

STRAW HARROW

BEDNAR

STRIEGEL-PRO PE, PN

Straw Harrow
for Precise Farming



JOY
OF FARMING



STRIEGEL-PRO PE

Why STRIEGEL-PRO?

The STRIEGEL-PRO are straw harrows through which the BEDNAR Company responds to the growing of yields and increased need of quality stubble cultivation immediately after harvest, before the soil is processed for the following crop. The machine is also used in early spring. STRIEGEL-PRO is an ideal machine for cheap and fast levelling and warming-up of the top layer of soil after winter, which accelerates the establishment of spring crops. STRIEGEL-PRO is a machine that should be in the modern farmer's fleet.

High daily outputs are possible thanks to the sophisticated construction of the STRIEGEL-PRO straw harrows. STRIEGEL-PRO can work at an operating speed of 15 km/h and above, with a large working width, while aggregated to tractors with lower output at low fuel consumption.



“The increasing yields of most crops are the result of new methods of soil processing, plant protection, plant nutrition and also new effective hybrids. The increasing yields also mean increasing quantity of post-harvest residues that have to be incorporated back into the soil uniformly and with a good quality. That is why STRIEGEL-PRO was developed. It is a machine that cuts and evenly distributes post-harvest residues in the stubble field. Stubble cultivation is then much better.”

Ladislav Bednář



STRIEGEL-PRO PN

Why STRIEGEL-PRO?

TECHNICAL ADVANTAGES

- Cutting coulters for disrupting stems and stubble residues, Trash Cutter rollers or hydraulic crush bar leveller for spring preparation.
- 6 rows of tines with large overlap guarantee a good distribution of material (Model PN has 5 rows of tines).
- Independent working angles of the first section (4 rows of tines) and the second section (2 rows of tines).
- Perfect surface contouring thanks to the independent seating of the individual sections on the parallelogram.
- Track eradicators for very early spring preparation.
- Compact transportation dimensions, even for the wide STRIEGEL-PRO models.

AGRONOMIC ADVANTAGES

- Management of crop residues – uniform distribution of crop residues in the stubble field.
- Starting up controlled second growth.
- Effective fight against pests (slugs, mice etc.).
- Early spring preparation of heavy and moist soils. Fast and effective opening and warming up of soil surface.
- Application of fertilizers and simple establishment of stands (greening) thanks to the option of connecting to the FERTI-BOX.
- Mechanical weed control.



WORK AFTER WINTER WHEAT

- STRIEGEL-PRO PN 9000
- Yield: 11,2 t/ha
- Number of passes: 1
- Operating speed: 18 km/h
- Fuel consumption: 3 L/ha



WORK AFTER DESICCATED RAPESEED

- STRIEGEL-PRO PE 12000
- Yield: 4,8 t/ha
- Number of passes: 1
- Operating speed: 15 km/h
- Fuel consumption: 4 L/ha



WORK IN SPRING

- STRIEGEL-PRO PE 12000
- Number of passes: 1
- Operating speed: 12 km/h
- Fuel consumption: 6 L/ha

Why STRIEGEL-PRO?

BENEFITS THAT BRING SAVINGS:

- Quality distribution of post-harvest residues at low fuel consumption.
- The large operating width of the machine and high working speed achieves high daily outputs with the machine.
- Quality distribution of crop residues after harvest and soil levelling and warming up in spring at low fuel consumption.
- Possibility also to work under very moist conditions thanks to the construction of the machine without rollers.

YOU CAN USE THE STRIEGEL-PRO FOR:

- Cutting and spreading crop residues, including residues after desiccated rapeseed.
- Fast and cheap start-up of second growth of small seeds, such as rapeseed.
- Elimination of pests, such as slugs, mice etc.
- Application of fertilizers by connecting STRIEGEL-PRO to FERTI-BOX.
- Establishment of cover crops, greening by connecting STRIEGEL-PRO to a FERTI-BOX or ALFA DRILL.
- Fast levelling, opening and warming up of the top soil after winter in the spring.
- Mechanical weeding.



"I achieve high daily outputs with the STRIEGEL-PRO harrows. The harrows perfectly distribute crop residue after harvest on the plots and start the second growth."

Jörg Kriegshammer

Becker – Henrich Agrar
Bad Tennstedt
1100ha
STRIEGEL-PRO PE 12000



Application



HIGHER CROPS, WIDER CUTTING PLATFORMS OF COMBINE HARVESTERS

In addition to higher crops, we should also mention the increasing capacity of combine harvesters. Contemporary combine harvesters often have 9-metre, or even 12-metre wide cutting platforms. Straw choppers at high yields are not able to evenly distribute the cut crop residues along the entire width of the cutting platform, creating strips

of concentrated crop residues behind the harvester, which subsequently affects stubble cultivation and causes uneven germination of future crops. Driving the STRIEGEL-PRO harrows sideways to the direction of the harvester easily, quickly and cheaply solves the issue with unevenness.



THE VOLUME OF CROP RESIDUES INCREASES WITH THE YIELD

Five years ago, we used to harvest 5.5 t/ha (of cereals) and now we often harvest 8.5 t/ha, and some even more, therefore at the ratio:

$$\begin{matrix} \mathbf{0.8 : 1} \\ \text{crop residues : yield (grain)} \end{matrix}$$

We have to solve crop residues differently than how we solved them when the yield was 5.5 t/ha. The ratio does not change. When we harvest 5.5 t/ha of grains, we work with 4.4 t/ha crop residues. When we harvest 8.5 t/ha of grains,

we work with 6.8 t/ha of crop residues. We have to process and incorporate 2.4 t/ha of crop residues more into the soil. This fact means the following:

1. Larger amount of crop residues in the field due to larger yield.
2. Larger amount of crop residues on the plot increases the unevenness of distribution of the residues.
3. Larger amount of crop residues and their uneven distribution on the land increases the risk of transfer of diseases and spreading of pests.



Low-quality stubble cultivation. The stubble field produced a high yield and the harvester left a large amount of material in strips. On the other hand, there are not enough crop residues along the edges of the cutting platform.



Straw clumps with higher humidity are an ideal environment for the life and propagation of slugs. If the cereal is followed by rapeseed, there is a great risk of spreading of slugs. When the clumps are distributed and the slug eggs are exposed to the sun, the eggs dry out.



Application

SECOND GROWTH CONTROL

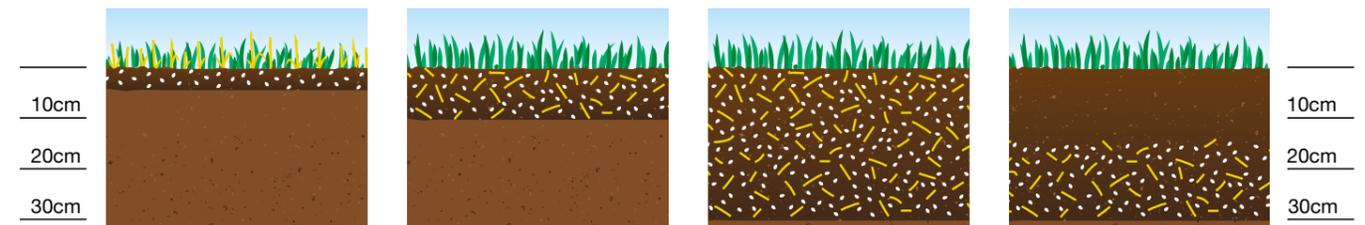
The BEDNAR STRIEGEL-PRO harrows are an ideal tool for a fast and controlled start of the second growth, particularly the second growth of small seeds such as rapeseed. The tines superficially mix the seeds (small seeds) with the soil. The second growth emerges fast and evenly on the entire plot. Subsequently, it can be destroyed effectively, either by chemical or mechanical means.

If the fallen out seeds get into deeper soil profiles by tillage or cultivation, there is an increased risk of uncontrolled germination of the seeds in the future crop.

FERTILISATION / SOWING

The BEDNAR STRIEGEL-PRO harrows can be connected to FERTI-BOX, a hopper for fertilizer or seeds. The fertilizer/ seeds are delivered pneumatically to the working sections of the harrows. This connection provides, for example, the following solution:

- Application of fertilizer to the stubble field before the harrows. The application of the fertilizer and mixing the fertilizer (e.g. nitrate) with straw and the uniform distribution of straw helps achieve an effective and accelerated decomposition of crop residues.
- Applying seeds in front of STRIEGEL-PRO allows to establish the cover crop in a fast, simple and cheap way. Also, it is possible to establish crop as a protective measure – i.e. greening.



The STRIEGEL-PRO harrows superficially (2–4cm) mix the fallen out rapeseeds with the soil. The second growth starts quickly and it can be destroyed quickly either by chemical or mechanical means.

The second growth can be easily controlled by mixing it into the top parts of the soil profile (e.g. by a disc cultivator). The germination of the fallen out seeds, however, is delayed when compared with the harrows.

When share cultivators or chisel ploughs are used directly without any previous control of the second growth, the fallen out seeds are mixed deep in the soil profile and they can emerge in the newly established crop.

The fallen out seeds get to the bottom of the furrow when a plough is used. The risk of secondary germination in newly established crop, even in future years, is high.



Application

GRASS TREATMENT

STRIEGEL-PRO is very suitable for the maintenance and restoration of permanent grass. By using the straw harrows, you will achieve:

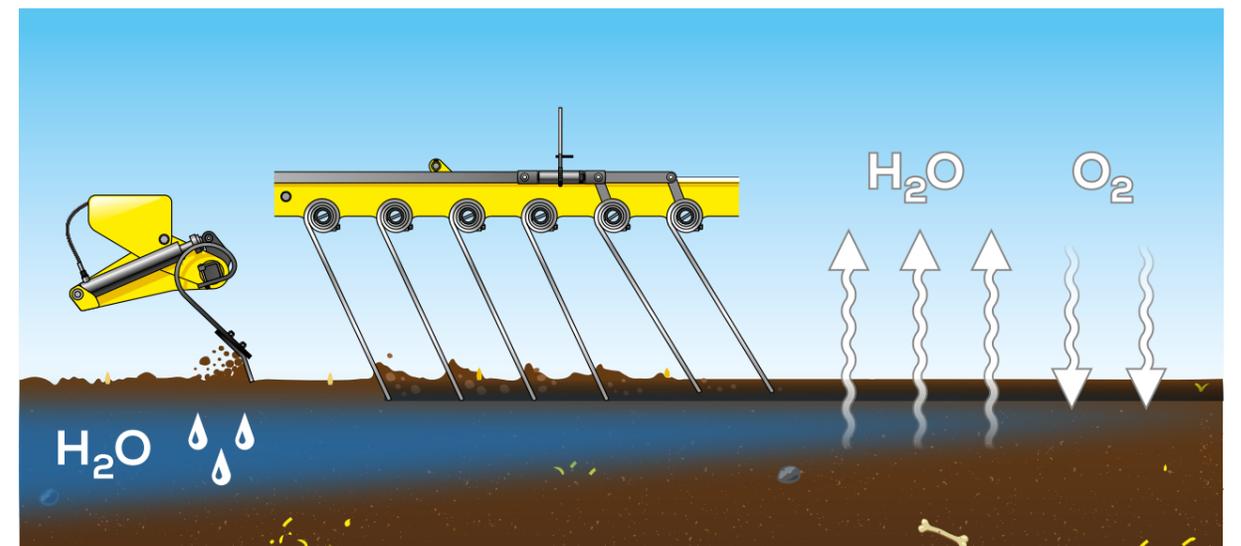
- better permeability of water, oxygen and nutrients for the grass,
- recovery and thickening of grass, resulting in higher crop,
- can also be used for grass seedbed preparation.

EARLY SPRING SOIL PREPARATION

STRIEGEL-PRO is ideal for very early spring soil preparation – to open, level and warm up the top soil layer.

- The front hydraulic levelling Crushbar levels soil after previous autumn field operation.
- The first four rows of tines aerate and warm up top soil.
- The last two rows of tines can be set at a different angle than the first four rows to achieve the levelling effect of the harrows.

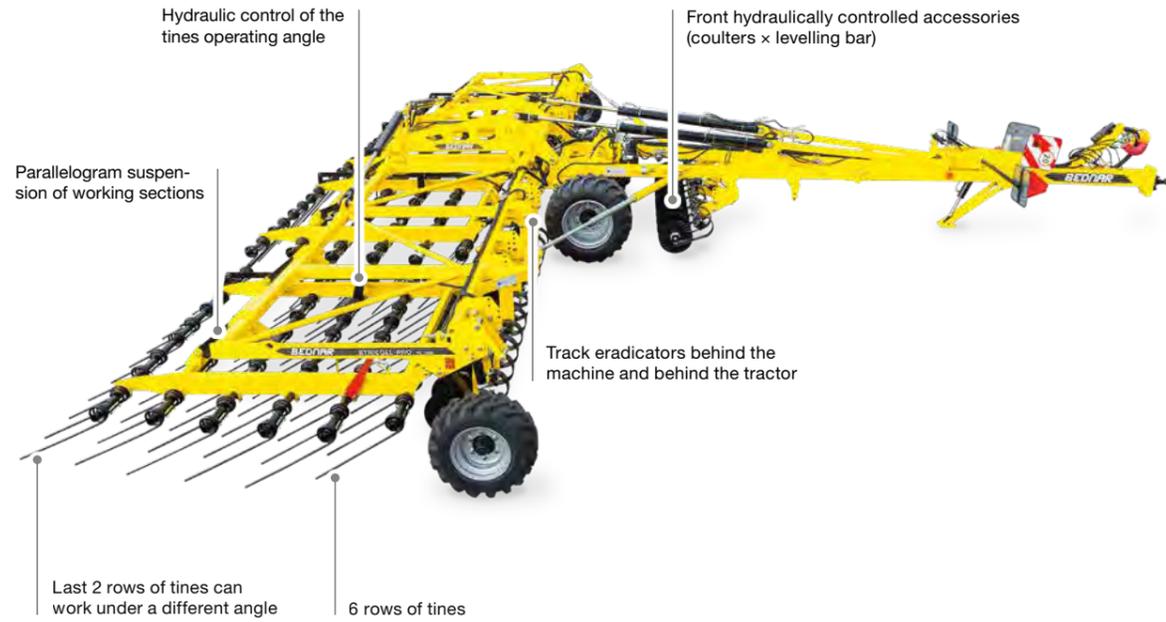
The application of the STRIEGEL-PRO harrows can significantly accelerate soil maturing for planting spring crop.



Important Working Parts



STRIEGEL-PRO PE



STRIEGEL-PRO PN



SECTION ATTACHMENT PARALLELOGRAM



The working sections are attached to the parallelogram. This solution provides perfect tracing of any unevenness of the terrain.

TRACK ERADICATORS



The massive track eradicators with spring protection are installed behind the tractor as well as behind the wheels of the pulled STRIEGEL-PRO models. The field is even and without any tracks.

FRONT HYDRAULIC LEVELLING BAR - CRUSHBAR



The front hydraulic levelling bar - CRUSHBAR levels out coarse unevenness in front of the tines. It is possible to install cutting coulters to the spring instead of the blades.

FRONT CUTTING COULTERS



The front cutting coulters are used for cutting crop residues. The coulters have a diameter of 406mm and they operate on a maintenance-free bearing attached to a spring. Blades for spring preparation can be installed to the spring instead of the coulters.

HYDRAULIC CONTROL OF THE OPERATING ANGLE



The operating angle of the first 4 rows of tines can be controlled hydraulically from the tractor cabin.

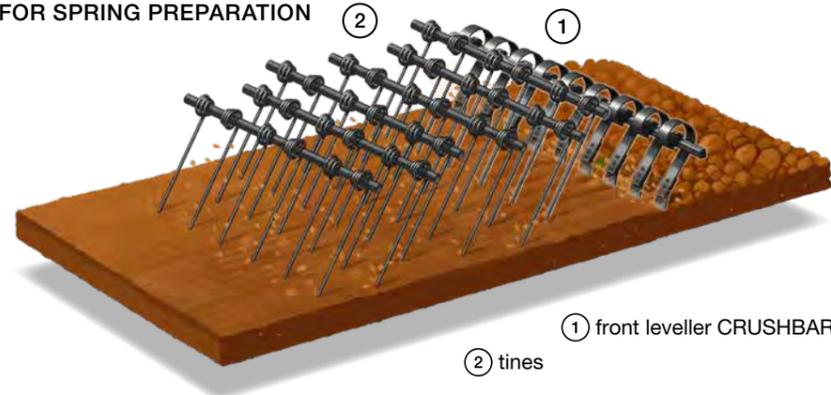
MECHANICAL CONTROL OF THE OPERATING ANGLE



The operating angle of the last 2 rows of tines is controlled mechanically, simply by using a manual ratchet.

Important Working Parts

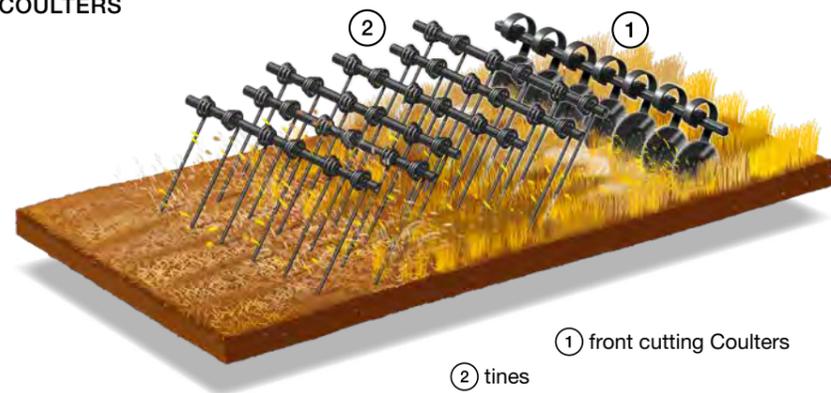
CRUSHBAR – FRONT LEVELLER FOR SPRING PREPARATION



CRUSHBAR is a front levelling bar with individual spring loading of each blade using a leaf spring. The working angle of the Crushbar is adjusted hydraulically from the tractor cabin.

Application: Crushbar is ideal for levelling the surface in early spring. It can also be used for levelling a plot that has been cultivated already.

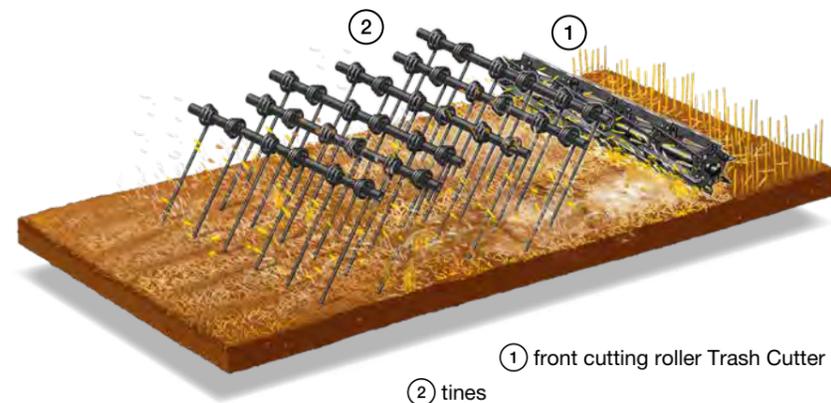
FRONT CUTTING COULTERS



COULTERS are sharp front cutting discs that work on leaf springs. The profile of the coulters brings out soil that is subsequently mixed with crop residue.

Application: Coulters are ideal for shortening stalks, especially after cereals or oilseed plants.

FRONT TRASH CUTTER



TRASH CUTTER is a cutting roller for STRIEGEL-PRO PN located in the front part of the machine. The roller has sharp edges mounted as a screw. The small roller diameter (310 mm) means a high circumferential speed. The roller pressure is controlled hydraulically from the tractor cabin.

Application: Trash Cutter is ideal for cutting fragile, long stalks created by desiccated seed rape, sunflower, frozen intercrops etc.



„The STRIEGEL-PRO harrows are used for even distribution of crop residues after harvest in the stubble field. It helps us achieve better stubble cultivation after cereals. Striegel is ideal for fast starting of the second growth of rapeseed.“

Petr Korous

Agro Korous
Litoměřice District
1000ha
STRIEGEL-PRO PE 12000



STRIEGEL-PRO PN

Compact mounted harrows designed for tractors from 80 horses to 180 horses.
 Operating width: 6.1m; 7.5m a 9m.
 Folding by two frames upwards.

FOLDING THE MACHINE



The mounted model is simply folded up for the transport position using a hydraulic cylinder.

ALFA DRILL



The mounted STRIEGEL-PRO PN can be equipped with the ALFA-DRILL seed hopper, allowing for wide sowing of, for example, cover crops.

COMFORTABLE TRANSPORTATION



The machine is close to the tractor which provides comfortable transportation on roads and field paths.



STRIEGEL-PRO PN

		PN 6000	PN 7500	PN 9000
Working width	m	6.1	7.5	9
Transport width	m	3	3	3
Transport length	m	3.5	3.5	3.5
Working depth*	cm	0-4	0-4	0-4
Number of coulters	pcs	20	24	30
Number of tine rows	pcs	5	5	5
Tine spacing	cm	6	6	6
Number of tines / points	pcs	50 / 100	60 / 120	75 / 150
Total weight**	kg	1 550-2 100	1 800-2 400	2 150-2 900
Recommended output*	HP	80-120	140-180	180-220

* depends on soil conditions ** depends on equipment



STRIEGEL-PRO PE

Compact mounted harrows designed for tractors from 230 horses to 400 horses.
 Operating width: 12m.
 Folding forward to the drawbar

COMPACT TRANSPORTATION DIMENSIONS



The compact transportation dimensions provide easy manipulation, even in a narrow and difficult terrain. The transport length of STRIEGEL-PRO PE 12000 is a mere 8.7 metres.

ALFA DRILL



STRIEGEL-PRO PE can also be equipped with the ALFA-DRILL seed hopper with a capacity of up to 800L, allowing for wide sowing of, for example, cover crops.

TELESCOPIC RODS



The rods stabilize side frames during work at high speed. They are included in the basic equipment of the machine.



STRIEGEL-PRO PE

		PE 12000
Working width	m	12
Transport width	m	3
Transport length	m	8.7
Working depth*	cm	0–4
Number of coulters	pcs	36
Number of tine rows	pcs	6
Tine spacing	cm	5
Number of tines / points	pcs	120 / 240
Total weight**	kg	6000–7450
Recommended output*	HP	230–350

* depends on soil conditions ** depends on equipment

LONG LIFE



LONG LIFE TINES

- The tines for the STRIEGEL-PRO harrows are made from spring steel with a diameter of 16mm.
- The tines are laid out so that their overlap is maximum.
- The tines can have carbide fitted to the ends, the LONG LIFE version.
- The durability of LONG LIFE tines is several times higher.
- The quality of work in relation to wear and tear does not change when LONG LIFE tines are used.



I did maximum for more yield this year

soil cultivation



STRIEGEL-PRO
Harrows



SWIFTERDISC
Disc Cultivators



ATLAS
Disc Cultivators



SWIFTER
Seedbed Cultivators



FENIX
Versatile Cultivators



TERRALAND
Chisel Ploughs



CUTTERPACK
Trailed Packers



PRESSPACK
Trailed Packers



TERRALAND DO
Combined Chisel Plough

seeding and fertilizing



OMEGA
Seed Drills



FERTI-BOX
Hopper for Fertilizer



ALFA DRILL
Seed Hopper

inter-row cultivation mulching



ROW-MASTER
Inter-row Cultivator



MULCHER
Rotary Cutters

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