

SEED DRILL FOR
STRIP SEEDING

BEDNAR

MATADOR MO

Strip-tillage, fertilisation
and seeding in one pass



JOY OF FARMING



MATADOR MO

Modern farmer's seed drill



„We developed the MATADOR MO seed drill to help farmers achieve high yields in accordance with new legislative requirements. MATADOR MO brings many options for crop distribution and organisation – wide double rows, narrow double rows, single rows, all-area seeding or wide crop establishment. Crops established with MATADOR MO allow farmers to reduce or completely avoid the use of herbicides. Those are replaced with mechanical weeding.“

Jan Bednář

MATADOR MO is a strip-till seed drill that brings innovative and modern crop organisation. The layout of the loosening tines with 37.5 spacing is based on the new agronomic and legislative trends in withdrawal of herbicides at the expense of mechanical weeding. The distance of 37.5 cm with an option to lift-up every other tine enables crop organisation with an inter-row spacing of 75 cm.

The selected inter-row spacing (37.5 or 75 cm) combined with the row-distance arrangement of seeding bars (multiples of 12.5 cm) make MATADOR MO the most versatile one-pass seed drill on the market. The machine offers a wide range of operational tests both for rapeseed where there are two options for double rows with nutrition provided by one fertilised strip and for cereals where all-area distribution of fertiliser is used. The tests prove the correctness of the selected technology.



MATADOR MO

Content

WHY MATADOR MO?	
Technical Advantages	6
Agronomic Advantages	7
Various Crop Organisation Options	8
IMPORTANT WORKING PARTS	
Supplementary Fertilisation System	12
Levelling Disc Section	13
Soil Consolidation	14
Pressurised Hoppers	16
PRECISE SEED PLACEMENT	
Seeding bar CORSA CN	18
Double Edge Drill Coulters	22
MACHINE CONTROL AND SETTINGS	
Terminals	23
Calibration	24
Metering Units	24
Seeding Rollers	24
FARM LINK Application	25
Pre-emergent Markers and Tram Flaps	26
ALFA DRILL SEEDING UNIT	
ALFA DRILL 400	27
TECHNICAL DATA	29
OVERVIEW OF SEEDING ROLLERS	30



Why MATADOR MO?

TECHNICAL ADVANTAGES

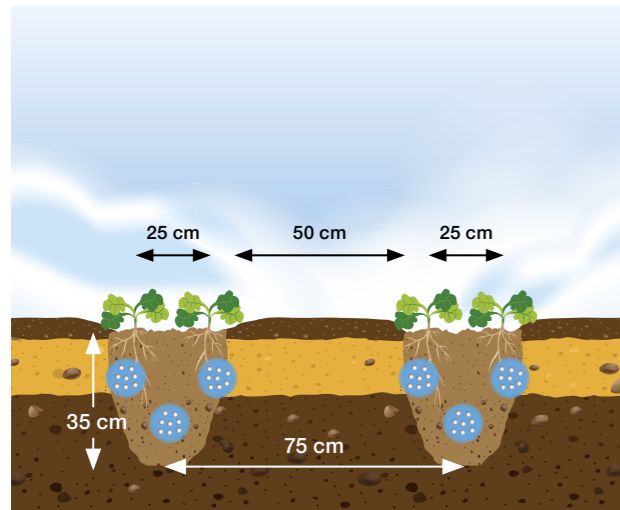
- Pressurised hoppers for precise fertiliser and seed dosing – application of large doses at high accuracy independently of the seed/fertiliser size.
- Robust hydraulic auto-reset tine protection with a release force of 870 kg (max. lift height 30 cm).
- Hydraulically adjustable disc section behind tines for creating ridges or levelling the surface.
- Large tyre-packer (280/85 R20) – offset layout for better machine clearance and to prevent wave formation in front of the packer, easy tyre replacement when needed.
- Robust three-point hitch – optional connection to the BEDNAR CORSA CN seeding bar or for connection with precision planter.
- Machine control via BEDNAR EASY CONTROL software developed by BEDNAR developers – simple, easy and intuitive control.

AGRONOMIC ADVANTAGES

- Soil loosening only in strips. Seeds have access to soil moisture.
- Plant nutrition at the first growth stages thanks to supplementary fertilisation – placement of mineral fertiliser into prepared strips, onto soil surface or together with the seeds.
- The layout of the loosening tine with 37.5 spacing is based on the new agronomic and legislative trends in withdrawal of herbicides at the expense of mechanical weeding.
- The distance of 37.5 cm with an option to lift-up every other tine enables crop organisation with an inter-row spacing of 75 cm.
- Seeding both main and auxiliary crops in one pass to eliminate weeds in the main crop and reduce herbicides use.
- Optional inter-row spacing of 12.5 cm or 25 cm.
- MATADOR MO can be used for direct drilling into a stubble field, seeding in minimum or conventional soil cultivation technologies.
- Creation of a strong root system capable of overwintering in the case of winter crops. You can still achieve a good yield in the case of long-lasting dry season.

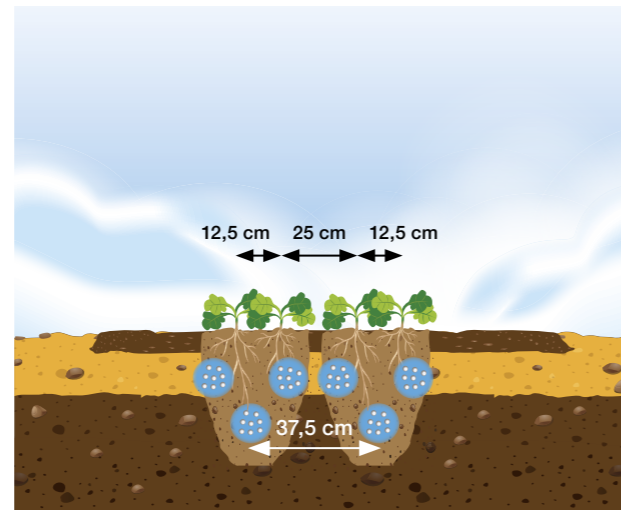
VARIOUS CROP ORGANISATION OPTIONS

The high variability and individual equipment options for the MATADOR MO seed drill allows for establishing crops with the following organisation:



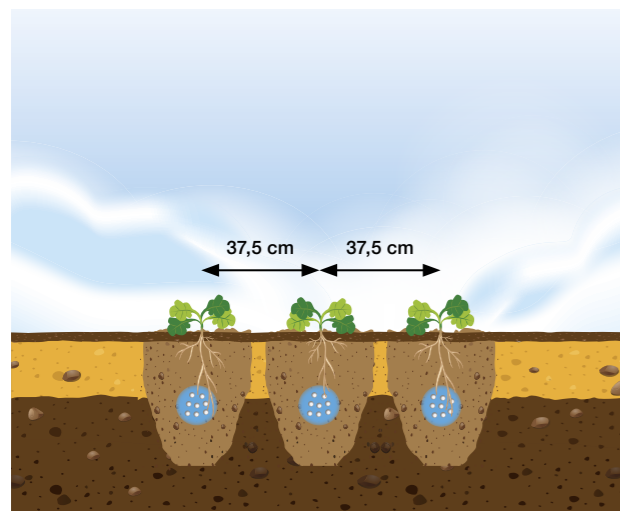
WIDE DOUBLE ROWS

The crop is established in double rows with an inter-row spacing of 25 cm. The double rows get nutrients from the central fertilised strips with a spacing of 75 cm. This crop organisation considerably reduces the power demand. This method allows establishing the main and the auxiliary crop in one pass.



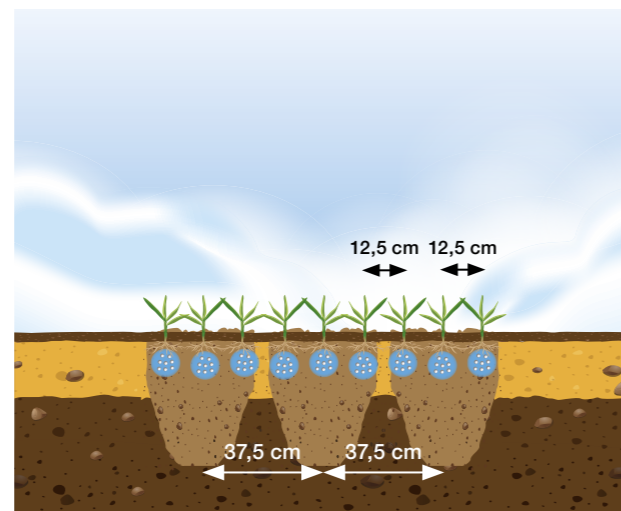
NARROW DOUBLE ROWS

The crop is established in double rows with an inter-row spacing of 12.5 cm. The double rows get nutrients from the fertilised strips with a spacing of 37.5 cm. This organisation allows for mechanical weeding.



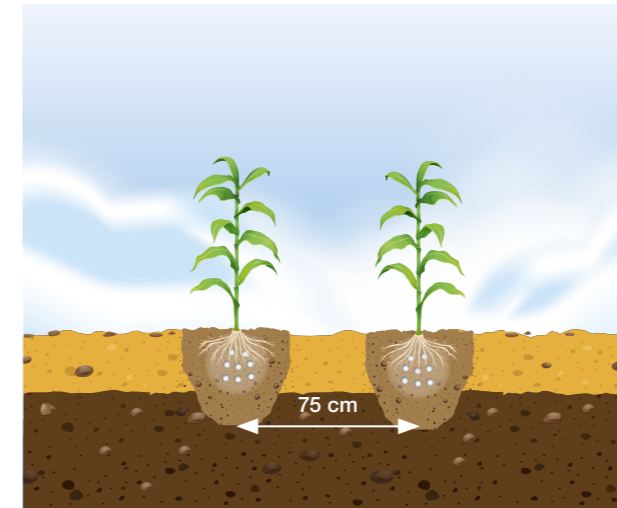
SINGLE ROWS

The crop is established in wide single rows with an inter-row spacing of 37.5 (35) cm. Each row gets nutrients from the fertilised strip with a spacing of 37.5 (35) cm.



ALL-AREA SEEDING

All-area seeding with an inter-row distance of 12.5 cm or 25 cm with the CORSA CN seeding bar and simultaneous fertilisation of the soil profile.



WIDE-ROW CROPS

The MATADOR MO seed drill can be equipped with a precision planter, e.g., for corn. The tine section offers the option of fertilising the soil profile in strips with a spacing of 75 (70) cm.



Crop weeding (e.g., rape established in double rows) can be a considerable intensifying factor of the entire technology, especially when executed with a weeding cultivator that allows for supplementary fertilisation or strip spraying.

Reducing the chemicals use is another significant positive feature of the described technology, since the crop can be protected with herbicides only in one third of the field using strip spraying.

VARIOUS CROP ORGANISATION OPTIONS



EXAMPLE OF WINTER RAPE ESTABLISHED IN STUBBLE FIELD AFTER WINTER WHEAT HARVEST

- Winter rapeseed yield 3.6 t/ha
- Seed drill: MO 6000
- Seeding depth: 2 cm
- Working speed: 12 km/h



EXAMPLE OF WINTER RAPE ESTABLISHED IN PREPARED SOIL

- Winter rapeseed yield 4.2 t/ha
- Seed drill: MO 6000
- Seeding depth: 2 cm
- Working speed: 12 km/h



EXAMPLE OF WINTER WHEAT ESTABLISHED IN PREPARED SOIL

- Winter wheat yield 8.4 t/ha
- Seed drill: MO 6000
- Seeding depth: 3 cm
- Working speed: 12 km/h



EXAMPLE OF DIRECT DRILLING OF MAIZE FOR SILAGE

- Silage corn yield 52 t/ha
- Seed drill: MO 6000
- Seeding depth: 4 cm
- Working speed: 8 km/h

IMPORTANT WORKING PARTS



DOUBLE FRONT SUPPORT WHEELS

The front support wheels of the MATADOR MO seed drill are double. They help the seed drill work without swaying and similar movements that could have a negative effect on uneven seed and fertiliser placement depth.



HYDRAULICALLY ADJUSTABLE DRAWBAR

The hydraulically adjustable drawbar makes it easy to connect the machine to various tractor hitch types while keeping the ability to perfectly contour terrain.

For example, when the K80 hitch, the function of terrain contouring is preserved despite the fixed point on the tractor.



HYDRAULIC AUTO-RESET TINE PROTECTION

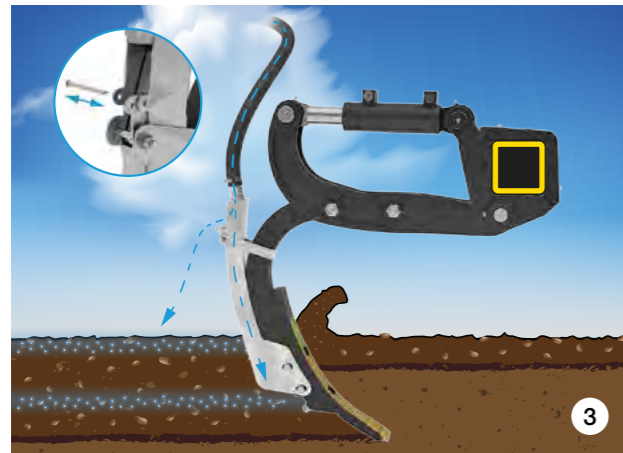
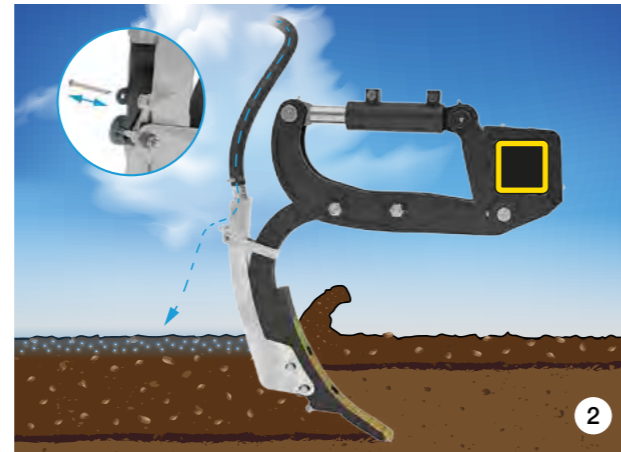
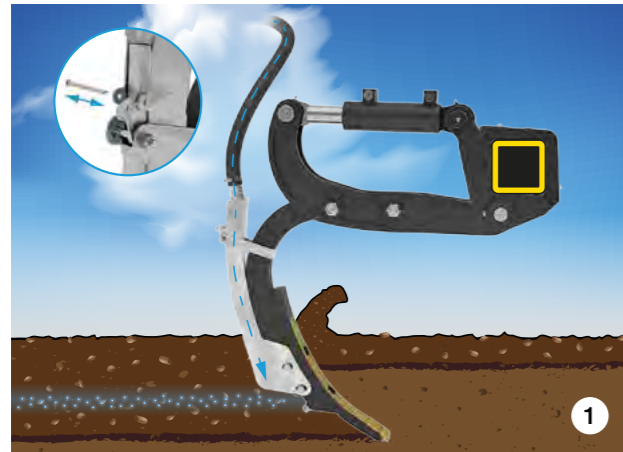
The basic equipment of the machine includes hydraulic AUTO-RESET tine protection (max. release force 870 kg, max. lift height 30 cm).

The protection uses massive cast-iron mounting on the seed drill frames.

IMPORTANT WORKING PARTS

SUPPLEMENTARY FERTILISATION SYSTEM

Each tine is fitted with applicator spouts pieces for fertiliser distribution. The applicator spout makes it possible to place fertiliser in the soil profile or onto the soil surface.



- 1 – Fertiliser placement in soil profile
- 2 – Fertiliser placement onto soil surface
- 3 – Fertiliser placement onto soil surface and in soil profile

LONG LIFE POINT 40 MM

For deeper loosening (up to 35 cm) with lower mixing intensity, the MATADOR seed drill can be equipped with LONG LIFE points with a width of 40 mm.



LONG LIFE POINT 80 MM

For standard loosening depth between 20 and 30 cm with higher intensity, the seed drill is equipped with LONG LIFE points with a width of 80 mm.



LEVELLING DISC SECTION

The disc section behind the tines section is hydraulically adjustable thanks to the hydraulic circuit and hydroclips.

The disc section can be set to:

- Level soil before the tyre-packer – suitable solution for most cereals.
- Create ridges – suitable for rape crop.



„I have been using BEDNAR machines for ten years. They have always excelled in functionality, durability and excellent work in the field. I purchased MATADOR MO 6000 after a demonstration at my farm and having ten-year-long experience with the OMEGA 3000 L seed drill; I seeded about 4,000 hectares with that machine over the time.

Łukasz Miłoszewski, the owner
GR Miłoszewscy | Poland

IMPORTANT WORKING PARTS



SPRING-LOADED CENTRAL PART OF THE TYRE PACKER

The central part of the tyre packer is suspended using a spring (patented design). This design increases the comfort when transporting the machine on roads and reduces the pressure on the frames when the hoppers are full.



THREE-POINT HITCH

The rear part of the seed drill is equipped with a three-point hitch, category III. This hitch is used for connecting the MATADOR MO seed drill to the CORSA CN seeding bar or precision planter.

Maximum three-point hitch lifting capacity: 4,000 kg.

To maintain the required spacing when establishing double row crops, the three-point hitch hooks can be moved to the sides by 6.25 cm.

SOIL CONSOLIDATION

The MATADOR MO seed drill is equipped with a unique tyre-packer arranged in two rows (offset layout). The tyre dimensions are 280/85 R20. The design is based on excellent experience with the offset packer used in OMEGA seed drills.

The offset tyre-packer perfectly consolidates, levels the soil and provides a smooth and stable passing of the machine across the field and on roads.

The independently mounted wheels are an advantage – each wheel has its own hub that lets it turn independently at its own speed. This design improves manoeuvrability of the machine when turning at headland.

UNDISPUTED ADVANTAGES OF THE OFFSET LAYOUT VERIFIED IN PRACTICE:

1. Significantly higher off-road capability compared to tires arranged in a single row.
2. Reduction of rolling resistance = reduction of power demand.
3. Independent wheel mounting = easy replacement in case of puncture.
4. Double row arrangement = excellent self-cleaning effect.



IMPORTANT WORKING PARTS



DOUBLE-CHAMBER PRESSURISED HOPPERS FOR ALL MATADOR MO MODELS

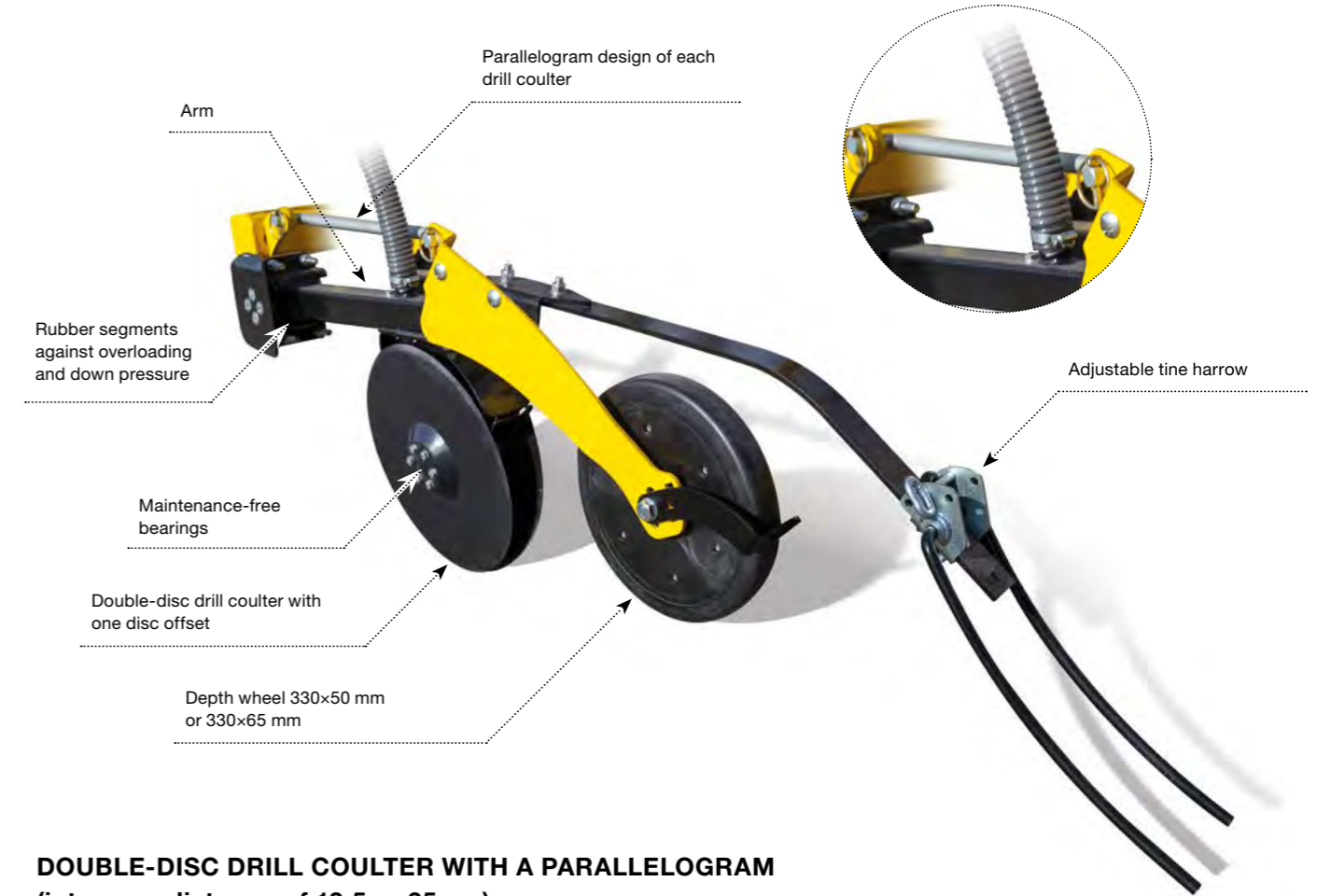
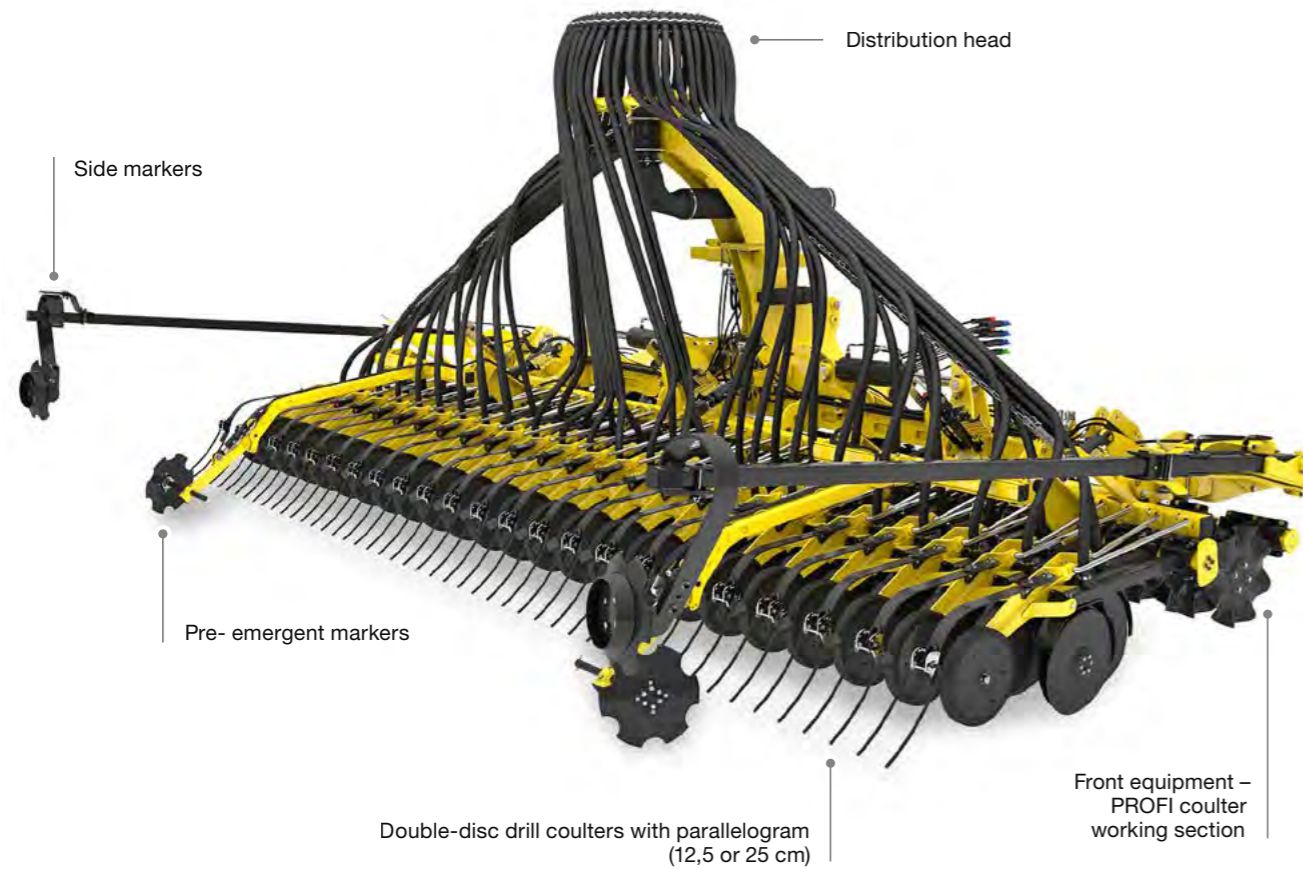
The first BEDNAR seed drill models used non-pressurised hoppers. However, practice has clearly shown the advantages of the pressurised hoppers over non-pressurised ones. Today, all seed drills, mounted hoppers and BEDNAR carts are equipped with pressurised chambers. And the same applies to the MATADOR MO strip-till drill.

Main advantages of pressurised systems (hoppers):

1. Air pressure in the pipeline below the metering units does not need to be reduced to the atmospheric pressure level – in non-pressurised systems, it is done using a diffuser, or pipeline narrowing that reduces air flow and decreases the maximum seed (fertiliser) quantity that can be „blown“ through. It is thus possible to dose larger quantities with a higher precision with pressurised hoppers.
2. It does not require resolving the changes in the dosing air system layout – e.g., by closing a half of the outlets when seeding every other row – the unpressurised hopper is very sensitive and seeding every other row may cause incorrect dosing (pressure under the metering unit changes).

CORSA CN SEEDING BAR

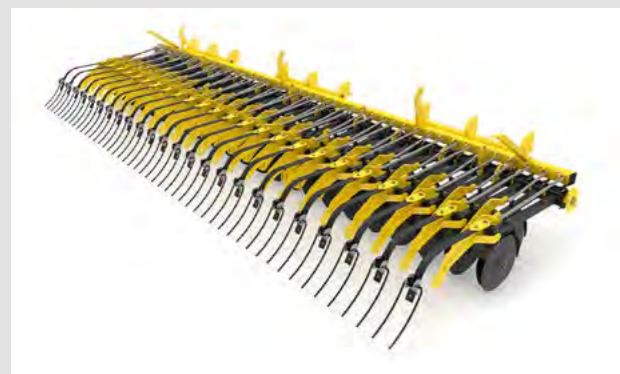
The BEDNAR CORSA CN seeding bar is a versatile seeding bar with a working width of 6 m, which is connected into the three-point hitch of the MATADOR MO seeder. The seeding bar is equipped with two disc seeding coulters as standard with a PSP system (parallelogram) of individual seeding coulters for quality and uniform crop establishment. The seeding bar can be fitted with one of four types of front equipment.



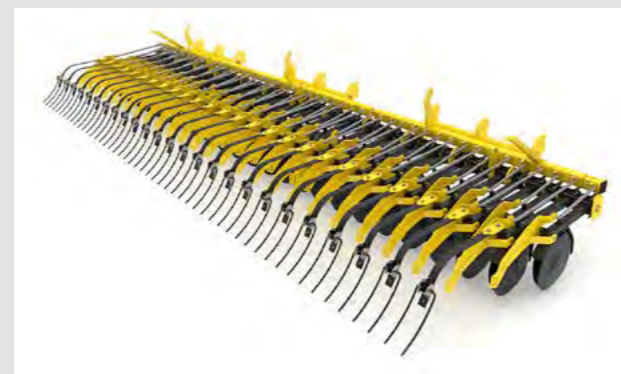
DOUBLE-DISC DRILL COULTER WITH A PARALLELOGRAM (inter-row distance of 12,5 or 25 cm)

A precisely formed seeding groove is a condition for successful crop establishment. The double-disc drill coulters cuts crop residue and creates a clean and prepared groove for even seed placement. The seeds are then covered with fine soil and pressed down into the soil by the depth wheel. The rear leveller can be adjusted according to the current soil and moisture conditions. The levellers creates optimal soil structure for seed germination.

INTER-ROW SPACING OF THE SEEDING COULTERS



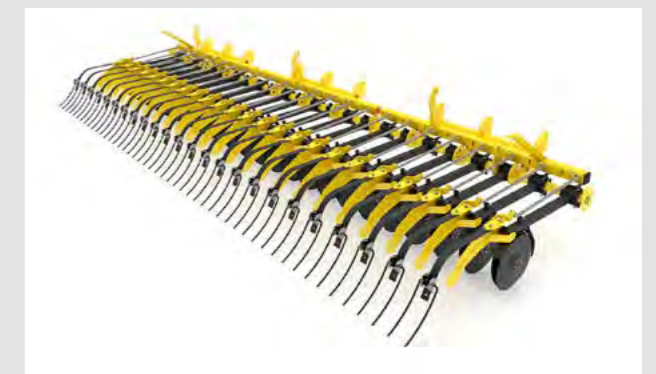
Inter-row distance of 12,5 cm (48 drill coulters)



Inter-row distance of 12,5 cm + double edge drill coulters (50 drill coulters)



Inter-row distance of 12,5 cm + inter-row distance 25 cm (32 drill coulters)



Inter-row distance of 25 cm (24 drill coulters)

IMPORTANT WORKING PARTS



HYDRAULIC SETTING OF THE DRILL COULTER PRESSURE

The drill coulter pressure is set using hydraulic cylinders that are connected to the machine frame and drill coulters. The hydraulic cylinder position is secured with hydroclips.



HYDRAULIC SETTING OF THE SEEDING DEPTH

The seeding depth is set by pressurising the respective hydraulic circuit. The shorter the piston rod is, the deeper the drill coulters work. On the other hand, the drill coulters are lifted when the piston rod extends. The hydraulic cylinder position is secured with hydroclips.

OPTIONAL FRONT EQUIPMENT



FRONT CRUSHBAR LEVELLING BAR

The Crushbar paddle levelling board is used for initial levelling of the coarse furrow and terrain unevenness. The levelling board angle can be changed hydraulically during work from the tractor cabin.



TYRE FRONTPACK

The Frontpack with a diameter of 390 mm ensures even soil profile levelling and reverse soil consolidation before the drill coulters.



TURBO COULTER WORKING SECTION

TURBO coulters are sharp discs with a diameter of 400 mm. The TURBO coulter cuts crop mulch and soil. TURBO coulters work in the same line as the rear drill coulters. The coulter spacing is 12.5 cm.

The TURBO coulter pressure can be changed hydraulically during work from the tractor cabin.



PROFI COULTER WORKING SECTION

PROFI coulters are specially shaped discs with a diameter of 400 mm, offering an excellent crumbling effect. They are suitable for quality cultivation of heavy soils. The coulter spacing is 12.5 cm.

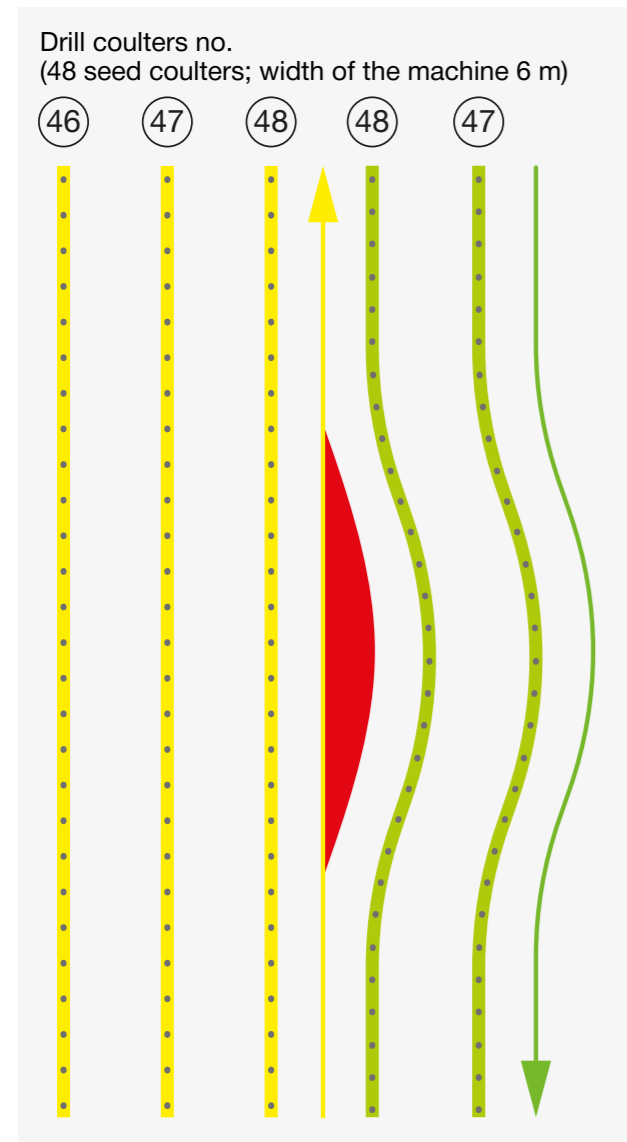
The PROFIL coulter pressure can be changed hydraulically during work from the tractor cabin.

PRECISE SEED PLACEMENT

DOUBLE EDGE DRILL COULTERS

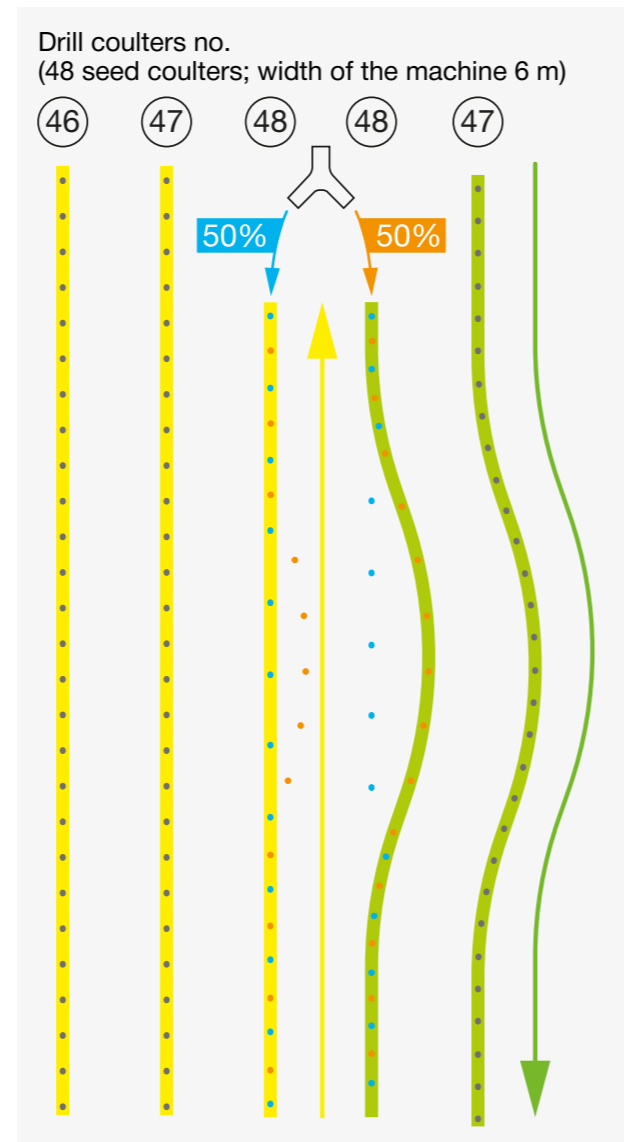
The machine moves away from the ideal line and wobbles when seeding. That creates increased gaps, or so-called „eyes“ between the individual rides in the field (with standard arrangement of the drill coulters). All those deficiencies are eliminated with our innovative design – the double edge drill coulters. When there is a deviation from the ideal line, the growth is only thinned locally without any significant gaps, or eyes“.

STANDARD SEEDING METHOD



Reverse driving with a deviation from the theoretical line

DOUBLE EDGE DRILL COULTERS—THE SEED FLOW IS DIVIDED IN TWO PARTS IN THE EDGE COULTERS



Reverse driving with a deviation from the theoretical line

↑↓ Direction of travel

● Visible gap increase

MACHINE CONTROL AND SETTINGS

SIMPLE CONTROL, INCLUDING ISOBUS

Seed drills can be controlled by the ISOBUS system. If the tractor is not equipped with ISOBUS, the machine can be controlled using the following terminals.

Own control software – created on the basis of experience and requirements of operators and users. The MATADOR MO seed drill is equipped with control software developed by BEDNAR developers.

The software offers a well-arranged, easy and intuitive seed drill control. If the seed drill is equipped with the ALFA DRILL 400 seeding unit, the seeding unit control is completely integrated into one system (no other monitors are needed).



SMART 570 TERMINAL

- Economical and easily controllable option for controlling seed drills.
- Easy and fast installation of the terminal in the tractor cabin.
- The terminal is equipped with a 5.7" coloured display that provides all the information in a well-arranged manner.
- Functions can also be controlled with the keys on the right side of the display or with a rotary control.



ME TOUCH 800 TERMINAL

- A terminal equipped with a touch display.
- The terminal is equipped with a dual 8" TFT touch display.
- The touch film is placed behind protective glass, which makes this terminal perfect for the rough agricultural environment.
- This alternative allows displaying the „main screen“ and the „header screen“ at the same time thanks to the high resolution.
- The TOUCH 800 terminal support the functions of precise farming, such as Section Control, Variable Rate Control, Task Controller, FieldNAV (easy machine navigation in the field)*.
- To make it more convenient for the operator, the TOUCH 800 terminal can be extended with a series of accessories, such as cameras etc.*



* Some functions are available for an additional charge and may require additional accessories. If interested, contact your dealer.

MACHINE CONTROL AND SETTINGS



EASY AND CONVENIENT CALIBRATION WITH HOPPER EMPTYING

The seeding/fertiliser calibration is done in the rear part of the seed drill, in an easily accessible place – there is no need for complicated calibration under the metering unit. A highly convenient and well accessible place for the operator.

Also, any unused seeds or fertiliser can be emptied in the rear part from the hopper back into big bags.



EFFICIENT AND PRECISE METERING UNIT

The metering unit of the MATADOR MO seed drills is made of stainless steel and driven by an electric motor. The stainless configuration guarantees a very long service life when compared with the frequently used plastic version.

The metering unit is capable of dosing the seeds precisely within the range from 0.6 to 350 kg/ha.

The system is equipped with a discharge gate for thorough emptying of the hopper. The gate is also used for easy replacement of the seeding roller.

The metering unit includes an agitator for better seed throughput.



SEEDING ROLLERS

The basic equipment of the MATADOR MO seed drills includes two types of seeding rollers (one for fine seeds, such as rapeseed, the other for cereals).

The extended BEDNAR portfolio includes a total of sixteen seeding rollers from 7 cm³ to 890 cm³ see p. 30.



FARM LINK MOBILE APPLICATION

BEDNAR developers designed a mobile application that provides easy and simple calibration of the seed drill from your mobile phone. The mobile application includes a guide that helps with the right selection of the seeding roller based on the type of seeds/fertiliser, working speed and the required seeding amount.

The seed drill is connected with the mobile phone via a Wi-Fi module.



MACHINE CONTROL AND SETTINGS

PRE-EMERGENT MARKERS AND TRAMLINE

FLAPS:

- Symetric
- Asymetric

TRAMLINE FLAPS (SEEDS)

- Deactivation: asymetric 2x2 / 3x3
- Deactivation: symetric 2x2 / 3x3
- Deactivation: special 4x4 / 6x6

TRAMLINE FLAPS (FERTILISER)

- Deactivation: asymetric 2x1
- Deactivation: symetric 2x1



The MATADOR MO seed drill can be equipped with hydraulically controlled side markers when working without GPS.



ALFA DRILL



ALFA DRILL 400 AS A PART OF MATADOR MO

The MATADOR MO seed drill can be equipped with the ALFA ALFA-DRILL 400 seeding unit. The ALFA DRILL seeding unit is pressurised. It can be controlled:

- via ISOBUS
- via terminal

The ALFA DRILL seeding unit can be controlled with the software available for the MATADOR MO seed drill. There is no need for another control monitor separate for the seeding unit in the tractor cabin.

MAIN ADVANTAGES OF THE ALFA DRILL 400 SEEDING UNIT

The combination of a seeding unit as a third hopper on a seed drill offers a bigger versatility in the use of the machine. Also, the seeding unit allows to respond to new agronomic trends in crop establishment, where it enables you to establish up to three types of crop, to apply fertiliser, micro-granulate, and to seed the catch crop.

BASIC DESCRIPTION



MATADOR MO

		MO 4500	MO 6000
Working width	m	4.5	6
Transport width	m	3	3
Transport height	m	3	3.3
Transport length*	m	10.3	10.3
Seed/fertiliser hopper capacity (double-chamber hopper)	l	3,000/2,000	3,000/2,000
Filling height of the double-chamber hopper	m	3	3
Number of tines	pcs	12/6	16/8
Tine spacing	cm	37.5/75 (35/70)	37.5/75 (35/70)
Packer diameter	cm	98	98
Packer tyre dimensions		280/85 R20	280/85 R20
Number of drill coulters	pcs	36/18	48/24
Drill coulters spacing	cm	12.5/25	12.5/25
Drill coulters down pressure	kg	130	130
Frame clearance	cm	65	65
Power demand *	HP	210–280	280–400
Total weight without the seeding section **	kg	7,800	8,900
Total weight with the seeding section (coulters spacing 12.5 cm)	kg	10,500	11,200

* according to the equipment ** depends on soil conditions *** weight including (Alfa Drill 400 up to 350 kg)

Overview of Seeding Rollers

<p>7 cm³</p>  <p>KM420007</p> <p>Poppy seed, Rape</p>	<p>11 cm³</p>  <p>KM420011</p> <p>Poppy seed, Rape, Mustard</p>	<p>14 cm³</p>  <p>KM420014</p> <p>Mustard, Rape</p>	<p>22 cm³</p>  <p>KM420022</p> <p>Mustard, Rape</p>
<p>30 cm³</p>  <p>KM420030</p> <p>Mustard, Rape, Sunflower</p>	<p>50 cm³</p>  <p>KM420050</p> <p>Mustard, Wheat, Grass, Sunflower</p>	<p>75 cm³</p>  <p>KM420075</p> <p>Wheat, Grass, Sunflower</p>	<p>100 cm³</p>  <p>KM420100</p> <p>Wheat, Grass, Sunflower</p>
<p>145 cm³</p>  <p>KM420145</p> <p>Wheat, Grass</p>	<p>150 cm³</p>  <p>KM420150</p> <p>Barley, Wheat, Grass, Rye</p>	<p>290 cm³</p>  <p>KM420290</p> <p>Barley, Wheat, Grass, Rye</p>	<p>305 cm³</p>  <p>KM420305</p> <p>Barley, Wheat, Grass, Rye</p>
<p>395 cm³</p>  <p>KM4204395</p> <p>Pea, Barley, Wheat, Grass, Rye</p>	<p>580 cm³</p>  <p>KM420580</p> <p>Pea, Barley, Oat, Wheat, Grass</p>	<p>790 cm³</p>  <p>KM420790</p> <p>Pea, Barley, Oat, Wheat, Grass</p>	<p>890 cm³</p>  <p>KM420890</p> <p>Pea, Bean, Wheat</p>



CHOOSE WHAT YOU NEED

tillage



SWIFTERDISC
Disc Cultivator



ATLAS
Disc Cultivator



FENIX
Tine Cultivator



VERSATILL
Tine Cultivator



SWIFTER
Seedbed Cultivator



KATOR
Rotary Harrow



TERRALAND
Chisel Plough



ACTROS
Combined Cultivator



GALAXY
Roller

seeding and fertilisation



OMEGA
Seed Drill



MATADOR
Seed Drill



DIRECTO
Seed Drill



FERTI-BOX
Front Hopper

inter-row cultivation / strip-till mulching



ROW-MASTER
Inter-row Cultivator



STRIP-MASTER
Strip-till Cultivator



STRIEGEL-PRO
Straw-harrow



MULCHER
Rotary Mulcher

BEDNAR FMT, s. r. o.
Lohenicka 607
190 17 Praha-Vinor
Czech Republic



Your Authorized Dealer



EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise
and Innovations for Competitiveness



* M A 0 0 0 7 6 5 *