DLG Test Report 6871

KUHN HUARD S.A.S.

Stubble and seedbed cultivator Prolander 6000

Tractor requirement and quality of work
Handling, ease of operation, service and maintenance

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Overview

A test mark „DLG-APPROVED for individual criteria“ is awarded for agricultural products which have successfully fulfilled a scope-reduced usability testing conducted by DLG according to independent and recognised evaluation criteria. The test is intended to highlight particular innovations and key criteria of the test object. The test may contain criteria from the DLG test scope for overall tests, or focus on other value-determining characteristics and properties of the test subject. The minimum requirements, test conditions and procedures as well as the evaluation bases of the test results will be specified in consultation with an expert group of DLG. They correspond to the recognised rules of technology, as well as scientific and agricultural knowledge and requirements. The successful testing is concluded with the publication of a test report, as well as the awarding of the test mark which is valid for five years from the date of awarding.

The Kuhn Prolander 6000 stubble and seedbed cultivator (6 m working width) was subjected to two DLG tests – the “Tractor requirement and quality of work” test and the test on “Handling, ease of operation, service and maintenance”. The relevant measurements were carried out in a mainly flat field of sandy loam soil where a crop of rye had been harvested the year before. In this field, the cultivator was used to incorporate stubble and a break crop.

The test examines the cultivator to the test parameters set out in the DLG test framework for tillage equipment. These include the following:

– tractor requirement
– actual forward speed and nominal ha/h performance
– maximum penetration, average working depth and tillage depth of the tines
– profile of the soil surface before and after the cultivation pass
– tilling effect (distribution of the soil aggregates)
– thickness of the straw mat and effectiveness of incorporation
– visual assessment of the quality of work by farming experts
– overall machine handling, ease of operation, service and maintenance

The field conditions prevailing during the test runs were documented and comprised the stubble heights, the thickness of the straw mat, the soil moisture and the weather conditions. No other criteria have been examined in this test.

Assessment in brief

The performance of the Kuhn Prolander 6000 stubble and seedbed cultivator in all criteria specified by the DLG test framework was impressive. Based on the good test results, the cultivator is awarded the DLG APPROVED quality mark in the test modules “Tractor requirement and quality of work” and “Handling, ease of operation, service and maintenance”.

The tractor input during stubble incorporation with duckfoot shares was 103 hp (at a work rate of 9.5 km/h) and 177 hp (at a work rate of 12.5 km/h). The tractor input during incorporation of a frozen break crop using pointed tines was 119 hp (at 9.1 km/h) and 189 hp (at 11.4 km/h).

Table 1:
Assessment in brief

Quality of work as assessed by farming experts		**Averaged score**
Distribution of crop residues on the surface after cultivation	Straw incorporation	good
	Break crop incorporation	very good
Levelling effect by the cultivator	Straw incorporation	satisfactory*
	Break crop incorporation	good
Uniform depth control	Straw incorporation	good
	Break crop incorporation	good
Aggregate sizes and tilth	Straw incorporation	good
	Break crop incorporation	very good
Reconsolidation	Straw incorporation	good
	Break crop incorporation	good
General quality of work	Straw incorporation	good
	Break crop incorporation	good

Handling as assessed according to the DLG schemes	**Score**
Setting the work depth	very good
Setting up the levelling bar	good
Holder for the hydraulic lines	good
Attachment/removal of the lighting system	good

* Kuhn took this opportunity to address the attachment frame of the tine bar.
The company says that this modification leads to more effective levelling of the cultivated surface.

The Product

Manufacturer and applicant

Manufacturer:
KUHN HUARD S.A.S
Zone Industrielle, 44110 Châteaubriant
France

Name of applicant:
KUHN Maschinen-Vertrieb GmbH
Schopsdorfer Industriestraße 14, 39291 Genthin
Germany

The product:
Kuhn Prolander 6000 stubble and seedbed cultivator

Description and technical data

According to the manufacturer, the Kuhn Prolander 6000 stubble and seedbed cultivator is suitable for the incorporation of straw and break crops and seedbed preparation. The cultivator is available in 6m and 7.5m work widths and a new foldable mounted range in 4, 5 and 6 metres. The working width of the test unit was 6 m. The machine was semi-mounted to the tractor with a linkage drawbar (cat III). The machine can also be attached using a K80 hitch ball or hitch ring, depending on specification.

The first toolbar on the Kuhn Prolander 6000 stubble and seedbed cultivator is a levelling bar which is adjusted hydraulically from the cab to alter its intensity of work. The 22 elements on this leading bar are arranged between the two depth wheels. Each of these levelling elements is 10 cm wide and spaced at 12 cm from its neighbouring element(s) (figure 2).

The spacing of cuts is 150 mm from 39 tines arranged in a 5,850 mm wide field measured from the left to the right tine. Each point on the test candidate was attached with two bolts to a pig tail spring tine. In the future the tines will be attached with only one bolt to speed up point changes, says the manufacturer. The shares or spring tines are arranged on five beams. The test machine was fitted with 55 mm pointed tines or 205 mm wide duckfoot shares (figures 3 and 4).

Depth control on the Prolander 6000 is provided by two leading depth wheels and the trailing press at the rear. The working depth is adjusted hydraulically from the cab via double-acting rams. An easy to read scale on the right depth wheel helps operators to find previous depth setting.

The trailing press on the test machine was a double roller with channel rings that was split into three sections (figure 5). This roller measures 600 mm in diameter. The first roller consists of 23 rings while the second roller consists of 24 rings. The entire press combination is mounted in twelve ball bearings, each with a separate grease nipple that is greased every 50 hours.

The roller is followed by a levelling tine bar that is split into four sections. Its harrowing intensity is adjusted manually by refitting eight pins.

Headland turns are managed by lifting the machine via the running gear.

Changeovers from work to transport position are made by folding the wings hydraulically to the vertical. In transport position, the operator has to secure the hydraulic rams manually by closing two ball valves. This is to prevent accidental unfolding during road travel.

Lights, air brake, a storage box for tools or spare points (figure 6) and warning panels are standard specification on the Prolander 6000.

The eight hoses of the four hydraulic circuits (folding, lifting/lowering the running gear, depth control, adjustment of the levelling bar) can be stored in hose holders after removal.

Table 2:
Kuhn Prolander 6000 stubble and seedbed cultivator – specifications (manufacturer information)

Technical Data	
Working width	6.0 m
Underbeam clearance	600 mm
No. of tines	39
Spacing of cuts	150 mm
No. of toolbars	5
Interbar distance	60 cm to 80 cm
Maximum work depth	16 cm
Weight incl. trailing press	5,616 kg

Figure 2:
The leading bar with 22 levelling elements and hydraulic rams for height control

Figures 3 und 4:
The tine points (left) and duckfoot shares (right) that were used in the DLG test

Figure 5:
The trailing press with levelling tines

Figure 6:
The box stores spare tines and tools

The Method

The DLG test “Tractor requirement and quality of work” examines the performance of tillage equipment in the field by applying test criteria that are specified by the DLG test framework. The test comprises measurements that are carried out in suitable test fields and at typical forward speeds and working depths.

The conditions prevailing at the time of the test are documented and include the topography, the stubble heights, the straw residues on the surface, the soil moisture and the weather at the time of the test.

In each DLG test, the implement to be tested is set up on the site so the settings suit the specific conditions. These settings are determined by carrying out preliminary trial runs in the test field. These runs do not form part of the actual test.

Immediately before and during the actual test runs the test conditions are documented by taking soil samples to measure the soil moisture and by measuring the stubble height.

Also, the type of soil and disposition of the field is documented.

The implement’s draft requirement is measured using the DLG-owned equipment modules. Ground speeds and distances travelled are measured with the Correvit L400 system from KISTLER MESS-TECHNIK (figures 7 and 8). In addition, fuel consumption can be measured using the mobile DLG fuel metering equipment.

The machine’s nominal ha/h performance is computed using forward speed and working width data, but without taking into account potential overlaps and turn around times.

The surfaces before and after the cultivation pass, but also the penetration depths of the tines and their mean work depth are measured with the help of a

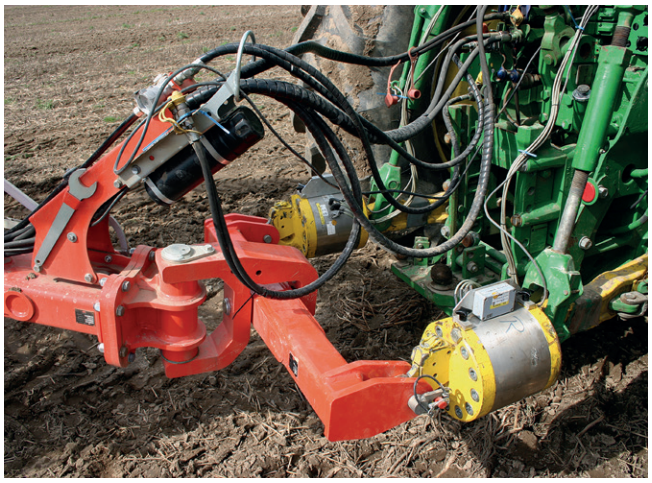

Figure 7:
DLG 3D load cells metering the draft requirement

Figure 8:
The Kistler Correvit L400 sensor

Figure 9:
Example of the cultivated horizon

laser sensor. This non-contact sensor scans the surface of the field across the direction of travel. The data collected are used to compute the height profile. The height profile of the cultivated surface is determined by computing the standard deviation (SD) from the individual scans. This describes the levelness of the surface. The smaller the standard deviation, the more even the cultivated surface.
To measure the cultivated horizon, the testers clear out a trench to the depth of cultivation (figure 9). The actual depth of cultivation by the tines is used to determine the maximum penetration depth and mean working depth.

The clod crushing effect of the cultivator is illustrated by measuring and plotting on a graph the distribution of the individual aggregate sizes in the cultivated layer. This is done by taking soil samples from the cultivated layer without destroying the aggregates. Then the samples are air dried until the weight remains unchanged. Next, these air dried samples are screen fractioned and the mean weight diameter (MWD) is computed from the samples in the individual fractions. The smaller the MWD the higher is the percentage of small soil aggregates.

The thickness of the straw layer is determined before and after the cultivation pass. This is done by removing all straw residues from several representative 1 m² plots in the test field and weighing the collected mass. The straw is then air dried and weighed again. The difference between the two results is used to compute the straw quantity that was incorporated by the cultivator.

The distribution of incorporated straw in the individual layers is measured with the help of the grid method by VOßHENRICH (2003). This method clears out a trench across the full working width and to a depth of 20 cm, making sure a smooth wall face is cut. The soil is the the sampled in 5 cm by 5 cm grid squares and the straw found in each square is sampled and classified. The findings are illustrated in a graph (fig. 10). The straw is classified by using different shades of orange. A darker shade indicates a higher amount of straw for that particular grid.
For a better overview, the graph is split into three sections (left section, central section, right section). The sums of the numerical values per soil horizon (straw distribution) are also entered in the graph (bottom right). These sums are used to compute the relative percentage of incorporated straw. The graph below is one example of the DLG test results from the Kuhn Prolander 6000 seedbed cultivator (break crop incorporation with tine points set to 13 cm working depth and 9.1 km/h forward speed).

Furthermore, the quality of work was assessed. This was examined in situ by five farming experts. The assessment was made by applying a five point grading system: very good (1), good (2), satisfactory (3), sufficient (4), not sufficient (5).

Figure 10:
Straw incorporation measured to the grid method (Voßhenrich, 2003)

Handling and operation, service and maintenance

Ease of handling is assessed using the following criteria:

– Setting the working depth
– Adjusting the levelling bar
– Storing the hydraulic lines
– Fitting/Removing the lighting unit

Each aspect is assessed based on the DLG assessment scheme.

In addition, the test also involves timing service and maintenance jobs that are carried out by the same farming experts. These tasks include the following:

– Changing tines
– Greasing nipples that are due at specific intervals
– Changing from transport to work position and vice versa

Detailed account of test results

The test

The test took place in Saxony-Anhalt, Germany, in April 2018. The field was a harvested field of rye. The mostly homogeneous test plot is classified as 'sandy loam' at the numerical value 33. The weather during the test was sunny with some wind and temperatures ranging between 14° C and 20° C. The soil moisture during the test ranged between 3.9 % and 11.9 %. The straw on the straw incorporation plot was cleared after the rye was harvested in August 2017. The straw on the break crop incorporation plot was also cleared in August 2017. A mix of Phacelia, clover, oilseed radish was then drilled directly into the stubble. The DLG test took place in April 2018 and consisted of incorporating the stubble with duckfoot shares (8 cm working depth) and the frozen break crops with pointed tines (13 cm working depth).

The length on the stubble in the straw incorporation plot was 18 cm (shortest length: 10 cm, maximum length: 30 cm, standard deviation: 4.9 cm). The mean thickness of the straw mat consisting of chaff and stubble prior to cultivation was 1.9 t/ha and 2.7 t/ha. The mean volume of organic material on the break crop plot was 4.1 t/ha and 4.2 t/ha. Table 3 shows the most relevant field conditions and the two test versions.

The tractor was a John Deere 8285R (282 hp rated output, 310 hp maximum output at 1,900 rpm).

Table 3:
The test versions

	Incorporating straw with duckfoot shares		Incorporating a break crop with pointed tines	
Soil type, numerical value	Sandy loam, 33			
Forward speed	9.5 km/h	12.5 km/h	9.1 km/h	11.4 km/h
Soil moisture	7.4 - 10.0 %	4.2 - 9.5 %	3.9 - 11.3 %	7.7 - 11.9 %
Preceding field work in the previous season	Combining, straw harvest		Combining, straw harvest, seed of break crops (Phacelia, clover, oilseed radish)	
Organic mat before the cultivation pass (measured in April 2018)	1.9 t/ha	2.7 t/ha	4.1 t/ha	4.2 t/ha
Target work depth	8 cm		13 cm	

Forward speed, working depth, draft requirements and ha/h performance

Table 4 below shows the test results in terms of actual forward speed and working depth, the resulting draft requirement and the computed nominal acreage.

Table 4:
Forward speed, working depth, draft requirement and ha/h performance

	Incorporating straw with duckfoot shares		Incorporating a break crop with pointed tines	
Actual forward speed	9.5 km/h	12.5 km/h	9.1 km/h	11.4 km/h
Maximum penetration	7.9 cm	7.9 cm	13.1 cm	12.7 cm
Mean working depth	6.1 cm	6.0 cm	10.4 cm	9.8 cm
Draft requirement	103 hp	177 hp	119 hp	189 hp
Nominal ha/h performance	5.7 ha/h	7.5 ha/h	5.5 ha/h	6.8 ha/h

All target depths were reached in the DLG test. In stubble incorporation with duckfoot shares, the draft requirement increased from 103 hp to 177 hp and in break crop incorporation from 119 hp to 189 hp when forward speed increased.

Working at 9.1 km/h, the stubble and seedbed cultivator with a 6m work width achieved nominal work rates of about 5.5 ha/h. Working at 12.5 km/h the nominal work rate was 7.5 ha/h.

Soil surface roughness, MWD and aggregate size range

Soil surface roughness is expressed by the standard deviation (SD) and the level of tilth, which is in turn expressed by the mean weight diameter (MWD) of the soil aggregates after the cultivation pass. The cultivator achieved a comparable levelness in both test versions. The same applies to the distribution of soil aggregates in both test versions using the same tines. The duckfoot shares produced a mean aggregate size (MWD) of 17.02 mm and 15.95 mm. The mean aggregate size produced by pointed tines was 12.03 mm and 12.35 mm. In our light test soil, it took only a slow forward speed to produce a high percentage of tine tilth. The pointed tines produced a higher percentage of tilth than the duckfoot shares (table 5).

Table 5:
Soil surface roughness, MWD and aggregate size range

	Incorporating straw with duckfoot shares		Incorporating a break crop with pointed tines	
Actual forward speed	9.5 km/h	12.5 km/h	9.1 km/h	11.4 km/h
Surface roughness (standard deviation)	1.8 cm	1.7 cm	1.8 cm	1.6 cm
Tilth (MWD*)	17.02 mm	15.95 mm	12.03 mm	12.35 mm
Aggregate size range [%]				
< 2.5 mm	21.0 %	21.5 %	32.2 %	34.5 %
2.5 - 5 mm	15.9 %	17.1 %	18.8 %	20.7 %
5 - 10 mm	13.1 %	15.1 %	11.8 %	10.8 %
10 - 20 mm	18.6 %	19.7 %	16.7 %	13.9 %
20 - 40 mm	21.5 %	16.7 %	15.9 %	12.7 %
40 - 80 mm	9.9 %	9.9 %	4.6 %	7.4 %
>80 mm	0.0 %	0.0 %	0.0 %	0.0 %

* mean aggregate weight diameter

The graph in figure 11 shows the soil surface data before and after the shallow straw incorporation pass using duckfoot shares at a forward speed of 9.5 km/h. The red curve shows the soil surfaces before the cultivation pass (red), the green curve indicates the profile after cultivation and the blue curve the cleared trench that reflects the horizon that was cultivated by the tines. The blue arrow in table 11 indicates the maximum penetration depth (= working depth). This is 7.9 cm in the example shown. The computed mean working depth is 6.1 cm (orange arrow). The standard deviation (SD) measures the roughness of the soil surface after the cultivating pass and is 1.8 cm in this example.

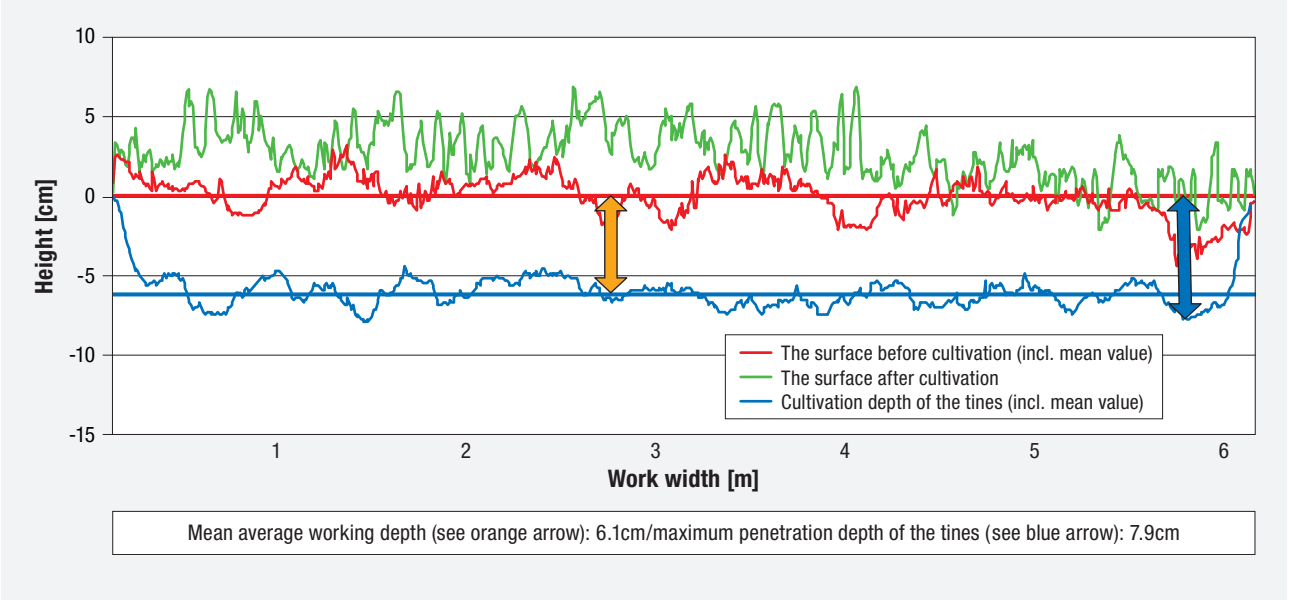

Figure 11:
Soil surface and cultivation depth measurements from a repeated shallow stubble incorporation pass

Straw mat and straw incorporation

One straw incorporation plot was cultivated at a forward speed of 9.5 km/h. The amount of residues (straw including stubble and chaff) was 1.9 t/ha before the cultivation pass. The duckfoot shares mixed 84 % of the straw (1.6 t/ha) into the soil.

The other straw incorporation plot was cultivated at a forward speed of 12.5 km/h. Here, the amount of residue was 2.7 t/ha before the cultivation pass. The cultivator mixed in 93 % of the residues (2.5 t/ha).

This percentage increased when the forward speed increased in this test version. 81 % and 84 % of the incorporated straw was mixed into the top layer (0-5 cm depth) and 19 % and 16 % was mixed into the next deeper layer (5-10 cm depth).

The distribution of the straw across layers was not affected by the forward speed.

Figure 12 shows one of the passes where the straw was incorporated with duckfoot shares (9.5 km/h forward speed).

Figure 12:
Quality of work in straw incorporation by the Kuhn Prolander (Forward speed: 9.5 km/h)

When cultivating break crops with tine points at a forward speed of 9.1 km/h, the cultivator mixed in 90 % of the residues (3.7 t/ha). After forward speed increased to 11.4 km/h, the percentage of incorporated material remained unchanged at 90 % (3.8 t/ha). The distribution of the material across the various horizons was not affected by changing the forward speed. About 75 % was mixed into the top layer (0-5 cm) and about 25 % was mixed into the next layer (5-10 cm) (see table 6).

Figure 13 (see page 12) shows a plot after the second cultivation pass (at 11.4 km/h).

Table 6:
Organic material incorporated in each horizon in both passes

	Incorporating straw with duckfoot shares		Incorporating a break crop with tine points	
Actual forward speed	9.5 km/h	12.5 km/h	9.1 km/h	11.4 km/h
Straw mass before the cultivation pass	1.9 t/ha	2.7 t/ha	4.1 t/ha	4.2 t/ha
Percentage of incorporated straw	84 % (1.6 t/ha)	93 % (2.5 t/ha)	90 % (3.7 t/ha)	90 % (3.8 t/ha)
Distribution across the horizons				
0 - 5 cm	81 % (1.3 t/ha)	84 % (2.1 t/ha)	73 % (2.7 t/ha)	76 % (2.9 t/ha)
5 - 10 cm	19 % (0.3 t/ha)	16 % (0.4 t/ha)	27 % (1.0 t/ha)	24 % (0.9 t/ha)

Figure 13:
Quality of work in break crop incorporation by the Kuhn Prolander
(Forward speed: 11.4 km/h)

Working quality assesment by five farming experts

The quality of work was assessed by five farming experts.
The results of this part of the test are shown in table 7.

Table 7:
Assessing the quality of work by five farming experts
(Grading system: very good (1), good (2), satisfactory (3), sufficient (4), not sufficient (5)

Test criteria		Expert					
	Test run	1	2	3	4	5	Ø
Distribution of residues on the surface after the cultivation pass	Straw incorporation	1	2	2	2	2	1.8
	Break crop incorporation	1	1	2	1	2	1.4
Levelling effect by the cultivator	Straw incorporation	2	3	2	3	3	2.6
	Break crop incorporation	1	2	2	3	2	2.0
Maintaining a consistent depth	Straw incorporation	1	2	1	2	2	1.6
	Break crop incorporation	2	3	3	2	2	2.4
Aggregate sizes and tilth	Straw incorporation	1	2	1	1	3	1.6
	Break crop incorporation	1	1	1	2	2	1.4
Reconsolidation	Straw incorporation	2	3	2	1	2	2.0
	Break crop incorporation	2	2	3	2	1	2.0
General quality of work	Straw incorporation	1	2	1	2	2	1.6
	Break crop incorporation	1	2	3	2	1	1.8
Overall expert assessment		**1.9 (good)**					

Handling, ease of operation, service and maintenance

Assessment of machine handling

The working depth is set without tools using hydraulic rams controlled from the cab. A scale on the front right depth wheel helps find a preset depth quickly (++).

The levelling bar is also adjusted via hydraulic rams and without tools. These hydraulic cylinders, too, are controlled from the cab. There is no scale that helps retrieve a previous setting (+).

All hydraulic couplers on the test machine were marked by colour coded caps. The same colour code is repeated by decals on the holder, helping operators to match hoses and couplers quickly. After the cultivator is removed from the tractor, the hoses are stored in their specific holders. There is no drip container to collect leaking oil. The oil hose holder is graded as good (+) to the DLG assessment scheme.

The cultivator has a permanent lighting system which is not removed from the machine during field work. There is no dust/water-proof holder to store the electric connector after its removal from the tractor (+).

Table 8 (page 14) gives an overview of the results of this test module.

Time spent on service and maintenance

The DLG test also included the timing of servicing and maintenance. All results of this test module are grouped in table 9 (page 14).

Table 8:
Assessment of handling

Test criteria	DLG score*	Comments
Setting the working depth	very good	The operator can adjust the work depth from the tractor on the move.
Setting up the levelling bar	good	The operator can adjust the levelling bar from the tractor on the move.
Holder for hydraulic lines	good	The oil hoses are colour coded and stored tidily in a holder.
Attachment/removal of the lighting system	good	The lighting system is permanently installed, but the electric connector is not protected from dust and moisture.

* The score is based on the DLG assessment scheme for tillage equipment

Table 9:
Timing machine functions and services

Activity		Time taken [mins]					Average time	Tool required
		Test person						
		1	2	3	4	5		
Replacing a tine	The spare tine and a 15" spanner are ready for use next to the machine.	2:00	1:46	1:33	1:05	1:22	1:33	15" spanner
Replacing all 39 tines	The spare tines and an impact screwdriver are ready for use next to the machine.	25:45 The tines were replaced once by two persons. Each point was attached with two bolts to the spring tine. The future solution will require only one bolt.						Impact screwdriver, 15" spanner
Greasing the cultivator (41 nipples at a 50 hour service interval)	The grease gun is ready for use next to the cultivator. Each grease point receives three shots of grease. After greasing all nipples, the grease gun is placed back next to the machine.	7:04	9:24	8:42	5:40	5:20	7:14	Grease gun
Greasing the cultivator (16 nipples at a 1000 hour service interval)		3:53	3:32	4:04	3:16	2:52	3:31	
Greasing the cultivator (8 nipples at a 200 hour service interval)		1:48	2:41	2:04	1:24	1:12	1:50	
Folding into work position	The rates reflect the seconds the hydraulic system takes to fold the machine into work and transport position but do not include the time the operator needs to dismount the tractor and secure/ release the transport lock.	0:22	0:23	0:23	0:23	0:23	0:23	– –
Folding into transport position		0:49	0:49	0:48	0:49	0:49	0:49	– –

Machine dimensions

The dimensions of the test machine were also measured in the DLG test. These are listed in table 10.

Table 10:
Test machine dimensions

Unit	Measurement [m]
Length	7.90
Height in transport position	3.53
Width in transport position	2.96
Width in work position	6.20

Summary

The DLG test for the Kuhn Prolander 6000 stubble and seedbed cultivator consisted of the test modules “Tractor requirement and quality of work” and “Handling, ease of operation, service and maintenance”. The cultivator is suitable for the shallow incorporation of stubble and mixing in a break crop. The test runs were smooth and no blockages were observed.

The tractor input during stubble incorporation with duckfoot tines was 103 hp (at 9.5 km/h) and 177 hp (at 12.5 km/h). The tractor input during incorporation of a break crop using pointed tines was 119 hp (at 9.1 km/h) and 189 hp (at 11.4 km/h).

The quality of work was assessed by expert farmers. These assessed the quality of work as very good, good and satisfactory in all criteria. The overall score across all test criteria was 1.9 (good).

Machine handling received ‘very good’ and ‘good’ marks.

Based on these results, the Kuhn Prolander 6000 stubble and seedbed cultivator is awarded the DLG APPROVED quality mark 2018 in the test modules “Tractor requirement and quality of work” and “Handling, ease of operation, service and maintenance”.

Further information

The DLG committee on crop production technology researches extensively on tillage and drilling equipment. Papers prepared by volunteer experts are available as pdf files free of charge at: **dlg.org/technik_pflanzenproduktion.html**

Test performed by

DLG TestService GmbH, Gross-Umstadt location
The tests are conducted on behalf of DLG e.V.

DLG test scope

Tillage equipment (date of issue 04/2018)

Department

Field equipment

Head of Department

Dr. Ulrich Rubenschuh

Test engineer(s)

Dipl.-Ing agr. Georg Horst Schuchmann

* Author

DLG – the open network and professional voice

Founded in 1885 by the German engineer Max Eyth, DLG (Deutsche Landwirtschafts-Gesellschaft – German Agricultural Society) is an expert organisation in the fields of agriculture, agribusiness and the food sector. Its mission is to promote progress through the transfer of knowledge, quality standards and technology. As such, DLG is an open network and acts as the professional voice of the agricultural, agribusiness and food sectors.

As one of the leading organisations in the agricultural and food market, DLG organises international trade fairs and events in the specialist areas of crop production, animal husbandry, machinery and equipment for farming and forestry work as well as energy supply and food technology. DLG's quality tests for food, agricultural equipment and farm inputs are highly acclaimed around the world.

For more than 130 years, our mission has also been to promote dialogue between academia, farmers and the general public across disciplines and national borders. As an open and independent organisation, our network of experts collaborate with farmers, academics, consultants, policymakers and specialists in administration in the development of future-proof solutions for the challenges facing the agriculture and the food industry.

Leaders in the testing of agricultural equipment and input products

The DLG Test Center Technology and Farm Inputs and its test methods, test profiles and quality seals hold a leading position in testing and certifying equipment and inputs for the agricultural industry. Our test methods and test profiles are developed by an independent and impartial commission to simulate in-field applications of the products. All tests are carried out using state-of-the-art measuring and test methods applying also international standards.

Internal test code DLG: 18-204

DLG e.V.
Test Center Technology and Farm Inputs
Max-Eyth-Weg 1 • 64823 Groß-Umstadt • Germany
Phone: +49 69 24788-600 • Fax: +49 69 24788-690
Tech@DLG.org • www.DLG.org