

M & L
LINE



FIND MORE INFORMATION AT
www.bogballe.com



THE COMPANY BEHIND THE WORLD'S BEST AND BIGGEST MINERAL FERTILISER SPREADER.

We are one of the world wide leading manufacturers of mineral fertiliser spreaders. 365 days a year we are thinking, developing and manufacturing the best techniques for distributing mineral fertiliser - a passion through generations.

Back in 1934 in the village of Bogballe, our founder Anders Peter Laursen started up manufacturing of equipment for chicken production. Times changed and in the beginning of the 1950's focus was brought onto our well known blue fertiliser spreaders. Today the third generation are managing BOGBALLE A/S, continuing a proud tradition.

Optimal functionality and user-friendly design are based on years of practical experience in co-operation with farmers world wide.

At our disposal we have the latest high technology production facilities combined with proven facilities for development and full scale testing in our test hall. We are working all year around analysing fertiliser specifications, testing and formulating spread charts by spreading more than 200 ton of fertiliser each year. Our test hall is one of Europe's biggest and most advanced and the only facility that is set up with two systems to manage both 2D and 3D testing.

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BOGBALLE A/S makes certain reservations to typing errors, technical errors or typographical errors. All BOGBALLE products are subject to continuous development. Information in this leaflet can therefore be changed without notice.



AGROSS KLÍCANY, ONDREJ BAČINA (CZ)

Top application, performance and capacity. Our next fertiliser spreader will without doubt be a blue and yellow spreader. We are also sure that this spreader must have the weighing technique as the advantages are clear particularly for handling variations in fertiliser.



CHRISTIAN JUUL JENSEN (DK)

The L20W spreader is a kind of multipurpose machine. For the basic fertilising we used the combination of CALIBRATOR ZURF and NAVI App for section control in early spring. After harvest we have spread slug pellets to fight snail attacks in newly drilled oil seed rape. We also used it for establishing green cover crops.

CONTINUOUS SUCCESS

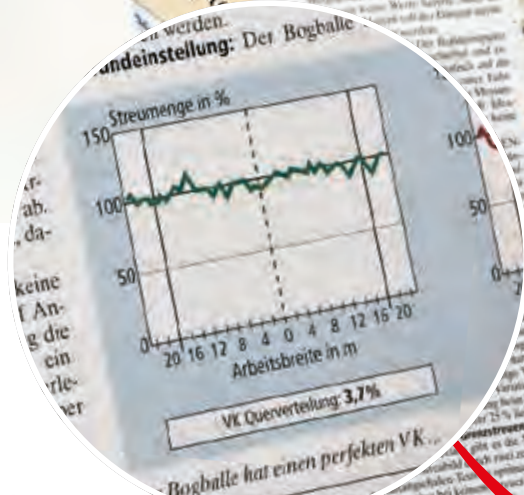
We are the specialists in spreading techniques and precision. It requires courage and self-confidence to claim so, but focusing 365 days a year on only one niche product - makes us a specialist within our discipline.

100% focus on functionality, precision and design gives us the skills to develop what we call "the worlds best fertiliser spreader".

Over many years we have participated in many international test events - always with a terrific performance. Again and again the test results show that we offer ultimate precision when it comes to our core competence - the distribution of mineral fertiliser.



...zin für moderne
...schaft



International test carried out by Top Agrar
Coefficient of variation: 3,7%

SEE ALL MODELS AT
www.bogballe.com



	M60W plus	M45W plus	M35W plus	M35W base	M45 plus	M35 plus	M35 base
Working width							
Metres	12-42						
Capacity							
Litres	4.050-5.550	1.800-4.500	1.800-3.500	1.250-3.000	1.800-4.500	1.800-3.500	1.250-3.000
Kilo	4.450-6.000	1.980-4.500	1.980-3.500	1.370-3.000	1.980-4.500	1.980-3.500	1.370-3.000
Control unit							
CALIBRATOR TOTZ	●	●	●	●	○	○	○
CALIBRATOR ICON	–	–	–	–	○	○	○
ISOBUS Controller	●	●	●	●	–	–	–
Navi Com module*	○	○	○	○	○	○	○
Hydraulic	–	–	–	–	○	○	○

* With CALIBRATOR TOTZ/ZURF only

HARD-HITTING ARGUMENTS

HOLD STRONG CARDS - WITHOUT GAMBLING

A range of up-to-date, innovative features puts you in a position to meet the tasks of today and for the future.

The design of the spreader and the versatility of the quantity control makes the machine more than just a fertiliser spreader - and with the impressive spreading technique you hold the strongest card.

In other words: An investment in a BOGBALLE spreader offers reliability during field work, handling high value fertilisers with care and applied with maximum precision - exactly as you would wish !

L20W plus L20 plus L15 plus L15 base

	L20W plus	L20 plus	L15 plus	L15 base
Working width				
Metres	12-24	12-24	10-18	10-18
Capacity				
Litres	700-2.050	700-2.050	700-1.600	500-1.325
Kilo	770-2.000	770-2.000	770-1.600	550-1.450
Control unit				
CALIBRATOR ZURF	●	○	○	○
CALIBRATOR ICON	—	○	○	○
ISOBUS Controller	●	○	○	○
Navi Com module*	○	○	○	○
Hydraulic	—	○	○	○

- Standard
- Depending on model
- Extra
- Not available

* With CALIBRATOR TOTZ/ZURF only

3 quick ways for simple and effective setting.

Weighing technique

If you choose a spreader with weighing technique, adjustment of the spreader is fully automatic. The flow of the fertiliser is controlled by the weighing system and the opening of the outlets is adjusted according to the required application rate and the actual forward speed.

Speed independent quantity control

If you choose a spreader with quantity control independent of forward speed, then simply key in the flow factor defined in our spread charts. Alternatively, use the S-indicator to define the flow rate for a specific fertiliser.

Remote or manual control

If you choose a spreader with hydraulic or manual control, use the settings in our spread charts or use the S-indicator to determine the settings for a specific fertiliser.



EASY SETTING



Latest, up to date spread charts are available via App or web.



The S-indicator is easy to use and a complete flow test of a specific fertiliser is carried out in a few minutes.



Spreaders fitted with weighing technique are automatically calibrated on the move, so there is no need for a manual flow test.



Detection of irregularities by weighing system



Detection of irregularities by Intelligent Control



WHO WEIGHS - IS IN TOTAL CONTROL MORE THAN 30 YEARS OF DEVELOPMENT.

As a pioneer of the weighing technique, Bogballe has over the last 30 years continued to develop and refine the weighing system to perfection. It is now a system that defines the highest standards for precise distribution.

The technique is based on the 1:1 principle, in which the weight of the actual hopper contents is continuously monitored. The flow rate leaving the hopper is fine tuned to achieve the target quantity (kg/ha). This direct input gives 100% control of both application quantity and contents during field work.

We use a robust 6 ton weigh cell linked to an absolutely parallel double frame which results in only the actual hopper contents being measured. An uncompromising weighing technique for total precision.

The system is continually monitoring the actual flow rate and keeps the operator informed via the CALIBRATOR or the ISOBUS Terminal.

THE BEST WEIGHING TECHNIQUE

INTELLIGENT CONTROL - DOUBLE CHECK ACCURACY

To give exact weighing under all conditions, the spreader is equipped with an Intelligent Control (IC) feature, that combines two important elements: An Accelerometer and an Inclinometer.

The Accelerometer records and separates the bumps and shocks from driving on uneven ground, so only the actual and real hopper contents are registered.

The Inclinometer records the position of the spreader compared to horizontal for precise control, even when working on up, down or across slopes.

The diagram shows the actual weigh cell reading during spreading under field conditions.

The red IC line shows how the Intelligent Control is able to monitor the weight signal and discard incorrect values to give a true weight reading.

Intelligent Control is a reliable necessity to carry out totally precise automatic calibration, continuously on-the-move to accurately control the application quantity.



100% Control

PRECISE QUANTITY AND EFFICIENT CONTROL

The M-line is a high capacity spreader, equipped with a rotating flow-outlet for precise setting of rates from 0 - 650 Kg/min. The L-line has output rates from 0-370 Kg/min. It is possible to choose between four different outlet positions for maximum accuracy from very low to very high quantities.

This possibility increases the versatility of the spreader adding more uses from spreading fertiliser, to seeds and slug pellets.

At full opening, the M-line spreader has a huge output capacity of up to 650 Kg/min. equivalent to applying 600kg/ha at 36m at forward speed of 18kph!

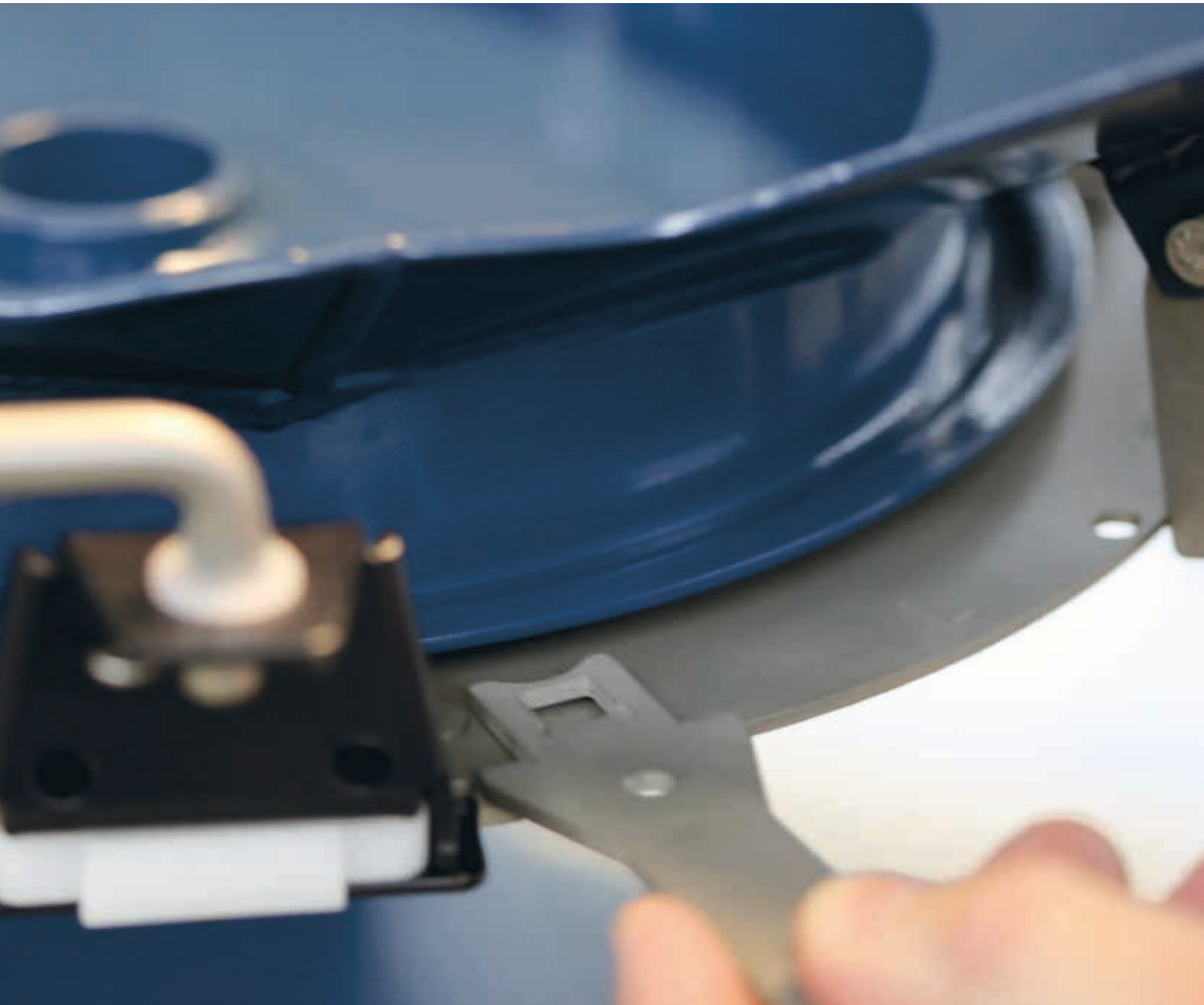
Integration between the four flow outlets and our electronic controllers offers easy and logical setting.



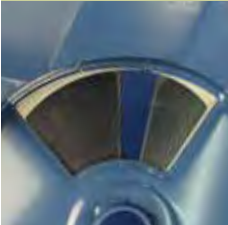
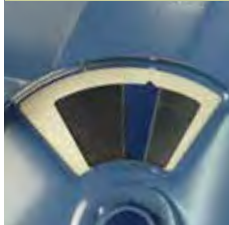
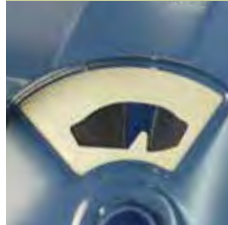

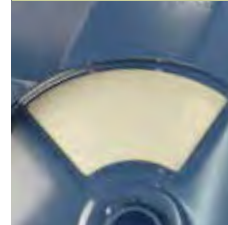
0 - 650 Kg/min.



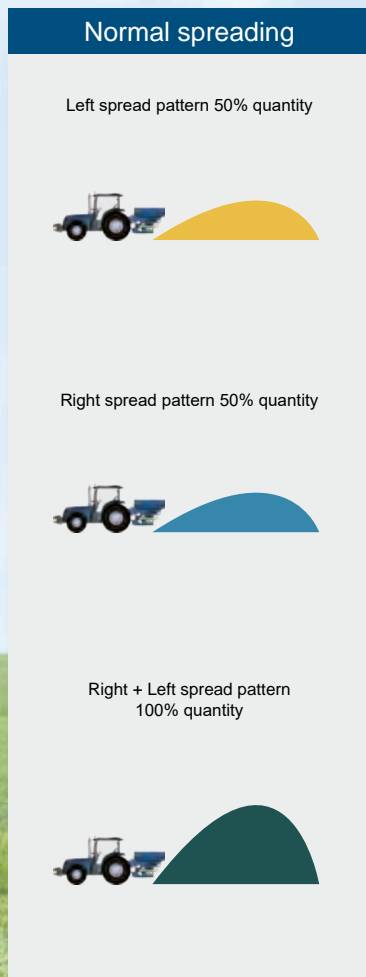
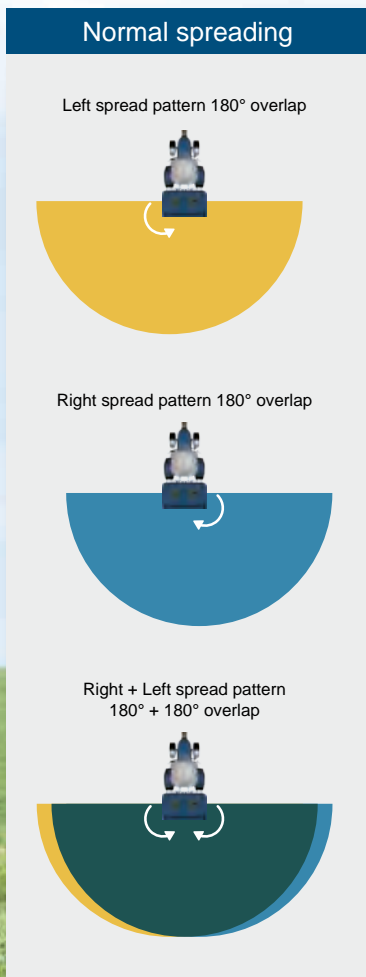
MORE THAN A FERTILISER SPREADER



M-line

L20(W)				
[MAX]	[STD]	[MIN]	[MIC]	[OFF]
Maximum Up to 650 Kg/min.	Standard. Up to 300 Kg/min.	Minimum. Up to 75 Kg/min.	Micro. 0,5-15 kg/min. >2,5 kg/ha	[OFF]
				
Optional (L15)				

L15



TEST TRAYS

If in any doubt about the physical quality of the fertiliser, it is always good practice to make sure that the spreader is adjusted correctly by using test trays.



MEASURING CYLINDERS

The perfect spread pattern with correct overlapping is achieved when the contents of the seven measuring cylinders are all in line.

THE BEST SPREADING SYSTEM

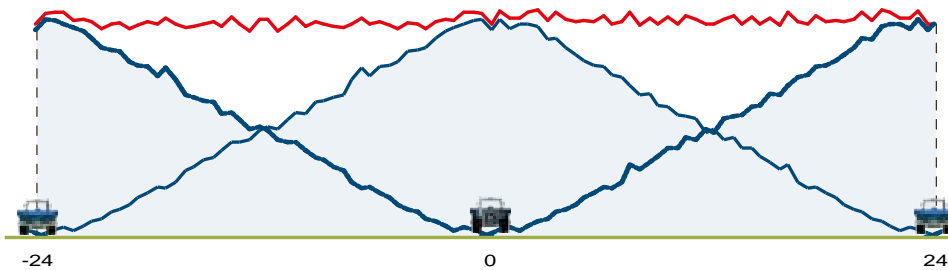


IN-CENTRE SPREADING. OPTIMAL FOR NORMAL SPREADING

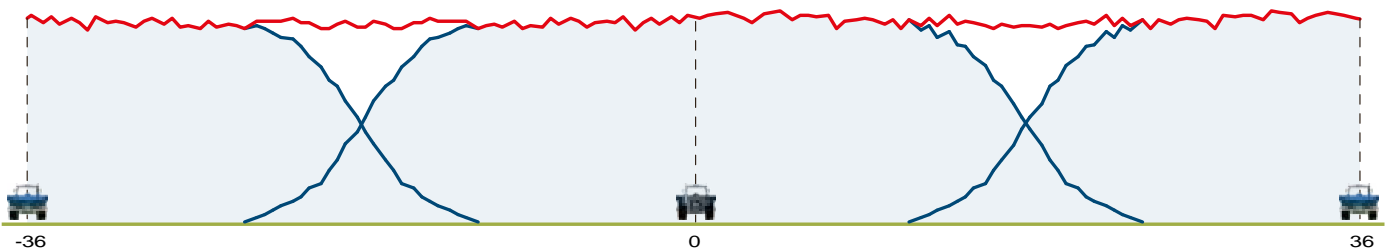
Our In-centre spreading system with the discs spinning towards each other, is recognized as a high precision system with a minimum of settings. In practice this means maximum certainty to obtain an even distribution.

The full 180 deg. overlap between the two discs, means that the right and the left side of the spreader does not need any individual adjustment to achieve the correct overlapping spread. Both discs individually cover the full area, so no need for extra settings.

24 metre working width



36 metre working width

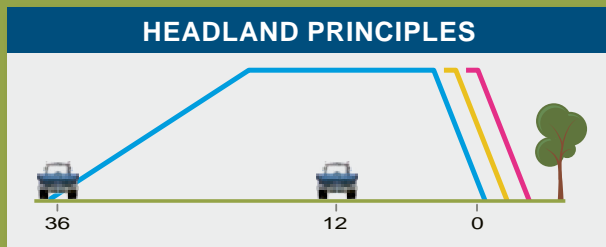


ONLY TO THE BORDER - THANKS!

Our headland spreading is based on the Off-centre spreading system. The rotation direction of the spreading discs is away from each other creating two individual spread patterns . . . one a pattern towards the headland falling steeply at the border with a sharp cut-off and the other a full width pattern into the field area. The back side of the spreading vanes are used for headland spreading and designed to produce half the spread width to the right side of the spreader.

Forward directed spread pattern when headland spreading.

The forward directed spread pattern on the headland side, makes sure that all the field is correctly fertilised, including in the corners. The amount of fertiliser at the headland border can be freely adjusted by changing the Pto revs to meet individual requirements.



Different headland strategies

The PTO revs determines the headland pattern. Either minimum, medium or maximum quantity to the border.

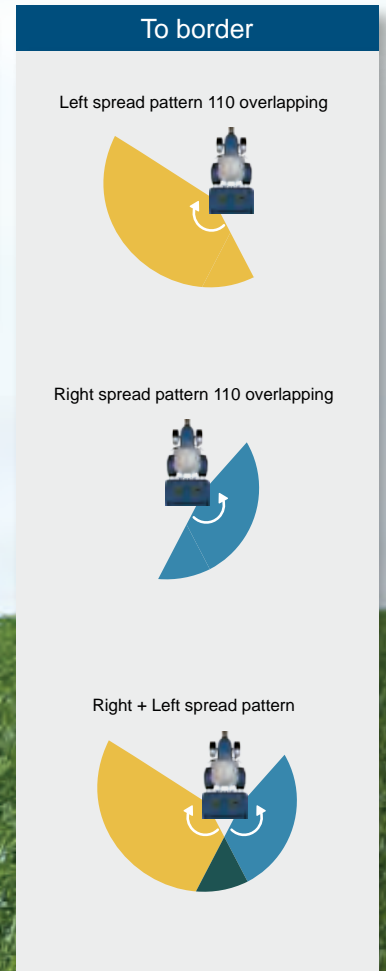
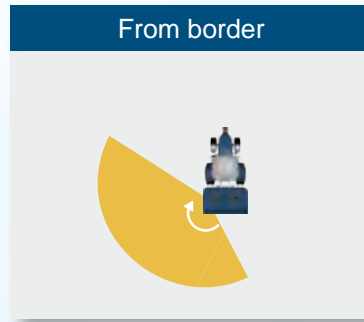


HEADLAND SPREADING FROM BORDER

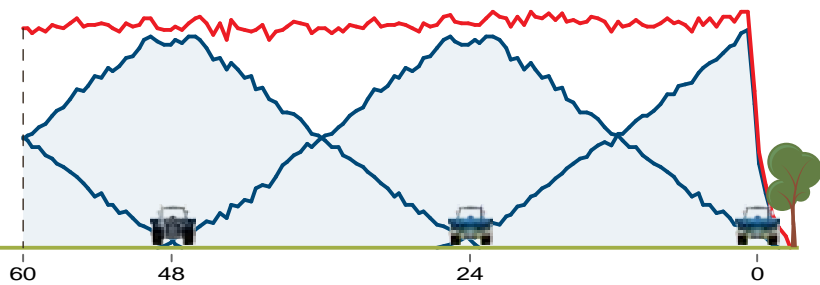
Additionally we offer a from border system, with the possibility to distribute the fertiliser via one disc only - spreading from the border into the field. This system results in a steep falling spread pattern at the border from 100% to no fertiliser within 1,5 metres.

THE OPTIMAL SPREADING SYSTEM

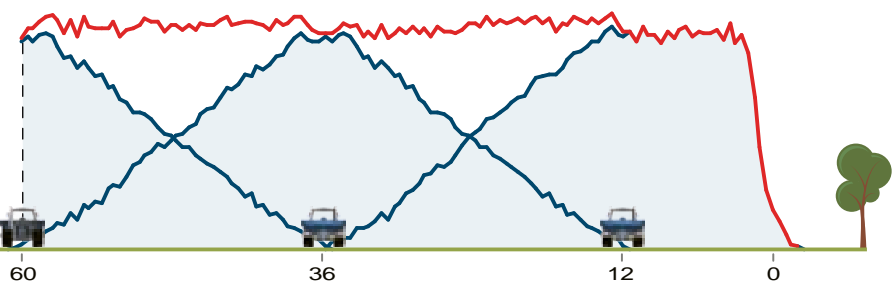
(Y TO THE BORDER
NKSI)



Headland spreading from border



Headland spreading to border



Integrated know how from the factory.

The BOGBALLE spreading technique is designed with focus on the minimal need for settings and adjustment. Our know how and expertise is an integrated part of the spreader, so not to leave complicated settings for the operator.

No manual adjustment

The outlet is designed to correct the drop point automatically and independent of the quantity spread - with no manual setting - and always achieving an even spread pattern.

Even during Variable Rate Application, or when activating the Dynamic Differential spreading system, or when changing the quantity according to crop conditions, or simply changing forward speed - the outlet system automatically compensates to maintain an accurate, even spread.

Constant flow

Our free wheeling agitators ensure a constant flow and particularly gentle handling of the fertiliser. The unique design delivers a constant flow without deviation and blockage.

The non powered, eccentric agitators automatically adjust the rotation speed according

to the condition or type of fertiliser. The rotation speed varies between 10 revs. when spreading light fertiliser with a high flow rate and up to 60 revs. per minute spreading a coarse fertiliser.

The cone protecting the agitator prevents against overloading and creates a constant flow from full hopper to empty.

Minimal drop distance

The low drop distance from the outlets to the spreading disc ensures that the spread pattern is not influenced by sloping or tilted ground. No adjustment or corrections.

Turn at the right place

Besides 100% overlapping and easy setting, the In-centre system has a crucial advantage. The system distributes the fertiliser from close to the spreader all the way across the spread pattern. Turning at the headland can therefore be completed in the headland tramline and not in the crop between the headland and the border. Significant crop damage is avoided by not having to turn in the crop.

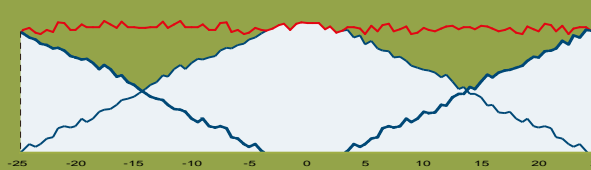


Use the same tramlines and headland wheelings as the sprayer. The In-centre spread pattern is close to the spreader and does not require turning outside the headland tramlines.

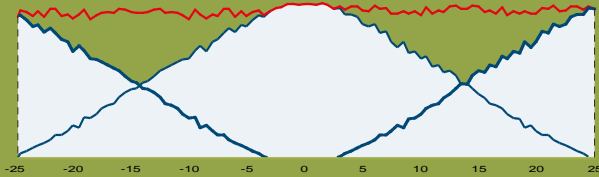
THE BEST SPREADING SYSTEM



Working width: 28 m at 250 Kg/ha



Working width: 28 m at 450 Kg/ha



The asymmetric opening of the unique double quantity shutters keeps the drop point in the correct position independent of the application quantity and forward speed.



M-line and L20(W) spreaders are fitted with large and flat spreading discs which release the fertiliser evenly on a 180 degree area.



The free wheeling agitator keeps a constant flow of fertiliser by a gentle and eccentric rotation.



L15 is fitted with conical shaped spreading discs which are ideal for smaller working widths from 10-18 metres.

Spreader technique - where the detail counts.

Stainless steel

The extensive use of stainless steel prevents corrosion and also protects the painted surfaces against damage from the fertiliser.

Easy access for adjustment

The M-line and L20(W) spreaders are equipped with two spirit levels to check the angle of the tractor and the spreader.

L15 which is always mounted in horizontal position is fitted with one spirit level positioned on the top link point.

The top link is fitted with factory set and fixed horizontal spirit level - parallel with the spreading discs. This offers the opportunity for a double check that the adjustable spirit level is correctly calibrated.

Turbine effect

On M-line spreaders our spreading technique utilises the turbine effect produced from the rotation of the spreading vanes. An air stream is guided through the guard vents creating a controlled vacuum which disperses the fertiliser evenly on the spreading disc, to optimise the spread result.

THE BEST SPREADING SYSTEM



The rotation of the spreading discs draw a controlled airstream through the vents of the guard and releases the fertiliser evenly on the spreading disc (M-line).



The spirit level on the top link is fixed parallel with the spreading discs and is the reference point for the correct calibration of the working angle of the spreader (M-line + L20(W)).



The L15 is always set in horizontal position. To ensure correct mounting it is fitted with a fixed spirit level at the top link point.

Hydraulic or mechanical driven transmission

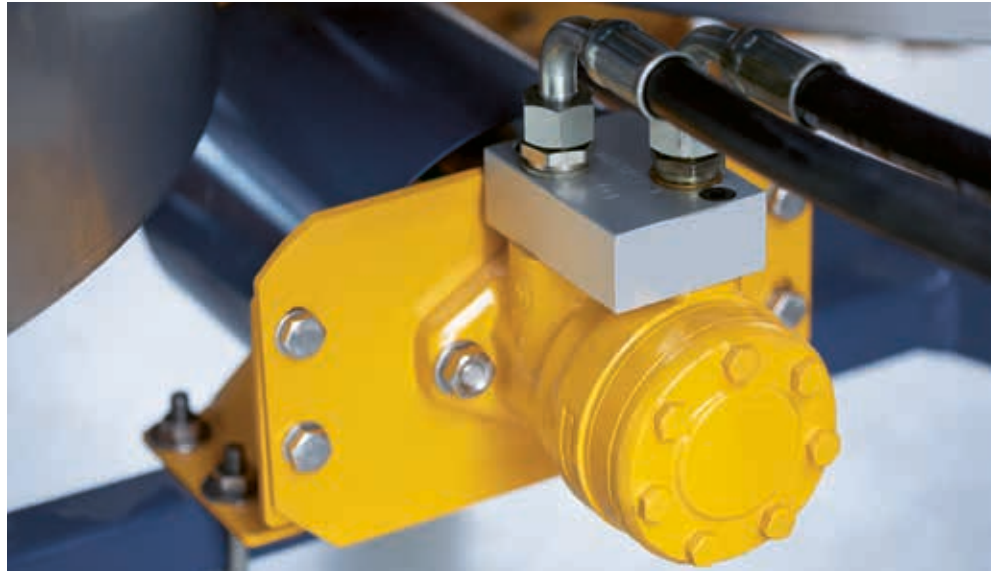
The transmission is a sealed unit filled with high quality grease to ensure protection of all internal components for a long working life. The grease has excellent non-wearing capacity and protects the gears against overload. At the same time the transmission is protected by a fully sealed, water resistant friction clutch based on double belville washers, protecting against damage from extreme loads, particularly at Pto start or stop. The PTO-shaft is fitted with an overrun clutch.

Hydraulic or PTO-driven

You can choose between two different systems running the spreading device. As standard, the spreader is delivered with a PTO-shaft including free wheeling clutch.

As an option, a hydraulic drive system to run the spreading device is available for saving fuel and saving cost. The hydraulic system is a reliable and efficient solution which works at lower tractor engine revolutions than the traditional PTO-system.

TRANSMISSION AND DRIVE SYSTEMS



The hydraulic drive system is a economical and fuel saving solution.



The differential design including four meshing gears, results in a robust and resistant system with a strength two times higher than a traditional transmission.



The integrated waterproof and maintenance free overload clutch, protects against damage on the tractor, the PTO-shaft and the transmission in case of PTO-start at high tractor revs.



On speed independent spreaders, the PTO-revolutions are monitored directly on the display.

CAREFUL SURFACE TREATMENT FROM A - Z

In 1994 BOGBALLE introduced powder painting as this method was proven to be the best possible surface treatment for a fertiliser spreader. The powder paint is extremely wear and impact resistant, together with excellent corrosion resistant characteristics.

Preparing perfect paint work starts when receiving the steel.

The process is extensive and consist of the following steps:

- Quality control of the steel
- Shot blasting
- Grinding and deburring all surfaces and edges
- 45 minutes of cleaning
- Powder painting
- Hardening
- Quality control

The powder application is loading the powder particles at 10-12000 volts to ensure sufficient static adherence.

Quality control ensures that all painted parts fulfil our high standards.



NO SHARP EDGES

All laser cut parts pass through several processes of grinding and deburring. The better the grinding, the more surface for the paint to stick - the better durability and quality.



45 MINUTES OF CLEANING

Each part is carefully cleaned in a 7-step cleaning process. The absolutely clean surface is then the perfect starting point for maximum powder paint adherence.

SURFACE TREATMENT



RESISTS MORE THAN 1000 HOURS OF CORROSION TEST

Our systematic corrosion test runs for 1008 hours and is carried out in an artificial atmosphere according to the standard DS/EN ISO 9227.



THE FINAL RESULT

The BOGBALLE "Flexi-Coat" is 30 times stronger than a traditional wet paint.



MORE THAN 45.000 SPREADING TESTS

More than 45.000 full-scale tests have been carried out in the BOGBALLE test facilities. All our experience and knowledge gained is available via bogballe.com or through our app.



DO YOUR OWN FERTILISER ANALYSIS

The test equipment evaluates and compares the quality of the actual fertiliser relative to the specification from the supplier. The test result can then be compared with our online fertiliser analysis - to determine the recommended spreader settings.

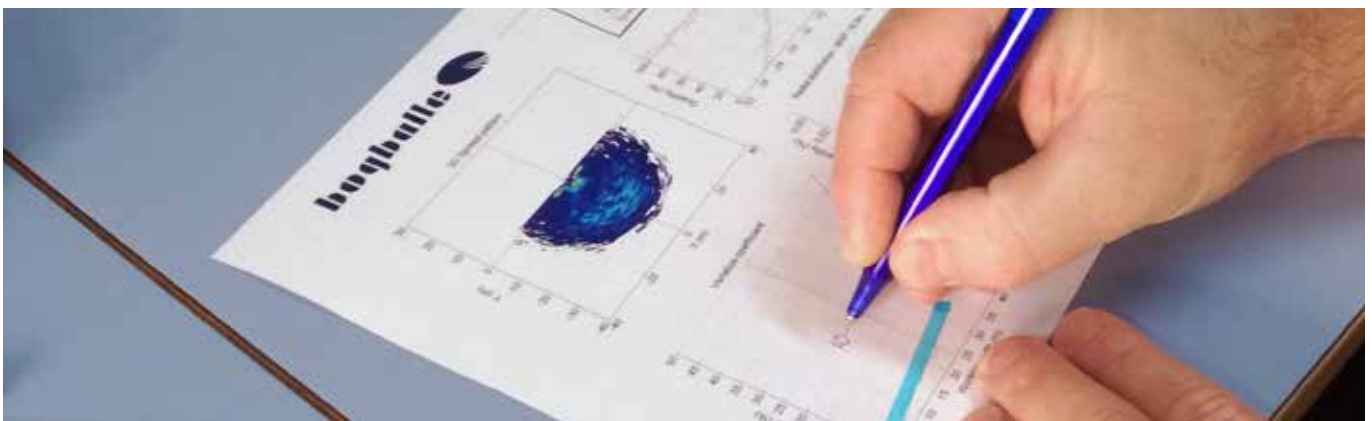


MORE THAN 50 YEARS EXPERT KNOWLEDGE

We care about precision and back in 1964 built our first test hall. Today we have at our disposal highly sophisticated test facilities covering 1600 m².

We are the only world wide producer of fertiliser spreaders, who do both 2D and 3D spreading tests. The 2D test is primarily for spread charts and the 3D test is the basis for developing automatic headland control, section control in wedges and variable rate control.

More than 45.000 full-scale test have been carried out in the BOGBALLE test facilities. All our experience and knowledge gained is available via bogballe.com or through our App.



DOUBLE UP ON TECHNOLOGY

3D test - for analyzing the distribution spreading at headland, wedges and at variable rates / differential application. 2D test - identically matches practical in field spreading.

Control units Offer a world of opportunities

CALIBRATOR

Field work is efficient and precisely controlled by the CALIBRATOR. And combined with the weighing technique, the spreader is transformed into a 100% fully automatically controlled spreader. The precision and the quantity spread is spot on - irrespective of changes in forward speed and field conditions.

Operating is easy with a logical menu-structure. Before starting the field work, planned field data can be downloaded via a USB stick. After spreading the actual field work is transferred and documented.

The CALIBRATOR TOTZ, which is standard on the M60W, M45W, M35W and L20W fulfils all requirements for operating, monitoring and recording spreading operations.

CALIBRATOR ICON is a controller for spreaders without weighing technique. The user interface is based on intuitive icons and controls all important functions to achieve a professional result. Connecting a PC by a cable, field data is transferred from the CALIBRATOR ICON.

ISOBUS Controller

An ISOBUS Controller is a possibility for all spreaders with weighing technique. This solution enables the spreader to be controlled by the tractor ISOBUS Terminal. Our ISOBUS Controller meets the ISO11783 standard and controls all the functions on "W" spreaders. An ISOBUS break away plug connects the spreader to the tractor ISOBUS network.

CONNECTIVITY



CALBRATOR TOTZ



CALBRATOR ZURF



CALBRATOR ICON



ISOBUS Controller

Maybe - you already have a GPS?

Perhaps you already have a GPS solution on your farm?

We are continuously testing the possibilities for connecting various external serial GPS systems for our CALIBRATOR TOTZ/ZURF and CALIBRATOR ICON. Therefore, the possibility is open for using a system already existing on your farm.

It is possible to connect the CALIBRATOR TOTZ/ZURF to a number of standard GPS systems via the serial connection to obtain automatic control in wedges and automatic on/off at the headland. An interface is required between the two systems like for example AgLeader, Trimble, TeeJet and TopCon.

CONNECTIVITY



Ag Leader connected to CALIBRATOR ICON



Trimble CFX750 connected to CALIBRATOR TOTZ



TopCon terminal connected to CALIBRATOR ZURF

NAVI App - the all-round GPS App

Integrated headland and section control

NAVI App is a brilliant and flexible App for GPS-controlled headland management. The App runs on a standard Android tablet as a “plug and play “ unit. The hardware required consists of a GPS antenna and a wireless NAVI Com communication module, connected to the CALIBRATOR TOTZ/ZURF.

Application maps via GPS

The NAVI App includes the possibility of Variable Rate Application, applying different rates of fertiliser according to the position in the field. The Variable Rate Application maps can be based on yield maps, sensor reading via drones, satellite photos or soil samples.

The application map is based on the widely recognised and accepted SHAPE file format as most field management software is able to handle these type of files.

Among the many advantages of using application maps in modern agriculture, is the ability to redistribute the mineral fertiliser to obtain the best possible yield by increasing

or decreasing the quantity based on soil and crop potential. This ensures a more homogeneous growth and a more even crop for harvesting.

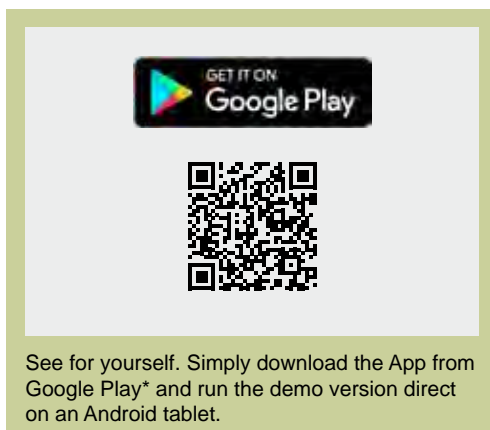
With the NAVI App it is also possible to communicate directly with a crop sensor measuring the plant's nutrient requirements. This method makes it possible to predict the actual need for nitrogen in real time and at the same time automatically adjust the spreader to apply the optimal quantity.

Full documentation

After spreading a field, the tablet sends an email containing a job report as a document defining field name, quantity, working width etc.

One flexible solution

The NAVI App system will function on any tractor brand or model, offering total versatility.



CONNECTIVITY



Use an Android tablet for fully automatic section control and variable rate application via GPS. It offers the possibility to upgrade even the farm's oldest tractor to the latest GPS technology.



Setting GPS guidance as straight or curved A - B lines.



The field report with full documentation is automatically generated as a PDF and a CSV file.



Make your own application maps - and import the files - easy and simple.

Ideal for fixed tramlines - no extra wheel marks in the headland crop


Turn in the headland tramline

Besides 100% overlapping and easy setting, the In-centre system has a crucial advantage. The system distributes the fertiliser from close to the spreader all the way across the spread pattern. Turning at the headland can therefore be completed in the headland tramline and not in the crop between the headland and the border. Significant crop damage is avoided by not having to turn in the crop.

TempoTracker

The exclusive BOGBALLE TempoTracker software is an integrated part of our Section Control; TempoTracker is designed to automatically control the closing and opening positions at the headland.



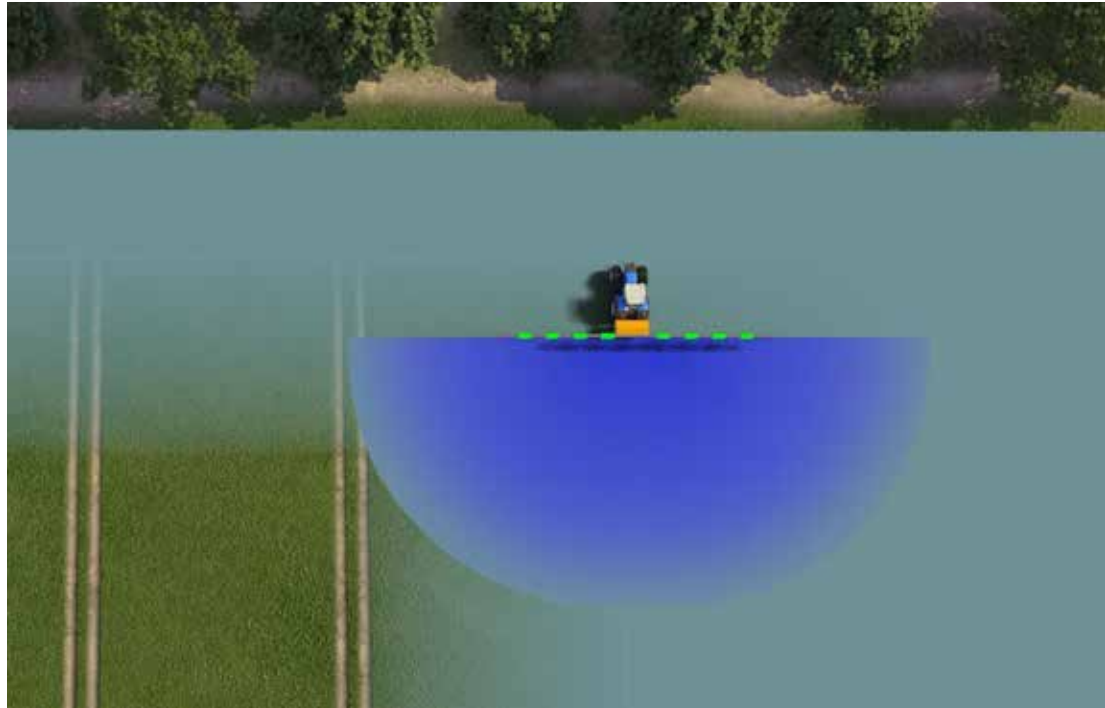
 24 metres

 36 metres

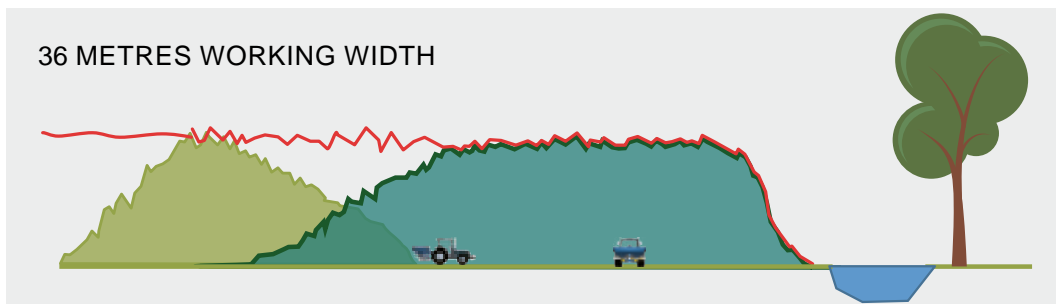
 40 metres

Distribution of fertiliser behind the spreader is the same regardless of working width.

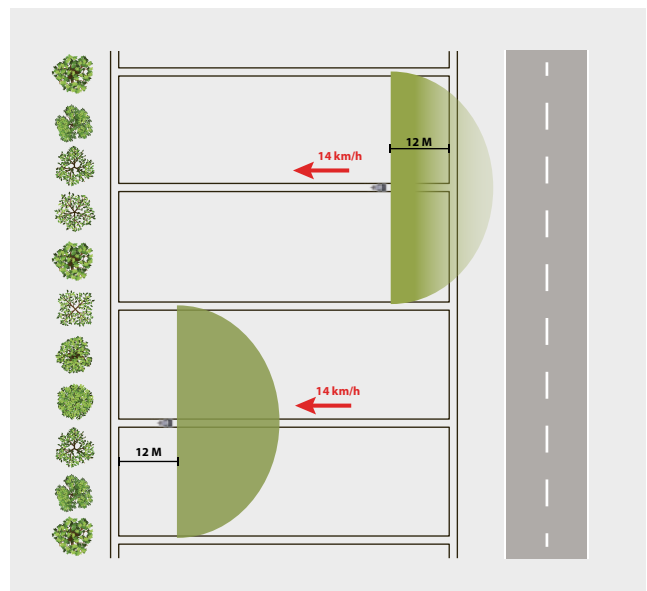
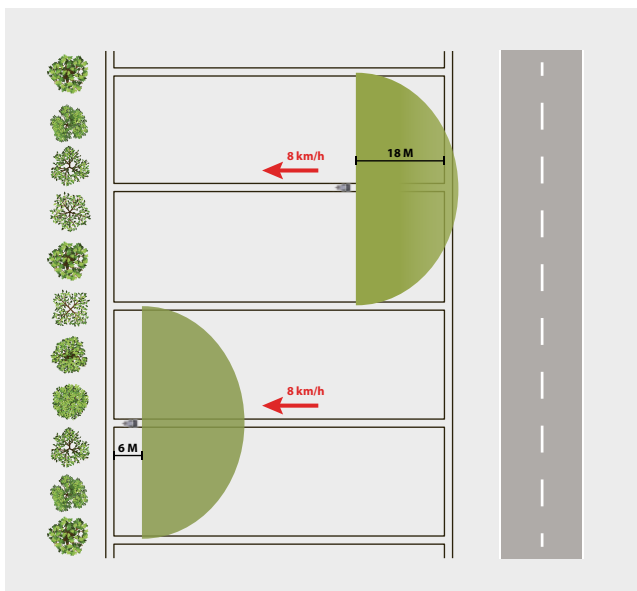
INTELLIGENT SPEED



The In-centre system distributes the fertiliser all the way across the spreader. Turning at the headland is therefore in the headland tramlines and not in the crop between the headland and the border. Significant crop damage and loss is avoided not having to turn in the crop.

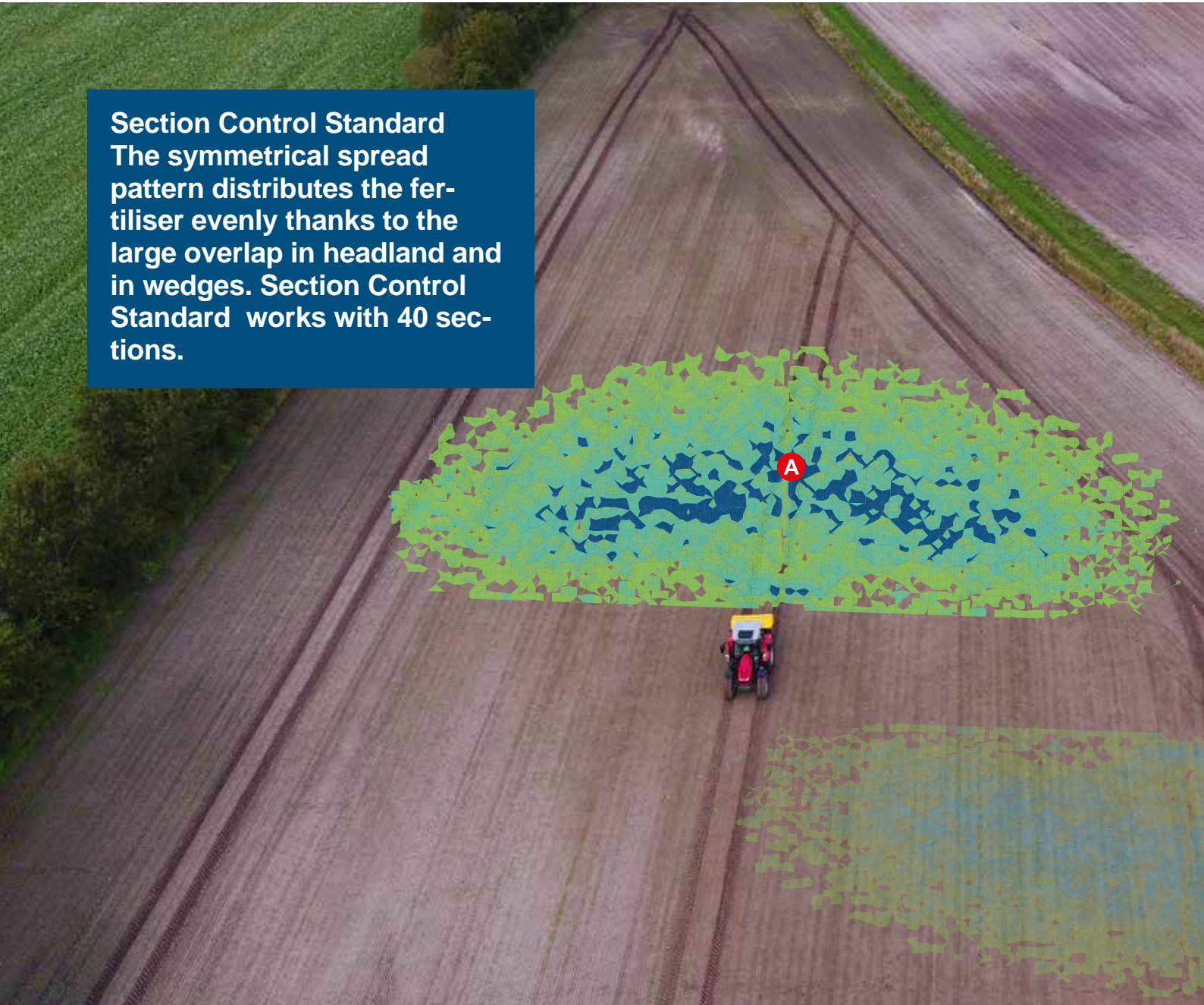


The TempoTracker software calculates the Start/Stop positions based on the forward speed, quantity and working width.

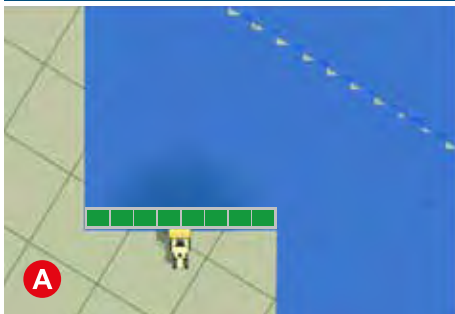


The forward speed toward the headland is typically lower than the forward speed driving into the field.

Section Control Standard
The symmetrical spread pattern distributes the fertiliser evenly thanks to the large overlap in headland and in wedges. Section Control Standard works with 40 sections.



GPS SCREEN
with 40 sections open



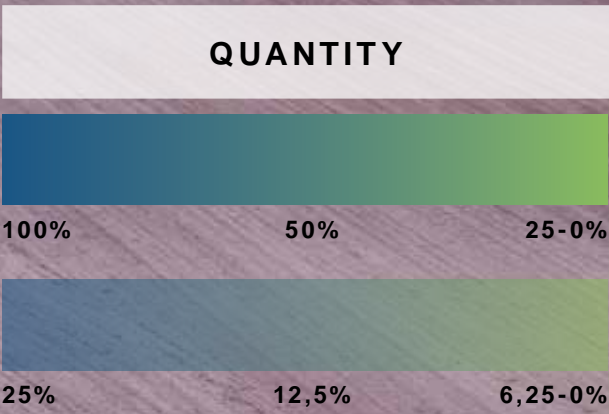
GPS SCREEN
with 10 sections open



SECTION CONTROL STANDARD
Recommended up to 24 metres



WEDGE SPREADING



SECTION CONTROL STANDARD

Section Control

Advantages of section control on a fertiliser spreader are plenty. First and foremost it provides increased precision by avoiding to spread areas that has already been covered by the spreader.

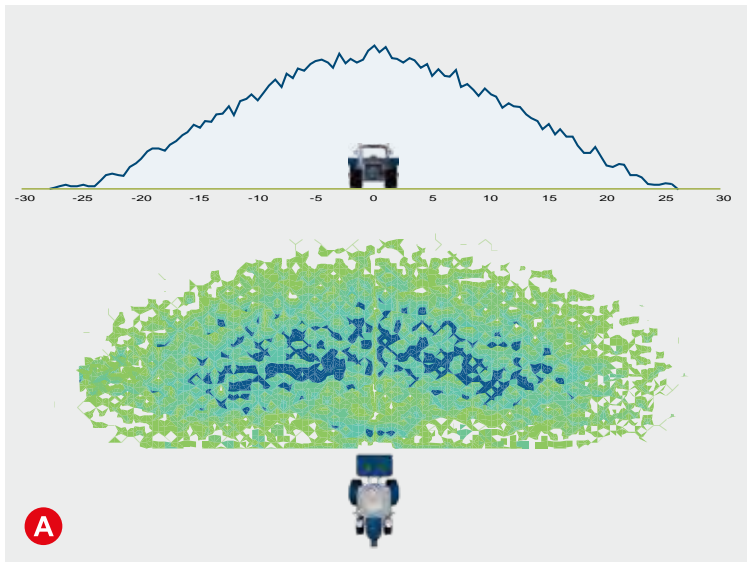
Section Control Standard

Whilst performing section control up until a working width of 24 meters, we recommend using our standard section control solution by simply connecting a GPS system that regulates the spreading in wedges.

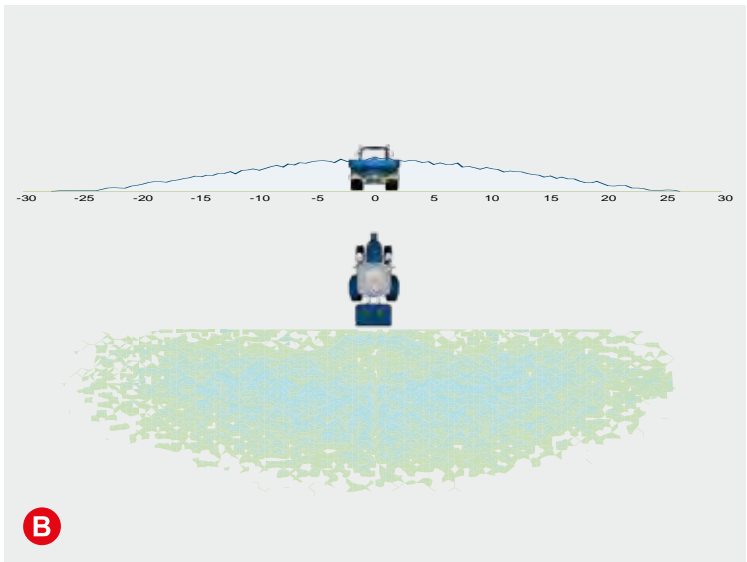
Measurements in our test facilities and practice tests confirm that the symmetrical spread pattern combined with large overlap zones in headland and in wedges provide a fantastic distribution of the fertiliser.

Our in-centre spreading system with four-double overlap covers an area of up to 1000 square meters. This ensures distribution of the fertiliser parallel to the spreader and in a 180° semi-circle behind the spreader. The large overlap with automatic rate control in wedges prevents the possibility of overdose.

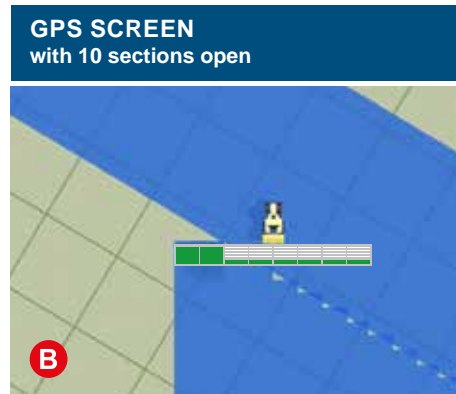
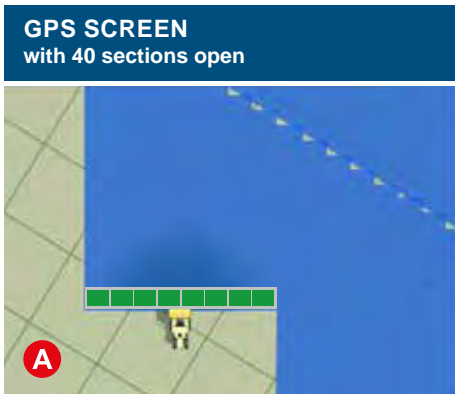
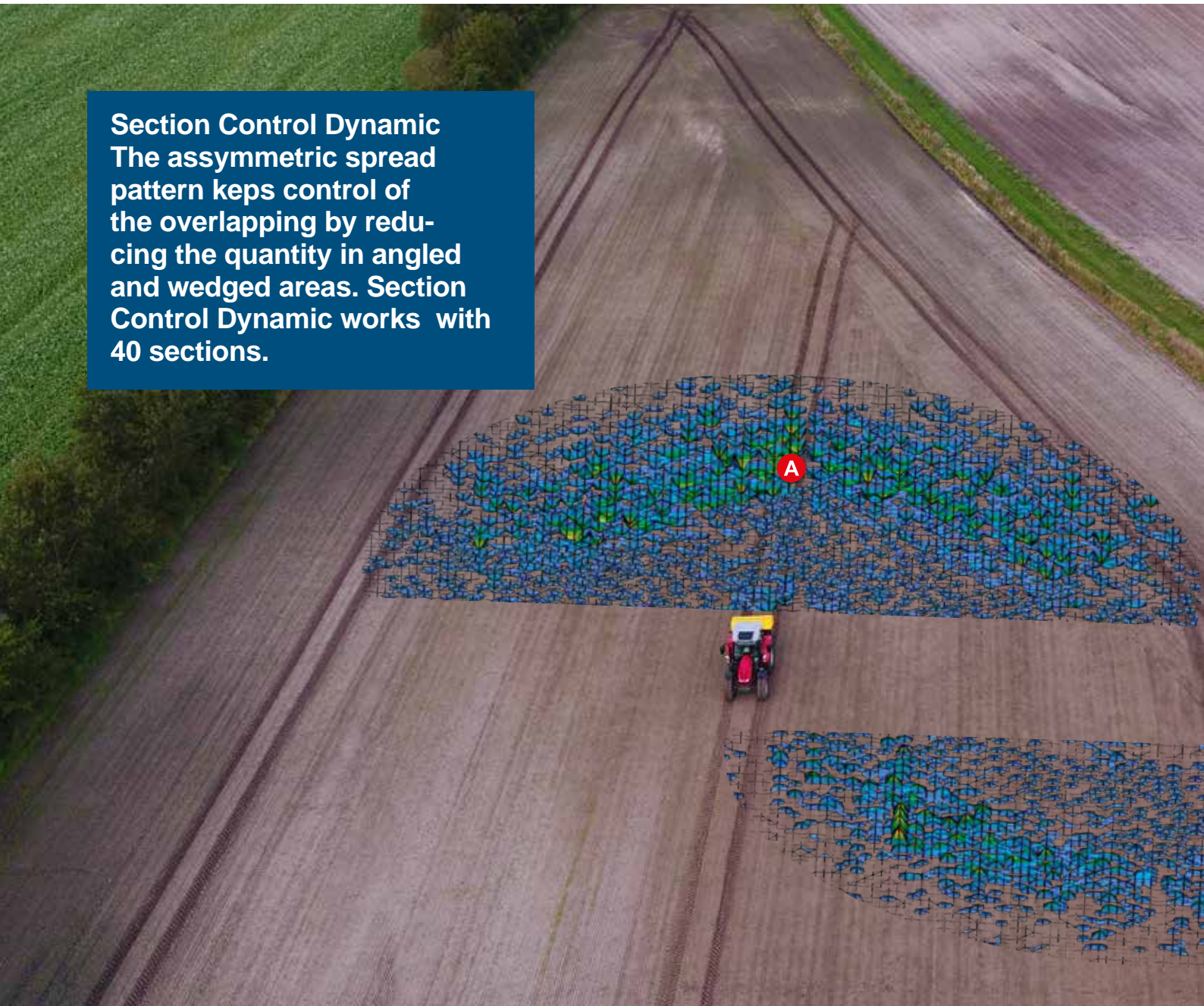
2D AND 3D MEASURING
of Section Control Standard spread pattern with 40 sections open



2D AND 3D MEASURING
of Section Control Standard spread pattern with 10 sections open



Section Control Dynamic
The asymmetric spread pattern keeps control of the overlapping by reducing the quantity in angled and wedged areas. Section Control Dynamic works with 40 sections.



SECTION CONTROL DYNAMIC
Recommended **from** 24 metres



SECTION CONTROL DYNAMIC

Dual Dynamic

Dual Dynamic combines the asymmetric spread pattern of "Dynamic Section Control" performed at headland wedges - with "Dynamic Differential Control", spreading variable rate / differential application to left or right.

Dynamic Section Control

Dynamic Section Control adjusts and controls the spread pattern according to the shape of the field, for example in angled headlands or wedges. The number of sections is in principle infinite, which is illustrated on the controller as main and sub sections. The control is accomplished in a way that the main sections are divided into unlimited and dynamic flow - opening and closing the "sections" gradually.

The system automatically opens and closes the shutters of the spreader in areas where fertiliser is already been applied - like at the headland.

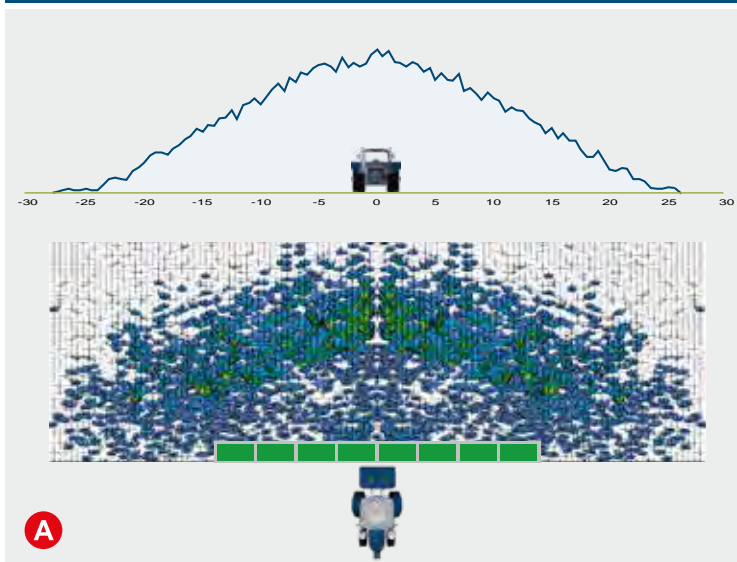
Asymmetric spread pattern

The Dynamic shutters create an asymmetric spread pattern by displacing the pattern and at the same time reducing the quantity in angled or wedged area. The gradual transition ensures optimal and even application in overlapping areas, minimising the risk of over or under application and ensuring the correct application quantity over the total field area.



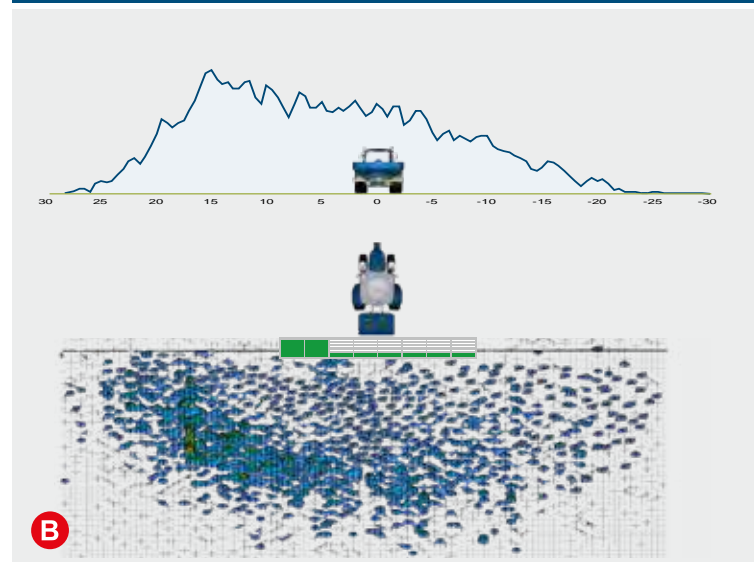
2D AND 3D MEASURING

of Section Control Dynamic spread pattern with 40 sections open



2D AND 3D MEASURING

of Section Control Dynamic spread pattern with 10 sections open



VARIABLE RATE APPLICATION

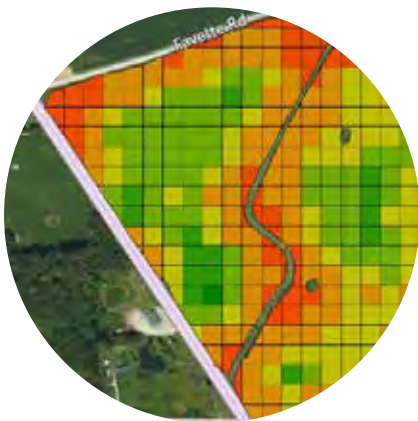
In 1991 BOGBALLE was the first spreader manufacturer offering GPS based variable rate application. Today we offer Dynamic Differential Control controlling both the application quantity and the shape of the spread pattern.

The shutters of the spreader control and modify the application of fertiliser across the working width. The planned application, according to the application map, is then applied in gradual transitions.

Often software systems are seeing the field as small individual and sharply separated areas. But in reality, the shift from one rate area to another is more gradual with smooth changes. Our Dynamic Differential Control adapts the quantity and spread gradually to match the actual conditions in the field.

Our NAVI App is calculating the quantity across the working width and the distribution behind the spreader is automatically corrected. This secures an optimal application - also in the overlapping areas (see page 36).

Our CALIBRATOR and ISOBUS solutions makes it possible for a wide range of GPS-assisted controllers to carry out differential application (see page 34).



APPLICATION MAP

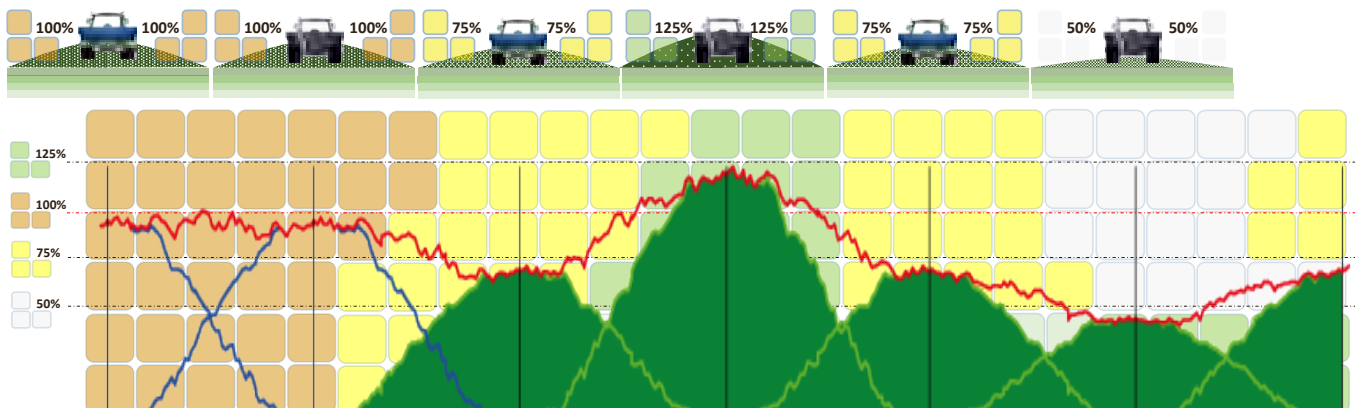
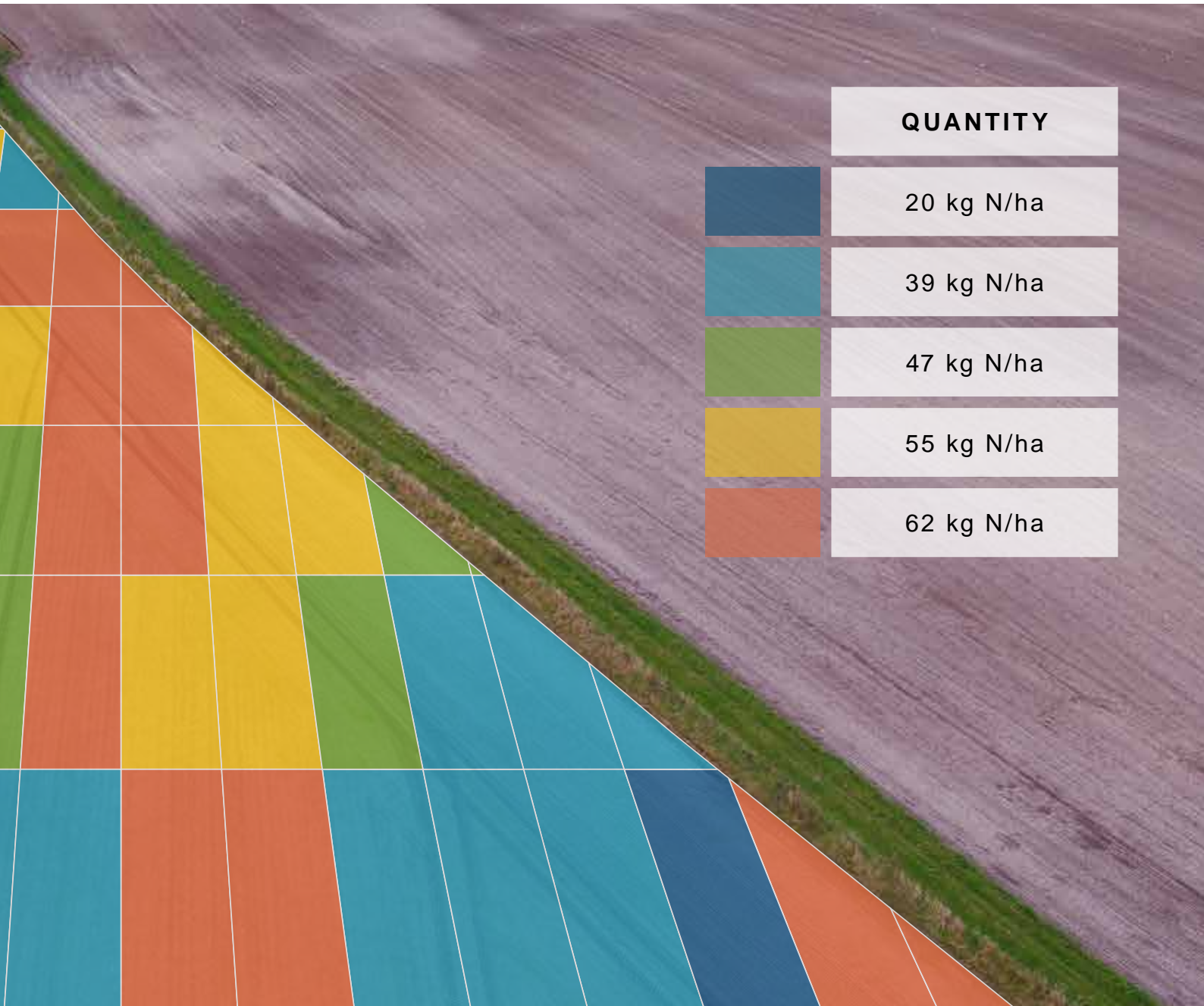
The NAVI App transforms the application map into graduated and smooth transitions.



ANDROID TABLET

Use a standard Android tablet for application maps using the NAVI App.

APPLICATION MAP



FLEXIBILITY AT HIGHEST LEVEL

Differential application from 150 Kg/ha to 450 Kg/ha at 28 meter.



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www.bogballe.com

FIND US ALL OVER THE WORLD

You can find BOGBALLE spreaders in more than 100 countries worldwide and every single country will have different standards as to how a spreader must perform. Still, common for all countries is that they expect an accurate application of fertiliser. That is the reason for our wide product range that exactly fulfils this requirement, no matter if it is a simple manual controlled spreader or the most sophisticated spreader with fully automated solutions and GPS control.

We sell our spreaders through locally based dealers and each has in depth knowledge of the local conditions. This combined with the fact that the spreader consists of standard components that feature throughout the complete product programme, ensures that your spreader always remains in top form. It also ensures a ready supply of wear and spare parts in your local area.

To choose BOGBALLE is a safe choice all the way, not only for the confidence in the precise handling of the valuable fertiliser you spread in the field, but also when it comes to the total costs through the complete lifespan of the spreader.

ALL OVER THE WORLD



FIND MORE INFORMATION ON
www.bogballe.com



Dealer: