

# Fendt FOCUS

MAGAZINE FOR PROFESSIONALS

## Bem vindo ao Mato Grosso

► On tour with 24 Fendt IDEAL  
in Brazil's granaries

## Fendt scores with accuracy

► Comparing six automatic  
steering systems

## Fries & precision farming

► Jacob van den Borne uses  
Smart Farming on his potato farm



## FendtONE onboard Part 1: The new driver's workstation



1996

**It's not a tractor without a control lever**

The control lever is as much a part of the tractor as the steering wheel or the armrest. Today, no Fendt is delivered without a joystick. The first model to feature a Vario transmission, the Fendt Favorit 926, was introduced 25 years ago at Agritechnica. This coincided with the launch of the Vario control lever, mounted right on the driver's seat. Due to its size, it quickly earned the nickname, "antlers". The Vario control lever combined the functions of today's joystick and armrest. Even back then, the tipping functions were the same as today's version. As early as 1995, we wanted the driver to be able to easily adjust the rear lift, depth regulation and fine control and activate the cruise control, all at the push of a button on the joystick.

**Joystick to replace the "antlers"**

Because a number of customers found the "antlers" too bulky, creative young Fendt development engineers designed a new, small Vario joystick in record time. From the second half of 1996, Fendt 926 Varios were delivered to the first customers with the new joystick on the armrest. The handling was similar to today's; push forward with the activation button pressed and the tractor accelerates. Let go of the joystick to maintain that speed. Pull back the joystick to slow down the speed to a stop. Tilt to the left to activate the turning sequence and tilt to the right for cruise control. Use the controller on the side to operate the rear hoist and adjust the depth.

At the Agritechnica 2019, visitors were introduced to the FendtONE operating concept with the new driver's workstation, including the new multifunction joystick. It has buttons to control the engine, hydraulic valves and



► The first-generation joystick made it much easier to operate the tractor.



headland management system, plus a handful of freely assignable buttons. You can reach all the functions without repositioning. The joystick sits comfortably in the hand. As before, tilting the joystick controls the acceleration, deceleration, cruise control and change of direction. Today's driver workstation is a digital office with a whole host of functions. That's why the multifunction joystick is continuously improved.



2019



◀ Development of the latest generation of multifunction joystick focused on ergonomics and individualisation.

**DEAR READER,**

I am delighted to welcome you personally for the first time in this Fendt FOCUS issue. I've been leading the Fendt business since the beginning of this year, and it's a wonderful but enormous task, which I approach with the greatest respect and joy.

This year, however, we are all facing brand new challenges. Due to the coronavirus pandemic, we were missing seasonal workers from some of our factories in the spring. Production lines had to be shut down for a short time at Fendt site in Marktobendorf because of the lack of key supply parts from Italy, Spain and France. And the hot, dry months of April and May had many farmers worrying about a third consecutive year of drought.

Luckily, the much-needed rain came in June. With the introduction of a second shift, Fendt tractor production was able to quickly pick up speed again and build your machines to the usual quality. The coronavirus crisis also led to a new awareness and appreciation of local farming among the population.

The current 2020 Nutrition Report\* found that 39 percent of respondents once again valued agriculture more as a result of the coronavirus crisis. This increase is particularly high among young people and young adults, with almost half attaching greater importance to farming now (47 percent). 83 percent are buying food that is sourced locally – especially dairy products, eggs, bread and baked goods, as well as fresh fruit and vegetables. These figures give us all hope for the future.

I hope that your work continues to attract this all-important recognition.

Enjoy reading this latest issue of Fendt FOCUS.

Kind  
regards,



Christoph Gröblichhoff  
Chairman of the AGCO/Fendt Executive Board



▲ Christoph Gröblichhoff has been the Vice President and Chairman of the Managing Board AGCO/Fendt since 1<sup>st</sup> January 2020.

\* 2020 Nutrition Report from the Federal Ministry of Food and Agriculture





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▶ Discover more about the anti-glare terminals and the new driver's workstation from page 6 onwards.



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Plan · Perform · Document

FendtONE (Part 1)

# THE NEW DRIVER'S WORKSTATION

Everyone is talking about FendtONE. It's a ONE-stop system, combining field and office work much more closely than before, so you can optimise your planning and work processes. The idea is that you can carry out your field work more accurately and resource-efficiently while completing your planning and office tasks in just a few clicks. The result is more quality, more productivity and more ease-of-use.

In our introduction to FendtONE, we will start with a part you'll recognise, which is the driver's workstation in the cab. The FendtONE driver's workstation will seem familiar to you while opening up all-new possibilities.











Multifunction joystick

3L joystick

Crossgate lever

Air-con control

Infotainment control

Pushdial to navigate terminals and dashboard

Customisable buttons

Engine and transmission

Front/rear power lift control

Assigned by default to hydraulics valves

### Familiar operation with greater possibilities

When we developed the new FendtONE driver's workstation, we focused on ergonomic working, simple machine operation and integrating Fendt Smart Farming solutions. The driver's workstation was presented at the Agritechnica last year with the launch of the new Fendt 300 and 700 Vario series.

A number of functions have remained the same, while some have simply moved position. The new armrest has a multifunction joystick, a pushdial to navigate the terminals and an optional crossgate lever or 3L joystick. There are also freely assignable buttons and a new compound of up to three displays.



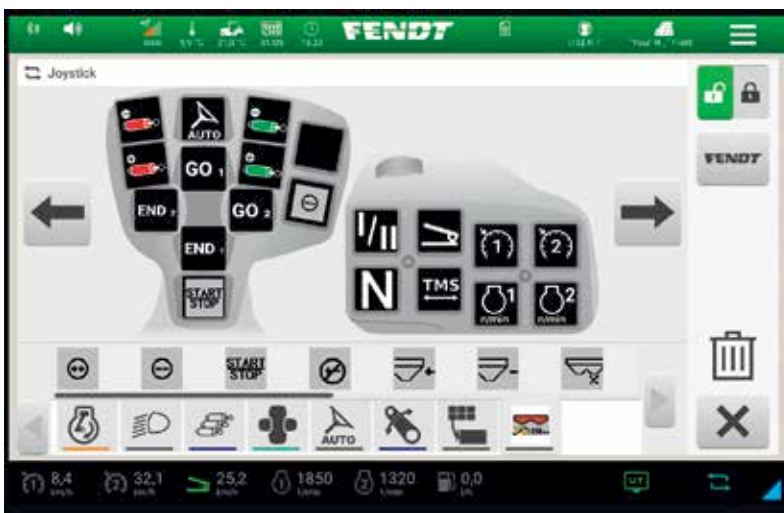
### All in hand

When we developed the multifunction joystick, we focused on intuitive and individual operation. The joystick has been equipped with additional functions. As before, you tilt the multifunction joystick to control acceleration, deceleration, cruise control and change of direction. You can now use the joystick to activate added functions – such as the rotary beacon, the work lights and the speed memory – by assigning them to the buttons you want. The multifunction joystick also has a dial on the side to adjust the cruise control speed even while driving along, without having to reach over.

The joystick can proportionally control two valves with the rockers. Use the rockers for functions like adjusting the flow rate of the hydraulic oil, or extending the top link more sensitively.

The freely assignable buttons on the multifunction joystick can easily be assigned with the right function via drag and drop. Select the function from the onscreen menu and simply drag it on the button. The button then lights up in the colour of that function group.

▼ The terminal clearly shows which functions the joystick buttons are assigned to.



When you reassign a valve, the valve colour changes. The freely assignable buttons on the joystick also light up in the colour of the function group after they are reassigned. For example, the rocker of the valve lights up blue at the bottom, to show it is assigned to the hydraulics function group. On the sides it lights up green for the green valve and red at the top when the valve is locked.

### COLOUR-CODING AND LIGHTING SCHEME

- Orange: Engine and gearbox
- Blue: Hydraulics
- Turquoise: Headland & ISOBUS
- Yellow: PTO
- White: General functions (headlights)



### WHAT CAN THE MULTIFUNCTION JOYSTICK DO?

- Tilt the joystick:
  - Accelerate
  - Decelerate
  - Activate cruise control
  - Change direction
- Assign ISOBUS functions to buttons
- Orange buttons: Engine & transmission
- Clover leaf: Headland management
- Freely assignable button (white): Assign e.g. work lights, rotary beacon, speed memories, preset cruise control or hydraulic valves
- Rockers: EHS valves

### WHAT CAN THE CROSSGATE LEVER DO?

- Controls hydraulic valves (if the vehicle has a front loader, this controls the front loader by default)
- Controls the 3<sup>rd</sup> and 4<sup>th</sup> hydraulic circuits



### Tried and tested – the crossgate lever

Depending on the configuration, the crossgate lever comes with both the Fendt 300 Vario and the Fendt 700 Vario. The crossgate lever has all the familiar functions, including controlling the hydraulic valves along with the 3<sup>rd</sup> and 4<sup>th</sup> hydraulic circuit on the front loader, for example.

### THE FENDT DRIVER'S WORKSTATION: FAMILIAR OPERATION WITH ALL-NEW POSSIBILITIES.



### WHAT FUNCTIONS CAN BE OPERATED WITH THE 3L JOYSTICK?

- Tractor functions (hydraulic)
- Front loader functions
- Travel direction (reverse button)



### Three functions at once

The 3L joystick is available as an option instead of the crossgate lever. This can be used to control the front loader as well as hydraulic functions. It has an additional, freely assignable button. By default, this button controls the change of direction of travel, without needing to reach over. The reverse button comes into its own during front loader work and frequently changing direction when loading or filling the feed mixer wagon.

If the Fendt 700 Vario is being used to fill the feed mixer wagon it is now possible to use the 3L joystick and the 3<sup>rd</sup> hydraulic circuit on the front loader to control three functions at once. Lift, tilt and open the silo grabber all at the same time. The third function is controlled with the thumb joystick on the 3L joystick. The Fendt 300 Vario does not feature a 3<sup>rd</sup> hydraulic circuit, and the operation of the silo grabber with the 3<sup>rd</sup> and 4<sup>th</sup> hydraulic circuit stays as before.



### Turn – push – tilt: this button can do more

The armrest now features three all-new pushdials to control the fans/air-con, infotainment system and terminals. On all the pushdials, the various functions are controlled by turning, pushing and tilting the button. Adjust the radio volume by turning the small knob. Tilt left or right to change the radio station, and push the button at the top to mute/unmute.

With the large pushdial, all three terminals are being controlled via a central button. If a blue triangle lights up at the bottom of the screen, this terminal can be controlled with the large pushdial. There are also four buttons above the button to control the terminal interfaces. Select an interface on the terminal, then scroll through the tiles by turning the dial. Push the button to edit the tile and open the function in full-screen. Use the touch control to adjust functions and settings on the terminals.

### More display area

FendtONE includes up to three digital display areas – a 10" dashboard on the steering column, a 12" terminal on the armrest and an optional 12" terminal on the right side of the roof liner. All the screens are anti-glare for the best visibility, even in bright sunlight. The menu structure has been made flatter to make it much easier to navigate. Settings in the terminal are no more than three clicks away.

Each screen on the 12" terminals contains six tiles, which you can individually assign to different func-

### WHAT CAN I CONTROL WITH THE PUSHDIAL?

- Fan/air-con
- Infotainment system
- Terminal



### HOW DO I USE THE PUSHDIAL?

- Tilt towards you: Opens the Launchpad on the terminal
- Tilt left or right: Toggle between the different screens on the terminal
- **a** Back button: Go back to the previous screen
- **b** Button with squares: Launchpad (overview page on the terminal)
- **c** Button with arrows: Menu for buttons ready to be assigned
- **d** Button with two terminals: Switch between terminals





### NOTES ON THE TERMINAL

If you can see a function menu in one of the tiles, just click on the screen to open it in full-screen mode. If the required function is not shown in a tile, you can open it from the Launchpad.

You can restore the default settings at any time in the Fendt Settings. This resets the freely assignable buttons as well as the terminal overviews.

Night mode is automatically activated in poor light, and the background colour of the terminal automatically changes from white to grey.



tions. A fully equipped Fendt 700 Vario has five screens, which can be expanded and personalised according to your needs. You can browse between the screens by swiping, as with a smartphone, or by tilting the pushdial. All the available functions are shown with logical symbols in the Launchpad – the overview page on the terminal. You can open the Launchpad easily by tilting the pushdial upwards. Tap an icon to open the page on the terminal and make your settings.

### Specific settings for each attachment

The screen shows different functions depending on the attachment. When used with a front packer / rotary harrow planter hookup, you can store specific settings for the head-land sequences, cruise control, speed memory, hydraulic oil flow-rate and terminal views as a separate work profile for that setup.

As soon as this combination or a specific attachment is coupled again, you can load the relevant work profile. The







▲ **New possibilities in automated steering, SectionControl or machine controls – the Fendt 300 Vario has everything you need for vegetable production.**

◀ **Specific work profiles for each attachment – it's so easy with FendtONE.**

new feature here is that you can save two settings for each work profile, i.e. Setting A and B. So, under A, you can save specific settings for field work and under B settings for road transport.

**Everything in sight when growing vegetables**  
Vegetable producers can make full use of the new skills of a Fendt 300 Vario Profi+. The potential display area is triple

that of its predecessor and the driver has significantly more data and functions to hand. Depending on the requirements, the driver can keep an eye on everything – from tractor data and lane guidance functions like SectionControl, to ISOBUS functions and camera images. Because the data can be split across the displays, there's no need to switch between screens, and the tractor and attachment can deliver their best performance at all times. **F**

**Learn more about the new digital products and the FendtONE offboard version for PC, tablet and smartphone in the next issue of Fendt FOCUS. Check out the new driver's workstation on [www.Fendt.TV](http://www.Fendt.TV), at: **FendtONE: A new level of user-friendliness****





# NEW GENERATION

Current model range Fendt 300 & Fendt 700 Vario







The Fendt 313 Vario and Fendt 724 Vario were Germany's best-selling tractors in 2019 (profi 3/2020). With the latest generation of the Fendt 300 Vario and Fendt 700 Vario series, Fendt has improved the nation's favourites even further. As well as the FendtONE operating concept, we have added more new features including the Infotainment package.







# FENDT 300 VARIO

	kW	hp
<b>Fendt 311 Vario</b>	83	113
<b>Fendt 312 Vario</b>	90	123
<b>Fendt 313 Vario</b>	98	133
<b>Fendt 314 Vario</b>	104	142
* with DP	112*	152*

Max. output ECE R120 with DP

## Fendt 300 Vario – Always the right choice.

The Fendt 300 Vario series is known as the all-rounder of mid-class tractors. With a maximum output of 113 hp to 152 hp, this agile compact tractor suits a wide range of applications. Whether on grassland, arable farms, transport, maintenance work or municipal jobs: the Fendt 300 Vario has the right configuration for any application. By popular demand, a suspended front axle is now also fitted as standard. Visctronic fans, air-con and electrical valves come as standard in all configurations.

The auto air-con and front power lift with load-relief control are available for the first time as optional extras on Power models.



### INFOTAINMENT PACKAGE

The Infotainment package with 4.1 sound system includes:

- Four high-end speakers
- Subwoofer and
- Integrated hands-free system.

This range is available starting with the Profi equipment package on the Fendt 300 and Fendt 700 Vario.



### FENDT 300 VARIO POWER

#### Operation

- FendtONE armrest with multifunction joystick (standard)
- Crossgate lever (optional)

#### Terminal

- 10" digital dashboard (standard)

#### Smart Farming





### FENDT 300 VARIO PROFI

- FendtONE armrest with multifunction joystick (standard)

*Choice of:*

- Crossgate lever
- 3L joystick

- 10" digital dashboard (standard)
- 12" terminal on the armrest (optional)
- 12" terminal in the roof liner (optional)

### FENDT 300 VARIO PROFI+

- FendtONE armrest with multifunction joystick (standard)

*Choice of:*

- Crossgate lever
- 3L joystick

- 10" digital dashboard (standard)
- 12" terminal on the armrest (optional)
- 12" terminal in the roof liner (optional)

- Guidance system basic package including Fendt Guide (standard)
- SectionControl (optional)
- VariableRateControl (optional)





### FENDT 700 VARIO POWER

### FENDT 700 VARIO POWER+

<b>Operation</b>	<ul style="list-style-type: none"> <li>• FendtONE armrest with multifunction joystick (standard)</li> <li>• Crossgate lever (standard)</li> </ul>	<ul style="list-style-type: none"> <li>• FendtONE armrest with multifunction joystick (standard)</li> <li><i>Choice of:</i></li> <li>• Crossgate lever</li> <li>• 3L joystick</li> </ul>
<b>Terminal</b>	<ul style="list-style-type: none"> <li>• 10" digital dashboard (standard)</li> <li>• 12" terminal on the armrest (standard)</li> </ul>	<ul style="list-style-type: none"> <li>• 10" digital dashboard (standard)</li> <li>• 12" terminal on the armrest (standard)</li> </ul>
<b>Technology</b>	<ul style="list-style-type: none"> <li>• Hydraulic pump 109 l/min (standard)</li> </ul>	<ul style="list-style-type: none"> <li>• Cargo front loader with 3<sup>rd</sup> valve (optional)</li> </ul>
<b>Smart Farming</b>		<ul style="list-style-type: none"> <li>• Guidance system basic package including Fendt Guide (standard)</li> <li>• Agronomics basic package (optional)</li> <li>• Telemetry basic package (optional)</li> <li>• Machine Control basic package (ISOBUS) (standard)</li> <li>• SectionControl (optional)</li> <li>• VariableRateControl (optional)</li> </ul>





# FENDT 700 VARIO

	kW	hp
<b>Fendt 714 Vario</b>	106	144
<b>Fendt 716 Vario</b>	120	163
<b>Fendt 718 Vario</b>	133	181
<b>Fendt 720 Vario</b>	148	201
<b>Fendt 722 Vario</b>	163	222
<b>Fendt 724 Vario</b>	174	237

Rated power in accordance with ECE R120

## Fendt 700 Vario – Perfected for any type of work.

The Fendt 700 Vario is designed for demanding operations and fast transport. With its power range of up to 237 hp, this versatile tractor is perfect for anything from light grassland tasks to heavy-duty field work. Added features, like the front ISOBUS connection and a 6-way multi-coupler for a 3rd front loader valve, make the Fendt 700 Vario even more versatile. You can use up to three terminals for a clearer use of all functions. All the displays work in a compound so you can show the tractor functions on specific terminals depending on the job at hand. **F**

### FENDT 700 VARIO PROFI

- FendtONE armrest with multifunction joystick (standard)

*Choice of:*

- Crossgate lever
- 3L joystick

- 10" digital dashboard (standard)
- 12" terminal on the armrest (standard)
- 12" terminal in the roof liner (optional)

- Cargo front loader with 3<sup>rd</sup> valve (optional)
- Hydraulic pump 152 l/min (standard)
- Hydraulic pump 193 l/min (optional)

- Telemetry basic package (optional)
- Machine Control basic package (ISOBUS) (standard)

### FENDT 700 VARIO PROFI+

- FendtONE armrest with multifunction joystick (standard)

*Choice of:*

- Crossgate lever
- 3L joystick

- 10" digital dashboard (standard)
- 12" terminal on the armrest (standard)
- 12" terminal in the roof liner (optional)

- Cargo front loader with 3<sup>rd</sup> valve (optional)
- Hydraulic pump 152 l/min (standard)
- Hydraulic pump 193 l/min (optional)

- Guidance system basic package including Fendt Guide (standard)
- Agronomics basic package (standard)
- Telemetry basic package (standard)
- Machine Control basic package (ISOBUS) (standard)
- SectionControl (optional)
- VariableRateControl (optional)



*PERSONAL PROFILE*

- 61 years
- Married, 2 grown-up children
- Agricultural Science degree from Rendsburg Technical College
- 1956: Contractor business founded by father
- 1990: Took over contractor business
- Hobbies and interests: hunting, handiwork, motorcycling (BMW)

[www.lohnunternehmen-pentzlin.de](http://www.lohnunternehmen-pentzlin.de)





# “YOU HAVE TO GET AROUND.”

since 2002. Since November 2015, he is also the President of the European Contractor Organisation CEETTAR (Confédération Européenne des Entrepreneurs de Travaux Techniques Agricoles et Ruraux), based in Brussels. This was our first Fendt FOCUS interview via video conference.

Klaus Pentzlin has been President of the Federal Association of Contractors (BLU) honorary

The coronavirus pandemic has also obviously led to a fresh appreciation of local farming produce among many consumers.

What's your take on that?

I'm really happy that so many people are shopping in farm shops now. We have a small farm shop near us, and it's busy every morning. Local produce in particular is in high demand. People now seem to be valuing the quality of food more than before. It's wonderful to see. When my wife and I get the BBQ fired up, we get our produce locally, too. It doesn't all have to be organic, but it should be of high quality and, if possible, locally produced.

How do you think business for contractors has changed in recent years? And what are the issues that contractors are increasingly concerned with today?

There are two very big issues. One is the development of agricultural holdings, more precisely their structural changes. The sec-

*“People now seem to be valuing the quality of food more than before.”*

ond major issue is staff. There is a shortage of skilled workers and we have an impossibly high wage gap between farming, industry and also the urban environment. To give an example, the closer you get to Hamburg, the harder it becomes for contractors to find affordable workers. Even in road construc-

tion, you have to pay epic sums to get machine operators at all. Actual labour costs don't match up anymore with today's reduced prices for our customers, the farmers.

We are trying to find our own way through all this. We are training people up and try to offer them better prospects. And we need to make them realise it's about more than hourly wages, but also about the working environment and collegiality.

What worries me more personally is hearing about falling milk prices. If they go down again, even more dairy farms will give up. These companies are crucial to us as contractors. In general though, you could say, we need to evolve. Many farms will take on even more specialist jobs. And this is where we can be pioneers and specialists – with the right technology and more experience. Our business model is to bring state-of-the-art technology to every company.



Digitalization also plays an important role for contractors, the key words being cost management or documentation.

Digitalisation no longer means having a vehicle with a guidance system. That's actually a standard feature now. What we need are smart management systems that can export

*“What we need are smart management systems.”*

working hours and performance data to create a secure, instant billing basis. Another advantage is that we can immediately determine whether we have earned anything from an order or not.

In fact, our order management system would have to be completely self-sufficient. A friend of mine runs a courier company with a fleet of vans. All recurring orders are posted automatically because the order data is already there. Once the driver has fulfilled the order, the invoice is automatically created, printed, enveloped and sent. Many contractors aren't working like that yet.

You can also use data to complete the orders we receive from the customer, then process and return them for the customer's field database. With the never-ending bureaucracy nowadays this can be a great help.

Fendt large tractors have a good reputation with contractors. What do you think are the special requirements for these machines?

What's really important to us in the technology is that the machines work. Then the drivers are happy, too. Machine failures are embarrassing for a service provider. The reliability of a machine reflects on the reliability of the company. Costs must match the benefits. Another important factor is how comfortable the machine is to use. I don't want to inflict bad equipment on my drivers. Sometimes it's the little things that give something that feel-good factor. It makes a difference to the driver whether a machine drives quietly or makes an ugly noise. For me, driver-friendliness also includes clear, logical menu navigation and controls.

You are President of the German Federation of Contractors and President of the European Contractor Organisation CEETTAR. How do the tasks and challenges of contractors differ in European countries?

In Spain and Italy, but also in Poland, farming structures are different from those in Germany. Italian farms are often smaller in size, for example. That's why there are more than 3,000 organised contractors in Italy – compared to 2,000 in Germany. If we look to the east, contractors are almost always agricultural machinery dealers. In the north, forestry companies prevail.

In Europe, we try to represent everyone equally. To this end, we have set up standing committees to pool the problems in the various countries and then try to influence policies. The committees meet with specialists from the Member States. There's a technical committee, one for forestry and, most importantly, one for the common agricultural policy. This committee is made up of the countries' leading business representatives. The Standing Committee for Technology takes care of extra-wide load rules and the tonnage of machines, among other things. We are also trying to create a uniform professional profile with well-informed training. This isn't always easy, because the infrastructures and level of professionalism vary considerably.

*“The reliability of a machine reflects on the reliability of the company.”*

You run your own contractor business in Schönweide, Schleswig-Holstein. How do you see your profession today compared to when you started?

My father ended up in Schleswig-Holstein after the Second World War and founded the contractor business in 1956. I was born and raised here in Schönweide. I took over the



▲ Socially-distanced interview – Manja Morawitz and Sepp Nuscheler in Marktoberdorf spoke to Klaus Pentzlin in Schönweide via video conference.





contractor business in 1990. Since then, the work contractors do has changed considerably. If I were to take over the business today, it would probably be a very different company altogether. Knowing what I know now, I would not do my training with a local contractor. You have to get out there and work on other farms. Including abroad. By working on other farms, you can see how they do things and get new ideas. I say the same to young people working in farming.

**Many thanks for talking to us!**

**This interview was conducted by**

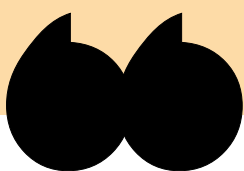
**Manja Morawitz and Sepp Nuscheler. F**



**ABOUT BLU**

Federal Association of Contractors (Bundesverband Lohnunternehmen e.V. or BLU) represents the common interests of contractors in Germany. Around 2,000 contractors with their 30,000 employees from 12 national associations and groups are represented by BLU.

[www.lohnunternehmen.de](http://www.lohnunternehmen.de)







80 years, 4 generations of Mauch, 200 employees, one branch in Romania and one near Salzburg. MAUCH Gesellschaft m.b.H. & Co. KG is the largest private agricultural machinery dealer in Austria and has been selling Fendt machines since 1997. **Susanna Mauch-Autenrieth** leads the highly motivated sales team.

Agricultural technology and sales are close to the heart of this Head of Sales for Agricultural Machinery, as she grew up on the family business in Burgkirchen. Much has changed over four generations – in the farming itself and the technology. “Today’s farms are very far removed from those we would have seen 50 years ago,” says Susanna. During her internship at Fendt in 2004, she was there for the introduction of the first guidance system –

now it’s all about FendtONE and Fendt Connect. So the technology is new, but the

**“THE TRUST OF  
OUR CUSTOMERS  
IS OUR GREATEST  
ASSET.”**

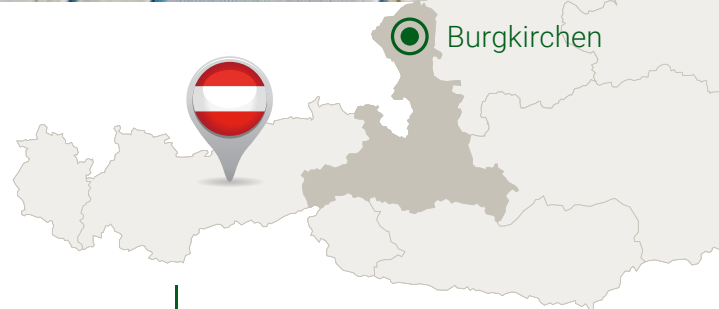
questions remain the same: “What are the benefits, how complicated is it to use and how does it help my farm?” The business woman has no doubt, “Farmers are very pro-



# “FARMERS ARE VERY PROGRESSIVE.”



◀ Susanna Mauch-Autenrieth (right) keeps in touch with Fendt. Here she is in conversation with Wolfgang Möhrer, Sales Manager Fendt Central Europe.



gressive, and when new technology is shown to make their work easier, it is quickly accepted. Today, a guidance system is the norm on most farms.”

In sales, sound professional advice and dealing with customers are crucial to Susanna: “Customer service and courtesy are our golden rules. We treat every customer equally, because the trust of our customers is our greatest asset.” The entire team regularly par-

ticipates in training courses so they can always deliver the best quality advice. In early 2020, FendtONE training was on the agenda.

### **After guidance system comes FendtONE**

“FendtONE is a milestone. The guidance functions especially are made even simpler with FendtONE”, says the sales expert. “FendtONE is instantly clear to the Fendt driver. The almost self-explanatory system also enables

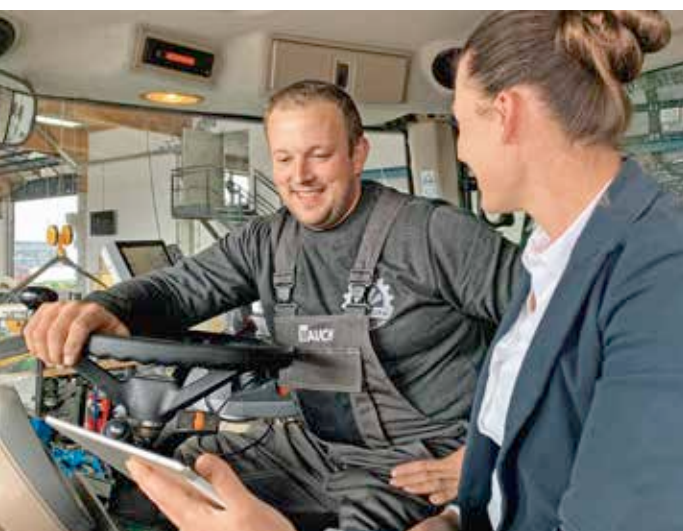
### **AGRICULTURE IN AUSTRIA**

- 162,000 part-time and full-time agricultural holdings
- Working farmland: 38% of Austria
- Forest: 43% of Austria
- 26% of Austria's farmland is used organically and ecologically
- Types of farming include:
  - Alpine farming, grassland, arable farming, forestry, conversions: dairy farms, cattle, pigs, poultry and tourism
  - Average farm size: 20 ha
  - 55% of new tractor registrations in 2019 are below 110 hp





◀ Giving her customers personal expert advice is particularly important for Susanna, whether at the kitchen table, in the head office or even socially distanced. Since coronavirus, the business has significantly expanded its digital services. (Photos taken pre-Covid-19)



newcomers to learn the new operation without a hitch. That's the strength of Fendt," she says. But in addition to these innovations, she also likes the different configurations. "Fendt has taken into account the different needs of its customers. From the basic Power version to the fully-loaded Profi+ – Fendt always focuses on the work requirements of its customers," Susanna explains.

**Advice delivered to your door**

"The consultation takes place at the customer's, but this year it's a little different," says the 35-year-old. Despite coronavirus, operations at Mauch have been never stopped. "On the Thursday before lockdown, we were still in Marktoberdorf for our FendtONE training course at Fendt, and over the weekend we had to change the entire operation," Susanna explains. "The safety of our team was paramount, but closing was not an option for us. After all, our customers continue to work." The trade fairs and field days are also affected. Instead of the traditional Field Day, a new format was developed at short notice – the #mauchzuhausmesse. "We wanted to offer

more digital services anyway, and this just drove that project forward. Our website traffic has increased dramatically, and the videos especially have gone down very well." None of this replaces the personal contact between the customer and the seller. But we need to reduce contact for now.

**Service without contact**

"Solutions like Fendt Connect will help us in the future. When our customers use Fendt Connect and share it

**“BEING GOOD WITH A SCREWDRIVER IS NO LONGER ENOUGH.”**

with us, we can view the tractor status directly from the workshop and respond more quickly. The customer has no reason to go to our workshop first," says the former business graduate. With Fendt Connect, customers can use an app to check the status of their tractor, including maintenance intervals, fill levels, and the tractor location. This is very helpful for non-local drivers. "If they lose their way, you can send them to the right field. Fendt Connect can also be used for anti-theft protection because its location is always visible," says



Susanna. The electronics is a challenge for mechatronics technicians. “Being good with a screwdriver is no longer enough. Reading circuit diagrams and error codes and having an understanding of electronics are just as crucial,” she explains.

**A companion in the 900-series**

The 900-series keeps crossing her career path. The first time was in her internship at Fendt, where she also met her future husband Philipp Autenrieth while still writing her thesis. Susanna studied Technology & Innovation Management at the University of Munich after her technical

training. For her thesis, she conducted a worldwide survey on the 900-series. After graduating, she went back to the family business. “That’s when I managed to entice my husband away from Fendt. Now he is in charge of our service team for agricultural machinery,” says Susanna. And she has just sold two new 900s.

When she is not working at the business, the mother-of-three likes to spend time with her family. “It’s a great counter-balance,” she laughs. Her children Maximiliane, 9, Ferdinand, 7, and Leopold, 5, keep her on her toes. Like their mother, they get to grow

up on the farm. “We’re such a close family that I can balance work and family life almost without compromise. It’s an enormous privilege,” says the Austrian. A few years ago,

**“PHILIPP AND I ARE A STRONG TEAM BOTH PRIVATELY AND PROFESSIONALLY.”**

Marie Mauch, her sister, joined the family business and is now heading its special machinery division. In many instances this has strengthened the teamwork. “Fendt is the ideal carrier vehicle,”

Susanna says with a smile. “Marie studied agriculture at the University of Natural Resources and Life Sciences in Vienna and has always had a passion for organic farming. This and her dedicated talent for sales are a constant source of inspiration for me.”

“My husband Philipp and I are a strong team both privately and professionally. Our lives are on an entirely equal footing – and not just on paper. Otherwise our shared work and family life would not be so smooth sailing. I owe some of this luck to Fendt and how we crossed paths over 16 years ago,” says Susanna. **F**

▼ Fendtlers and the Mauch family met at the Grassland Field Day in June 2018, before social distancing. Susanna Mauch-Autenrieth (2<sup>nd</sup> from left) with Ferdinand, Leopold and husband Philipp, with Fendtlers Dennis Rebay von Ehrenwiesen (left), Markus Kahr and Berkcan Kutlucan.







# *BEM VINDO AO MATO GROSSO*



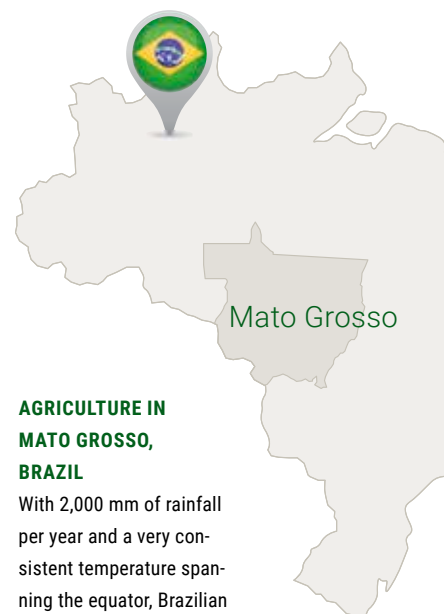




## 24 Fendt IDEAL on tour in Brazil

Vast stretches of land, huge soya and corn fields and two annual harvests – Mato Grosso is the granary of Brazil. The Fendt IDEAL demo tour in Brazil started at the beginning of 2020, with 24 Fendt IDEAL models and a team of more than 50 specialists in tow.

The Fendt 1000 Vario had already won over Brazilian farmers. Then came the Fendt IDEAL, which was also a hit. From 2,000-ha family farms to agricultural companies with over 100,000 ha – farm sizes in Brazil vary enormously, as do the requirements of the customers.



### AGRICULTURE IN MATO GROSSO, BRAZIL

With 2,000 mm of rainfall per year and a very consistent temperature spanning the equator, Brazilian farmers can harvest two crops a year. Soya, maize and cotton are the main crops in Mato Grosso.

Soya is usually harvested between the beginning of January and the end of February, with cotton or maize planted right away. This is when most of the rain falls. Farmers therefore have to harvest then sow within a very short period of time for the second harvest to emerge. By law, the soil must be allowed to rest from mid-July to 15th September.





▲ A Fendt 1050 Vario is already at work at Fazenda Vé Amantino, Rafael Lodi's family farm. They trialled the Fendt IDEAL 8 here in February.



### FENDT IN BRAZIL

The Agri-Show held just outside São Paulo in April 2019 marked Fendt's market entry in Brazil. At the agricultural equipment fair, the Brazilian team unveiled the Fendt IDEAL, the Fendt 1050 Vario and the Fendt MOMENTUM precision planter.

The Fendt do Brasil team now has 31 Fendt employees at various locations and its own headquarters in Sorriso, Mato Grosso. To mark the first anniversary, the Brazilian team launched the Fendt 900 Vario in a virtual live event in April 2020.

### 15,000 HECTARES WITH A TEAM OF 15

"Bem vindo ao Mato Grosso Fendt", combine harvester driver Guimerson welcomes Fendt to Mato Grosso.

**Rafael Lodi's Fazenda Vé Amantino** is headquartered in Sinop, in the state of Mato Grosso. Maize and soya are the main crops grown over the 15,000 hectares. And all the work is done by Rafael Lodi with his 15 employees, so they need high-capacity and efficient machines.

The Fendt 1050 Vario has already made its mark and combine harvester driver Guimerson sees great potential in the capabilities of the Fendt IDEAL. He'd seen an online video of the Fendt IDEAL from Europe. "I was eager to find out more about this vehicle," Guimerson explains. The use of a tracked drive instead of wheels is of particular interest to him.



▲ "The cab is very comfortable and the terminal is easy to use," says Guimerson. He is obviously a fan of the Fendt IDEAL.





### BIG RUN-OUTS, BIG MACHINES

More than 100,000 ha of land belong to the **Scheffer Group**, one of the largest agricultural enterprises in Brazil, with operations in Cuiabá, Sapezal, Sinop and Imperatriz. Two Fendt 1050 Varios are already at work on this large-scale farm. Now they were trialling two Fendt IDEAL 9Ts at Fazenda Três Lagoas farm in Sapezal. The *grupo Scheffer* farm mainly grows soya, maize and cotton. They also farm cattle.

With so much land to cover, comfort and ease-of-use are big plus points for the drivers, which is why, again, the Fendt IDEAL is the perfect choice; "Drivers aren't used to such a high level of comfort in today's conventional machines. I'm talking about the air conditioning, the overall quality and the spaciousness of the cab," explains combine harvester driver **Joilson Batista**.



▲ Joilson A. Batista is impressed: "The Fendt IDEAL harvests everything and collects the crop in the grain tank, without dropping anything on the field that will grow later and cause problems for further cultivation."

### 38 TONNES PER HOUR

**Alexandre Schenkel** has a farm in Campo Verde in the state of Mato Grosso, where soya and cotton are the main crops. There are already two 1000-series at work there. He tills the 2,000-ha plot with a workforce of 10 and tried out both a Fendt IDEAL 8 and a Fendt IDEAL 9T. He has now opted for a Fendt IDEAL 9T. "In our region, we have to sow and harvest soya very early," explains the farm manager. Following the double-crop sequence, cotton is planted immediately after the soya harvest, so it can still be harvested within the strict legal time window. To do this, they need machines that get the harvest done quickly and at high-capacity. "This machine can harvest up to 38 tonnes an hour. That's outstanding for the local conditions," says Schenkel. For him, crop failures are the biggest concern, because the business invests a lot of money and time in sowing.



▲ "We are impressed by the quality, the speed and the volume that can be harvested with these machines," says Alexandre, praising the Fendt IDEAL.

### 15 METRES OF CUTTING UNIT WITHOUT LOSSES

Arable farming, fish farming, cattle farming and sheep farming over 2,200 ha: this is the farm of **Luis Carlos Nardi** in Sorriso, Mato Grosso. With a workforce of six, he needs a powerful combine harvester for his beautifully-named farm, **Fazenda Estrela de Fogo**. "Sometimes we have very long periods of rain. That's why we need a powerful machine," explains the farmer. "With this machine's output, we can drive faster, the grain quality is excellent and, most importantly for us, we have fewer crop losses." With the Fendt IDEAL, he expects to harvest 480 ha of soya and 1,000 hectares of maize per season. In the fair weather periods, most crop losses are caused by the cutting unit, so that was an important aspect to consider. Soil conditions are another challenge, as the soil on the farm has a clay content of more than 50%. Tracked drives are a must and the Fendt IDEAL 9T is perfectly equipped. **F**



▲ "I came to Mato Grosso in 1984 as an employed worker and have never seen a machine with a 15-metre cutting unit that harvested at 9 km/h without losses," says Luiz Nardi of Fendt IDEAL 9T enthusiastically.



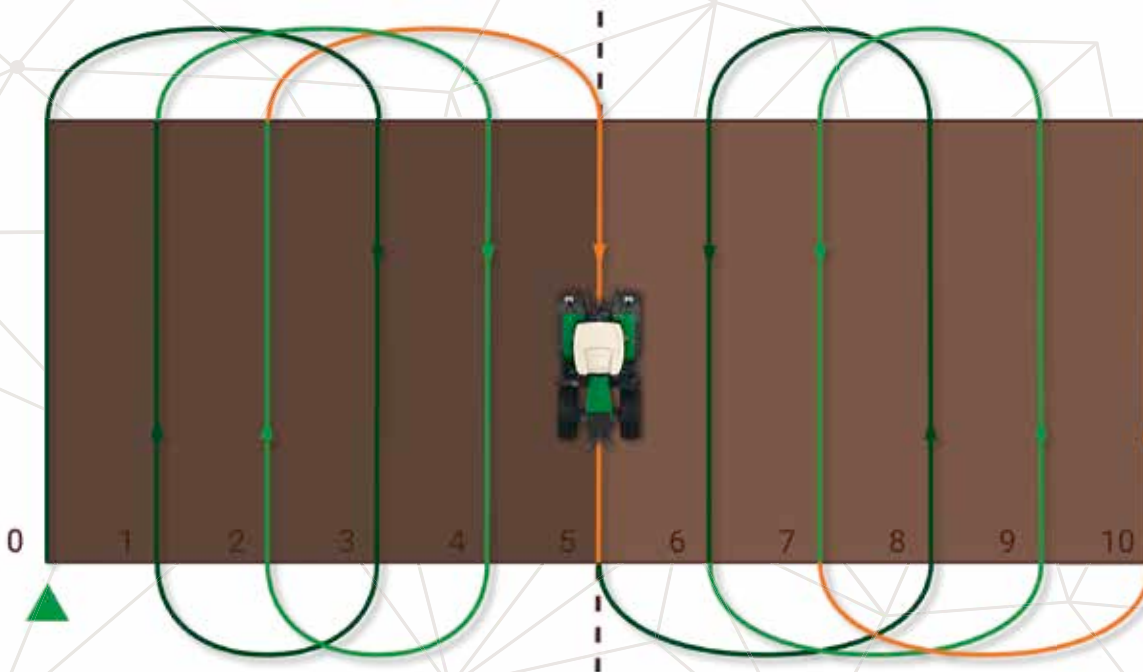
# HOW TO USE VARIOTRONIC<sup>TI</sup> TURN ASSISTANT

In this issue, we'll show you how to automatically turn in Part Field mode with the **Variotronic<sup>TI</sup> Turn Assistant**.

The **Variotronic<sup>TI</sup> Turn Assistant** calculates automatic turning operations for the headland. This helps you use the headland particularly efficiently and avoid unnecessary turns. Of course, you can also choose manual mode for turning, in which case the tractor turns at the push of a button.

**Please note:**

With **Variotronic<sup>TI</sup> Turn Assistant** in AUTO mode, you can select U-Turn mode as well as Part Field mode. To do this, just follow Step 3 in the instructions.



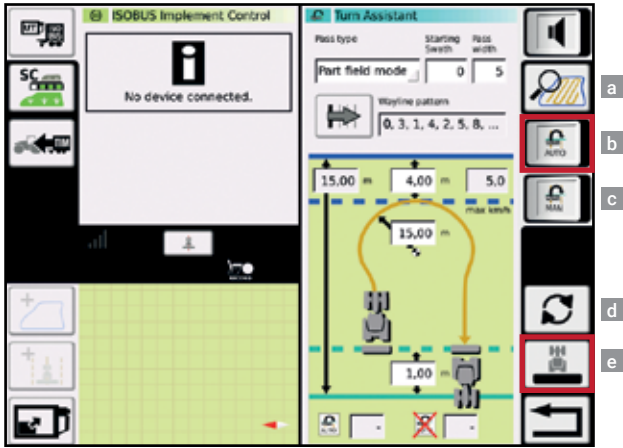
**REQUIREMENT**

- VarioGuide (with NovAtel or Trimble receiver)
- Software release TI Headland
- Various settings for the Variotronic<sup>TI</sup> Turn Assistant should already be applied (including headland width, attachment, turning radius).

- 1 Open the VarioGuide main menu by pressing the **VarioGuide button twice** on the terminal. Then tap the **Variotronic<sup>TI</sup> Turn Assistant button** to automatically turn.



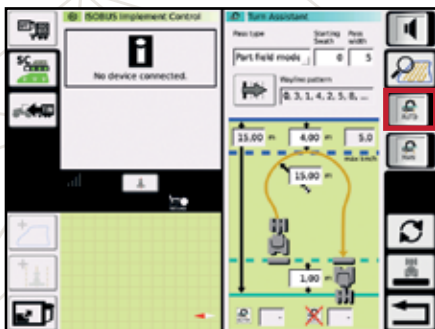
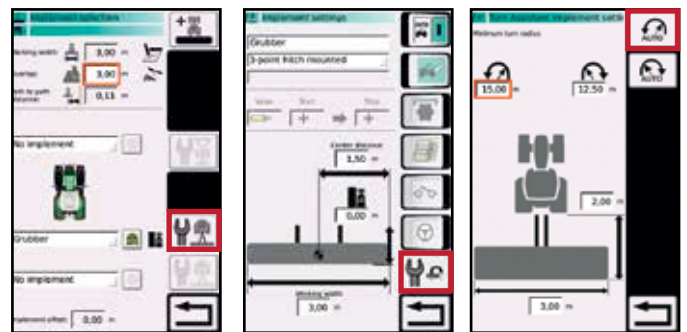




**Turn Assistant menu overview:**

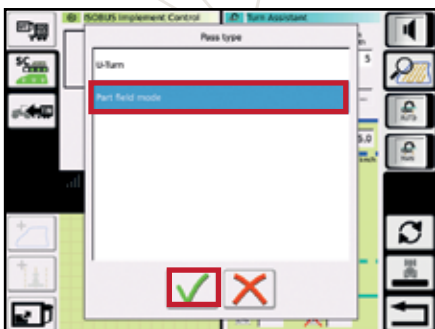
- a Preview:**  
Show all pre-calculated turning sequences
- b AUTO:** Automatic mode
- c MAN:** Manual mode
- d Apply button:** Calculate turning sequences
- e Device Manager:**  
Make settings for attachments

**2** Data on the attachment, which the system uses to calculate the curve radius, can be entered in the **Device Manager** and the Variotronic<sup>TI</sup> Turn Assistant settings. To do this, tap the **Device Manager** button **e** followed by the **Variotronic<sup>TI</sup> Turn Assistant settings** button. Alternatively, you can record the minimum turning circle for each side. *These settings should be made before you start work, as the curve radius significantly influences the results!*

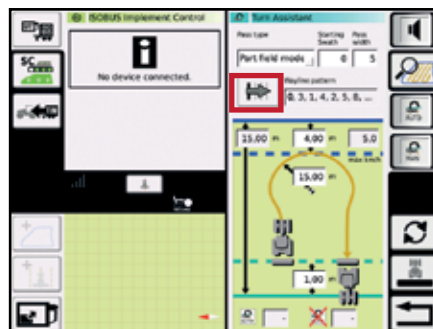


**3** Now select automatic mode by tapping the **AUTO** button **b**. In AUTO mode, you can choose between two different types of turns. In Part Field mode, you drive three lanes out and two back. In U-Turn mode you turn in individual track widths.

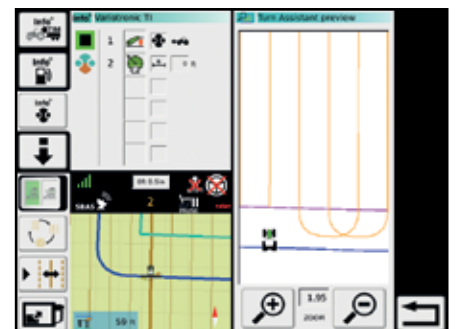
If the AUTO button **b** is greyed out, there are no valid settings stored in the menu. In this case, go back to Step 2 and make the necessary settings on the attachment.



**4** In our example, select **Part Field mode** and confirm by tapping the **green checkmark**.



**5** Depending on your field, you can select the **track** you want to edit first, and set the work direction by tapping the **direction arrow**. When you have made these settings, press the **Apply** button **d**. This automatically calculates all the turns for that field.



**6** Tap the **Preview** button **a** to show the calculated turns for the entire field. If all the curves are correctly calculated, you can activate Part Field mode. **F**

You can find out how to set **field boundaries** in VarioGuide in our next issue of **Fendt FOCUS** in **January 2020!**





# THE WAGON'S FULLY LOADED



▲ (left to right) Pius, Markus, Felix, Simon and Sabine Endraß

A picture book farm – cows, chickens, Fendt machines, and the Alps in the background. The Endraß family manages Makarerhof farm on the northern slope of the Auerberg in Germany's Allgäu, about 15 km from the Fendt plant in Marktoberdorf.





Makarerhof has been an organic farm since 2007, with 55 dairy cows and 50 calves. To feed the animals, 63 ha of farmland is kept as permanent pasture, of which 50% is leased. All the work can be managed by the family members without outside help. Markus Endraß and his wife Sabine mainly work on the farm, but their three sons also muck in. The eldest son Simon is currently training as a farmer, but he comes home to help at peak work times. A total of two workers work in the yard, using Fendt technology as they go. In 2018, they invested in a Fendt 313 Vario and a Fendt Tigo MR 50 Profi

also joined the farm in April 2019.

The conditions in the foothills of the Alps are perfect for grassland and grazing, where the Fendt Tigo is completely at home. One challenge, however, is the weather. Conditions can change quickly in the Alps and harvest time windows must be cleverly managed. “We have snow in May,” says organic farmer Markus Endraß. We have 1,200 mm of rainfall a year and the average annual temperature is a cool 7.5°C. “We had some concerns about full loads in wet conditions,” says Markus Endraß. Simon want-

ed to try it anyway and his hunch paid off. “Both machines have wide tyres, the 313 has 650 tyres and the Tigo has 710. So they don’t leave tracks in the grass and the central gauge wheel behind the pick-up stops dirt getting into the feed,” explains the young farmer.

#### **The Alpine expert**

With its swivel bulkhead specially developed for the Tigo, and its low centre of gravity, the Fendt Tigo MR Profi is an Alpine expert in its own right. Level surfaces are few and far between on this farm, with some even located on the steep slopes. But that doesn’t

stop the Fendt 313 Vario / Fendt Tigo team. “The Tigo has the same dimensions as our old loader wagon, with a much higher DIN-rated load-

**“THE TIGO  
HAS A FAR  
HIGHER  
CAPACITY.”**

ing capacity of 5m<sup>3</sup>, doubling to 10m<sup>3</sup> after compaction”, estimates Simon Endraß. “Because we can variably adjust the pressure of the bulkhead, we can respond flexibly to the changing feed structure. All from the com-



▶ “The Fendt 313 Vario is very compact, clear and agile and has just the right amount of power we need,” says Markus Endraß.



▲ Simon enthusiastically drives his loader wagons until the bulkhead moves forward – that’s when he knows the Tigo is fully loaded.

fort of the tractor seat.” With the first cut, the feed has plenty of structure; with the last cut significantly less. “And of

**“WE NEVER LOOKED BACK AFTER GOING ORGANIC.”**

course we don't want to destroy the structure of the follow-on growth,” says Markus Endraß.

“I'd been looking to phase out high-performance production for a long time, and when the market for organic products surged, we took the step,” says Markus Endraß. The organic milk market has always been

steady with slight growth, which gives the farm security for the future. “We never looked back after the change-over. In the first year I had my doubts because the milk yield and production fell, but the bottom line is that things are going really well,” he says proudly. “We are running a low-input farm with the lowest possible operating costs but it's still efficient,” says Markus Endraß, explaining the system. As such, they rely on efficient technology throughout the farm to incorporate economic and ecological factors. “We keep our feed costs as low as possible. It works well, with an emphasis on grazing in combination with barn feeding and efficient use of concentrate. And





with the Fendt machines we can produce the highest quality basic feed. They are reliable, economical, value-retaining, and fit perfectly into the philosophy of our company.”

### Fully loaded

Pre-compression during loading is one clear benefit to the variable bulkhead of the Fendt Tigo. It also reliably stops the food from becoming mush. Another strength is the way it fully empties during

the unloading process. “On the Tigo, you no longer have to remove food residues above the loading unit by hand,” says Simon Endraß. The swivelling bulkhead together with the fast-running scraper floor of the Fendt Tigo significantly reduces silage unloading time. The gap between the rotor tines is particularly narrow on the Fendt Tigo. “This is an advantage during the cutting process, because the

stalks are better placed against the knife so they can be cut shorter,” says the young farmer.

The Fendt Tigo is also fantastic as a forage harvester transport wagon, because it can take on considerably higher volumes than conventional loaders. The wagon is filled more evenly thanks to the variable bulkhead, making sure the weight is perfectly distributed between the tractor and loader wagon. “And the forage harvester driver has a greater area to fill the material into,” explains Simon Endraß.

This farm is a family affair. After his training, Simon wants to become more involved. “We want a smooth handover of the farm,” says Markus Endraß. But expanding production is out of the question for the family. “Our fields are almost completely

rounded, so we can perfectly combine ecology and economy. We have a conservative finance model, so we are free to make our decisions.” The work on the farm is down to 18-year-old Simon, but he also likes to build. “I might want to continue my studies as an agricultural machine mechan-

## “WE WANT A SMOOTH FARM HANDOVER.”

ic, but I’m not sure yet.” He has always been passionate about technology, as shown by the countless mini agricultural machine models he has built.

Markus’ grandfather introduced the first Diesellox tractor to the farm. But, quite unlike his successors, he still preferred the horse over the tractor. **F**





# THE 200-SERIES IS READY FOR STREAMING



In a small village in Brandenburg at the end of July 2019: there are about 20 houses, over 50 cars, some caravans and containers plus 6 trucks full of camera gear. A film shoot brings with it a bustle of logistics, people and chaos, and in the middle of it all is a Fendt 200 Vario – welcome to the set of **Bibi & Tina**.

A microphone sticks out from a cornfield with about 25 people around it. Everything is still, except for a quiet rustling. “Cut! It’s a wrap,” a shout breaks the silence from the field, and producer Detlev Buck and actress Harriet Herbig-Matten, followed by the sound and camera crew, emerge out of the corn plants. They have just finished filming a scene with a field mouse for the new Bibi & Tina series.

This popular German children’s series with the witch Bibi Blocksberg and her friend Tina Martin is all

about friendship, family and life on the horse farm, with some witchcraft mixed in. Young witch Bibi Blocksberg always triggers her own bit of chaos and that’s what makes the series so charming. After four successful big-screen movies, Detlev Buck and Kirstin Wille are now producing a new series with Katharina Hirschberger starring as Bibi and Harriet Herbig-Matten as Tina.

### **A nose for the environment**

Scene change – after a long drought, wild boars devastate the cornfield on Mühlenhof





▲ “And cut!”, echoes across the field as a plane flies over the set. You can’t get every scene right first time, but the Fendt stands patiently like a professional.

farm. Count Falko von Falkenstein calls for a hunt for the wild boars. Bibi wants to stop the hunt and put a spell on it, but it doesn't quite work and

### “THE MÜHLENHOF FARMER DRIVES A FENDT.”

she gives herself pig's snout instead for a while. The farmer drives a Fendt (what else?) and so our little one gets its first onscreen appearance. This episode continues the series' topic of drought and

famine, which drives the animals from the forest into the cornfield. For the creators, it was especially important in the new series that the characters should be role models for the young fans. That's why, unlike in the animated series, the riders always wear a riding helmet and the script deals with topics like environmental protection, drought, mineral resources and even climate change.

Throughout the series, both actresses have been touched even more by the importance of nature and agriculture. “I always try to buy local prod-

#### BIBI & TINA

The audible series *Bibi & Tina* has been running since 1991 with a total of 97 episodes. Young witch Bibi Blocksberg is 13 years old, her friend Tina is 14 and all the episodes are set at Martinshof farm which belongs to Tina's mother, Susanne Martin. So far, the audible episodes have given way to 54 episodes of a cartoon series and 4 feature films. The first season of the new *Bibi & Tina* series, starring the Fendt 200 Vario, was released on Amazon Prime on April 3, 2020.



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ucts, especially organic products,” says Harriet. Like Harriet, for Katharina, who prefers Ina, nature protection is close to her heart: “During filming, I was reminded how important and beautiful nature can be,” says Ina with a passion. Most of the filming took place in remote areas in Brandenburg, so they both spent a lot of time outdoors and on the farm, which forms the backdrop for Martinshof farm.

### **Swapping village life for a film set**

The rural environment is nothing new for either actor, as they both grew up in the countryside. “I come from a very small village where we lived right next to a farm. I played there and helped out a

## **“WE LOVE RIDING ON THE FENDT TO THE DIFFERENT FILMING LOCATIONS.”**

lot. And as a child, I often went on holiday camps at riding stables,” says Ina. That’s why, unlike Harriet, she already had riding experience. But both were given riding lessons before the start of the series. “I love riding now and I really want to keep it up in my own time,” says Harriet. Both grew up with the stories of *Bibi & Tina* and are clearly thrilled to be able to play the

two leading roles. It’s Ina’s first film role. Before *Bibi & Tina*, Harriet starred in the movie *Das Pubertier*.

### **Roaring across the field**

No sooner is one scene wrapped, then they start with the next. This time, the farmer is driving the tractor across his field. A thunderstorm is looming, so his radio is going crazy. To get the shots of the farmer in his cab, the Fendt 200 Vario was fitted with a boom for the cameraman to ride on a specially installed seat on the side. Another camera sits on the bonnet of the tractor. Setting up the boom alone takes more than an hour. There is also a seat-belt. Because safety on set is vital, of course. They don’t want the cameraman falling off as the Fendt roars across the field. The thunderstorm came naturally anyway, but before the heavens opened, the scene was wrapped up.

Incidentally, the little one is also well loved as a taxi: “We love riding on the Fendt to the different filming locations,” laughs Detlev Buck. It’s a door-to-door off-roader and the suspension seat and easy controls gave it an instant fan base on set. It can also move or lift heavy things – very handy, having a tractor on set.

**F**

◀ “It’s great fun to drive. I don’t often get the chance to drive a tractor,” laughs Dirk Schmidt, who plays the Mühlenhof farmer.







▶ To capture the cab scenes, the cameraman sat on a special seat outside the tractor, with a seatbelt of course for safety.





# Fendt FOCUS NEWS



## Series production launch of the new Fendt Katana 650

Production of the new Fendt Katana 650 started in May at the site in Hohenmölsen (Saxony-Anhalt). The new generation of the forage harvester with 25 horse power more and all-new roller crackers was presented at the Agritechnica 2019.

Fendt customers can now order the new R and RS roller crackers. The efficient R cracker breaks down the grain with excellent results thanks to the large preparation area and its sawtooth profile. The RS roller cracker is characterised by the added V-spiral groove. With the new crackers, the Fendt Katana 650 can deliver a cutting length of 30 mm at maximum output. The integrated V-spiral groove pulls crops apart even better, especially at longer cutting lengths, to increase the quality of the harvest. With the new crackers, contractors can cover the specific requirements of dairy and biogas farms.

Similar to the Vario tractors, the new Katana models undergo a two-hour quality verification test. "Something we are introducing for the first time is sending one of the first machines straight out onto the field from the production line so we can analyse and ensure the forage harvesters' immediate readiness and quality," says Ekkehart Gläser, Vice President and Managing Director Production AGCO/Fendt.

Back in February 2020, the Fendt Katana 650 was awarded the Silver Leaf innovation award at Fieragricola 2020 in Verona.



## Popular tractors and a good image

In 2019, Fendt won the tractor premier league in the power classes 151 hp to 401 hp, also managing to bag the top three places in Germany's table of most popular tractor models.

"This clearly shows Fendt's performance range – and how high the standards are. The Fendt 724 tops the 2019 registration charts," writes the *profi* editorial team (3/2020). With the Fendt 724 Vario, the Fendt 313 Vario and the Fendt 516 Vario, Fendt tractors occupy the top three places on the list of most popular tractor models. This shows once again that the Fendt 700 Vario series is the absolute favourite among tractor series in Germany. "This year, our sales partners are looking forward to offering our customers all-new opportunities with the latest generation of the Fendt 300 Vario and Fendt 700 Vario series and the FendtONE operating concept," says Andreas Loewel, Director of Fendt Sales in Germany.

### Fendt has the best image.

With 59 points, Fendt again came first in the DLG ImageBarometer. Every year, around 700 German farmers take part in the phone survey to assess the strengths of different agricultural brands. "Agricultural technology seems to paint a familiar picture – Fendt is the leader," the DLG describes the survey results for 2019. Christoph Gröblichhoff, Chairman of the AGCO/Fendt Management Board, is also delighted with the results: "We are proud that Fendt is once again at the forefront of this independent survey of farmers on brand image."



## LEGAL NOTICE

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At the gates of Hannover, Bockerode Manor lies in the middle of Calenberg Land, a historic landscape in Lower Saxony. But don't expect medieval structures, moats and nobility. Away from any major roads, a modern farm has emerged from an ancient estate.

▼ The plant protection measures are planned by Georg Henkels and carried out with the Fendt Rogator 355.



# SMART KNIGHT'





The Calenberg Börde is a 684 km<sup>2</sup> piece of land to the west and southwest of the state capital of Hannover in Lower Saxony. These fields belong to the former knightly estates of Bockerode and Paterhof in Eldagsen, which were merged in 2012 to become the Bockerode Paterhof GbR. Today, 290 hectares of arable land with a fertile

***“CONTEMPORARY AND MODERN AGRICULTURE IN TUNE WITH ECONOMICS AND ECOLOGY.”***

loess deposits are managed by farm manager, Friedrich Henkels, his sons Georg and Paul and GbR partner, Alexander Block: wheat, maize, sugar beet and potatoes are

the staples on the farm’s crop rotation. “Contemporary and modern agriculture must be in tune with economics and ecology,” explains successor, Georg

Henkels. The farm has already proved several times over and to an expert audience, that this challenge can be implemented in practice, with the German Agricultural Society (DLG) having selected the farm for major events such as DLG Field Days and Potato Europe. This means that the fields must be maintained and free of weeds. And





▲ It is crucial to get the right time window for spraying on the farm, especially in potato cultivation. And with rounded fields and modern plant protection solutions, this is all possible.

that's a challenge, with fewer resources available for plant protection and resistance increasing. Technology is coming more to the fore when it comes to exact dosing and optimal application times. Plant protection is an important and central topic on this farm in Lower Saxony.

### ***From brave knights to smart farmers***

The farm's successor has searched in vain for an iron suit of armour such as Georg Henkels' ancestors would have once worn on the knight's estate. However, when he attaches his Fendt Rogator 355 to the tractor, he

has all the protective gear he needs. The young farmer believes in smart farming instead of traditional agriculture. To be prepared for future plant protection, the Henkels decided 18 months ago to buy a new plant protection sprayer. Area coverage, reliability and output performance were on the wishlist, as were comfort and user-friendliness. The farm processes 1,800 ha every year, 700 more for inter-farm use, and the technological requirements were understandably high on the agenda for this purchase decision. In the end, it was the Fendt Rogator that won over the managers.

### ***Tradition meets modernity***

Fendt and plant protection – not your first thought when you think of investing in plant protection. But the managers of the estate are open to change, and gave Fendt a chance from the hard-fought market of towed sprayers. Of course, traditional values also played a role in their decision to purchase a plant protection solution – trust in the brand and excellent contact with the dealer, Buchheister Landtechnik, who is now overseeing the technology. Advice and service were the two points that ultimately swung the purchase. Since their delivery





### ***“TIMELY PLANT PROTECTION IN POTATOES IS CRUCIAL FOR THE HEALTH OF THE CROP.”***

in January 2019, the new machinery has sprayed well over 3,000 hectares. The Fendt 720 Vario and Fendt Rogator 355 fit together – green harmony with ISOBUS at the core. The plant protection sprayer was used for the first time in February 2019 – when the wheat needed its first nitrogen boost. UAN was accurately spread in the winter months as a starting gift for the spring, and spring herbicides followed. From then on, there was run-

out after run-out – 10 to 14 sprays are applied to the potatoes from June to August. Then is when the Rogator 355 with its 5,500 litres of tank capacity really comes into its own. “Timely plant protection in potatoes is crucial for the health of the crop,” explains Georg Henkels. “The powerful pump meant I was able to significantly increase the output compared to the old technology. And I could use it for inter-farm work.” The hookup travels over the crop at an

average speed of 9 km/h. To be able to match the row spacing of the potatoes, the 27-metre aluminium boom was equipped with wide-diffusion outer nozzles, to reach the required 28 m spray width. The Henkels’ air-injector flat jet nozzles ID 120-03 and asymmetric air-injector double-flat jet nozzles IDTA 120-04 C have been installed on the boom’s “DualSelect 2+2” nozzle bar, which is controlled from the driver’s seat in the tractor. Depending

on the nozzles installed, DualSelect 2+2 can spray from 2 nozzles at the same time. If you are spraying in the dew, all the nozzle bodies are turned on the IDTA 120-04 C and fewer pesticides are used. This also allows you to experience higher driving speeds of up to 12 km/h.

And yet many of the features offered by this implement are untouched. “With the Rogator, I have all the options I need to set up smart farming on the fields. The next step is to update the tractor technology. Then nothing will stand in the way of us using VarioDoc, TIM etc.,” explains the



**“WITH THE ROGATOR, I HAVE ALL THE OPTIONS I NEED TO SET UP SMART FARMING ON THE FIELDS.”**

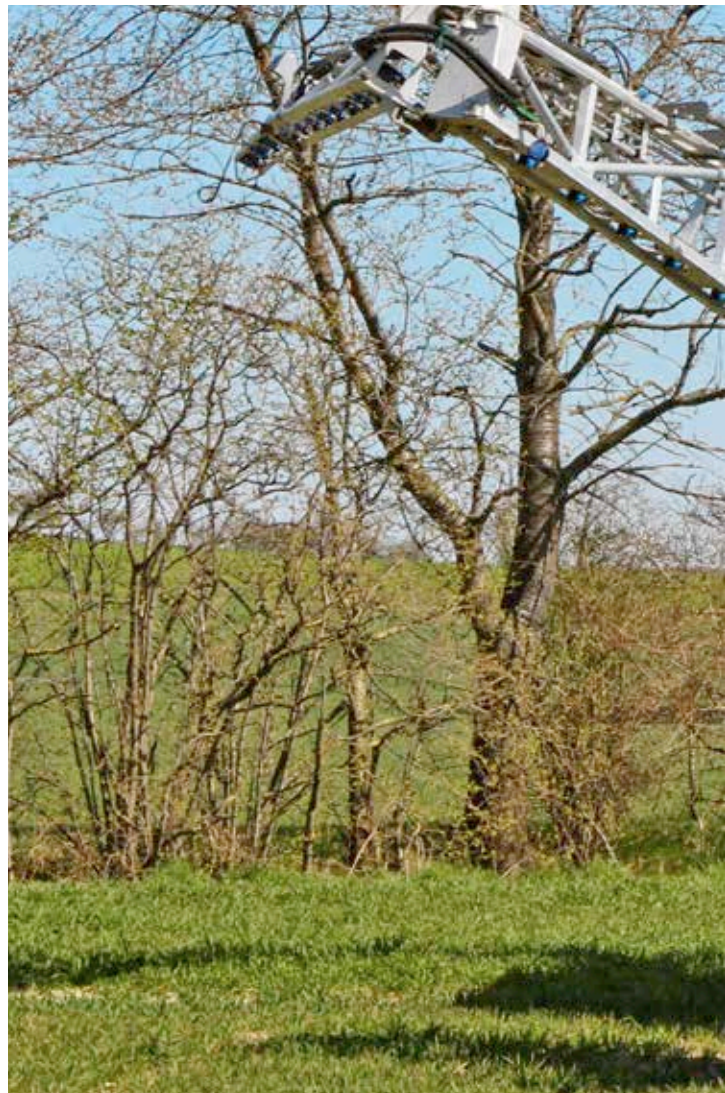
young farmer, who, at 22, is about to graduate from technical college. He will then gradually introduce the other options. “The advantage of where we are is having even and rounded land. The technical possibilities of the Rogator are therefore much more for working comfort than optimising the use of resources,” the plant managers say with confidence. Nobody knows for sure what challenges plant protection faces in the future, but being properly armed with the right technology is an advantage.

**Logical commands**

The tractor can clearly communicate with the sprayer and vice versa via the ISOBUS interface – just connect the plug of the sprayer into the socket on the tractor and you can call up all the machine functions on the terminal of the Fendt 720 Vario. Self-explanatory symbols are used onscreen, with only the units shown in writing. Right next to it is the Henkels’ iPad holder. The young farmer uses this to document his plant protection measures in the field database.

It couldn’t be an easier process: once Georg Henkels has positioned the hookup in the lane, the Opti-Control joystick comes into play for the first time. The technology can be easily controlled with just one hand. Vario terminal and joystick work together with the AUX-N function.

Switching from transport to field mode, axle steering and boom steering are the first of the 24 joystick functions that come into play. Then a last look into the field database to check the right output volumes, a quick data entry on the terminal, and the spraying



► In the case of plant protection, the solution is not yet being used to its full potential. This will change over time.







process can begin. “Thanks to the tractor’s RTK steering, I can concentrate fully on operating the technology with the joystick. You quickly get used to it, and now it’s just perfect,” says the modern young farmer. He presses the main switch to start the spraying sequence and the action begins.

As soon as Fendt’s automatic boom height guidance, OptiSonic, is active, the boom is automatically kept at the working height, compensating for unevenness in the track and making sure it is neither too far away or too close to the crop. At the

headland, the boom arms are automatically lifted in headland mode. Plant protection does not get any easier than this.

That’s how they process average run-outs of 17 hectares on this farm. In the summer months, the plant protection hook-up gets to work almost every week around this historic estate. Just as the noble warriors once defended their land, Georg Henkels is now fighting for the health of his crops with modern technology – a smart knight indeed. **F**





# “FENDT SCORED WITH THE BEST ACCURACY.”

Savings on equipment, soil preservation and more efficient field processing are just a few of the reasons why guidance systems are increasingly becoming the new norm. The specialist magazine, **top agrar**, put **VarioGuide** to the test in its **03/2020 issue**.

In a comparison test, various correction signals were used to test six automatic steering systems for accuracy, i.e. track engagement of the attachment, reliability and user-friendliness.

To get the most practical results from the tests, top agrar developed its own testing method together with Lemken. The new NovAtel Smart7 Receiver was used in the Fendt.

Tests were carried out once with RTK and once with a satellite-based correction signal. “The Fendt was the only one in the test that managed to receive signals from the Chinese Beidou satellites. This gave the system almost continuous visual contact with about 30 satellites, which minimises any interruption caused by trees and other shaded areas,” said top agrar.



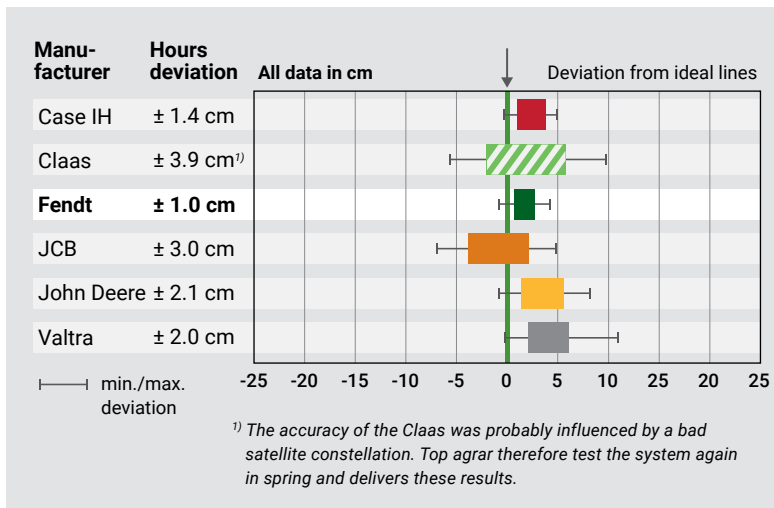


# VARIOGUIDE / FENDT GUIDE

“To make the conditions slightly more challenging, we placed the unit under a 10kV power line, which could cause possible interference to the systems,” he said. Despite the difficult conditions, top agrar concluded: “The Fendt came out top, with the best accuracy.”

User-friendliness was also taken into account and, again, the Fendt was rated positively: “The steering system stands out for its intuitiveness and incredible accuracy.”

## Overview 1: Sapos-RTK



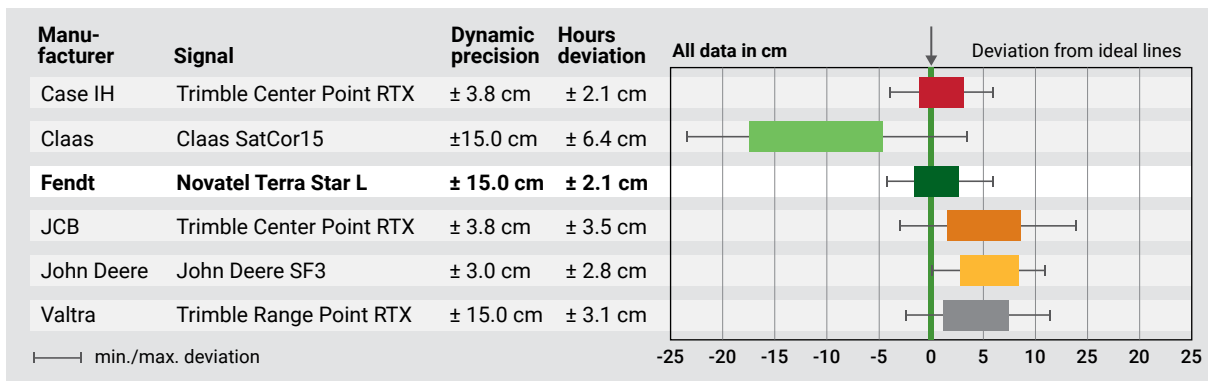
▲ Almost all tractors are 2-3 cm off the reference track with their ideal waylines. In the next 18 waylines, the lanes were driven down at a lane clearance of 5 m.

VarioGuide or Fendt Guide for tractors with the new FendtONE driver's workstation is the central guidance system for wheeled tractors, tracked tractors, forage harvesters, Fendt C-series combine harvesters as well as the Fendt Rogator 600 field sprayer and the Fendt IDEAL. Since guidance systems were first introduced in 2004, the system has been continuously expanded and further developed. VarioGuide is the basic prerequisite for guidance on the machine. You can add a number of other functions as required, such as Fendt SectionControl and Fendt VariableRateControl (VRC), as well as the Fendt Contour Assistant. Since this spring, Fendt has been offering an automatic turning feature with Fendt TI Headland (Variotronic<sup>TI</sup> Turn Assistant, available initially with the latest driver's workstation).

### FUNCTIONS OF THE GUIDANCE SYSTEM\*

- VarioGuide / Fendt Guide Contour Assistant
- Fendt TI Headland:
  - Variotronic<sup>TI</sup> automatic / Fendt TI Auto
  - Variotronic<sup>TI</sup> Turn Assistant
- VarioDoc Pro / Fendt TaskDoc
- Fendt SectionControl
- Fendt VariableRateControl

## Overview 2: Satellite-based signals



▲ Satellite-based correction signals with varying degrees of precision were used for the test. In most cases, manufacturers offer multiple correction signals, although the cheaper signals often work less accurately.

The test also verified how the tested steering systems behave at higher speeds. “Auto steering works at a maximum of 25 km/h. Instead of disabling the steering system, the tractor limits the speed. We liked that,” top agrar said of the Fendt guidance system. **F**

\* To find out more about **how the VarioGuide/ Fendt Guide auto steering systems work**, watch out for the next issue of Fendt FOCUS!



### TESTING METHODS IN TOP AGRAR TEST

For the test, a groove a few millimetres wide was drawn into the ground behind the tractor with a central disc. An ISO XML file was used to load each tractor with the same reference track created in advance using a Farm Management System. All the tractors were tested under the same conditions over the 100 x 100 m test area.



# V D BORNE AARDAPPELEN







# *FRIES & PRECISION FARMING*



Vlaamse frites is to Belgium what fish and chips is to the UK. In Part 2, Jacob van den Borne tells us more about his farm. The Dutchman produces most of his potatoes in the Belgian region of Flanders. It is the end of August, when the harvest of the early varieties begins, providing raw materials to the fries factories. With the help of his digital instruments, he can optimise the production of his golden tubers.



#### **WHAT ARE VLAAMSE FRITES?**

Ever heard of this unconventional way of making a humble produce into a culinary highlight? Flemish fries are double deep-fried in beef fat. This gives the thick, golden-brown Belgian chips a delicate core yet a crisp crunch on the outside – with that unique taste, of course.



*Aardappelen*. As far as the eye can see, *Aardappelen*. Potatoes are the staple crop in Dutch agriculture – as the farm's name suggests. Brothers Jacob and Jan van den Borne have optimised their operations for potato production. Not always easy, as the prices for the humble spud go up and down like a roller-coaster ride. And that's precisely why it is important for Jacob van den Borne to optimise production. One of the most important instruments they use is Precision Farming.

### **From grain to potatoes**

Grandfather Jan van den Borne founded the company in 1952 by buying a farm in Reusel. Livestock farming and grain propagation were the main sources of income. Both involved an awful lot of man-

ual work at the time. It quickly became clear to the founder that he had to invest in mechanisation to be able to operate profitably and efficiently. As his cultivated land grew, he added other crops, including

**“MY AIM IS TO  
OPTIMISE  
PRODUCTION.  
PRECISION  
FARMING IS THE  
ONLY WAY TO  
ACHIEVE THIS.”**

sugar beet, followed by *aardappelen* in 1970 – potatoes.

Times changed. The farm was passed down and further diversified. The restaurant originally run by his grandfa-

ther, “De Postelsche Hofstee”, has been part of the business since the beginning of the 1980s. In the meantime, branches such as animal husbandry were abandoned so they could devote themselves to optimising their arable farming.

Potato cultivation became the main crop. Mechanisation was further advanced. In 1995, the first Fendt tractor was added to the machine fleet. With the 512 model, the van den Bornes opted for by far the most produced model of the 500 series. A general-purpose weapon for the farm that was a winner even before the plough, the planter, the harvester and transport vehicles.

Precision Farming was still a topic for the future for most

farmers at the beginning of 2008. Agriculture 3.0? Hardly any farmer has talked about it, let alone believed in the success of digital progress. This is not the case with the van den Bornes. The Fendt 930 Vario is fitted with an automatic guidance system. Overlaps on uneven, mostly hexagonal fields have been reduced, minimising the cost of work, wear and fuel. A promising concept in which the Fendt tractors play an important role today.

### **Working to centimetre-level accuracy**

Nightshades are cultivated over 500 hectares. As of March, it's all hands on deck in the 140 or so potato fields, all within a radius of 30 km around the farm. Field boundaries of newly added







◀ Jacob van den Borne spends more time on his PC than on the Fendt. He plans every single lane that his employees then toil in the fields.

fields are recorded with the help of RTK to centimetre-level accuracy and exported to the field database. And vice versa: for Jacob van den Borne, it couldn't be easier to map the waylines as A-B lines on the PC then export them to the tractor. He can also use it to plan the irrigation system.



◀ Soil moisture sensors measure moisture levels at different soil depths. If you combine the collected data with that from the weather station, you can determine the best irrigation windows.

Soils vary on the Belgian/Dutch border, which justifies section-specific management even on the fields that average just 3 hectares in area. The cultivated fields have a rotation of 'devil's fruit' typical for this region. In other words, these are soils in which only crops such as rye, oats, barley, potatoes, sugarbeet and fodder beet can be successfully grown. This is because either the fields are too wet due to

▼ When planting potatoes, the Fendt Vario 828 processes the job orders created on the PC.







▲ The only downtimes during the planting phase is when the planter has to be restocked. A-B lines, lanes and so on are planned in advance to avoid delays.

flooding or there is a lack of water and they dry out. This dilemma means that around half of the land needs rain in the summer months for a decent harvest in the autumn. The young heathland consists of fine sand, which is slightly loamy. The humus-rich topsoil is 25 to 30 cm deep.

Seed bed preparation is the first step in planting the potatoes. Depending on the type of soil and intermediate fruit growth, this calls for a combination of a cultivator, rotary harrow and crumbler roller or alternatively the 6-disc plough with packer. With the help of ISOBUS, the Lemken gem can be used to adjust the working width and depth on the terminal in the Fendt Vario 724, as well as the packer.

Seed potatoes are expensive. Four varieties are grown for the French fries industry. This includes both early and late varieties, as well as varieties specified by the customer. The aim is to maximise yield. With this in mind, Jacob van den Borne divides his fields

into three zones with different yield potentials: lanes, dry zones and shaded zones. By adjusting the planting separation, he can prevent any loss of yield. The new Fendt 724 Vario and the 9-year-old 828 have the same software versions installed.

Extreme precision is required from the Varios when planting potatoes at an average

**“THE SOILS PLACE HIGH DEMANDS ON PEOPLE AND TECHNOLOGY.”**

speed of 7 to 8 km/h. Lanes are created to fit the 39 m working width of the plant protection sprayer. VarioDoc and VarioGuide make light work of creating the lanes, as it is fully automated. Back in the office, the manager has already programmed the job orders and sent them to the tractor over the mobile network.

When one lane is created, the first and fourth hills are omitted, so 5.5% of the field might not contain any seed potatoes. No planting, no yield, no income – it’s the logical order of things. The software promises a great deal of improvement in this regard. The hills next to the lanes get more sunlight, nutrients, water and minerals over the year, so the seed potatoes there have a higher yield potential. “We have to make the most of that,” explains van den Borne. Automatic SectionControl can increase the planting quantity in the two intermediate rows by 10%. Exactly the opposite is done in shaded zones. Less light means less yield per plant. So, the planting volumes are reduced proportionately to the lack of sunlight; by 10% in zones with 75% light, and by 30% in zones with only 25% light.

**The tractor finds its way**  
 “The VarioGuide Contour Assistant and its new wayline types – Contour Segments and Single Track – are a big















plus for Fendt when it comes to potato planting,” explains the Dutchman. The fields are often at an angle, so it’s not always easy to shape the best headland. This is much easier on the office PC than doing it there and then on the field. With this feature, there is no need to constantly find a new wayline. The tractor finds the next line on its own. This increases ease-of-use and makes the machinery even more productive by saving on working hours. And another smart Fendt feature plays an important role here: the Variotronic<sup>TI</sup> Turn Assistant. This turns the machine automatically without any effort from the driver. With the help of Variotronic<sup>TI</sup>, the implements are automatically applied and lifted with precision at the headland. Together, these functions form TI Headland – a fully automatic headland management system.

When the seed potatoes are in the ground, weather stations are set up on every field. This allows the manager to control the irrigation systems as required. Up to 25 millimetres of water can fall from the wells within 12 hours like natural rain over the potatoes. This data also backs up the decision-making for fertilisation and plant protection. Again, the planning is done on the PC. With the help of VariableRateControl, fertilisers and plant protection

agents are applied to specific sections. This saves costs, especially in the case of plant protection. The first spraying run usually takes place at the end of May, when the first shoots of the potato plants can be seen on the hills. More run-outs follow every week after that. From the outset, the threat of phytophthora

### **“WE ARE WITHIN REACH OF OUR CONTROLLED TRAFFIC FARMING AIM.”**

must be minimised. Fungicides are used to try to prevent the fungus from settling on the potato leaves. With the right management tools, this is no problem for the Dutchman.

For the past three years, the potato specialist has been using Fendt’s complete Smart Farming solutions. “My aim is Controlled Traffic Farming. And I will implement this together with Fendt at the Van Den Borne Aardappelen farm in the near future,” says Jacob van den Borne with confidence. **F**



To find out more about Jakob van den Borne’s farm, watch [www.Fendt.TV](http://www.Fendt.TV)