

Special print: Field test Krone Comprima X-treme

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A strong tradition

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The challenge:
small and undulating fields



A strong tradition

The wet and mild climate in Ireland offers best conditions for growing forage, but the high yields and sloping fields strewn with stones place a great strain on operators and machines.

We went to the island to find out how the Krone Comprima X-treme is doing in these conditions.

By Karsten Schranz

Great expectations rest on the Irish farmers after the country – which some years ago suffered enormously in the financial crisis – developed a plan to boost the agricultural sector of its economy. The Food Harvest 2020 initiative launched by the Ministry for Agriculture aims at raising exports of agricultural produce to 12 billion euros by 2020, with milk production increasing by 50 percent to an annual 7.4 billion euros by 2020.

So the country is going back to its roots and seeing agriculture as the backbone of its economy which underwent a major structural change

in the nineteen eighties. Should the Ministry of Agriculture and many farmers have their way, it will soon be the backbone again.

One of these farmers is Dick Kissane who runs his own farm and a contracting business near Tralee in the southwest of the country. "Our conditions here are ideal for making top quality silage. The climate is temperate and there is plenty of rain, so the grass grows quickly. You can literally hear it grow," says Dick. „But, we also have our challenges," he continues, pointing to the undulating countryside which is anything but flat. Consequently, strong rainfall constantly washes up big stones on the slopes,

the smaller specimens of which could be described as fist sized – surely not the kind of material the pick-up would want to deal with. And of course, the steep hills necessitate a sufficiently strong tractor to pull the baler. And then the high-power combination needs to be nimble enough to negotiate the narrow gateways to the fields which are generally surrounded by hedges or metal fences.

Silage bales are by themselves a challenge for balers and all their components, from the pick-up, rotor and cutting system to bearings and frames. The low dry matter content levels and heavy swaths encountered really take it

PHOTOS: SCHRANZ



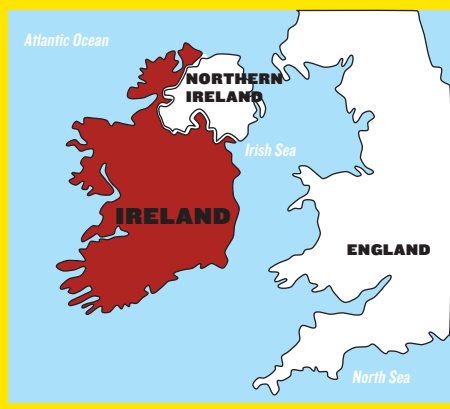
High yields: The mild climate with plenty of rain throughout the year makes the grass grow quickly.

About Ireland

Ireland is 70,000km² in size and has 4.6 million inhabitants, one third of whom live in and near the capital Dublin in the east of the country.

The Irish climate is ideal for growing forage. The temperatures do not vary much, which is down to the Gulf Stream. The average temperature is 9.2°C and it is almost always raining, especially in winter.

There are 120,000 farms in Ireland, most of which are livestock fattening and dairy farms. Agriculture accounts for 5% of the country's gross national product.



out of the hardware. Yet there are a few things Irish contractors have in common with German contractors: "Downtime due to machine failure is unacceptable," explains Dick. "Our harvest windows are very small and we simply must be able to rely 100% on the machine."

A reliable machine was found in the Krone product range. So Dick has been using a Comprima X-treme CF-155 XC since 2014: "This is the perfect machine for me and for the conditions we have here!" This comes as no surprise because Comprima X-treme is a bespoke development for exactly such arduous conditions as those prevailing in Ireland. For this purpose,

the developers took many components from the Comprima models and reinforced them for the x-treme models.

VARIABLE COMBINATION

To respond to customer wishes in timely and efficient fashion, Dick opted for the Comprima CF 155 XC X-treme with a semi-variable baling chamber, which offers bale diameters between 1.35m and 1.5m. It is this flexibility together with the high bale density which is normally available from fixed-chamber models only. And this is what clinched the purchase decision. The bale size is adjusted in 5cm steps by refitting

Quality control: High-quality forage is of paramount importance, and customers check it out on site.



two pins. The pick-up, too, was reinforced. It measures 2.15m in width to DIN standards, is camless, has 6mm diameter tines and revolves at a 34% higher speed. Besides, the crop press roller and large-gauge wheels are standard specifications. Its working depth is adjusted conveniently without tools – a great boon in these hilly fields. Pick-up stability was enhanced by fitting 40mm diameter bearings. So, the unit lifts clear out of work for headland turns. The driveline is protected by a clutch and the chains are tensioned automatically. When we were harvesting wet crop, the unit performed brilliantly, raking the ground cleanly even at high forward speeds and in rough terrain. From the pick-up, the crop flows to the cutting rotor, which also has to be able to cope with the heavy silage. To do that, it revolves at a 15% higher



speed to handle the material without hiccups. It is available with a choice of 17 or 26 knives. Both rotor options are 53cm in diameter and specced with three tines per star. The 17-knife rotor has its knives spaced at 64mm (or 128mm when only half the number of knives are in cutting position). The tines are arranged in a helix,

Although fields are typically small in Ireland, agriculture contributes a fair portion to the country's gross product.

which is to ensure firm edges. The operator can also engage the knives from the cab as an option. He can also remove any blockages very quickly by lowering the floor under the knives



so the material flows directly into the baling chamber and is not dropped on the ground.

PLENTY OF GRIP

The NovoGrip belt, which rolls and compresses the material inside the Comprima balers, was also modified to suit heavy-duty applications.

The endless belt is tensioned as long as the chamber is not filled with material. As soon as the material is flowing in, it starts rolling. Compressing, too, starts at an early stage, which is the secret behind the heavy bales that roll out of a fixed-chamber baler. As the bale is growing in size, belt tension is progressively released,

1 Most fields are surrounded by hedges and walls that make access to the field difficult at times

2 Stones are a constant challenge in forage harvesting. Rain washes them up to the surface.

User testimonial: Dick Kissane, farmer and contractor from Tralee, Ireland



„RELIABILITY IS EVERYTHING“

“The conditions in our region are optimal for producing top-quality silage,” explains Dick. “The mild but wet climate and the fertile soils make for high yields. But the flipside is that we can’t afford any downtime at all, because it may rain any moment. I have to go out early and make sure I get my customers’ needs attended to swiftly.” I have been using a Krone Comprima X-treme CF 155 XC since 2014. Weighing in at 7.2 tonnes, it may be a heavy thing but runs on tandem axles which are standard spec and so I can go into boggy terrain no problem, especially as it is clad with 620/40 R 22.5 tyres.“

The high weight of Comprima X-treme is attributed to its heavy-duty design, which means many components were strengthened. “This is very important in the conditions we have here. Our time windows are so narrow and we work for many small farms and we have to serve them all well. We can’t afford any downtime. Every customer wants to be served first. Which is of course not possible, but you have to serve everybody fast and reliably. The pick-up and its clean work are important here. It has stronger tines and a beefy crop press roller that picks up thick swaths very effectively.“

What is also important for us is the way the bale is transferred from the baling chamber to the wrapping table – because most of the time we are baling in hilly terrain. It is a great aggravation if the bale does not drop out of the chamber dependably, because it means we are losing a lot of time and our daily output will clearly drop.“

There is one detail Dick would appreciate having on his Comprima: “When I bought the baler wrapper, I did not order the peripheral film wrapping system, but I did later. I am really happy you can retrofit that.“



There has to be plenty of horsepower hitched to the baler wrapper to handle hilly land.

because the growing bale presses against the tensioning springs that control the NovoGrip belt, shortening the belt's circumference. All components that make up the X-treme chamber are stronger than on regular Comprima models so they are able to cope with those high bale densities.

The driveline, too, was beefed up from 1¼ inches to 1½ inches. Larger sprockets and pulleys ensure quiet running. Dick can't remember any problems with bales failing to roll; and when we were operating the machine it was always on top of things, even when huge masses of crop were entering the machine.

As for wrapping, buyers can choose between net and film wrap. Our Irish machine had the net wrap system which covers the bale edges courtesy of stretchers, and we were happy with it. But customers can also switch to film wrap which makes film disposal easy. The net or film roll is arranged on the machine's front end where the operator can watch it.

The Krone engineers also modified the rear door which is locked mechanically now – a failsafe solution that is also gentle on the components. To ensure the rear door closes effectively also on slopes, it is guided by two plastic rollers on either side and cushioned by a rubber stop on the frame.



Technical Data

Bale chamber: semi-variable (1.25m to 1.5m in 5cm increments), 1.20 width, endless NovoGrip belt, bale density increases as bale diameter grows, mechanical lock on rear door which is guided by side rollers

Pick-up: camless, five rows, 2.15m width to DIN, standard crop press roller and lateral gauge wheels, 6mm tines

Cutting rotor: 53cm diameter, 17 or 26 knives, minimal 64mm or 42mm spacings, engaged manually in two sets, hydraulic knife control is an option, hydraulic floor

Wrapping: standard net wrap, optional film wrap

Weight: 7,200kg (baler wrapper)

Price excl. VAT: €87,340 for base specification model

The tandem axles are standard spec to distribute the weight evenly.

The design of the bale chamber which tilts slightly forward has two benefits: it eases and speeds up the transfer and makes for a more compact build – a huge advantage in view of those narrow gates.

The wrapping table at the rear is made up of chain elevators and turns the bale effectively. Two bobbins keep the bale in position when operating on slopes. The dispenser stretches 50mm and 750mm film. Twelve rolls can be stored on the machine. A good detail is the fact that the holder folds down for easy replacement. The compartment itself is isolated from dust and dirt.

The double arm wrapper orbits at a higher speed than on the regular Comprima models to deal with the high throughput. The dispenser can be set to either 50% or 70% as standard. The operator can set the number of wraps conveniently from the cab and monitor the progress on the screen.

Like many components, the wrapping table is driven hydraulically, courtesy of the on-board hydraulic system. The enclosed hydraulic system eliminates any risks of oil mixing and contaminating. This way, Comprima X-treme manages with only one single-acting spool (pick-up and hydraulic floor) and the 540rpm pto.



SWIFT BALE TRANSFER

Fast and efficient baling with the baler wrapper Comprima CF-155 XC X-treme takes a fast and also dependable bale transfer from the chamber to the wrapping table. The clever solution leaves the bale to roll onto the lowered table by its own weight. An additional arm is provided to ensure this is done effectively, even in hilly terrain. This arm lifts the bale so it rolls effectively on to the wrapping table.