

CHISEL PLOUGHS

**BEDNAR**

## TERRALAND TN, TN\_PROFI, TO

Increase the potential of your  
crops. Heal your fields.



**JOY**  
OF FARMING



TERRALAND TN\_PROFI

## Why the TERRALAND?

BEDNAR TERRALAND TN is a chisel plough which allows fast economic and high quality deep cultivation. It was conceived as a full-value alternative to traditional with a higher daily output (operating speed 6–12 km/h) and reduced energy consumption (up to 60 % compared to classic ploughs). The TERRALAND machines come in the TN, TN\_PROFI (equipped with Cutter section).

BEDNAR TERRALAND TO with integrated transport axle located between the operating tines is an all-purpose machine, which can also be used without the rear tandem spiky rollers.

In contrast to traditional ploughs, TERRALAND chisel ploughs are able to till soil in the harshest conditions,

to a greater depth whilst significantly cutting costs. The low tensile resistance guarantees low fuel consumption, the tine geometry even allows you to cultivate dry compacted soil and at the same time still retain that high quality. The rear tandem spiky rollers 'till' the clumps. They make the land flat and loosened, and plant residue is incorporated into the soil. There is no need for the land to be worked any further (levelling, rolling). The chisel plough working depth is significantly deeper than that of traditional ploughs and it's results are tangible such as the intensive break-up of the compacted soil layers and the restoration of the soil profile. Hence it provides your crops with a rich healthy root system, leading to greater yields.



“In recent years, the price of land has gone up remarkably, and so has the going rate to rent a hectare. Expanding the area for cultivation is not only difficult but expensive as well. The TERRALAND is a machine which is able to till the land intensively, deeply, affordably and restores the soil's climate to bring you a greater yield per hectare, and thus also greater revenue without having to expand your farm.”

Jan Bednář

# Why the TERRALAND?

## MAIN ADVANTAGES OF THE MACHINE

- The machine main frames are made of high strength Alform steel.
- The triple ringed angle of the working tines ensures easy soil penetration and the ideal throughput of the machine.
- An extremely high machine throughout thanks to the frame clearance and a tine distance.
- The Quick-Change system for the chisels is a smart solution that enables the swift change of the machine operating components.
- The rear tandem spiky rollers can be set hydraulically and crush the final persistent clumps.
- Side rollers and side shields guarantee a level field without any visible passes.
- Hydraulic auto-reset system of tines for extremely heavy or stony soils.

## TO version

- The integrated axle, placed between the working tines, will even allow you to work without rear tandem spiky rollers.

## AGRONOMIC ADVANTAGES OF THE MACHINE

- Loosens deeper than standard cultivators with a max. depth of up to 55 cm (version D up to 65 cm), which results in the roots having access to more moisture.
- There is more air in the soil which is needed to create a better soil climate.
- Lower soil layers are not brought up to the higher soil profiles; mixing takes place in the upper section of the soil layers.
- Plant residue is covered over after the harvest.
- Livestock manure and digestates from biogas stations are easily incorporated in one pass.
- Increased rainwater absorption that in turn eliminates puddles and long-term wet patches.
- Levels the soil surface after the previous field operations, or tracks made by heavy machinery.



“We had the opportunity to test the TERRALAND TN chisel plough first, we had a choice of subsoiler machines and chisel ploughs from five different manufacturers. The quality of work convinced us as well as the references from the neighbouring companies that use a TERRALAND TN, for instance, to process soil for potatoes. The chisel plough works great. Right now, we are using tines equipped with LONG LIFE carbide chisels, since they have a longer service life than the standard version. They are definitely a better solution for our rocky soils.”

Ing. Michal Vaněk, the chief agronomist of the company

VOD Kámen | Czech Republic  
TERRALAND TN 3000 HD7R

## BENEFITS WHICH RESULT IN SAVINGS AND GREATER YIELDS:

- **Quality deep tilling in one pass** – One pass of the TERRALAND means even faster soil loosening below the plough pan. It also covers over all plant residue, livestock manure and digestates etc.
- **Deeper soil Jordbearbejdning and lower fuel consumption** – Thanks to the triple angle tine geometry, it is easy to till deeper soil layers at affordable fuel costs.
- **More water and air** – By tilling with the TERRALAND, air gets into the soil and the impermeable layers are broken up, allowing the root system to get a greater reach.
- **The final touches** – To maximise the finish on the job, you can opt for the TERRALAND TN\_PROFI with cutter section.
- **Less time needed** – By using the TERRALAND, you can significantly reduce the time required in comparison to traditional ploughs. The TERRALAND can prepare the soil in a way that minimises the need for any further soil preparation work. The soil remains clod-free and loosened.
- **The costs associated with the spare parts** that are used, are significantly lower than those for traditional ploughs.

# Usage

## TERRALAND IS USED FOR:

- Deep loosening, breaking up the plough pan and creating superior soil conditions for the subsequent crops whilst restoring the soil climate (more air, more water).
- Incorporating livestock manure in a single pass of the machine. It can even incorporate livestock manure applied in large hectare doses.
- Incorporating a large amount of plant residue in one pass, such as maize, oil seed rape...
- Incorporating digestates created in biogas stations.
- Working in very wet and soggy conditions, e.g. in late autumn or winter. The TERRALAND has a high throughput.

And much more...



### HYDRAULIC AUTO-RESET SYSTEM OF TINES

Hydraulic auto-reset system for tough stony conditions and extremely compacted soils. The securing power for each tine starts at 1 000 kg and ends at 1 500 kg.

### 2 ROWS OF SHARES WITH WINGS, CHISELS 70/40 mm

The tines can be equipped with chisels with a width of 70 mm for intense loosening, or with a width of 40 mm for demanding conditions and deep work. The tine wings undercut the disrupted bottom layer to eliminate clod formation. With new Long Life chisels and wings you will achieve quality, time and cost benefits: significantly longer lifetime than traditional standard parts; consistent working depth and equal quality of work.



### TANDEM SPIKY ROLLERS

The rear tandem spiky rollers with a diameter of 245 mm have overlapping spikes which, clean the rollers allowing the machine to work in the harshest conditions without clogging up. They have a weight of 202 kg/m.



### TILLING RAPE STUBBLE, TERRALAND TO

- depth: 35 cm
- operating speed: 10–12 km/h
- fuel consumption: 16–18 l/ha



### TILLING WINTER BARLEY STUBBLE, TERRALAND TN\_PROFI

- 1x discing, depth 15 cm
- TERRALAND use, depth: 40 cm
- operating speed: 10–12 km/h
- fuel consumption: 18–20 l



### TILLING GRAIN MAIZE STUBBLE, TERRALAND TN

- TERRALAND use, depth: 45 cm
- operating speed: 7–9 km/h
- fuel consumption: 23–25 l

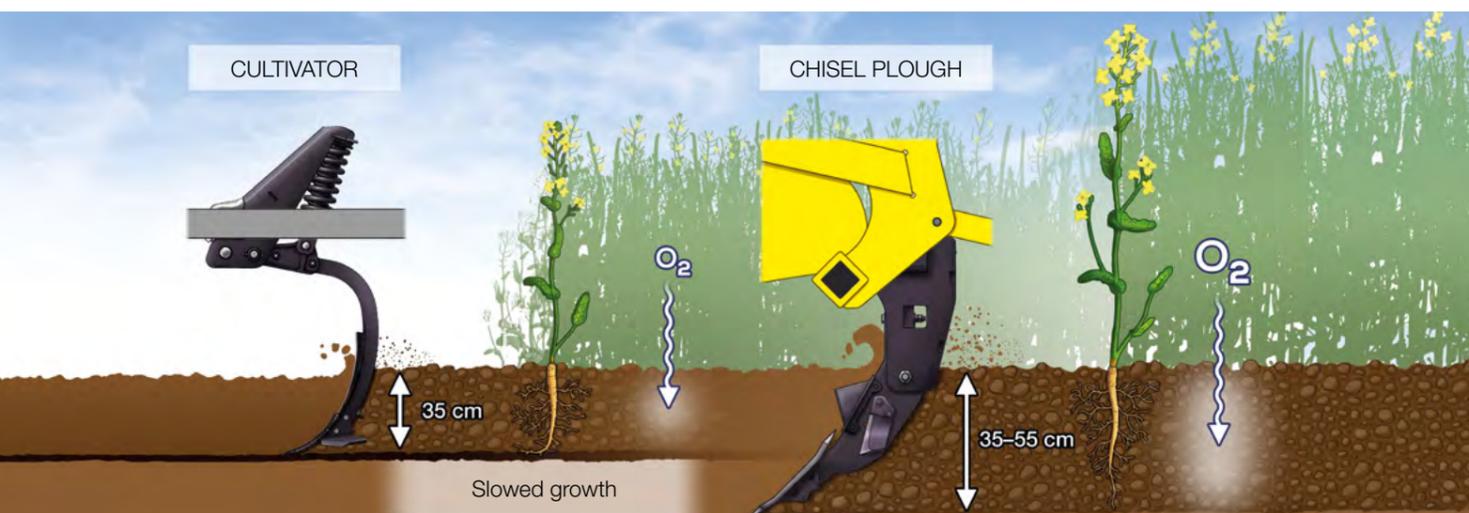
## 3 angles for easy work



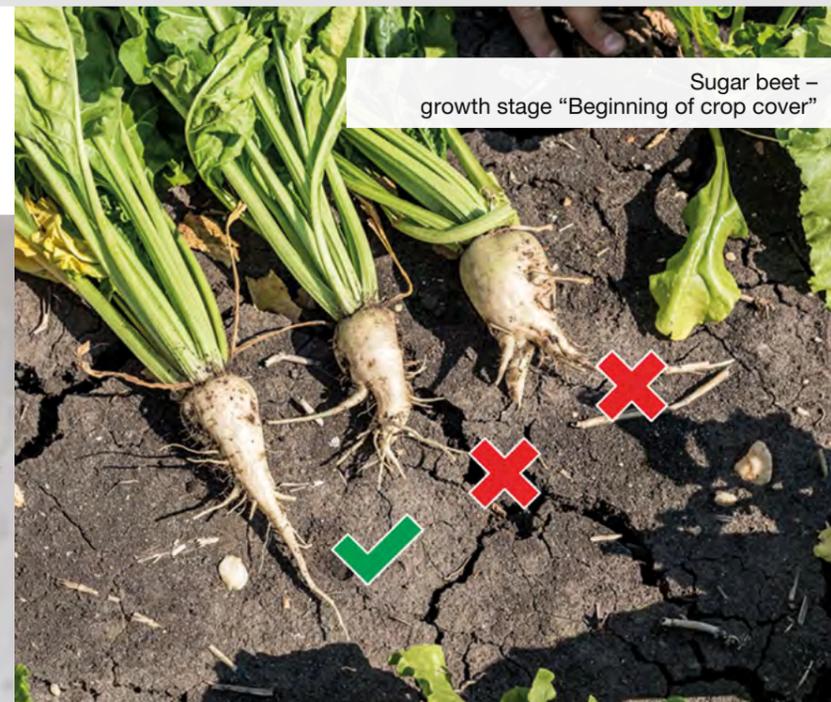
### WHY ITS WORK IS INTENSIVE AND EFFECTIVE

The machine breaks up the plough pan and the chisel tips reach right under this compacted layer. The soil in the upper soil profile is mixed intensively with the plant residue and is covered. These superior results are achieved thanks to the tines which are bent at 3 different angles:

- The first angle is positioned in such a way as not to carry the lower soil layers (poor in nutrients) up to depths where the seeds are sown. The first angle cuts aggressively through the plough pan.
- The second angle generates an intensive mixing effect, mixing plant residue with the soil. This creates a homogeneous organic material.
- The third angle forces tilling and mixes the organic matter for its final incorporation.



## Water and air



### THE VERTICAL H<sub>2</sub>O MOVEMENT EFFECT – A SOLUTION FOR WATERLOGGED FIELDS, CREATING ACCESS TO THE ROOTS FOR THE WATER

Over the last ten years, the performance of agricultural machines has increased considerably, and with the performance of the machines, the weight of the machinery has increased too. These extra kilos, often tons have also resulted in marked compaction of agricultural soils. This is evidenced by an increase in long-term waterlogged land, even where rainfall levels are average. Another effect which results in the blockage of water movement is long-term Jordbearbejdning at the same working depth. Rainwater cannot penetrate the soil and groundwater cannot reach the crop roots. The soil is blocked. The solution is to use the TERRALAND chisel plough which breaks up the compacted soil layers, supporting rain water absorption (preventing waterlogging) and facilitating ground water access to the roots.

NOTE: When tilling with the TERRALAND in summertime, e.g. before sowing winter rape, the soil must be packed using the heavy packer. The soil is loosened and aerated – the topsoil is compressed with the packer so that the upper layers don't dry out, preserving the initial moisture for the seeds.

### YIELDS DEPEND ON A SOIL'S AIR CONTENT

In addition to facilitating groundwater access to the roots, high yields require sufficient oxygenated air in the soil. The air in the soil creates a gaseous soil phase necessary for biological and chemical reactions, which take place in the soil and which are one of the building blocks for plant life. Air fills up the pores without water. The air in the soil contains more CO<sub>2</sub> than on average (by 0.2 to 0.7 %), and the oxygen content in the soil is 20 % lower than in the atmosphere. The TERRALAND chisel plough enriches (oxygenates) the soil in one pass all the way down to the deeper layers. Plants respond faster and more efficiently in aerated soils.

# Operating components

# More accessories, service, maintenance and setting up

## TERRALAND SAVES TIME AND MONEY

Using the TERRALAND significantly reduces costs:

- Costs related to field operations, i.e. costs related to further land preparation. Traditional ploughs create clumps, then tilling which often requires a number of operations on the field to create the right conditions for sowing.
- Costs related to time, i.e. less operations = less time required. Time is money in the world of farming. Furthermore the TERRALAND is an easy machine to control and the great thing is anyone can work with the chisel plough. A traditional plough requires a person with experience.
- The costs associated with the replacement of the wearing parts for the TERRALAND chisel plough are significantly lower than those for traditional ploughs. You can work deeper, faster, without clumps and with lower operating costs.

COMPARED FACTORS	TERRALAND 	PLOUGH 
Most common working depth	30–45 cm, more water and air	15–25 cm, creating impermeable layer
Most common operating speed	8–12 km/h	6–8 km/h
Most common operating width	3 m	3 m (7body plough)
Costs for subsequent field working	Lower – no clods	Clods
Costs for wearing parts	Lower – only chisels and wings	Chisel, blades, sole, replacement part, mouldboard
Investment costs	Lower for same operating width	Higher
Fuel consumption	Lower at greater working depth	Higher

## EASY TO USE, MAINTAIN AND SET-UP

An important factor for any farmer is his MO – maintenance and set-up. The TERRALANDs are machines which simple maintenance. The TERRALAND chisel plough only needs to be set for the tractor arms and the rear hydraulically controlled rollers.

## 3POINT CATEGORY III./IV. LINKAGE



The TERRALAND TN and TN\_PROFI are connected to a tractor with a 3point linkage. The mounted model has the advantage of being easy to manoeuvre at the headlands and on the roads.

## SIDE ROLLERS



The TERRALAND TN can be equipped with additional folding side rollers. These rollers prevent the formation of side ridges. The field stays level even at the sides of the machine.

## MAINTENANCE-FREE REAR ROLLER BEARINGS



Multiple sealing prevents the penetration of impurities into the bearing and the reinforced sealing construction eliminates the risk of damage. The bearing is maintenance free.

## REPLACE YOUR CHISELS WITH THE COMFORTABLE QUICK-CHANGE SYSTEM



Each tine is fitted with a double-sided chisel (70 mm) by using the Quick-Change system. This is based on inserting the double-sided chisel at the end of the tine and fixing it with one securing pin. The Quick-Change system is user friendly and offers comfort and peace of mind.

## EASILY ADJUSTABLE WORKING DEPTH



The TERRALAND TN and TN\_PROFI working depth is set hydraulically and controlled from the tractor cabin by the positioning of the rear tandem rollers and the tractor arms.

## ADDITIONAL SIDE SCREENS – HYDRAULICALLY CONTROLLABLE



They maintain cultivated soil along the working width without the risk of side ridge formation. The side screens offer comfortable folding into the working position from the tractor cabin using hydraulics.



# TERRALAND TN

Terraland TN – the machine for large amounts of plant residue

The TERRALAND TN is a mounted chisel plough suitable for tractors with 150 HP or greater (depending on soil conditions). The TN model comes in 2 versions, the TN\_D model which allows for a maximum working depth of 65 cm, and the TN\_M model which can reach a maximum working depth of 55 cm. The tine securing for both versions is either mechanical (tightening bolts) or hydraulic (hydraulic cylinders).

The TN model can also be used during the summer; if you intend to sow afterwards, e.g. winter rape, we would recommend that you immediately compact the soil behind the machine so that no moisture is lost by the deeply tilled soil profile drying out.

## TERRALAND TN EXCELLENT THROUGHPUT



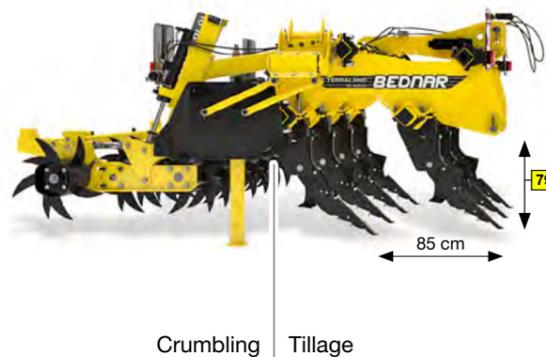
The high frame clearance (up to 86 cm), spacing between tines and rear tandem spiky rollers have been designed to even allow for a high material throughput in very challenging conditions.

## IT EVEN GETS THE JOB DONE ON SOGGY WATERLOGGED LAND

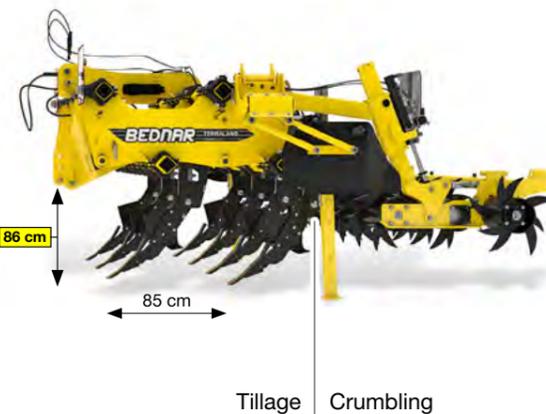


The TERRALAND TN design allows you to work with the machine on soggy waterlogged land. The tilled land loosens up fast and water seeps down through the land. The land drains quickly, the soil is restored and ready for use in no time. Waterlogged fields are a thing of the past.

### TN\_M



### TN\_D



## TERRALAND TN 4000 HD9

The TERRALAND TN 4000 HD9 chisel plough is designed for powerful tractors; the machine has a robust frame made of Alform steel. The chisel folding plough is equipped with 9 tines with a spacing of 45 cm. The individual tines are hydraulic protected (the release force can be set in relation to the soil type).

The transport width of the TERRALAND TN 4000 HD9 chisel plough does not exceed the permitted 3 metres. The machine can be driven on roads within the EU without any problems.

The TERRALAND TN 4000 HD9 can be equipped with a hydraulically adjustable double spiky roller, heavy Cutpack packer or V-RING packer with a diameter of 630 mm.



TERRALAND TN



TERRALAND TN



TERRALAND TN\_PROFI

# TERRALAND TN\_PROFI

Terraland TN\_PROFI and sowing

TERRALAND TN\_PROFI is a TERRALAND TN chisel plough with an additional 2 rows of self-cleaning cutter discs. The TERRALAND TN\_PROFI, equipped with 2 rows of tines, tandem spiky rollers and a cutter disc section, is a machine which can create the right conditions for seed drills in just one pass. The cutter disc section finishes off the job and performs the following tasks:

- Finely cuts clods, creating a soil structure which allows you to use a seed drill for sowing right after the TERRALAND TN\_PROFI.
- Covers and conceals plant residue in the soil so that the land remains without as little plant residue as possible and the plant matter can degrade rapidly.
- Levels the soil behind the machine so that a perfectly level field is created for sowing without any furrows or other imperfections.

### CUTTER DISCS

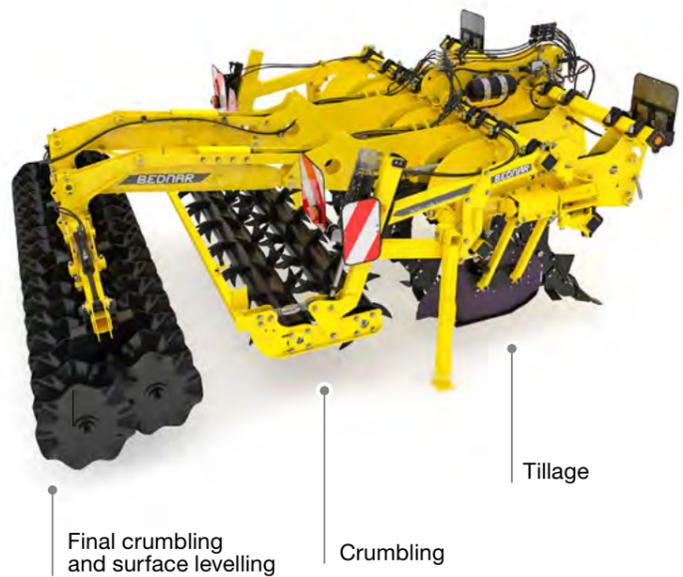


The cutter disc section (battery) is formed of 2 rows of discs of 520 x 5 mm in diameter. These discs cut through and cover the plant material and level the soil for the seed drill. The cutter discs are embedded into each other. This means the discs clean themselves in wet and soggy conditions.

### CUTTER DISC TRANSPORT



The cutter disc section folds up hydraulically above the machine. When set in this position it allows you to work without a rear cutter section, e.g. in conditions with a larger amount of plant residue.

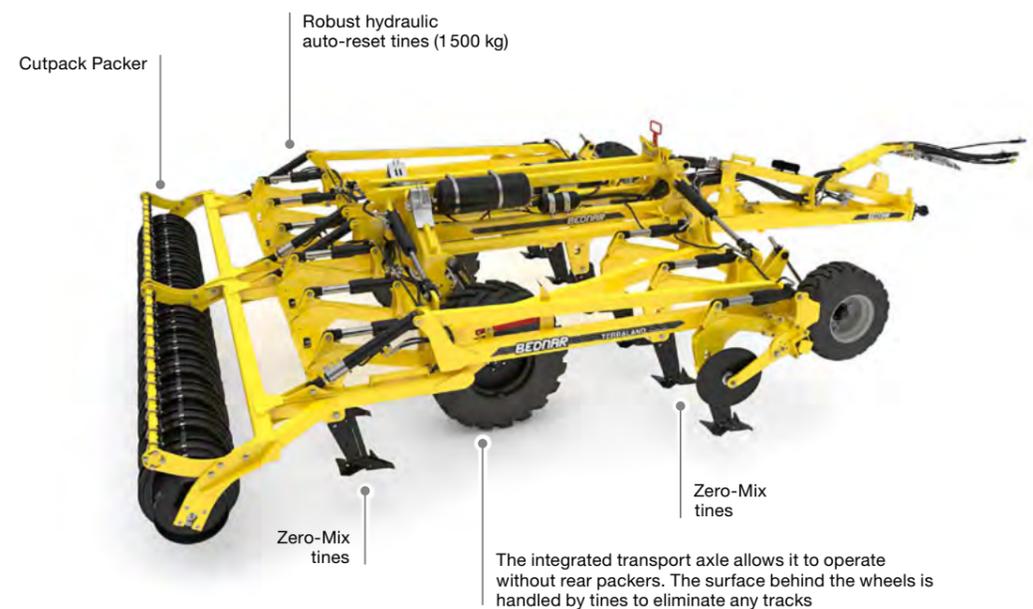
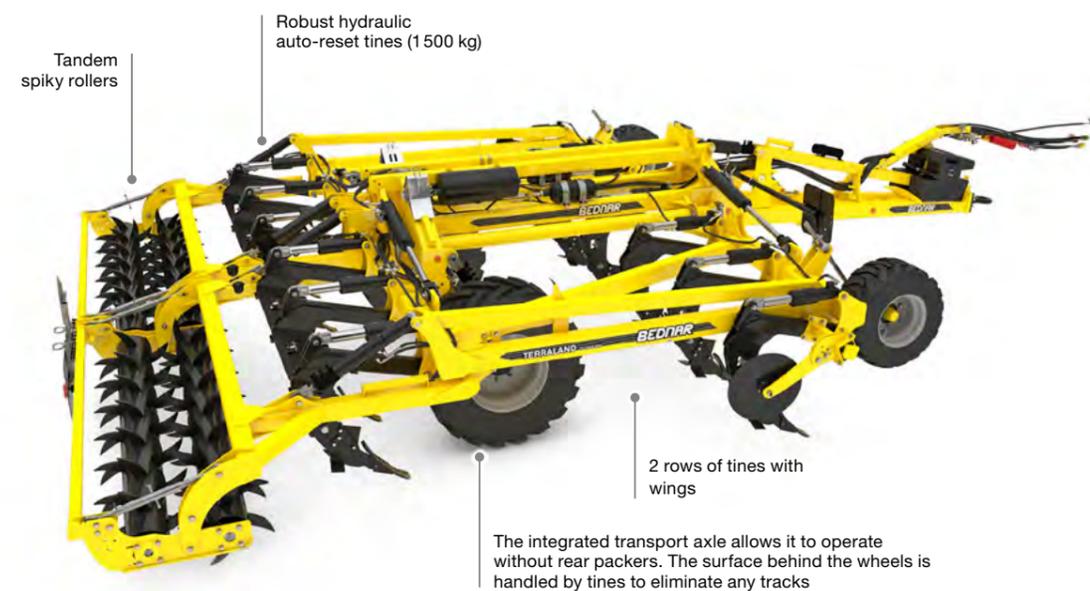




# TERRALAND TO

work in extreme conditions thanks to the integrated axle

The integrated axle located between the operating tines allows the machine to work without rear tandem rollers, with more tines working behind the transport wheels. In wet conditions, you can simply remove the rollers from operation and till the soil without rollers. Particularly when tilling in winter, the soil does not need to be compacted. Furthermore, with the axle located in the centre of the machine, it is more adept at turning at the headlands – a shorter turn radius.



„We purchased the TERRALAND TO for two reasons. The first reason was a problem with long-term compaction on our land, and the second reason was waterlogged land. We use the TERRALAND TO to till the land to a 40 cm depth, eliminating compacted soil and creating the best possible conditions for the subsequent crop. After just one pass, the soil is no longer compacted and the field remains level thanks to the high quality spiky rollers,” says farm manager Andreas Hansen.

Josef Schlüter (left);  
Maik Schröter, tractor operator (right)

Agricultural co-operative Elbniederung Eutzsch e.G. (Germany)  
2 300 ha | TERRALAND TO 6000 HM

# Technical data



## TERRALAND TN

		TN 3000 M5R / D5R	TN 3000 M7R / D7R	TN 4000 M7R / D7R	TN 4000 M9R / D9R
Working width	m	3	3	4	4
Transport width	m	3	3	4	4
Transport length	m	2.9	2.9	2.9	2.9
Working depth*	cm	15–55 / 15–65	15–55 / 15–65	15–55 / 15–65	15–55 / 15–65
Number of tines	pcs	5	7	7	9
Spacing of tines	cm	60	40	56.5	42.5
Total weight**	kg	1,850–2,200 / 1,950–2,350	1,950–2,350 / 2,250–2,620	2,220–2,600 / 2,520–2,890	2,480–2,860 / 2,800–3,180
Recommended output*	HP	150–180 / 200–250	180–220 / 220–280	200–260 / 250–300	220–300 / 280–350

\* depends on soil conditions \*\* depends on the machine accessories



## TERRALAND TN PROFI

		TN 3000 PROFI D7R	TN 3000 H PROFI D7R	TN 4000 H PROFI D7R	TN 4000 PROFI D9R	TN 4000 H PROFI D9R
Working width	m	3	3	4	4	4
Transport width	m	3	3	4	4	4
Transport length	m	3	3.1	3.1	3	3.1
Working depth*	cm	15–65	15–65	15–65	15–65	15–65
Number of tines	pcs	7	7	7	9	9
Spacing of tines	cm	40	40	56.5	42.5	42.5
Total weight**	kg	3,400–3,600	4,150–4,500	4,350–4,700	4,150–4,350	4,700–5,050
Recommended output*	HP	230–290	230–290	230–290	290–360	290–360

\* depends on soil conditions \*\* depends on the machine accessories



## TERRALAND TN H

		TN 3000 H M5R	TN 3000 H M7R	TN 3000 H D7R	TN 4000 H M9R	TN 4000 H D9R	TN 4000 H D9
Working width	m	3	3	3	4	4	4,2
Transport width	m	3	3	3	4	4	3
Transport length	m	3.1	3.1	3.1	3.1	3.1	3,9
Working depth*	cm	15–55	15–55	15–65	15–55	15–65	15–65
Number of tines	pcs	5	7	7	9	9	9
Spacing of tines	cm	42.5	40	40	42.5	42.5	45
Total weight**	kg	1,800–2,150	2,625–2,980	2,700–3,080	3,360–3,760	3,470–3,850	3,670–4,200
Recommended output*	HP	150–180	180–220	220–280	220–300	280–350	280–350

\* depends on soil conditions \*\* depends on the machine accessories



## TERRALAND TO

		TO 4000	TO 5000	TO 6000	TO 6000+
Working width	m	4	5	6	6.4
Transport width	m	3	3	3	3
Transport length	m	8.6	8.6	8.6	8.6
Working depth*	cm	15–55	15–55	15–55	15–55
Number of tines	pcs	9	11	13	15
Spacing of tines	cm	43	43	43	43
Total weight**	kg	8,460	9,150	9,710	9,710
Recommended output*	HP	320–380	400–500	500–600	500–620

\* depends on soil conditions \*\* depends on the machine accessories

# Functional technology

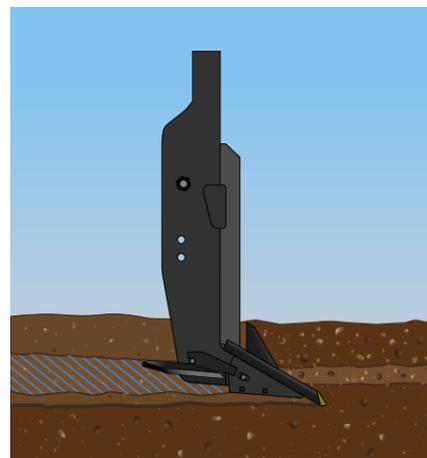
## BENEFITS THAT BRING SAVINGS

- Connecting the fertilisation and soil-processing operations into a single operation.
- Supplementing the deficit of nutrients and their balance in the soil.
- Improving the accessibility of nutrients by plant roots.
- Storing nutrition in the soil has a positive effect on the architecture of the root system.
- Fertilisers applied into the soil are often better accepted by many plants and thus better utilised.
- Fertilisers support deep rooting of plants which provides access to moisture and thus helps plants overcome periods of insufficient precipitation.



### ACTIVE-MIX TINES: IN-DEPTH CULTIVATION WITH APPLICATION OF NUTRIENTS INTO THE SOIL PROFILE PROVIDES EXCELLENT RESULTS

Active-Mix tines disrupt hardened layers, enrich soil with air and promote the moisture regime. The work of the chisel plough can be seen on the soil surface when the soil profile is deeply loosened, intensively mixed, and the soil surface is levelled, all in a single pass. Fertilizer (N, P, K, Mg, S) is applied directly behind the TERRALAND tines from the fertilizer hopper (FERTI-BOX, FERTI-CART) at the pre-set soil profile depth. The combination of in-depth cultivation and basic fertilization into soil creates a favourable soil environment for the growth of a corresponding rich root system that nourishes the above-ground part of the plant intensively and efficiently.

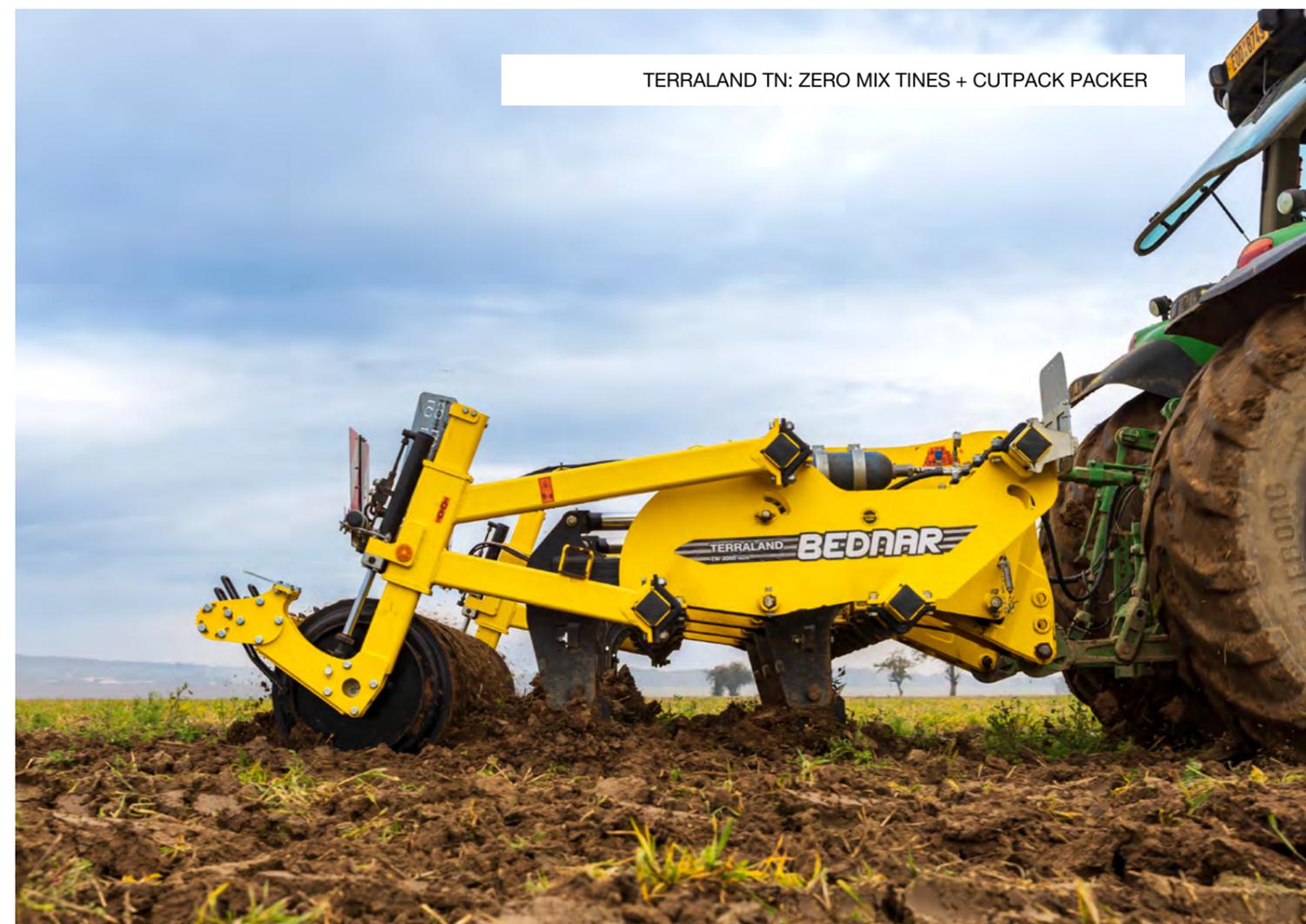


### ZERO-MIX TINES: PROFESSIONAL SUBSOILING WITH CUTPACK

The work of the machine equipped with Zero-Mix tines and Cutpack is not visible on the soil surface at first sight. The main work operation takes place in the soil profile where the hardened layers are disrupted and the soil profile is aerated.



TERRALAND TN: ACTIVE MIX TINES+ SPIKY DOUBLE ROLLER



TERRALAND TN: ZERO MIX TINES + CUTPACK PACKER

# Get 2in1 by Purchasing TERRALAND

Chisel Plough and Professional Subsoiler

The TERRALAND TN, TN\_PROFI and TO chisel ploughs provide customers with an option to use the machine differently during the year or in relation to the current weather changes thanks to an easy replacement of the working parts.



## DEEP LOOSENING

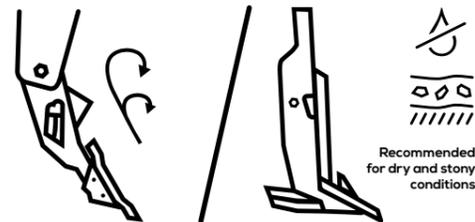
The TERRALAND chisel plough in combination with Active-Mix tines and spiky double roller is suitable for deep loosening. The special shape of the tines provides easy soil penetration, and excellent loosening and mixing effect. In one pass, the soil profile is loosened in depth and the soil surface is intensely mixed and levelled.



## SUBSOIL TILLAGE

The TERRALAND frame can be equipped with special Zero-Mix tines, with a negative angle, and the heavy steel Cutpack for subsoil tillage without active mixing of soil. This operation is suitable for disrupting hardened soil layers, aerating the soil profile, and creating a proper soil environment.

### 2 IN 1 - ACTIVE / ZERO MIX READY



### SMART AGRONOMICAL SOLUTION

If you are planning to use the machine for both deep cultivation and subsoil tillage, just order both sets of tines. Or you can decide to purchase the other set of tines any time when using the machine. Replacing the working parts is easy, quick, and they can also be used for already delivered and used machines.



TERRALAND TN + FERTI-CART FC

# I did my best, for maximum yield this year

## Soil Cultivation



**SWIFTERDISC**  
Disc Cultivators



**ATLAS**  
Disc Cultivators



**FENIX**  
Versatile Cultivators



**VERSATILL**  
Versatile Cultivators



**SWIFTER**  
Seedbed Cultivators



**KATOR**  
Rotary Harrow



**TERRALAND**  
Chisel Plough



**ACTROS**  
Combined Cultivator



**CADDY**  
Universal Carrier

## Seeding and Fertilising



**OMEGA**  
Seed Drills



**ALFA DRILL**  
Seeding Unit



**COMBO SYSTEM**  
Double-Chamber Storage



**FERTI-BOX**  
Hopper for Fertilizer

## Inter-row/Line Cultivation Mulching



**ROW-MASTER**  
Inter-row Cultivator



**STRIP-MASTER**  
Line cultivator



**STRIEGEL-PRO**  
Harrows



**MULCHER**  
Rotary Cutters

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