



AGRI TECHNICA

The World's No.1

World Soil and Tillage Show

**Tillage worldwide -
concepts and solutions**



Hall 11, Pavilion B,C,D

07

Hanover, Germany
13-17 November 2007
Preview Days 11/12 November



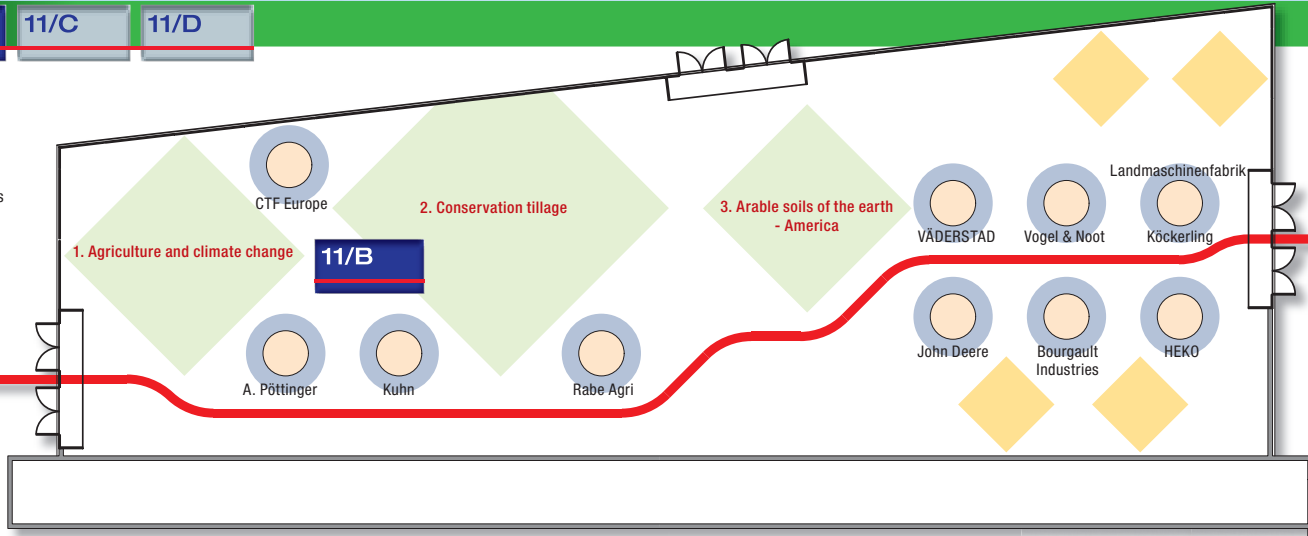
www.agritechnica.com

- Agriculture and climate change
- Conservation tillage
- Arable soils in America



11/B 11/C 11/D

○ Agricultural machinery exhibits
◇ Top farmers



1. Agriculture and climate change

How can farmers respond to climate change? Temperature curves, rainfall distribution and water balance – regional and global. What should we be prepared for? Impacts on yields and productivity per unit area. How can agriculture adapt? How are the cropping regions for the principal crops changing, globally and regionally?

Potsdam Institute for Climate Impact Research

2. Conservation tillage

How can conservation tillage be implemented at the different sites? What are the framework conditions for such procedures in moderate, tropical, subtropical, humid and arid climates? How are these distributed throughout the world? What must agriculture invest? How safe are the yields? What potential does direct drilling have for reducing CO₂ emissions?

*Food and Agriculture Organization of the United Nations (FAO)/
European Conservation Agriculture Federation (ECAAF)/Gesellschaft für
Konservierende Bodenbearbeitung (GKB)*

3. Arable soils of the earth – America

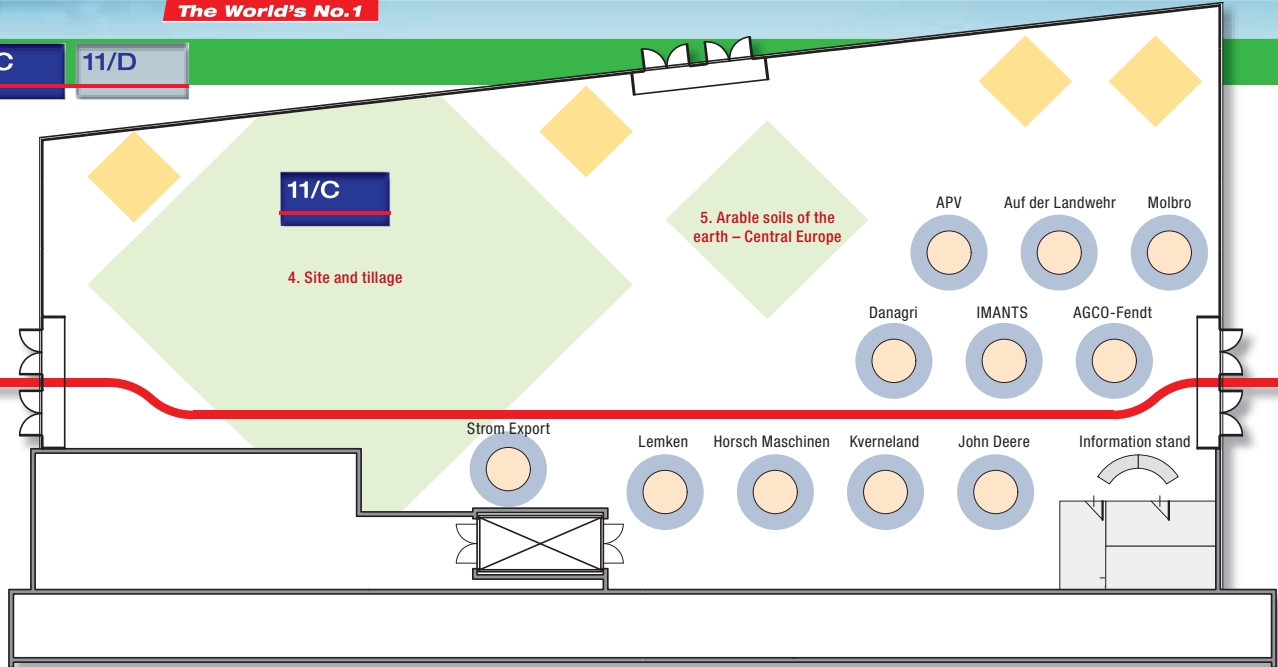
Arable soils are precious, for only 3% of the total surface of the planet can be used as arable land. Walk-over soil maps will show the most important arable soils of North and South America, Central and Eastern Europe. Presentation boards will provide information about the soil properties essential for arable farming and describe the best options for use and farming. Sustainable management of the earth's arable soils is an absolute necessity.

*University of Applied Science Osnabrück; Federal
Institute for Geosciences and Natural Resources*





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4. Site and tillage

Site and tillage are closely linked. Knowing your own soils is the prerequisite for choosing the right tillage method. Connections between soil structure and texture, between soil conservation and tillage are made visible here.

4a. Soil arena

Recognising soil structures and avoiding soil stresses are major challenges for farmers. Visitors will be guided in experimenting and enhancing their knowledge, for example in entering walk-over subsoil, in simulating soil pressure on the basis of farm data, or in measuring the soil pressure on model soils using a penetrometer.

South Westfalia University of Applied Sciences

4b. Spade diagnosis

Farmers use tillage to create a favourable soil structure. A spade diagnosis shows farmers what their soil structure looks like. This is crucial for the water and air household in the soil. Visitors can carry out a spade diagnosis themselves and discuss the results with specialists. Differences in soil make-up can be identified and assessed with the aid of prepared soil samples.

Saxon State Agency for Agriculture



- Site and tillage
- Arable soils in Central Europe



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4c. Avoid soil erosion

How strong is soil erosion at the location of your farm? What can you do against it? This is where to find the answers. A simulation shows how rain brings the soil structure to flow, or how and when soil erosion starts. Visitors can see for themselves what role the soil types, soil structures and vegetation play. A landscape model shows various options for avoiding erosion.

GSF, Experimental Estate Scheyern, Technical University (TU) Munich



4d. Precision drilling

The soil type, cover, humidity and temperature often vary on a small scale. These differences should be taken into account by adapting the depth of seeding. This optimises conditions for germination. A model will show a practicable approach to this, leading to higher field emergence.

University of Hohenheim

5. Arable soils of the earth – Central Europe

Arable soils are precious, for only 3 % of the total surface of the planet can be used as arable land. Walk-over soil maps will show the most important arable soils of North and South America, Central and Eastern Europe. Presentation boards will provide information about the soil properties essential for arable farming and describe the best options for use and farming. Sustainable management of the earth's arable soils is an absolute necessity.

University of Applied Science Osnabrück; Federal Institute for Geosciences and Natural Resources



- Cost-effectiveness of tillage
- Arable soils in Eastern Europe
- Soil-conserving tyres



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6. Cost-effectiveness of tillage

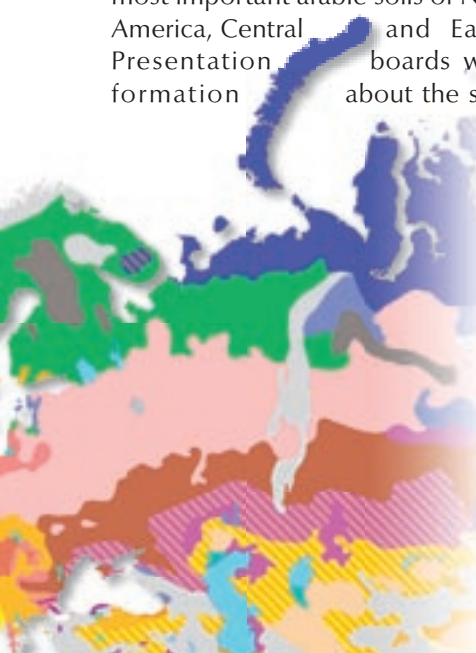
The cost-effectiveness of tillage for maize and wheat on typical farms from the world's leading arable farming regions will be shown. What are the differences between Argentina, Brazil, Canada, Germany, France, Poland, Russia, UK, Ukraine and the USA? What effect does cost-effective tillage have on the overall yield? What happens when the prices change?

Federal Agricultural Research Centre (FAL), agribenchmark

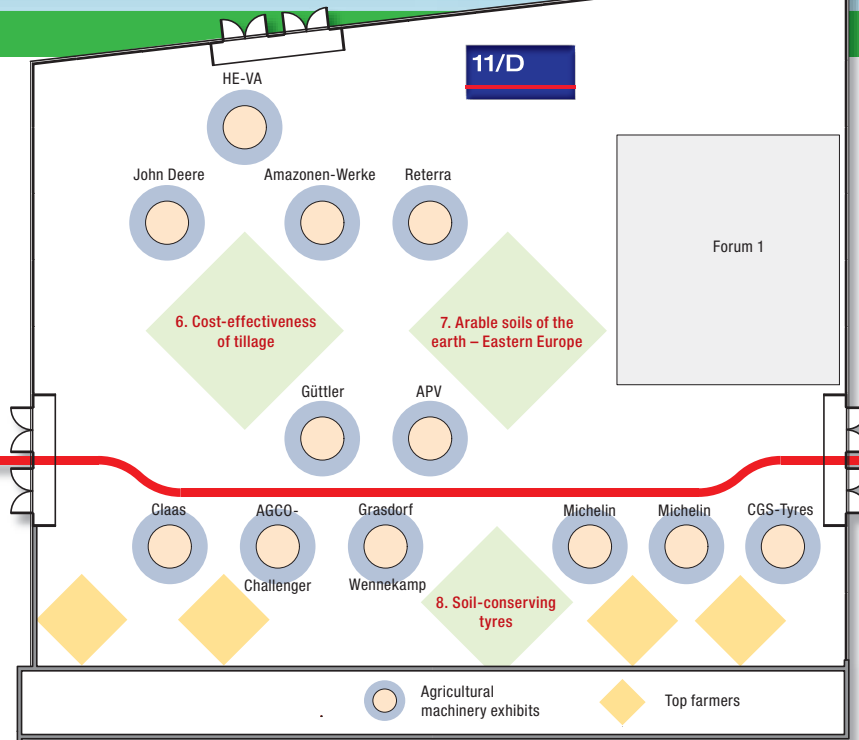
7. Arable soils of the earth – Europe

Arable soils are precious, for only 3 % of the total surface of the planet can be used as arable land. Walk-over soil maps will show the most important arable soils of North and South America, Central and Eastern Europe. Presentation boards will provide information about the soil properties essential for arable farming and describe the best options for use and farming. Sustainable management of the earth's arable soils is an absolute necessity.

University of Applied Science Osnabrück; Federal Institute for Geosciences and Natural Resources



11/D



8. Soil-conserving tyres

How does a newly developed test rig for tyre pressure work? A complete model evaluates tyres and shows how different tyres distribute the soil pressure. You can follow measuring methods and test results via a monitor. 32,408 measuring points record the pressure conditions for the soil pressure at a depth of about 20 cm on a measuring film with an area of 1 m². Minute differences between the various tyre designs become visible.

DLG Test Center Technology and Farm Inputs



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AGCO GmbH – Challenger

Pavilion 11 D Main stand: 9 C23

Challenger MT 800 for soil working and seed bed preparation. Ground contact area and ground adjustment are vital in seed bed preparation to avoid soil compactions and thus secure yields sustainably. Transfer of tractive force and area working rates are discussed intensively on business farms and realised by the combination of track technology and large working widths. The right timing and strength are the key to success in our present age!

AGCO GmbH – Fendt

Pavilion 11 C Main stand: 9 E05

The 936 Fendt-Vario in operation in the field during the cultivation year. Four special field assignments are shown using miniature models of the tractor and respective trailed implements. The machine combinations show work procedures in which „good agricultural practice“ ensures reduction of soil erosion and soil compaction, as well as conservation of soil fertility.

Amazonen-Werke

Pavilion 11 D Main stand: 14 A16

AMAZONE's 3C arable farming concept describes procedures and machinery for cultivation. The objective is site-appropriate and cost-optimised tillage and cultivation. The intensity of tillage and drilling operations can be varied. In ploughless cultivation the quantity and distribution of the straw determine the mixing-in intensity. Oxygen and water supply are the crucial criteria for the loosening depth

APV

Pavilion 11 C Main stand: 11 E20

Pneumatic seeder PS 250 M2 from APV: The pneumatic seeder PS 250 M2 is suitable for placing all kinds of seed (oilseed rape, clover, grass, lucerne, cereal grains, ...). It can be used multifunctionally throughout the year in a single pass together with a tillage implement. The optimal implement for drilling, from 1.5 – 300 kg/ha and working widths of 2 – 7m.

APV

Pavilion 11 D Main stand: 11 E20

Pneumatic seeder PS 600 M1 from APV: The pneumatic seeder PS 600 M1 is suitable for placing all kinds of seed (oilseed rape, clover, grass, lucerne, cereal grains, ...). It can be used multifunctionally throughout the year in a single operation together with a tillage implement. The optimal implement for drilling, from 1.5 – 400 kg/ha and working widths of 4 – 12m.

Auf der Landwehr

Pavilion 11 C Main stand: 11 A31

TERRAFLOW – The active roller combines continuous re-consolidation of the soil with safe depth guidance and intensive crumbling to create an erosion-inhibiting soil structure. The active work rings produce the uniform soil structure, clean the roller, and prevent stones from becoming caught.

Bourgault Industries

Pavilion 11 B Main stand: 12 B70

Bourgault Industries Ltd. is an agricultural implement manufacturing firm that specializes in seeding systems that enable producers to be effective stewards of the land and manage a profitable business. Each seeding tool marketed by Bourgault will help producers address the particular needs of each region, yet all will offer the same minimal risk of seed damage when equipped for minimal or zero till operation.

CGS-Tyres

Pavilion 11 D Main stand: 12 F11

Continental SuperVolumeTyre (SVT) from Mitas a.s.: The new tyre concept has a larger volume than standard tyres. Thanks to the air volume the tyre offers high load-bearing capacity at low pressure and is hence exceptionally gentle to the soil.

Claas

Pavilion 11 D Main stand: 4 C22

RUBBER TRACK CHASSIS FOR LEXION 600/580/570/560; TERRA TRAC chassis. This unites the technological advantages of wheeled and tracked vehicles. The axle suspension supplies maximum riding comfort and prevents vibrations, shocks and rocking. Large ground contact area and uniform weight distribution are easy on the soil, coupled with maximum traction.

CTF Europe LTD

Pavilion 11 B Main stand: 11 F53

Soil compaction from field traffic increases production costs, reduces crop returns and damages the environment. Controlled Traffic Farming (CTF) is a discipline that confines all soil compaction to the least possible area of permanent traffic lanes. CTF thus reduces costs and increases crop returns while making farming simpler, less time consuming, and with fewer and less negative environmental impacts.

Danagri

Pavilion 11 C Main stand: 11 C12

DTE precision drill. The DTE unit of the pneumatic precision drill „Becker Aeromat“ works with 380 mm cutter discs that are depth-guided on both sides and is suitable for sowing maize, beans, sunflowers etc. under mulch seeding conditions. Preliminary tillage is advisable with a view to creating favourable germination conditions, but not absolutely necessary in light soil conditions.

Grasdorf Wennekamp

Pavilion 11 D Main stand: 12 D11

Grasdorf Wennekamp specialises in disc and special wheels. We produce and supply wheels and tyres for your applications. Our proven precision and quality inspire leading agricultural, forestry and construction machinery manufacturers to use the Grasdorf wheel (Grasdorf-Rad®).



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Güttler GmbH

Pavilion 11 D Main stand: 11 B04

Self-cleaning prismatic rollers from Güttler. The Güttler rollers create an ideal seed bed – firm beneath and loose on top. This conserves valuable soil humidity and prevents water and wind erosion. Also ideal for greenland renewal. Outstanding self-cleaning properties, so ideal in combination with all tillage implements. The rollers quickly pay for themselves by high field emergence rates and fewer seed bed preparation passes.

HEKO Konrad Hendlmeier

Pavilion 11 B Main stand: 11 B32

HEKO Turbo-Mix share: Easy-drawing share with mixer panels of various widths, plugged on in front of the share stem. Enhances mixing work up to three times over. The mixing panel is mounted approx. 15 cm behind the share tip at the share neck. The lower edge of the exchangeable mixing panel is countersunk in a recess in the share running crossways to the direction of work. The width of the mixing panel can be up to 50 % of the working width. When the mixer panel is dismantled the implement works like a conventional share.

HE-VA

Pavilion 11 D Main stand: 11 F20

HE-VA Till-Seeding: Using a HE-VA Sub-Tiller mounted with HE-VA Multi-Seeder an extremely simple and safe way to establish winter oil rape seed is guaranteed. This system is a super way to seed oil rape because the radicle of the oil rape does not like hard soil. Calculated price: 4 m wide machine and 200 ha/year, 35 EUR/ha

Horsch Maschinen

Pavilion 11C Main stand: 11 E21

The economic viability of a farming method is mainly determined by the intensity of tillage (working depth, number of passes). When developing and adapting farming systems, soil and climate are the main factors to consider. With 30 years of experience in conservation tillage, HORSCH offers Know How and technology for all arable farming regions in the world.

IMANTS

Pavilion 11 C Main stand: 11 F11

IMANTS rotary spading machine: Spading is proven to be significantly cheaper than ploughing. Primary and secondary tillage in one pass. University of Wageningen: significantly and reliably lower (22%) fuel consumption than ploughing and a reliably higher work rate (56%). Cultivation can be combined with seedbed preparation and seeding in one pass.

John Deere

Pavilion 11 B Main stand: 4 A22

Conserva PakTM opener. Hydraulic shanks for precise seed and fertilizer placement will enable minimal tillage disturbance system. Row spacing: 23/30cm. These openers allow seed and fertilizer separation vertically from 5 up to 11,5cm and provide consistent depth control for good seed placement without seed burn.

John Deere

Pavilion 11 C Main stand: 4 A22

Seeding coulters Series 90: The single disk coulters guarantees precise seed placement at the set depth even under difficult conditions. Can also be used for direct drilling. Double disk coulters: Double disk coulters cut mulch toppings up to 45% cover with offset disk. Both systems operate with an active coulters pressure system.

John Deere

Pavilion 11 D Main stand: 4 A22

MaxEmerge Plus. MaxEmerge row-units are an evolution in seeding accuracy, row-unit strength, and adjustability. The ductile iron shank is the foundation of the row unit. The seed metering system is simple and gains a more accurate seed spacing in any crop. Anything from no-till to sticky gumbo and everything in between can be planted with this row unit.

Köckerling Landmaschinenfabrik

Pavilion 11 B Main stand: 11 A20

The Köckerling drilling element is a 6cm wide tine that is guided by a support roller. The roller and share are mounted on the frame with plate springs. A hydraulic cylinder supports the element. The cylinder length is altered to adjust the drilling depth, adapt to the soil, and guard against stones. All the cylinders are controlled at the same time. The pre-tensioning of the springs indicates the drilling depth.

Kuhn

Pavilion 11 B Main stand: 6 C25

Appropriate tillage and drilling process. Complete programme for a wide variety of methods, taking agronomic, environmentally-relevant and economic parameters into account. Display boards showing various concepts adapted to both West European farming conditions and large-scale farm management.

Kverneland

Pavilion 11 C Main stand: 5 C34

Accord Optima HD – High performing mulch drilling with low power requirement. The trailed machine has a high capacity with a 1,200 l fertiliser tank and requires little pulling power, starting at 80 hp (8 rows) for normal and mulch drilling, even under heavy conditions. Exact depth guidance thanks to advance oscillating wheels. Individual weight of the coulters row 130 kg, and 100 kg ballast can be carried. Electrical drive (e-drive) available as an option.



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Lemken GmbH Co KG

Pavilion 11 C Main stand: 11 A40

Lemken offers appropriate tillage and seeding systems for all soil conditions and locations depending on the crop sequence, intensity and tillage methods. This ensures a maximum of soil stabilisation coupled with a minimum of water loss. Appropriate reconsolidation and precision drilling are explained with assemblies and project studies.

Michelin Reifenwerke

Pavilion 11 D Main stand 12 B18

AXIOBIB super-wide tyres for the top performance class from 250 to 500 hp. Thanks to the Ultraflex technology, low pneumatic tyre pressure and high load-bearing capacity guarantee gentler treatment of the soil when working with heavy weights. Outstandingly suitable for cultivation methods requiring high pulling forces without having to dispense with a maximum of soil conservation and diesel efficiency.

Michelin Reifenwerke

Pavilion 11 D Main stand: 12 B18

CARGOXBIB soil-conserving radial ply tyres for trailers and other trailed implements. Distinctly optimised rolling resistance and high load-bearing capacity make it possible to treat the soil gently as well as to work cost-effectively. Thanks to the special carcass structure, ideally suited for air pressure control systems. Precise guidance and large ground contact area round off the product properties.

Molbro

Pavilion 11 C Main stand: 11 E09

Molbro tillage implements create optimal growth conditions. Minimal energy outlay for mechanical tillage. Soil erosion is minimised by precision implements. Minimises the rate of plant protection agent and fertiliser application. Higher yield of high-grade foods thanks to Molbro work implements and recommendations.

A. Pöttinger Maschinenfabrik

Pavilion 11 B Main stand: 6 C39

Sustainable solutions for successful arable farming. Farmers have to decide on the right technology depending on their soils and crops. Pöttinger offers a variety of methods for practice – conventional ploughing, mulch drilling and mulch direct drilling.

Rabe Agri

Pavilion 11 B Main stand: 11 C21

Rabe Parallel drilling system (PSS unit). Soil unevenness is compensated crossways by top-mounted rubber bearings (for one tandem element each) and lengthways by plate springs for each individual drilling unit. Individual stone guards, optimal running smoothness, even at high working speeds. Transverse forces are neutralised by tandem unit. Little wear (no turning point). Self-supported drilling system, precise placement depth thanks to reconsolidating, follow-on depth guide roller.

Reterra

Pavilion 11 D Main stand: 14 D22

Compost application in plant production helps in cases of dry stress. Enhanced biological activity of the soil and improved water bonding make a major contribution to a balanced water regime and alleviate or prevent dry stress. This gives farmers a cost-effective alternative for coping better with inclement weather due to climate change in future.

Strom Export

Pavilion 11 C Main stand: 11 E12

System Quick-Stop®. Patented system. The rolled plough column made of high-grade spring steel permits micro vibrations to be used for self-cleaning without strippers. Also reduces the size of the cut-off bottom beam. Can be used in very stony conditions. The Quick-Stop® system also includes side guidance of the plough columns to keep a constant distance between discs. Quick-Stop® is used in DISCLAND LC, LN and SWIFTER SD.

VÄDERSTAD

Pavilion 11 B Main stand: 11 C31

A model landscape (scale 1:32) shows three plant production methods. Variant 1: light soils with intensive methods: Carrier (short disc harrow) + Cultus (cultivator) + Spirit (drilling machine). Variant 2: heavy soils with close crop sequences: TopDown (one-pass cultivator) + Rapid (drilling machine). Variant 3: border locations (due to water etc.): Seed Hawk (direct drilling method).

Vogel & Noot Landmaschinen

Pavilion 11 B Main stand: 11 E31

VN MultiQuick – share changing in seconds. Quick changing systems for cultivator wear parts, for both share tips and winged shares (unique and patented). Allows wear parts to be changed in seconds without any tools and thus leads to uncompromisingly cost-effective tillage with the cultivator.



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Simultaneous interpreting: English 11 – 13/11/07; Russian 13 – 14/11/07

Time	Sun. 11/11	Mon. 12/11	Tue. 13/11	Wed. 14/11	Thur. 15/11	Fri. 16/11	Sat. 17/11
10		Modern tillage for all farm sizes DLG	Modern tillage for all farm sizes DLG	Fuel requirements of modern cultivation systems – how much fuel is necessary? DLG	Fuel requirements of modern cultivation systems – how much fuel is necessary? DLG	Tillage in the course of climate change – appropriate concepts DLG	Tillage in the course of climate change – appropriate concepts DLG
11		World tillage – success concepts of leading farmers DLG/DLG-Mitteilungen	Is it worth investing in farm land? BVVG	What do successful farmers do when loess flows and sand flies? DLG/DLG-Mitteilungen	Innovative tillage concepts of farmers from Saxony DLG/DLG-Mitteilungen	Tillage worldwide – the challenge is time management! DLG/DLG-Mitteilungen	Tillage worldwide – the challenge is soil compaction! DLG/DLG-Mitteilungen
12	Opening of the World Soil and Tillage Show – Tillage Worldwide DLG	Cost-effectiveness of tillage – an international comparison agribenchmark FAL/DLG	Cost-effectiveness of tillage – an international comparison agribenchmark FAL/DLG	Global and regional conservation agriculture – resource-efficient and technical solutions FAO/Saxony State Institute for Agriculture/DLG	Successful implementation of no-till methods ECAF/GKB/DLG	International perspectives of conservation tillage IAMO/Magazine TCS/DLG	Conservation tillage and no-till solutions – technical perspectives and contributions to climate change PIK/ECAF/GKB/DLG
13	Cost-effectiveness of tillage – an international comparison agribenchmark FAL/DLG	Soil protection in Germany and Europe – framework conditions and perspectives UBA (Federal Environment Agency)	Challenges for plant production in the 21 st century – crop rotation, soil structure, water supply University of Applied Science South Westfalia/ Chamber of Agriculture NRW/DLG	Challenges for plant production in the 21 st century – crop rotation, soil structure, water supply DLG/University of Applied Science Soest/ IG Pflanzenzucht	Humus management and soil erosion – challenges for farmers TUM	Humus management and soil erosion – challenges for farmers TUM	Soil protection in Germany and Europe – framework conditions and perspectives UBA (Federal Environment Agency)
14	Large-scale tillage and cultivation – successful management in Russia and the USA agribenchmark FAL/DLG	Large-scale tillage and cultivation – successful management in Russia and the USA agribenchmark FAL/DLG	Climate change and yields in Russia – options for adaptation through agricultural machinery DLG	Tillage XXL – where are the limits of transferring tractive power? DLG	Tillage XXL – where are the limits of transferring tractive power? DLG	Special equipment contra universal equipment – which way is modern tillage machinery developing? DLG	Special equipment contra universal equipment – which way is modern tillage machinery developing? DLG
15	Climate change – challenges, opportunities, strategies DLG	Climate changes and adaptation strategies DLG	Climate change/mild winters – more virus diseases? DLG	Mild winters, dry summers – how can we secure the harvests? DLG	Mild winters, dry summers – farmers' adaptation strategies DLG	Is Germany becoming too hot for wheat cropping? DLG	Climate change – what technologies for a pro-active approach to the future? DLG
16		Soil-conserving tyres DLG Test Center Agricultural Machinery and Farm Inputs	ISO-Bus in the European market DLG	Efficiency and Sustainability of the Argentinian Agriculture INTA/AAPRESID			

(Subject to change)

11/B

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The soil specialists – Top farmers

Outstanding farmers from the worlds leading arable farming regions present their tillage systems and their many years of experience. The focus is on production machinery, cost-effectiveness and site appropriateness. The portraits show various farms from America (Brazil, Argentina, USA, Canada); Central Europe (France, UK, Germany) and Eastern Europe (Poland, Russia, Ukraine, Kazakhstan) with their specific tillage challenges.

DLG e.V.



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