



Strautmann Magnon CFS430 DO forage wagon:

The cherry on top

Not only has the Magnon forage wagon got a moving front, but, to make it stand out from the crowd, Strautmann has used plastic tines on the pick-up. We test its crop gathering and packing ability.

There's a developing market for large capacity forage wagons that can give a shorter crop chop length and run on ground-friendly big rubber. And a lot of these are using a moving front to boost capacity. Strautmann has the Magnon, a new wagon design that was unveiled in 2019. Yet it isn't just the moving headboard that's different on the Magnon; it was presented with the new Flex-Load pick-up with plastic tines. Smooth running, less wear and better ground hugging are what the sales rep will promise. During our test, the smooth running and super easy tine changes really stood out. In normal conditions, their crop-raking ability is pretty

similar to a pick-up's with steel tines. In very short grass, such as late in the season, a thin steel tine did have a slight advantage in crop gathering. As with many other wagons of this size, the pick-up unit is hydraulically powered with adjustable tine speed to match the conditions. In first cut, the rotor seemed to be the limiting factor, the pick-up shovelling enough forage into the wagon's mouth. Even when the cam clutch on the rotor gearbox triggers, the tines keep firing in grass until there is no longer sufficient power and the oil escapes via the protecting pressure-relief valve. In our opinion, when the rotor chokes, the

KEEPING IT BRIEF

The pick-up with its plastic tines impressed with its smooth running and low maintenance.

Strautmann reworked the mountings of the gauge wheels, including the rear roller.

Easy to control using a compatible ISObus screen.

pick-up should stop automatically. This would make it much easier to get the rotor back up and running. Also, we think the drawbar could extend directly to increase the crop intake opening, but this is a minor detail.

Turbo loading

Another unique feature on the Strautmann wagon is its long-established Continuous Flow System (CFS). Positioned behind the pick-up, a steel roller is tasked with spreading out the grass mat uniformly across the full width of

A self-loading and forage-filled wagon



the rotor. It's a design that works effectively and reduces grass lumps, helping take the peak loads away from the driveline. The second important point for the accelerator (Strautmann is one of the few wagon makers not using a sloped front floor section) is that the pick-up works at a favourable angle to the ground at a shallow setting. We did find that the struts connecting the ground roller behind the pick-up to the gauge wheels were not quite strong enough, and they bent several times during the test when

working on rough ground. Strautmann says it has now beefed up the supports so this shouldn't be an issue on future machines.

Slim drawbar

The feed rotor measures 2.10m across and is driven directly by the 1,000 speed tractor pto via a planetary gear in the rotor. As on the Giga (and the Terra Vitesse which is replaced by the Magnon), rather than having a long pto shaft going from the tractor back to a central gearbox, a bracket with a carrier bearing is mounted on the drawbar, shortening the pto shaft, and it runs very smoothly – great. The super slim drawbar and good hose holder get top marks.

The active steering unit is sourced from BPW, allowing the 30.5in tyres to turn up to 18°, making the 38m³ wagon (40m³ without the dosing rotors) very manoeuvrable – not just on the road but also when getting in and out of relatively narrow gateways. On tarmac the road noise of the big tyres is quite noticeable. These taller tyres also restrict the height of the drawbar, which is already in a very low position when loading.

200hp or more

If you want to make the most of the Magnon, then it is going to need 200hp or more up front. Our 250hp John Deere 6250R was a good match, running the wagon to its limit in first cut.

Our testers really liked the control box layout, which is split into loading, road and unloading and another road menu. The automatic lock on the CFS's steering axle, with two different audible alarms for opening and locking, is a good idea. We operated the wagon through the tractor's ISObus screen, and the set-up worked really well.

Sensible automatic functions such as setting the height of the drawbar, good sequence switching when unloading or even simple display warnings, illustrate how the software



Plastic tines on the Flex-Load pick-up make it unique. The tines taper from 20mm to about 10mm thick, rake very quietly and can be quickly changed by opening the clamping screws behind the deflector plate.

The mechanically powered CFS roller bridges the gap between the pick-up and the higher mounted rotor. The Magnon doesn't have a sloped floor so there is more room underneath for changing the knives.

TEST ASSESSMENT	
TECHNICAL	
Stand	+
Articulated drawbar	+
Pick-up unit	+
Crop feed	++
Chain-and-slat floor	⊖
Discharge rollers	++
Drives	+
Use and operation	+
HANDLING/OPERATION	
Loading capacity	+
Automatic loading system	⊖
Quality of cut	+
Changing blades	+
Utilisation of the load area	+
Overload protection	++
Unloading	+
GENERAL	
Ride quality	⊖
Manoeuvrability	++
Tractor power	+
Build quality	+
Paintwork	+

Grading: ++ = very good; + = good; ⊖ = average; ⊖ = below average; ⊖⊖ = poor



🔍 PRACTICAL TEST

The geometry of the gauge wheel linkage and the strut that connects the wheels with the rear roller bent several times during our test, but they've since been beefed up.



Operating the CFS wagon through the ISOBus screen in our John Deere was flawless. Operation is perfected by function keys on the joystick, although the icon symbols could be clearer.

MEASUREMENTS

PICK-UP

Width	2.04m (tine to tine)
Gauge wheels	Two 16 x 6.50-8
Number of tines	38 x 6
Tine length	11cm/1cm thick

ROTOR/CUTTING UNIT

Width	Rotor 2.10m, cutting width 1.70m
No. of tine rows	Eight, helical arrangement
Tine width	14mm
Strippers	16mm
Number/spacing of knives	48/35mm

MOVING FLOOR

Number/size of chains	Four/link chains 65/44mm
No. of slats	44
Advancing speed	Max 16m/min

DIMENSIONS

Load area (L/W/H)	6.55m/2.40m/2.12m
Volume	38m ³ (with discharge rollers and headboard tilted forward)
Total load capacity (l/w/h)	9.90m/2.99m/4.00m
Tyres	Vredestein 800/45 R30.5

WEIGHTS

Kerb weight	11,930kg
...of which draw-bar load	2,770kg
Gross weight	19,340kg grass
...of which draw-bar load	3,920kg
Gross weight	27,140kg (maize)
Tongue load	4,340kg

programmers have worked with operators. For example, before switching over to the unloading menu, the user is asked whether the trailer cover has been opened.

A couple of areas for improvement. When using the Magnon for carting maize, we have to criticise the cover-folding system, which has vertical cylinders at the front; these are exposed to getting a thump off a tree branch. Also, the automatic loading system relies on a potentiometer on the folding headboard, which is old hat compared to rival wagons in this class. Other makers use torque sensors that allow you to tailor settings for different crop conditions.

The pivoting headboard is also a good feature for this size of machine. Not only does it help to reduce the overall length compared to a conventional fixed-front wagon, but it allows



The camera and LED lighting are two options that are well worth having.



variable compression when loading and faster clear-out at the clamp. The headboard pivots to the rear, but it should also be possible to override it manually, even in automatic mode.

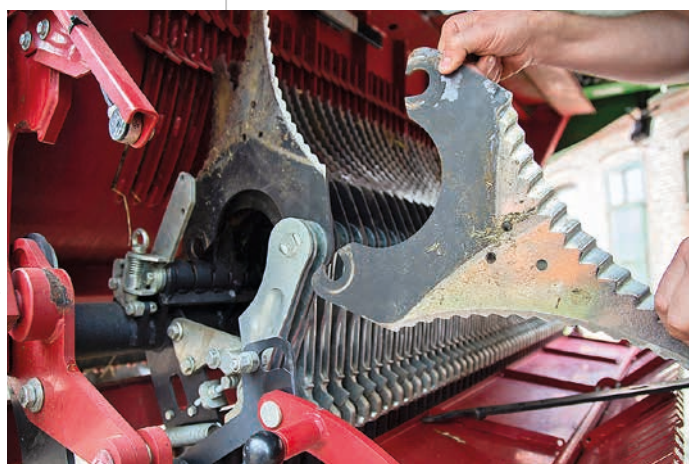
Slow chain-and-slat floor

The four floor chains boast a break force of 13t each. The optional three dosing rollers unload the crop in a tidy mat, while the two-speed hydraulic chain drive is a little slow – it should be quicker, especially for clear-out. When you're operating the wagon as a forage trailer, you can fit cover plates over the rotor to reduce the amount of crop left in the trailer.

How much?

In base spec a Magnon CFS430 is £140,539. Our test version was booted on 30.5-inch rubber, had additional lights and the crop covers, which bumped the price to £169,881.

We liked the durability and access to the knives. The 'Exact Cut' knives, which are reversible, make sense, especially for a contractor. Strautmann doesn't have an automatic sharpening system.





The headboard pivots to the rear, supporting the unloading process. However, the floor chains should move a little faster.

Other details

- The wide-angle camera at the rear of the trailer body is a real asset for viewing the fill level.
- The knife overload protection system that uses a toggle level works a lot better than the previous catch roller. A light barrier behind the blades lets the operator know if a blade swings out.
- Knife changes are easy to do. As the front of the floor isn't sloped, there is plenty of room under the wagon.
- The interior LED strips are good, as are the LED road lights. Additional lights at the top of the tailgate would be the icing on the illumination cake.
- To get into the trailer you need to fit the aluminium ladder – a bit of a fiddle.
- The overload protection in the pto driveline is rated to 2,200Nm.

Summary

The Magnon CFS is now the flagship wagon in the Strautmann range. The combi unit has

a lot of good points such as the quality of the chop and many practical details such as the new blade holder. The plastic tine pick-up does its job, runs smoothly and is impressively easy to service. The raking quality is also fine, but it reaches its limit in very light crops. The test spec 430, including the dosing rotors (a £11,065 option), lists at £169,881.

Tobias Bensing



The unladen wagon weighs 11t, with the hydraulic suspension keeping it stable. The 30.5-inch tyres are an option. After adding all the various on-test spec, final price of our test Magnon was £169,881.