where the stock stand.
9. Basic feed is easier to consume coloured feeds (e.g. haylage) compared to elongated feeds (grain, pellets). When reducing consumption of spherical feeders, we recommend mixing them with elongated feeds.
10. The feeder can tip in adverse wind events. This can be prevented by locking the feeder partially filled at all times.



**What are we in for the immediate future as far as get-
ting out of the current predicament?**

www.advantagefeeders.com



ADVANTAGE FEEDERS

FURTHER INFORMATION

AUSTRALIA

Website: www.advantagefeeders.com.au
Phone: 1300 88 15 75

NEW ZEALAND

Website: www.advantagefeeders.co.nz
Phone: 027 353 7274

GREAT BRITAIN

Website: www.advantagefeeders.co.uk
Phone: 08000 786 030

IRELAND

Website: www.advantagefeeders.ie
Phone: 1800 817 462

USA

Website: www.advantagefeeders.com
Phone: 1-800-806-0715

CANADA

Website: www.advantagefeeders.ca
Phone: 1-800-806-0715

DISCLAIMER:

The contents of this document are based on the experience of many Advantage Feeders customers and are not intended to take the place of advice received from farm consultants. Advantage Feeders is not liable for any incidental, direct, indirect, consequential or special damages of any kind, arising out of or in connection with the use of this document.

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