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DRIVING IMPRESSION

Spreading made easy and comfortable

The ZA-M is the classic model in the Amazone spreader programme which caters for all popular tramline systems spreading at widths from 10 to 36 metres. Last spring we had the opportunity to try out the new edition, the ZA-M 02 with EasySet 2 computer control.

Photos: Tastowe

△ The new generation ZA-M 02, Amazone's classic broadcaster model, sources many of its features from the company's higher-capacity series.

One such feature is the conspicuous all-round and orange painted guarding that gives the model a high-capacity appearance even from a distance. Like its predecessor, the ZA-M comes with a choice of three hopper sizes - 1,000, 1,200 and 1,500 litres. These can be expanded by 500- or 1,000-litre extensions to volumes of up to 3,000 litres which suitably reflect the 3,100kg payload. Neat details inside the hopper are the litre marks that are embossed in the steel walls. Our ZA-M1502 had the S500 hopper, a rather narrow design which however has no effect on the 2.44m total width. Its regular filling height is 1.14m and low enough for the spreader to fit beneath the chute of a big tipping trailer. On our specific machine the height was 1.28m, courtesy of the extensions fitted. Unladen and fitted with extensions the spreader weighs about 360kg.

MADE OF STAINLESS STEEL

The bottom of the hopper, the slides, the spreading discs and hopper screens are made from stainless steel. Standard models have two slides arranged on top of each other with one slide controlling the aperture. The appropriate slide setting on each side is controlled by one double-acting ram. Our spreader had the EasySet 2 operator terminal. This means there is only one slide per side and this is controlled by an actuator in combination with an angle sensor that measures the current position. The spreading rate is set exclusively on the terminal and the spreading width is changed by adjusting the two disc-mounted vanes of different lengths. This is done by adjusting tommy bar screws like on the predecessor. The machine comes with three sets of interchangeable discs that spread the material at widths from 10 to 36 metres. For 'normal spreading' the spreader is set horizontally and the spreading discs to a height of 80cm. For late applications to mature crops, the discs should spin 25cm above the crop and the ends of the vanes should be raised a bit. The ZA-M is operated by the 540rpm pto which translates into a 720rpm disc speed. The horizontal agitator is arranged above the outlet. Its shaft is driven by an angle gearbox and a stainless-steel chain. The granules drop 12cm onto the spreading discs. There are no plastic brushes that would protect them during their fall.

SUMMARY

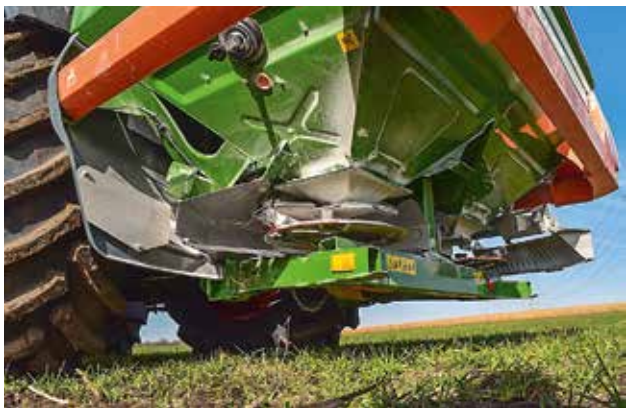
The Amazone ZA-M was given an update that focuses on the new electronic control system.

This controls the application rate relative to the current forward speed. Each function is retrieved from its own separate button.

The spreading widths range from 10 to 36 metres with the help of three interchangeable discs.

BOUNDARY SPREADING

When it comes to limiting the spread of fertilisers around the edge of fields, Amazone offers two options for spreading from the first tramline. The first is the Tele-Set boundary disc which is bolted in position; the second and more practical and convenient option is the Limiter edge spreading screen. This is controlled by a single-acting ram after the operator selects one of three settings (one for edge, boundary and watercourse spreading respectively) from a tommy screw and with the help of a lasered scale. The application rate, too, may have to be reduced.



◁ The spreading units are carried over from the predecessor. The spread width is set by adjusting the vanes.The application rate is controlled by actuators. Angle sensors measure the slide setting.

RATE CONTROL RELATIVE TO FORWARD SPEED

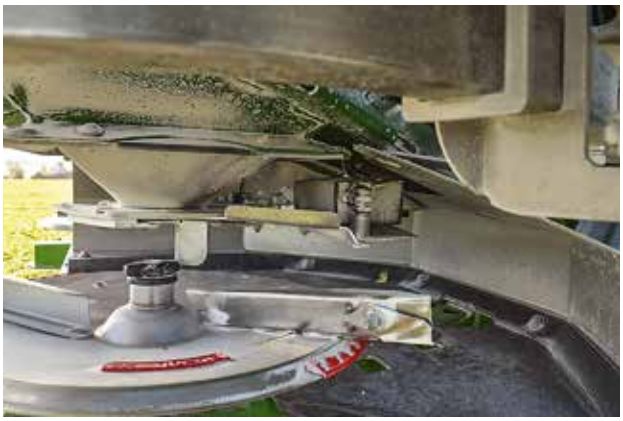
The highlight of the new fertiliser spreader is no doubt the EasySet 2 computer control. The unit simply connects to a three-pin socket and controls the spread pattern by simulating a constant forward speed and a fixed outlet setting. Yet, in order to use all EasySet 2 features, the device must be plugged into the seven-pin tractor socket through which it measures the current forward speed and modulates the application rate on the move. For tractors that have no signal socket, Amazone supplies either an optional sensor that measures the wheel revolutions or a GPS speed sensor.

Since our tractor did have the three-pin socket, we used the signal line. In that case, you have to enter the socket's pulse rate/100m to the terminal, which is done only once. If you don't know the pulse rate, you drive the tractor down a 100m distance while the terminal counts the pulses.

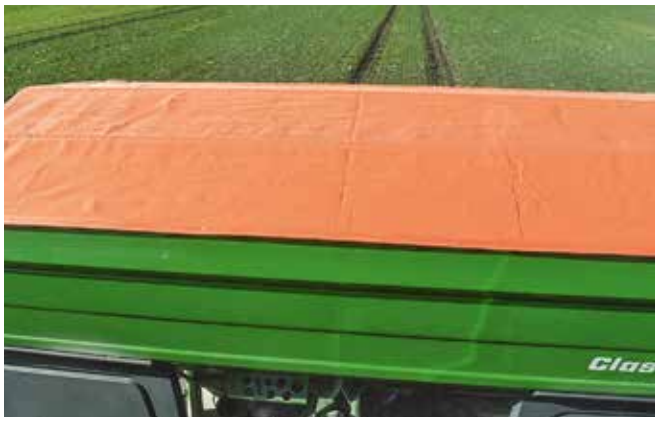
Choosing a different fertiliser requires only a few parameters to be entered to the terminal: application rate per hectare and spreading width are entered manually; vane position, calibration factor and disc speed are supplied by the mySpreader app or the online fertiliser service or the figures are copied from the traditional paper chart. We used the app which usually worked quite well. Selecting the correct pto speed is a bit of an issue, because you won't know the correct pto speed when spreading a fertiliser that requires a different disc speed. Yet Amazone plans to change this. In the meantime, they provide at least a table in PDF format on their website that lists the pairs of disc and pto speeds.

INTUITIVE OPERATION

Each setting is entered from its own separate button. This and the absence of multi-level menus make the system very user-friendly. For example, when you spread a different fertiliser you merely choose a different calibration factor. For precise rate settings, you can also calibrate the spreader. This is done by pressing and holding the calibration factor button. Then you open one out-



△ The spreading width is changed by adjusting the spreading vanes. The rate is controlled by actuators. Angle sensors measure the aperture.



△ Lacking an inspection window, the hopper doesn't allow operators to check the filling level from the seat.

let and collect the granules in a bucket. The terminal counts the seconds and the nominal calibration rate. Next, you weigh the granules and alter the setting by pressing the + or - buttons. Done.

Spreading is started by pressing the top button on the control unit. Both outlets are controlled relative to the current forward speed. The current rate per hectare and the current forward speed are indicated by numerical display readings. The two outlets also open and close separately from a touch of a button. Also, it is possible to adjust the spreading rate in synch for both sides and separately for each side. All this is easy to fathom without much explanation. The display also shows the two rates when both sides are spreading at different rates – a boon in awkward shaped patches.

In addition, the terminal also counts the area covered. The nominal rate applied is not shown, which is too bad especially as the hopper lacks a window and so you can't inspect filling levels on the move – something Amazone should definitely change.

SPEAKING OF COSTS

The electronic control worked without a hitch in our test. What did take getting used to, though, was an odd behaviour after the machine was halted temporarily. In this situation the outlets would close but not reopen automatically when the tractor pulled off again. This took another press of a button. Optional mud flaps (€272) protect the spreading units effectively from mud and debris flung up by the wheels. The granules are protected from contamination and rain by an easy folding tarp cover.

The entry-level ZA-M with hydraulic outlet control costs €5,379, which compares to the base specification model with EasySet 2 control for €7,560. The higher price buys accurate spreading rates at high forward speeds. Controlling the rate relative to the current forward speed, the machine allows operators to slow down on the headland and work at speed in the field. The price for the test specification spreader complete with extensions (€425), tarp cover (€660) and Limiter screen (€1,130) is €10,179.

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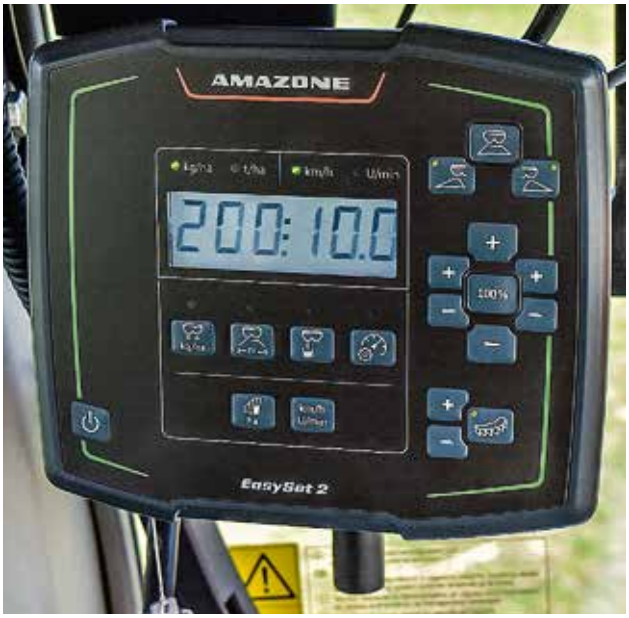
Translated into English by trans-agrar.



Photos: Tastowe

◁ An LED light down in the right corner on the EasySet 2 unit indicates the boundary screen is in position.