



Quality silage making in Cornwall:

Cornish contractor competes on quality

A silage consolidation roller is the latest machine to join a Cornish contractor's fleet – to assist in his quest to use 'quality' to separate his services from those offered by his competitors. Mick Roberts reports

In the fiercely competitive world of contract silage making, Ian Maddaver, of IDM Services SW, based nr Liskeard, Cornwall, has decided to focus on offering and promoting a quality service rather than battling to compete with other contractors on price. To achieve this, he invests in equipment and technology he feels increases quality and efficiency, adds value to his operation and delivers benefits to customers to justify his costs.

"We don't offer a 'cheap' service," he says. "Instead we provide a service that is sustainable, for both us and our customers. I think they now accept they need to pay a bit more to ensure that we, as contractors, can survive and also continue to invest. We value that commitment, and in return our aim is to provide the best service using the latest technology that also benefits their businesses."

"We have, I admit, lost customers along the way, who may not need or want to pay for the extra services we offer. But that has been more than compensated for by retaining and gaining customers that do see the value in what we're doing. Dairy farming in recent years has become a lot more professional. My theory is that I don't want to speak to my customers just a week before silage-making, but work with them through the year, understand their business needs and tailor my services to match."

In 2010 Mr Maddaver bought one of the first new generation Claas Jaguar 940 foragers complete with Quantimeter yield monitoring, telemetry and a tyre pressure inflation



Ian Maddaver (left), of IDM Services SW, and James Coumbe, Farms Director at Duchy College, Cornwall, discuss grass silage quality following clamp consolidation by the SilaPactor.

kit. "This provides more information for us and for our farming customers to work with. Like us, they know the key to any successful business is information – the more you have, the better decisions you can make," explains Mr Maddaver.

His latest acquisition – the SilaPactor silage consolidation roller – is, however, at the polar opposite end of the technology spectrum to precision farming. But it is something he again feels helps to set him apart from his competitors by improving forage quality for his customers.

"I saw the SilaPactor at the Dairy Event in 2011 and understood immediately the benefits it could offer me and my customers. It was quite a high capital cost – £6,500 – but we can charge a premium for running the press. It replaces one tractor and man on the clamp that in some cases we were previously employing just for rolling, saving £30/hr," he explains.

The SilaPactor, sold in the UK by Kelvin Cave, is as simple as it is effective, he adds. It is essentially a 3m roller that is mounted on to the rear linkage on the buck-raking

tractor. Weighing in at 4t, it is fitted with 11 steel ring train wheels, which roll the clamp. Its use is said to increase dry matter (DM) compaction density by up to 40%, compared with conventional tractor rolling.

The manufacturer says farmers in the UK are currently achieving a typical silage density of about 180kg/DM/m³. Employing the SilaPactor will boost this to 320kg/DM/m³ and, because it is 3m wide, it can work right up to the edges of the clamp without the risk of the tractor becoming trapped against the sides. It also acts as a very effective rear counter-weight.

The press is now mounted on IDM's John Deere 7530 buck-raking tractor and has, as Mr Maddever anticipated, sped up the operation, meaning that he doesn't have to provide a separate rolling tractor and resulting in much better clamp consolidation than before.

Despite the obvious need for speed when clamping forage, he says he would prefer the trailers to wait rather than rush the consolidation process. "We normally aim to spread the material in about 200-300mm layers across the surface. This season the one tractor kept up with the buck-raking and rolling and never held up the trailers," he comments.

In a more 'normal' season, adds Mr Maddever, when ensiling higher DM forages there are really only two ways to achieve better consolidation – chop it shorter or employ a compactor. "But the difficulty is that short-chopped material is not good for the cows. It's far better to leave it longer to improve digestion, which is where the SilaPactor will provide big benefits. This season's low DM grass was chopped to about 22-25mm, with no problems with density in the clamp."



One of the few bright days for silaging in Cornwall in 2012 saw the students and IDM Services harvest the Duchy College's grass, which is now ensiled with a dry matter of about 26%.



The buck-raking tractor consolidates the clamp with a rear-mounted SilaPactor. This saves the £30/hr cost of one tractor and man previously employed purely for rolling.



The 3m wide SilaPactor can work right up to the clamp sides, which helps reduce the risk of the tractor becoming trapped against the walls.

Contractor data

IDM Services SW silaging fleet

Forager:

Claas Jaguar 940, new generation with Quantimeter yield monitoring, tyre inflation system and telemetry. Claas Orbis 600, eight-row maize header and Claas Direct Disc wholecrop header

Tractors:

195hp John Deere 7430 (mowing) with Patchwork BlackBox Go guidance
205hp John Deere 7530 (buck-rake)
Other main tractors are supplied by full-time owner drivers who commit to IDM for the full season

Forage equipment:

3.2m Vicon 632FT front-mounted mower conditioner
3.2m Vicon 632T rear-mounted mower conditioner
7.6m Vicon Fanex 763 Pro six-rotor tedder
12.5m Claas Liner 3500 four-rotor rake
3m Kelvin Cave SilaPactor clamp consolidation roller

Trailers:

3 x Redrock 14t trailers, one equipped with weigher

Out in the fields most of the equipment that the silaging team uses is supplied by the dealership arm of IDM Services SW. This dovetails in with the contracting, explains Mr Maddever, who has a policy to operate the equipment he sells (see box). "It shows we have confidence in the machines, offers easy access to demonstrators and provides a stock of good used equipment, which in turn keeps our own machinery fleet up to date," he adds.

A pair of 3.2m wide Vicon mower conditioners – a 623FT up front with a 632T mounted behind – knocks down the grass before tedding with a six-rotor Vicon Fanex 763 Pro. Vicon doesn't sell the type of rake he needs in the UK, so he runs a 12.5m wide Claas Liner 3500 ahead of the forager to boost output and reduce wheelmarks in customers' fields.

To further protect the soil he has equipped the Claas Jaguar 940 forager with an on-board tyre inflation system, so that he can



IDM Services' Claas Jaguar 940 forager is equipped with yield metering, telemetry and a tyre inflation system for harvesting grass, maize and whole-crop cereals.



One of IDM's 14t trailers is equipped with a strain-gauge weigher. This provides data to help calibrate the forager's yield monitor.

reduce the tyre pressure in the fields and then pump them back up for transport. The Jaguar, which is fitted with telemetry, was also one of the first to be equipped with a pre-production version of Quantimeter yield monitoring, which Mr Maddever is keen to promote as part of his quality service. "While it works well for field mapping and recording fresh tonnage," he says, "it still

needs to improve the accuracy of its dry matter readings. I appreciate that the technology is very new and I am working closely with Claas, but knowing DM at harvest will provide customers with a huge benefit. Hopefully it will be sorted for the coming season."

The forager unloads into a fleet of 14t Redrock trailers, another of IDM's franchises. One of the trailers is equipped with a strain-gauge, on-board weighing system, which Mr Maddever has helped to develop with the firm. This is used to calibrate the forager's Quantimeter weighing system. Every time this trailer is being loaded, the



The consolidation roller is particularly effective when working in lighter, less dense maize, helping to cut waste.

forager driver logs this on the CEBIS terminal and stops when it's full. The actual measured weight is then keyed into the terminal. "This maintains accuracy and means we can provide customers with precise details of exactly how much is in their clamps. We have cross-checked the trailer's system with a public weighbridge and it has proven to be very, very precise.

Business background

IDM Services runs a contracting business from its base near Liskeard covering Cornwall and Devon, specialising in forage harvesting grass, maize and whole-crop. It also carries out a range of other work including cultivations, crop establishment, fertiliser spreading and spraying.

As well as contracting, IDM Services also runs a farm machinery dealership from the same base. This began with buying and selling used machinery and general ag engineering, as well as initially specialising in selling new and used sprayers. It has now transformed, fairly quickly, into also offering a wide range of equipment from several well-known brands.

The Cornish firm has recently taken on selling Maschio kit, which joins the existing franchises that IDM holds for Vicon, Redrock, Spread-A-Bale, Knight, Team Sprayers and Patchwork Technology. IDM's workshop also services/repairs a broad range of tractors and materials handlers as well as being an NSTS sprayer test centre.

"We now map everything and supply maps to the customers. But we are not, as yet, charging for the service. When we sort out the DM weight monitoring and other aspects I do see that it will add value for both us and our customers. It could also in the future link into other contracting jobs – for example, variable fertiliser spreading," explains Mr Maddever.

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Roller helps pack in the forage

James Coumbe is Farms Director at the Duchy College, Callington, Cornwall. He has the unenviable task of trying to balance educational needs of the students with running a commercially viable enterprise. Students make some of the silage for the college's herd of 270 Holstein-Friesian cows, but Mr Coumbe also calls in Ian Maddever to help out.

"We are yielding about 8,000 litres/cow and aim for 3,000 litres to come from forage. I like to make most of the forages, but in 2011 the farm had to buy in up to 700t. The cost of haulage and inconsistency and guarantee of feed supply meant that in 2012 I increased the first cut by 50% more than the year before," he says.

While the farm made about two thirds of the first cut in 2012, IDM made the remainder. "I knew Ian was offering the use of the SilaPactor, and for us the first advantage is that by consolidating material



James Coumbe, Farms Director at Duchy College, says consolidating the clamp with the roller has packed more into the same space and helped to cut waste.

not making trailers wait to tip. "Consolidation is key, although with wet forage there's a danger of over-compacting the material. There's a very fine line between removing the air and crushing the material; and in drier, lighter forages I can see that the SilaPactor will be of even more benefit."

The samples of the grass silage in the clamp show it is about 26% dry matter, with which he is satisfied, considering the conditions in which the crop was ensiled. There is very little visible waste, with virtually no mouldy material on the top or shoulders of the clamp.

A standard 'cling film' type material, covers the clamp and sucks down onto the clamp surface as soon as it is laid out, excluding air and creating a better seal. Standard black, 1-200 micron silage plastic is placed on top for protection, and at Duchy College this is



Employing the compaction roller, in conjunction with using silage 'cling film' covered with black plastic, has resulted in very little waste on top of the clamp at Duchy College.

more densely we were able to fit more forage into the existing clamp space. We're developing the dairy unit, which includes erecting new buildings and installing new clamps, but last year we needed to pack in as much as possible into the limited space. At the same time I knew the better consolidation would help reduce dry matter losses and cut waste," he adds.

While the wet weather last spring was not conducive to making high quality, high DM material, Mr Coumbe is satisfied with the results in the clamp. Most of the first cut was made in a single day/night with the SilaPactor improving consolidation while

weighted down by special thin sand bags and tyres.

Mr Maddever also created yield maps for the farm, which it intends to employ not only for its management decisions, but also to study with the students. The fresh matter yield means Mr Coumbe knows immediately the tonnage in the clamps, and he agrees with the contractor – that knowing the DM at the same time will be an enormous advance. In the meantime he is using the fresh yield information to direct him to areas where there could be issues, such as ground compaction or those areas that might benefit from a reseed.

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