BEDNAR

OMEGA OO_FL

Quality Crop Establishment in Any Conditions

BEDNAR FARM MACHINERY
SINCE 1997

WHY OMEGA?

The universal OMEGA FL seed drills are designed for establishing various crops and their combinations in various conditions, both regarding the soil and moisture. And versatility is a great advantage of the OMEGA FL seed drill.

Crop establishment is the basic foundation stone for a successful harvest. A balanced, vital crop with an excellent yield potential is something that every good farmer wants to achieve.

The OMEGA FL seed drill concept is simple and easy:

- An efficient seed drill with precise soil preparation and perfect material throughput.
- Variable settings of all working sections with an excellent levelling and consolidation effect.
- Precise seed and fertiliser placement and batching.

All of that is well-arranged and easy to control. And that guarantees quality seeding under any conditions.

AND THAT IS AN OMEGA FL.

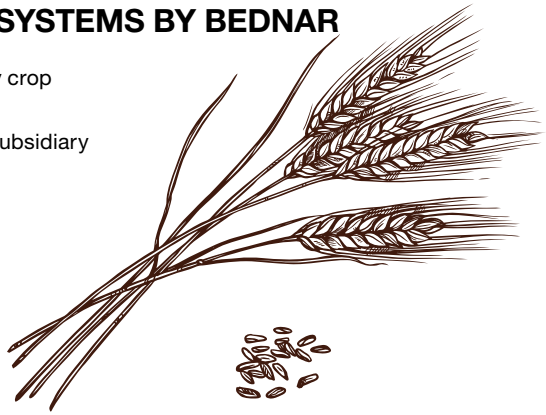
INNOVATIVE TECHNOLOGY

HIGH PRODUCTIVITY

EASY OPERATION

AGRONOMIC KNOW-HOW

WINTER WHEAT AND SUBSIDIARY CROP CULTIVATING SYSTEMS BY BEDNAR



- Planting wheat in 250 mm rows (seeding amount 80-110 kg/ha) and planting subsidiary crop in the inter-row
- Both winter and spring legumes, such as common pea and field pea, can be used as subsidiary crops (the seeding amount of both is 80 kg/ha)
- Winter legumes are regulated with herbicide in spring
- Production of a considerable amount of organic matter
- Nitrogen fixation when legumes are used (20-40 kg/ha)
- Withered up subsidiary crops supply winter wheat with nutrients
- Elimination of erosion and weeds in the winter wheat inter-rows
- Increased food supply for soil organisms

GROWING WINTER WHEAT AND SUBSIDIARY CROP

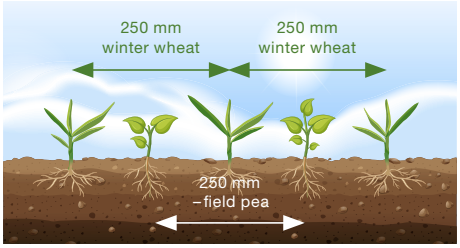
The option to adjust the depth of the wheels enables you to set a different depth for the wheat and for the subsidiary crop.

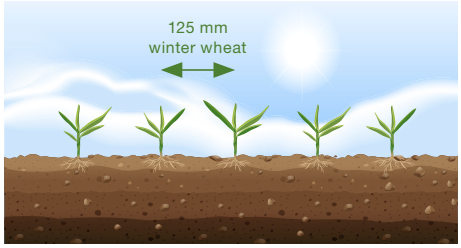
The sequence of rows when alternating the crops is provided by the passive navigation system and by the variable disconnecting of the edge drill coulter using a hinged valve.

The biological fixation of nitrogen saves the overall costs of wheat crop fertilization.

ADVANTAGES OF WIDE-ROW CROPS CULTIVATION

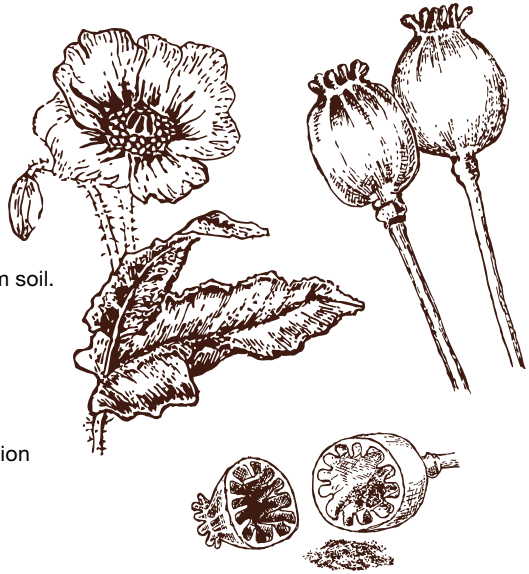
- Elimination of water stress risks. The subsidiary crop prevents evaporation in autumn, the growth closes up in spring.
- Reduced seed consumption per area unit (seeding amount 1.7 to 2.4 million germinative seeds/ha).
- Using varieties with a higher number of sprouts.
- Increased fertiliser utilisation thanks to specific fertilization during seeding.
- Possibility to eliminate weeds in the inter-rows by mechanical weeding.
- High grain quality achieved in all trials. The yield is retained.
- Ensuring economic efficiency in case of price decrease.





POPPY AND SUBSIDIARY CROP CULTIVATING SYSTEMS BY BEDNAR

- The use of the subsidiary crop system reduces the risk of crop erosion damage.
- Optimisation of the growth structure with a poppy row spacing of 250 mm.
- Elimination of weeds in the poppy vegetation.
- Fertilization is placed together with the poppy seeds in the row in a single pass.
- Supporting the poppy root system development in the bottom soil layers based on the positive competition with the subsidiary crop.
- Covering the poppy inter-rows with subsidiary crop mulch reduces the loss of water from soil.
- Minimisation of the costs of use of the subsidiary crop (up to EUR 30/ha).
- Spring barley (seeding amount 50 kg/ha) and oat (seeding amount 30 kg/ha) are used as subsidiary crops.
- The placement of the subsidiary crop outside the poppy row eliminates mutual competition
- The regulation of the subsidiary crop (cereal) is related to the herbicidal regulation of monocotyledonous weeds.

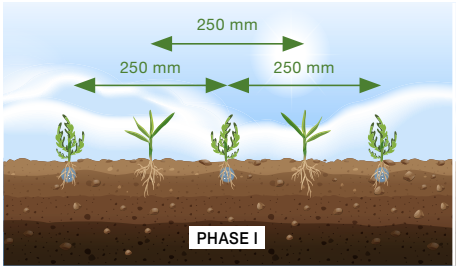


POPPY AND SUBSIDIARY CROP VEGETATION – ESTABLISHMENT TECHNOLOGY

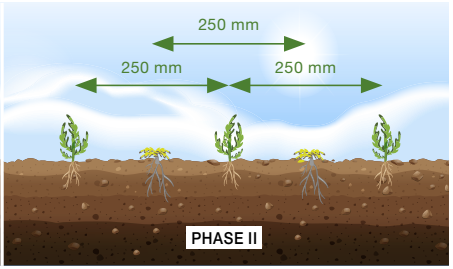
Poppy

Subsidiary crop – spring barley, oat

Fertiliser – micro-granulate, placed together with the seeds from a separate hopper

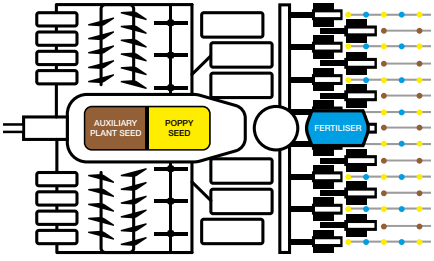


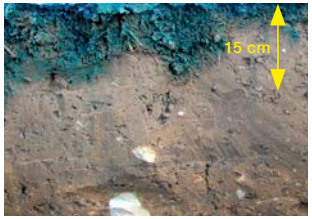
Poppy with a subsidiary crop planted with a spacing of 250 mm



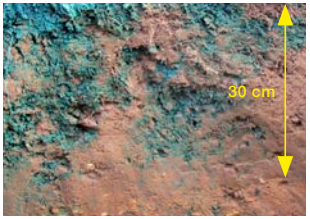
The condition of the crop after the regulation of the subsidiary crop. The soil in the inter-rows is protected by crop residue.

USING **BEDNAR OMEGA OO_FL** SEED DRILL + **ALFA DRILL** SEEDING UNIT





Water infiltration in areas without the subsidiary crop



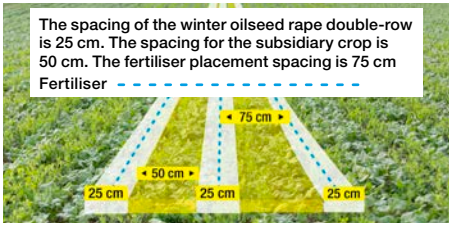
Water infiltration in areas with the subsidiary crop

WINTER OILSEED RAPE AND SUBSIDIARY CROP CULTIVATING SYSTEMS BY BEDNAR

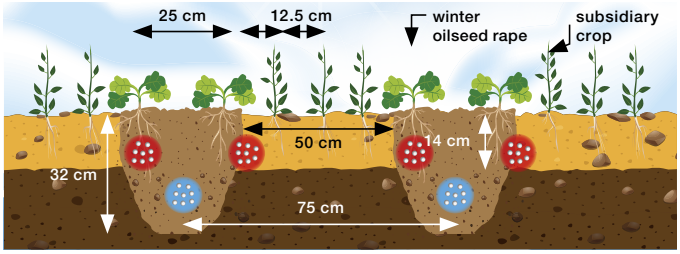
- Provision of space for the plant development
- Optimisation of the number of oilseed rape plants (18 to 25 plants/m2 in spring)
- The placement of the subsidiary crop outside the oilseed rape row eliminates mutual competition
- Seed savings thanks to the reduced number of plants per area unit
- Reduction in the quantity of pesticides per area unit thanks to their strip application
- A double-row spacing of 25 cm eliminates the growth of weeds
- The inter-row distance of 50 cm allows for inter-row cultivation
- Subsidiary crops can be established in the inter-row
- Fertilisers can be placed in soil during the cultivation of vegetation - higher use efficiency
- The inter-row cultivation eliminates the occurrence of volunteer oilseed rape and cereals.
- The system can be used for all-area soil cultivation as well as for strip-till cultivation.

PLANTING WINTER OILSEED RAPE IN DOUBLE-ROWS TOGETHER WITH SUBSIDIARY CROP

- Deep loosening by BEDNAR Terrastrip ZN 8R/70-75 with zoned fertiliser placement
- The subsidiary crop is planted together with the oilseed rape by the OMEGA seed drill in a single pass
- It is an anti-erosion technology
- Subsidiary crops provide oilseed rape with nitrogen after they freeze (20-40 kg N/ha)

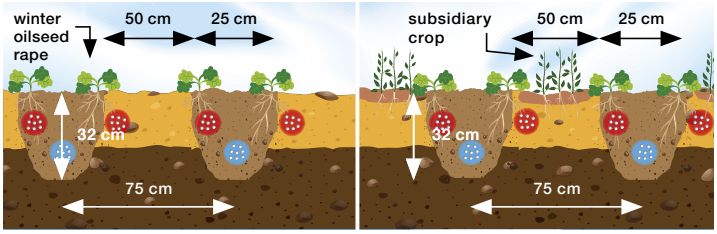


- Uncultivated soil
- Cultivating a stubble field
- Loosening soil with **TERRASTRIP** in combination with **FERTI-BOX** to a depth of 32 cm before seeding
- The fertiliser zone placed by **TERRASTRIP** during tillage
- The fertiliser zone placed during seeding by **OMEGA 6000 FL** equipped with an **ALFA 400** unit



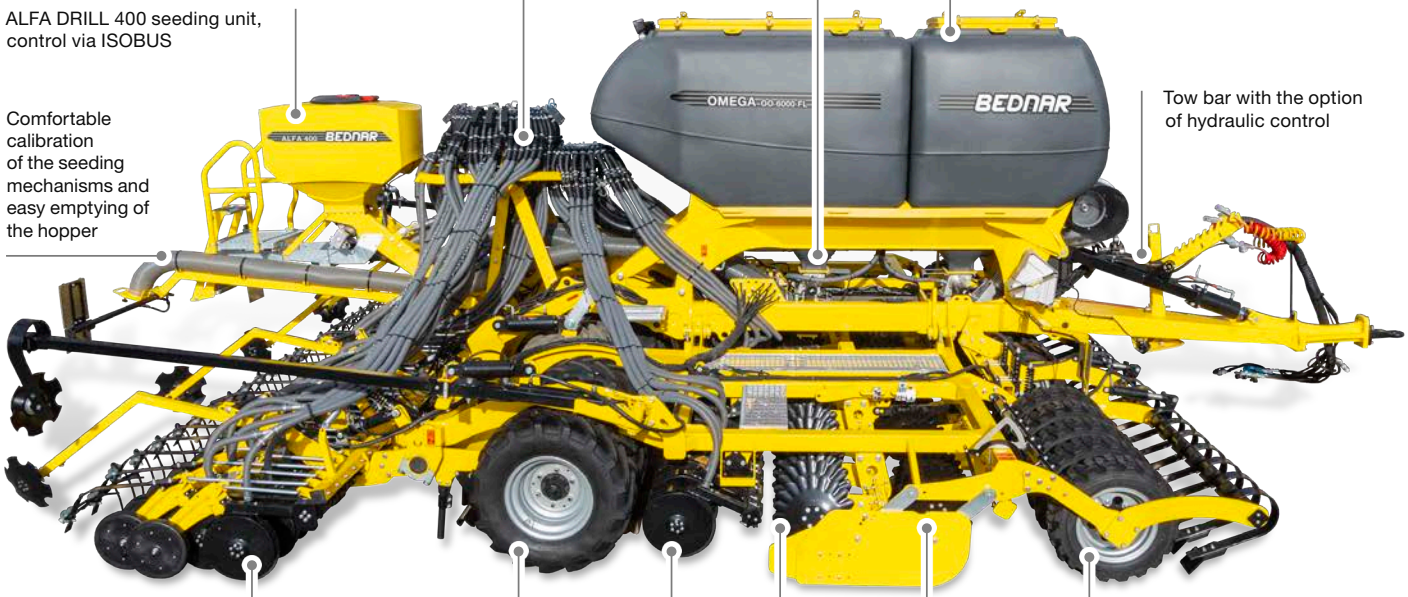
PLANTING WINTER OILSEED RAPE IN DOUBLE-ROWS TOGETHER WITH SUBSIDIARY CROP DURING THE FIRST WEEDING

- Subsidiary crop planted additionally into the inter-row by spraying with ROW-MASTER RN 6400 + ALFA DRILL 400
- Planting the subsidiary crop eliminates the growth of weeds after weeding
- The subsidiary crop eliminates erosion and supplies winter oilseed rape with nutrients in spring



- Uncultivated soil
- Cultivating a stubble field
- Loosening soil with **TERRASTRIP** in combination with **FERTI-BOX** to a depth of 32 cm before seeding
- Soil cultivated during weeding
- The fertiliser zone placed by **TERRASTRIP** during tillage
- The fertiliser zone placed during seeding by **OMEGA 6000 FL** equipped with an **ALFA 400** unit

BASIC DESCRIPTION



MAIN CHARACTERISTICS OF THE OMEGA OO_FL SEED DRILL

- A robust seed drill prepared for highly intensive conditions.
- A-discs with a higher cutting effect.
- A very good material throughput thanks to the larger distances between the individual working parts.
- Excellent fertiliser batching accuracy, even in higher batches, thanks to the pressurised hopper. The fertiliser can be placed in the inter-rows, over the entire area, or in the MIX system, i.e., with the seeds.
- Perfect surface tracing thanks to the seed drills working on a parallelogram – the PSP system
- ISOBUS connectivity, simple and easy control.

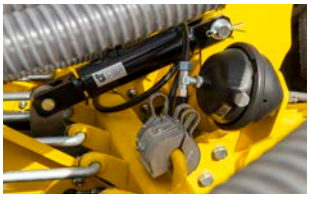
PRECISE SEED PLACEMENT

A precisely formed seeding groove is a condition for successful crop establishment. The double-disc seed drill with an offset disc 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

PRECISE SEED PLACEMENT BY OMEGA OO_FL / OMEGA OO_L

DRILL COULTER PRESSURE

The drill coulter pressure can be adjusted by the hydraulic cylinders. The pressure can be set at up to 130 kg.



HYDRAULIC SEEDING DEPTH SETTING

The central seeding depth setting is done from the tractor cabin terminal.

SEED DRILL WITH ADDITIONAL FERTILIZING

Precise batching thanks to the pressurised hopper

The OMEGA OO_FL seed drills have large-capacity double-chamber pressurised hoppers. This technical solution increases the quality of both fertiliser and seed batching precision multiple times, even in cases of higher batches at higher working speeds. Up to 350 kg of fertiliser/ha at a speed of 13-15 km/h.

Other advantages:

- Stainless dispensing mechanism for seeds/fertiliser.
- The fertiliser batch and the seed batch are independent of one another. Batching from the ALFA DRILL seeding unit
- The entire machine can be controlled from a single terminal

DOUBLE-CHAMBER HOPPER

The double-chamber hopper of the OO 6000 FL model is divided in the ratio of 40: 60, with the option to choose 60 seeds: 40 fertiliser, or 60 fertiliser: 40 seeds. The hopper can also be used 100% for seeds, for example when establishing winter crops. The distribution heads are located outside the hopper and thus they do not reduce its capacity.

INTER-ROW FERTILISER APPLICATION

The fertiliser is dispensed from the pressurised hopper through the stainless dispensing mechanism to the application discs (diameter 380 mm). The fertiliser placement depth is adjustable. The double-disc seed drills are designed for a high throughput with a spacing of 25 cm (12.5 cm inter-row seed distance) and 33 cm (16.7 cm inter-row seed distance).

INTER-ROW DISTANCE

“When we designed the OMEGA seed drill, the inter-row distance was one of the main topics. When talking to leading cultivators, we mostly agreed on the distance of 12.5 cm. Based on the many years of experience and the opportunity to compare the 12.5 distance with a wider distance between the rows. The cereal crops are usually better involved at 12.5 cm. Moreover, the distance is also suitable for combinations with the TERRASTRIP technology that aerates and places fertiliser at a spacing of 75 cm. Even at present, the popular planting of various crop combinations and crops established with a subsidiary crop seem to be working well and meaningful with a spacing of 12.5 cm.”

Ladislav Bednář

Inter-row distance of 12.5 cm for most conditions with a higher ratio of cereals in the seeding procedure. Possibility to plant winter oilseed rape in every other row with an inter-row distance of 25 cm, or every other row at 37.5 cm

Inter-row distance of 16.7 cm for conditions with higher precipitation or with an unusually large crop residue quantity on the surface.

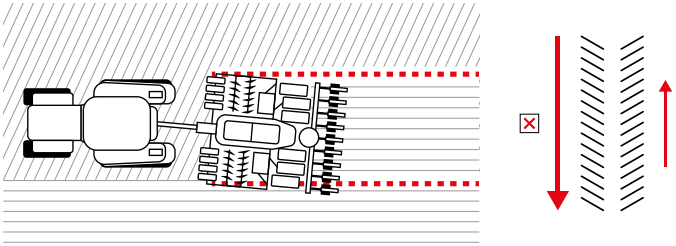
Ladislav Bednář, the company owner, with his **OMEGA OO 6000 FL.**

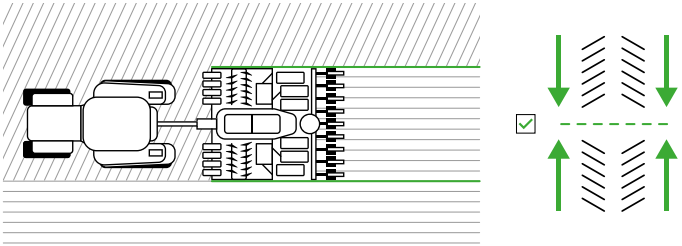
X-PRECISE – PRECISE TRACKING

Precise tractor tracking by the seed drill is very important. The “drifting” (movement of the machine outside the working tractor track) is a huge drawback of most seed drills with disc cultivation. This effect is caused by the fact that the first row of discs cultivates soil and the second row of discs does not have enough support in the cultivated soil profile. The negative consequence of drifting is overlapping lines that have already been cultivated and seeded. The achine cannot work according to GPS sufficiently.

X-PRECISE is the solution

The OMEGA seed drills have disc units arranged in the shape of an X. This arrangement balances the forces and helps the seed drill track the tractor or GPS precisely. No need to spend hours adjusting the seed drill – X-precise is the solution.





BASIC SPECIFICATION

OMEGA OO_FL

		OO 4000 FL	OO 6000 FL
Working width	m	4	6
Transport width	m	3	3
Transport length	m	9.2	9.2
Inter-row distance	cm	12.5/16.7	12.5/16.7
Number of drill coulters	pcs	32/24	48/36
Disc spacing in a row	cm	25	25
Number of discs	pcs	32	48
Disc diameter	cm	46	46
Reservoir volume	l	4 000	5 000
Total weight*	kg	5,300–7,600	7,700–10,600
Recommended output**	HP	130–180	200–280

* according to the equipment ** depends on soil conditions

At present, the requirements for crop establishment are developing dynamically and a lot of the current seeding technology is no longer able to respond to the new trends. The development and availability of navigation systems opens an enormous potential for various alternatives and combinations of planting that were not considered in the design of the seed drills available on the market.

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The development of the cultivation systems is done in cooperation with the Centre for Precision Agriculture at the Czech University of Life Sciences in Prague, AGROEKO Žamberk spol. s.r.o., and agribusinesses involved in the Vysoké Mýto Syncline project. The technical data and images are for illustration only. Design changes are reserved.

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