MACHINE
GRASS TECH GRAZER GT120

The simple solution

A switch to zero-grazing saw a father and son team select a Grass Tech GT120. *FMJ* went to the farm to find out how the new machine and system are working for the farm

WORDS AND IMAGES **KEN TOPHAM**

The dairy industry has continued to see significant change over recent years, driving some producers out of the sector and forcing those left to expand their herds or make their business as efficient as possible. If farmers are already near capacity with head count, making more of what you have is the key. Neil Young and his father David chose the efficiency route, purchasing an Irish-made Grass Technology GT120 zero-grazer four years ago.

The Grass Tech machine model designation provides an approximate guide to head of animals per 12 hours. The 120 measures 27m³ in dimensions, but grass type and conditions can make actual volume vary massively.

Its simplicity and solid engineering have proved themselves with the Youngs and the fully mechanical operation is praised by Neil as being reliable. It's important on any machine but especially on one that you rely on every day from March through until the end of October to give your cows the feed they need.

Profile

T. Young & Partners

Machine Grass Tech Grazer GT120

Year 2013

Owned for Four years

Operators Neil and David Young

Location Saintfield, Co. Down, Northern Ireland

Farm Dairy

Right: Neil Young is an advocate of zero-grazing

Simple mower

From the front the Grass Tech has an Italian-made Galfre mower unit attached via linkage to the chassis, carried at the front with adjustable springs to set the desired float pressure. The 2.1m twin-drum mower has four blades per side, carried on Hardox bottom saucers for longevity, which is essentially the Galfre front mower.

"The mower is pretty simple and there's not much to go wrong. The blades need changing or sharpening once a month roughly but regular checks keep everything else in order," Neil explains.

Following the mower is the elevator. Unlike forage wagons that push and compress the crop from the bottom up via a rotor, this machine collects the crop from the mower and the chain elevator drops the crop into the transport body from two thirds of the way up its sides. Grass is delivered to the cows in as close to field conditions,

Above right: Green stubble is Neil's key to quick pasture recovery

Right: Grass is fed into the wagon using a chain elevator up front

Above: Munching without waste, the load disappears through the day. Neil typically feeds around lunchtime

Right: The stepped axle is an optional extra and the footprint just overlaps for users concerned with compaction

replicating the ideal situation.

"The elevator works very well and you can tell when the crop needs moving back when you can see it heaping at the front. We don't need to overload it as we usually need two smaller loads per day anyway," Neil says of the shear-bolt protected elevator. "We have only ever broken one bolt but we couldn't find anything - could have been a fallen branch or a stone," he adds.

Cables and levers

The bed chains are stepped back by the operator pulling a lever and the only electrical components on this model are the road lights. Everything else is operated by Bowden cables and levers. "Its simplicity is great and if something isn't working you don't have to look too hard, as it's going to be something obvious," Neil explains.

Although the Youngs have their New Holland TM150 on the wagon, the power requirement is a modest 100hp. "The TM makes it more comfortable on hills and you're not damaging the pasture by slipping and causing soil contamination," Neil says.

Part of the reason Neil wanted to go down the zero-grazing route was to increase the efficiency of the herd without dramatically increasing acres. The other reason was geography. "We're locked in around the farm and there's nowhere to

Below: The loading elevator is a very reliable system for filling the wagon

The day's grass ration is unloaded in about half a minute

The Italian-made Galfre mower is carried by springs and the simple engineering behind the design is liked by the Youngs

Right: Neil is out with the zero-grazer every day from March until the end of October

Tech specs

Grass Tech Grazer GT120

Cutting width 2.1m
Blades per drum 4
Power requirement 100hp
Length 8.64m
Width 2.25m
Height 3.2m
Weight (full) 8.4t

Above: Neil pushes the grass to the feed barrier with a loader-mounted wedge

expand, so then you have to walk the cows. This way all of our animals are around the farm. The high yielders are in all of the time, and the low yielders are out during the day and the rest is young stock," he adds.

The reason a direct-cut machine was chosen is due in part to the geography also, as Neil didn't want a mower sticking out in front of the tractor when pulling out on to the road. "The extra length behind is manageable. You can steer with the drawbar and if a gate is tight it's safer than having that extra length out front," he explains.

Neil has his pastures on a 21- to 27-day rotation, using slurry and nitrogen to encourage growth. "I set out my zero-grazing platform at the start of the year," he says. "I harvest the silage fields until the end of March, then that land is fertilised and applied with slurry, and not cut until the first week in May for the clamp. We have our parlour set up so that the washings go into our slurry store. This gives us quite thin slurry, which is ideal as it soaks in quickly and only needs a bit of rain to wash it off the grass."

Wide footprint

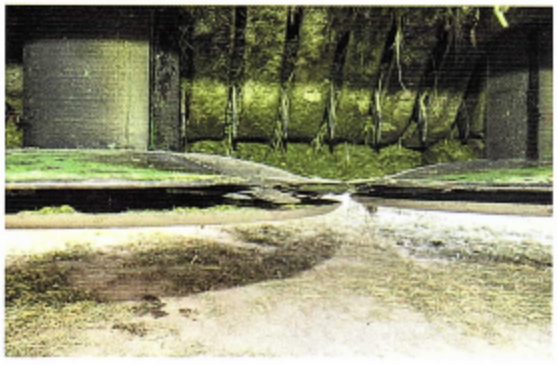
Harvesting early spring growth means you need to tread lightly and Neil and David chose the offset wheel option on their grazer, which can be added on request. The rocking bogies are stepped to leave a wide footprint with the wheels just overlapping.

"We have some hilly land and the axle set-up doesn't affect the stability dramatically if you're careful. As long as you don't lift the mower up when you're turning common sense will keep it upright, and the body is very low as is the centre of gravity," Neil explains.

To further spread the weight they chose to purchase new rear rims for their TM150 and buy Michelin XeoBib 710mm-wide tyres. "The wide tyres do help but we managed the first two

Below: 710mm wide Michelin XeoBib tyres help to spread the machine's weight

Above: The mower drums throw the grass back to the elevator



Right: The Grass Tech delivers the crop to the cows in fresh condition

seasons without them, you just have to know your land. If you have wet fields, just stay off them. You have to have a fluid approach and if the weather turns you have to be a few moves ahead, like you would if the cows were grazing," Neil comments.

Cutting around 18 to 19 acres a week when the grass is in its maximum growth cycle is average. "You have to keep an eye on things and if the grass really gets going that can drop to 11 acres. That's when you have to take action and mow a few acres to bale. Keeping the grass in its prime is important, as if the stems are white the protein is dropping."

Leaving stubble green is the aim for Neil, who says the feed value is in the leaves. Cutting too low has a similar effect to letting the crop get overgrown, which means you're not giving the best to the cow, and the crop takes longer to recover too.

Keep it simple

The Youngs chose not to have a cross conveyor on their machine, although initially Neil thought it would be beneficial. "I wanted to add it but it was extra cost, more moving parts and more weight. We have to push the feed back to the cows anyway and we use a silage pusher from Moneycarrie Engineering. It works well on our loader tractor.

"The cows are eating 4kg of clamp silage and 18kg per day from the zero-grazer, which includes the best estimate for the low yielders that are out during the day. They're also getting meal in the parlour. We're harvesting 2.5t to 2.8t per hectare in peak growing," Neil says.

The Youngs' herd is made up of Holsteins – 50 high yielders and over 50 lows, which have a yearly average milk yield of 26.2 litres per cow a day.

While aiming to reach each cow's potential, Neil and his father are pleased with their Grass Tech GT120 and the back-up they receive. The well-engineered machine suits their system and being able to measure their inputs more accurately helps to maximise efficiency, the key to any business. FMJ

Neil takes two smaller loads per day, rather than overloading the machine

"If the weather turns you have to be a few moves ahead, like you would if the cows were grazing"