

Drill combination:

Amazone AD-P 303 Super on test

Mounted drill combinations are still extremely popular, especially in areas with smaller scale field sizes. The DLG Test Centre has scrutinised such a combination from Amazone.

Amazone's AD-P 303 Super mounted drill combination is particularly suitable for small to medium sized farms looking for a compact and universally deployable drilling system. The AD-P Super drill can be used for drilling on land that has been pre-prepared by conventional cultivation or following minimum-tillage principles. The integrated rotary cultivator levels the ground, and depending on the forward speed and rotor speed, shifts organic residues,

stones and coarser clods from the seed horizon to the soil surface. In addition, the wedge ring roller pre-consolidates the seed furrow thus ensuring a clean, fine-tilth seedbed.

Performance on the test rig

1. Lateral distribution: In the laboratory, with the machine level, the drill achieved the results "very good" for wheat, "good" for oilseed rape and barley, and "satisfactory" for peas.

The seed rate sown showed here only slight deviations from the target rate (as in field application). Weighing the remaining seed in the hopper verifies the excellent relationship between the amount sown and the set target rate. According to the plant count, the germination showed

With an net weight of 3155 kg, the 150 hp tractor used for the test was only just large enough. Additional ballast was needed for the front axle.



the results “very good” on ploughed land for oilseed rape and barley, and – as a consequence of the late drilling date of November 3rd – “good” for wheat. The unploughed, min-till land in turn showed the results “very good” for oilseed rape and “good” for barley and wheat.

2. Longitudinal distribution: The impression given to the eye of a good plant distribution along the rows is backed up by the test data. After calculating the coefficient of variation factor using the DLG test schedule, the longitudinal distribution for oilseed rape, barley and wheat on ploughed land was assessed as “very good”, and on unploughed as “good”. Using the right metering cassette is particularly important in order to achieve good results. For this purpose – depending on seed rate and forward speed – Amazone offers two different metering cassettes with different transport rates for normal cereal seed and an additional metering cassette for fine seed.

Handling

Altogether the operation of the AD-P Super drill combination is assessed as “good”. Calibration is performed electronically via the AMATRON+ on-board computer (option). The desired seed rate together with the seed variety is entered in the on-board computer. After calibration, the computer converts the volume weighed to the field area and adapts the metering cassette speed to the target quantity.

Judging by our results, the setting is extremely precise. Fault-free operation is possible thanks to the step-by-step menu guidance in the computer, so that just two calibration tests lead closely to the desired quantity set.



The “very good” longitudinal distribution for oilseed rape on ploughed land led to a very uniform crop establishment.

Despite this, we recommend always conducting an additional calibration test just to check. During drilling, the total seed quantity sown and the area worked are allocated to that particular job with the on-board computer storing up to a maximum of 20 jobs. In the case of use by a contractor this facilitates the simple invoicing of the work done. In the same way, calibration is simplified so when using the same variety again with the same thousand grain weight, as the calibration factors from older jobs can be held in the memory.

The tramline modes can also be controlled and over-ridden via the on-board computer. We particularly liked the possibility of being able to create intermittent tramlines in locations which are exposed to the risk of erosion. The menu guidance in the AMATRON+ is particularly logical and intuitive. The keys are large with acoustic signals.

The control and monitoring possibilities are extremely comprehensive – listing all the functions here would exceed the scope of this article, however, the work menu appears

Brief Assessment of the AD-P 303 Super

Test criterion	Assessment
Lateral distribution with machine level	+
Germination conventional / min-till	++/+
Plant distribution along the row conventional / min-till	++/+
General operation	+ (0)
Calibration	+
Setting the placement depth	+ (0)
Changeover to different seed / residue emptying	o/-*
On-board computer operation	+
Rotary cultivator operation	o
Maintenance	++

Assessment schedule: ++ (very good), + (good), o (average), - (poor), -- (very poor)

* Residue emptying facility is offered by the factory as of Jan. 2008



Longitudinal distribution and field emergence – here barley – were classed “very good” on ploughed land.



a little unclear; less detail would bring more clarity here. Important information should be highlighted better. The coulters pressure can be adjusted hydraulically and centrally and in this way the placement depth can be accurately set too. Basic adjustment of the placement depth is possible by moving the depth limiter and cleaning disc found on each individual coulters. Press rollers for drill coulters are an option. Thus, for light, dry soils, placement depth and coulters pressure can be adapted very well to the conditions

of use. However, the basic adjustment on the drill coulters is time-consuming. The accessibility of the cleaning disc – especially on the front row of coulters – is difficult. One advantage is that the press rollers can be dismantled without the need to use any tools, for instance in wet drilling conditions. However, dismantling and adjustment were distinctly awkward but Amazone has improved this point in the meantime. Furthermore, the ability to fit the flap that facilitates the emptying of large quantities of seed remaining

in the hopper that was shown at Agritechnica 2007 has already been included in series production.

Summary

In the Fokus Test “Placement quality and operation” the Amazone AD-P 303 Super achieved chiefly scores of “very good” to “good”. The extensive memory and monitoring functions of the AMATRON+ on-board computer came out with a positive assessment too. The execution and finish also made a very good impression with both the paintwork and the quality of workmanship deserving praise. No clear weak points were found in either the working results or the operation. Criticism applies above all to the adjustment of the press rollers and the awkward access of the metering cassette. The complete test report 5720F can be downloaded free of charge at www.dlg-test.de/bestellung.



Advantage: The calibration operation requires little time. Disadvantage: the metering cassette and the facility for removing the remainder in the hopper are awkward to reach.

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Advantage: The central setting of the coulter pressure is carried out comfortably on the right-hand side of the machine as viewed in the direction of travel. Disadvantage: The adjustment of the press rollers and depth-limiter discs is somewhat awkward, in contrast.



The press rollers enhanced the field germination by 5 to 10% under normal to dry conditions as the coulters also ran more smoothly with the placement depth being more uniform too.

Amazone D9-30 Super mounted seed drill was also featured in a DLG FokusTest

The Amazone D9-30 Super is a mounted seed drill with mechanical seed metering and a 3m working width. The DLG Test Centre has tested it for accuracy of seed rate and also lateral distribution and it assessed as “very good”. The test machine was equipped with Suffolk coulters, hydraulic seed rate adjustment, hydraulic harrow pressure adjustment and the “AMALOG+” on-board computer. Rate control for oilseed rape, barley and wheat on the level and additionally for wheat at an inclination of 11° (20%) was determined on the test rig. The seed hopper was filled with 200 kg for barley and wheat, and with 20 kg for oilseed rape. The deviation from the calibrated quantity was very slight for wheat and barley at 1/40 ha and 1 ha, slight for oilseed rape at 1/10 ha, and very slight on 1 ha. After this, rate control on 1 ha was determined in practical operation on land cultivated by minimum tillage principles. The land consisted of minute soils with large clod sizes that had previously been worked twice with a two-beam reciprocating harrow. The proportion of runs crossways to the direction of cultivation with the Amazone D9 was approx. 50% in order to allow a sufficient measure of frequency in the test. The deviation of the rate actually sown away from the calibrated rate was “very low” for wheat and “low” for oilseed rape.

The complete test report can be downloaded at www.dlg-test.de/bestellung.



The 3 metre mounted seed drill had to show whether the set seed rates could be, in fact, maintained and how uniform the lateral distribution was.