

Convincing argument for self-propelled diet feeder



◀ *Advantages of the Strautmann self-propelled diet feeder demonstrated to UK farmers and dealers include a smooth clamp face improving weather resistance.*

▶ *The target is perfectly mixed feed to prevent livestock sorting and ensure each animal receives the recommended constituents for optimum health and yield.*

Discharge options include front and rear cross conveyors, rear opening doors or a combination of doors and front conveyor.

Power is from a 6-cylinder 175hp John Deere engine driving through six load-sensing hydraulic circuits. Drive options are 2 or 4wd and front steering is standard with 4-wheel steering an upgrade option. Travel speed to 40kph is available with a pneumatic suspension package making it ideal for larger farms working across several locations, or with outlying cattle to feed.

Both models use Strautmann's unique mixing auger design incorporating stepped sections on the flutes which create a tumbling effect for thorough mixing.

Why use a mixer?

Hefin Richards of the Rumination Nutrition Consultancy is an independent nutrition consultant specialising mainly in dairy and beef and he emphasised that benefits of using a mixer to feed include:

- same feed value in every mouthful
 - Reduced selection of favourite constituents by livestock
 - A calmer herd
 - Better overall herd performance
- An explanation of how the cow's rumen functions included details of the pH value changing as the diet alternates between solids and liquids, and Hefin said the challenge is to maintain a pH value as even as possible.
- Feeding a Total Mixed Ration (TMR) helps as all feed ingredients are mixed together but a challenge is that some minor ingredients such as supplements are mixed with large quantities of bulk. A benefit is that less attractive but essential ingredients, for example minerals, can be masked by better tasting constituents.

Mixing mechanises the total feeding process and ensures a balanced diet is consumed. Correct mixing means animals can't select or reject ingredients.

Accurate weighing is essential and accurate chopping control is needed. Hefin explained that whereas most farmers appreciate that mowers

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Demonstration days at locations across the UK were organised by UK importer Opico, allowing dealers and potential customers to learn about advantages of accurate diet feeding of dairy cattle, and to see the Strautmann self-propelled machine in action.

David Williams was there.

Self-propelled diet feeders are nothing new on the continent, having been widely used for medium and larger herds for many years. In the UK, while trailed and mounted diet feeders are popular, self-propelled versions are still viewed by many as a luxury for only the largest herds. Opico began importing Strautmann trailed diet feeders in 2016, adding self-propelled versions last year and offers an attractive combined contract-hire and maintenance plan allowing farms to budget accurately and to encourage acceptance. The demonstration days included talks by livestock nutritionists explaining why self-propelled models not only save time, but can also contribute to stock health and profitability.

"We believe that within five years self-propelled diet feeders will represent a sizeable chunk of the UK market", explained Opico managing director James Woolway. "When one considers costs for operating tractor-powered models, including hidden expenses often overlooked, then herds from just 200 cows could justify the investment and increase profitability. Potential feed rates up to 350 cows per hour for the larger machines means they could cope with some of the largest UK herds optimising feed quality and improving yields, milk quality and profitability."

The SF's milling head is larger than the Sherpa's for faster filling with a bigger head diameter and reach is up to 5.1m. Automatic loading uses load sensing technology regulating head travel speed across the clamp face.

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added precisely but there is often the temptation to estimate the amount due to time pressures, rather than weighing them. Transporting to the mixer and weighing as they are added leads to errors as often, if the amount delivered is too little then the operator won't bother to return to the store to bring more. If too much has been brought then there is the tendency to just add it, and feed a little less the next day but potential affect on milk quality and yield is significant. "For a 300-head dairy herd the feed cost is typically £1,100-£1,200/day. If we apply £1,100 worth of fertiliser we consider it expensive and make sure it is applied accurately so why accept variation when feeding the herd?" Hefin questioned.

Self-propelled advantage

Apart from the smallest additives most feed ingredients are collected from the store by the self-propelled diet feeder and loaded direct into the hopper using the elevator. This means each ingredient is precisely weighed while being added and any excess is easily returned to the heap by reversing the elevator. Feed is being mixed constantly, as ingredients are added so they are thoroughly incorporated ensuring each mouthful includes the intended amount.

"Accuracy of 1-2 per cent is easily achieved using a self-propelled diet feeder", stated Hefin, "and working the clamp face evenly and leaving it smooth minimises the surface area reducing degradation."

Efficiency gains and savings

James Woolway said benefits go further than just feed quality. "Leaving the trailed diet feeder in one place and delivering ingredients to it can involve six to eight shuttles with a loader or handler delivering major constituents costing extra time and money. Only one journey of the self-propelled diet feeder to the clamp and each store is needed, saving time, fuel and tyre wear. Manoeuvring in confined areas is also easier than for a trailed machine and for older set ups where space can be especially limited the 4-wheel steer option improves manoeuvrability even further."

Fuel and labour savings result from using just one powered machine rather than requiring a small fleet for feeding. "Most farms use a sizeable tractor driving the mixer wagon, parked in one location to allow constant PTO speed, while a tractor

persuade others to follow suit.

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and loader, or telescopic handler shuttles back and forth fetching and loading the ingredients", he said. "The self-propelled diet feeder mixes constantly as it travels to load each ingredient so it always operates efficiently and only one operator is needed."

This argument is backed up by case study results from a 720-cow unit on which time spent using a tractor-drawn feeder and telescopic loader was 7hrs, whereas one person using the Strautmann self-propelled machine completed the same task in just 5hrs.

Annual cost comparison ignoring fuel use revealed the Strautmann cost £43,080/year and the trailed system was cheaper at £36,250, but as soon as fuel figures were included for the tractor and handler the self-propelled was cheaper at £54,249, compared with the tractor-based system at £57,359.

Adding labour made the self-propelled advantage even greater, demonstrating a saving of approximately £10,000 against the trailed system.

Overall costs for the trailed feeder were £90,574, against the self-propelled at £77,974, and this is without considering additional benefits of potential higher milk yield through improved clamp management and consistent feed quality.

The farmers attended with G Richardson & Son Agri Engineering, based in Cheshire whose main franchises are Strautmann and NC Engineering. "Self-propelled feeders offer advantages for our customers including time savings with one person remaining in one machine throughout loading, mixing and feeding," explained sales specialist Ed Richardson.

Pictured (l-r) Ed Richardson, Oliver and Joseph Williams.

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Oswestry, Shropshire-based dealer HJR Agri Ltd has sold Strautmann diet feeders for more than 10 years. A main dealer for McCormick tractors along with Pottinger and Marshall, managing director Terry Hughes explained that Strautmann is considered very reliable with lower running costs than cheaper competitor machines. "We have found that customers moving from other brands to use Strautmann seldom move away again."

Terry said he has potential customers for the self-propelled version. "Labour saving is significant and one man and one machine for feeding is an advantage. We know Opico's reputation for service so are very pleased it has become Strautmann's official importer. The contract-hire deal makes sense and we feel that when self-propelled models are updated in five years or so, they will have a ready market with smaller herds. Demand will increase."

Terry is pictured (left) with Opico area sales manager Nick Rider and sales specialist Rob Owen.



Oliver and Joseph Williams of RA Williams, based at Winehill near Crewe were interested to see the diet feeder in action. With their father Richard they have a 450-cow dairy herd and say tyre wear on a telescopic handler used to load the feeder wagon is a significant cost. "We use a trailed Strautmann which is very good, but loading it is time-consuming. A big advantage of the self-propelled's loading system is the tidy clamp face which minimises silage waste", added Joseph. "It's been interesting seeing the machine at work," said Richard. "We always learn something at this sort of event."

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Opico Strautmann specialist David Mein (left) is pictured with livestock nutrition specialist Hefin Richards and Opico area sales manager Nick Rider.