



MACHINES OF THE FUTURE

mzuri

DISCOVER **VERSATILE, PRECISE**
AND ENVIRONMENTALLY-FRIENDLY MACHINES



**STATE-OF-THE-ART SOLUTIONS RESPONDING
TO CURRENT AND FUTURE CHALLENGES
IN THE AGRICULTURAL SECTOR.**

TECHNOLOG

PRO-TIL – DEEP CULTIVATION OF NARROW STRIPS

The MZURI Pro-Til strip-till technology provides an optimal environment for crop growth and yield. The MZURI Pro-Til technology involves cultivating only narrow strips of soil where fertilisers and seeds are to be sown. Crop residues remain in uncultivated interrows (Fig. 1). This helps retain water and preserve organic matter to improve soil structure, fertility and productivity. This can only be achieved with specially designed tines and seeding coulters. These coulters only work in the cultivated strips of soil where the plant seeds are placed.



Fig. 1. Plant rows and uncultivated interrows after using the Pro-Til technology.

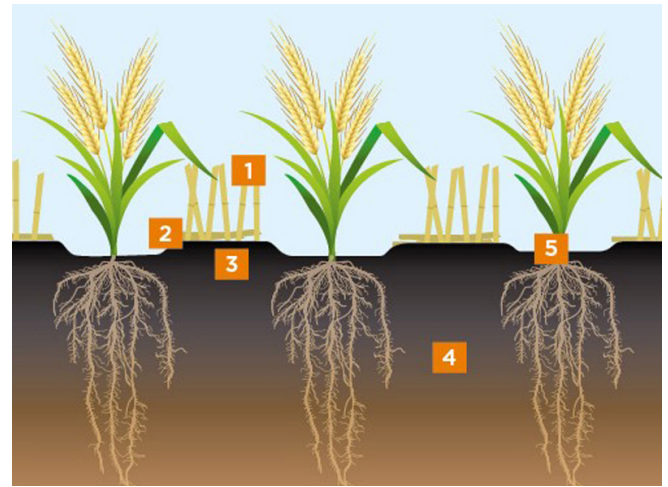


Fig. 2. Spatial diversity of the field: 1 – stubble, 2 – fragmented crop residues, 3 – soil with capillary water before loosening, 4 – uncultivated soil rich in nutrients, oxygen and water, 5 – strip of cultivated soil, place of seed germination and growth of roots.



Fig. 3. Structure of the crop in the field area.

With the MZURI Pro-Til technology, the soil located in interrows is not cultivated; this soil makes up about 2/3 of the field's surface area. The strips of cultivated soil occupy approximately 1/3 of the surface area (Fig. 3). Therefore, MZURI Pro-Til combines the advantages of deep tillage used for preparing soil for growth and activity of the root systems of plants with the advantages of direct sowing, resulting from mulch deposits in interrows (Fig. 2).

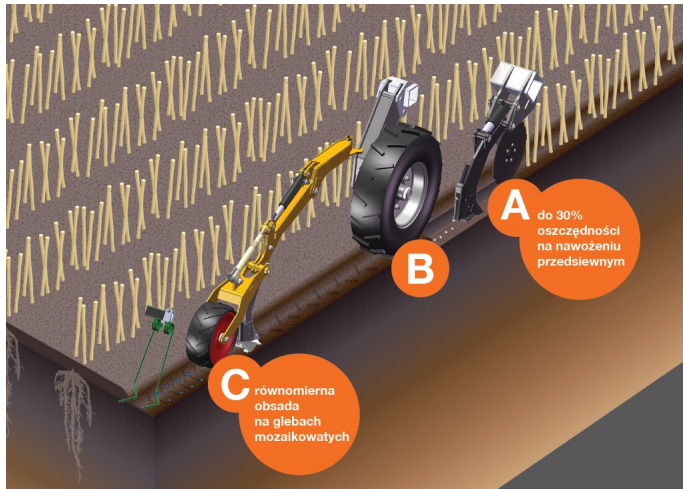


Fig. 4. Soil zones in a single pass technology.

In a single pass with the MZURI implements not only can you cultivate strips of land, but also apply mineral fertilisers, and sow crop seeds and micro granules, some plant protection agents or intercrop seeds. This method of field preparation and sowing can therefore be called “single pass technology”. The operation of working elements applied subsequently results in creating soil zones with different agricultural conditions (Fig. 4).

ZONE A – LOOSENING AND FERTILISING

Toothed disc coulters cut straw and other crop residues on the soil surface. The subsoiling tine cultivates the soil strip, pushes away the crop residues on both sides of the cultivated strip, and applies mineral fertiliser. The soil in this strip is well loosened, moist, with no plant residues on the surface. Precise placement of the fertiliser only in the cultivated soil space reduces its dose and ensures the availability of nutrients for the plants from the beginning of vegetation.

ZONE B – COMPACTION

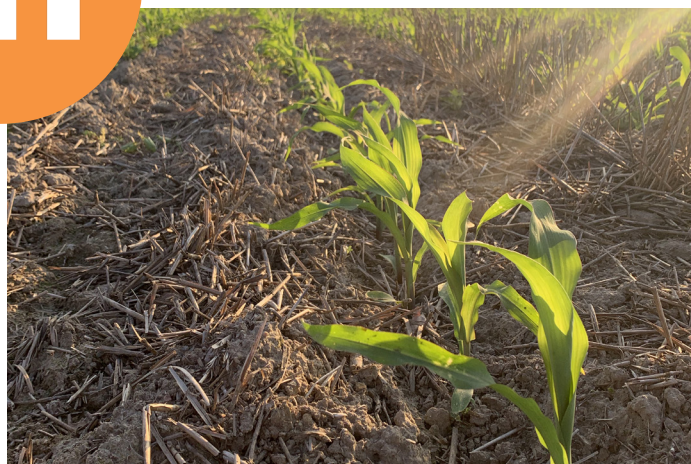
A unique and important feature of the MZURI units is that the entire weight of the machine is evenly distributed over each of the cultivated strips. This ensures the re-compaction of the loosened soil and the elimination of air pockets, which enables precise adjustment of sowing depth and favourable conditions for the germination of seeds and development of the root system of plants.

ZONE C – SOWING

The seeding coulters in each section work completely independently of the soil loosening elements. This ensures easy adjustment of the seeding coulters, excellent ground following and constant control of the sowing depth. Each coulter constantly presses the ground with following and pressing roller to adjust the sowing depth thanks to the hydraulic system. This ensures precise seed placement and excellent water and air conditions at the point of contact with the soil. Seeds or grains germinate quickly and evenly.

MZURI PRO-TIL VERSATILE TOOL

The MZURI implements are universal machines for seed drilling all cereals, rape, leguminous plants, maize, soya, sunflower, flax, poppy, hemp and others. Seeding various types of plants can be performed with a single implement, easily retooled with the appropriate sections for precision sowing.



MACHINES PROVEN IN ALL CONDITIONS



Every MZURI machine is tested in a range of soil, climate and other conditions, before we market it for use on farms. The MZURI units have been tested on almost all soil types and in countries with different climates.

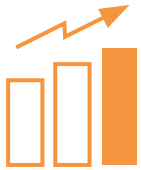
TOP QUALITY GUARANTEED BY ISO 9001

Our aim is to meet the needs of modern agriculture and to search for practical solutions. To achieve these objectives and provide farm owners with the top standard machines, the production process is based on the ISO 9001 quality management system.



BENEFITS

MZURI PRO-TIL MEANS **BENEFITS** FOR YOU AND FOR THE ENVIRONMENT



MZURI MEANS PROFIT

MZURI Pro-Til means savings on fuel, manpower, fertiliser, machines and maintenance costs. Efficient use of fertilisers and soil resources, and, consequently, high good quality yields, all guarantee easy sales of agricultural products and high income. Low costs and high income mean profit.



SAVINGS AND PROFIT

Time is money! As little as 10 – 15 minutes is enough to cultivate, fertilise and sow 1 hectare of soil in one pass of the MZURI Pro-Til unit, without having to do anything after harvesting the forecrop. This short working time allows for avoiding the accumulation of agricultural works and reducing costs.



FUEL AS A VALUABLE ASSET

Cultivating narrow strips of soil (1/3 of the field width at the most) and the low resistance of soil strips during deep loosening plus short working times result in low fuel consumption. If you want to grow, feed, sow, and use no more than 10 – 15 l/ha of fuel, use only MZURI implements.



YIELDING A GOOD CROP AND GIVING A HIGH YIELD

Timely, full and even emergence, a field of well-fed plants, wider row spacing limiting the development of pathogens. good plant lighting in the rows and soil retaining water – these are the advantages of the MZURI Pro-Til technology which guarantees high yields and the best quality crops. The stubble left on the soil surface and the small furrows in which the plants grow promote better winter-hardiness.

**REGULAR APPLICATION OF THE MZURI PRO-TIL TECHNOLOGY
ALLOWS FOR LAUNCHING A CYCLE OF BENEFICIAL CHANGES
IN SOIL PROPERTIES.**

HUMUS AS THE BASIS OF SOIL FERTILITY: The plant material is left on the soil surface or in the topsoil after harvesting. This activates microbiological transformations of the material which lead to an increase in the organic carbon content and, consequently, an increase in the quantity of humus. The presence of humus in soil is truly beneficial. It enables the formation of a permanent blocky structure, optimum water and air conditions, and it absorbs water like a “hydrogel”. Acting as a part of a sorption complex, it retains nutrients, increases their biological efficiency, reduces losses and reduces water and air pollution at the same time. Organic matter is food for microorganisms and earthworms.



EARTHWORMS DEVELOP SOIL: A large amount of plant residues and the minimal impact on the soil, the loosening of narrow strips without inverting the soil and intensive mixing encourage the presence of earthworms. They create vertical and horizontal corridors, make large non-capillary spaces that drain excess water and aerate the soil. Earthworms also introduce plant residues found on the surface into the soil, pass them through their organisms, release mucus, have a structure-forming effect, and form capillary pores to retain water. Preliminary decomposition of organic material by earthworms and their secretions stimulates the development and activity of soil microorganisms.



BIODIVERSITY: The MZURI Pro-Til technology leads to simple but key relationships: MZURI implement – organic matter – permanent blocky structure – limited water losses – sufficient air supply – variety of microorganisms (bacteria, fungi, protozoa) – earthworms – high activity of organisms – limited presence of pathogens – possible reduction in the use of plant protection agents.





WATER: No soil inversion, loosening limited to max. of 1/3 of the field surface area and mulching or very shallow loosening after harvesting the forecrop reduce water evaporation. Mulch, humus, a permanent blocky structure and the activity of large numbers of earthworms reduce surface runoff and erosion. They actually increase water retention, i.e. hold water and at the same time, they are responsible for draining excess water deeper into the soil to allow air to enter in its place.



BLOCKY STRUCTURE: The blocky structure of the soil is an indirect effect of the increase in organic matter content, including humus and earthworm activity. Permanent soil structure is a guarantee of the following: optimum water and air conditions, favourable conditions for the growth of plant roots, active microbiological life, balance of decomposition and synthesis transformations, nutrient circulation, lack of crust and over-compacted layers of soil, and limited water and wind erosion.



GREENHOUSE GASES: A single pass of a machine using MZURI Pro-Til technology reduces fuel consumption by over 50 l/ha and emits about 2.5 kg CO₂ per litre of diesel fuel used. If only 10% of the sown area in Poland was covered by this technology, the annual emissions of carbon dioxide into the atmosphere would be reduced by over 100,000 tons.



SOIL PRODUCTIVITY: The favourable physical, chemical and biological properties of the soil resulting from the use of proper MZURI tools and Pro-Til technology ensure that the plants growing in rows with wide spacing are healthy and strong. Even in densely spaced fields, the sun's rays reach the large leaf blades. The deep, well-developed root system draws nutrients from the rich and moist soil. Under these conditions, assimilation is active and the yield is likely to be high.

RESEARCH

THE RESULTS OF RESEARCH SPEAK FOR THEMSELVES

MZURI Pro-Til means strip-till. After passage of the implement, loosened soil strips and unloosened interrows are formed. Both zones have their own favourable properties for plant growth and yield.

LOOSENED STRIPS OF SOIL:

Soil free from plant residues

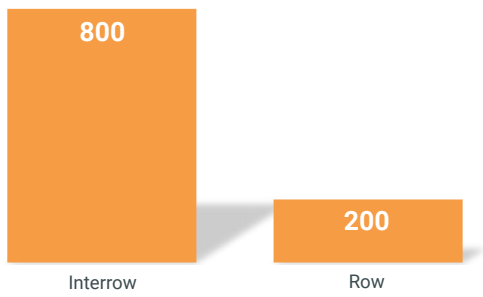


Fig. 1. Quantity of plant residues in the row and interrows.

Low soil density

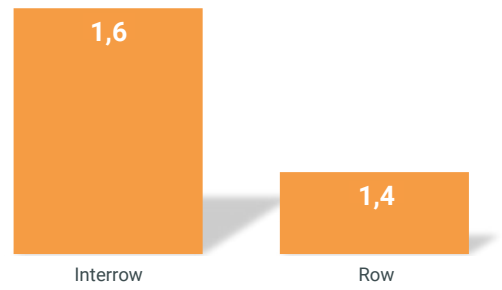


Fig. 2. Volumetric soil density in row and interrow.

Little resistance during root growth

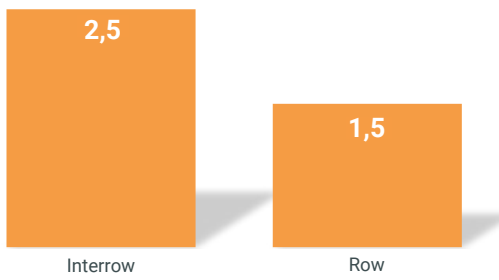


Fig. 3. Soil penetration resistance in row and interrow.

Fast water absorption after rainfall

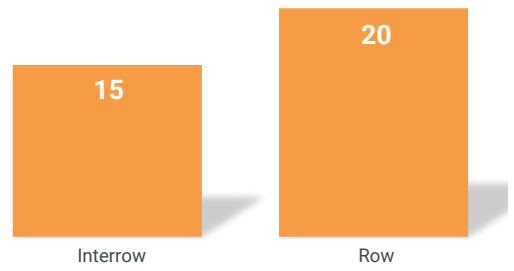


Fig. 4. Soil moisture content in row and interrow immediately following heavy rainfall.

Excess water drainage

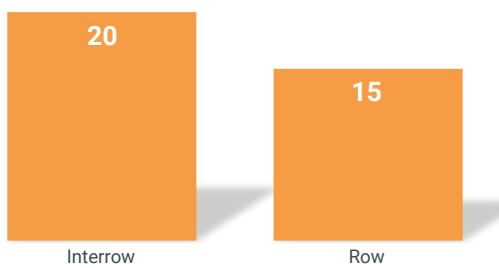


Fig. 5. Soil moisture content four days after rainfall.

INTERROWS:

Water maintenance during the non-rainfall period

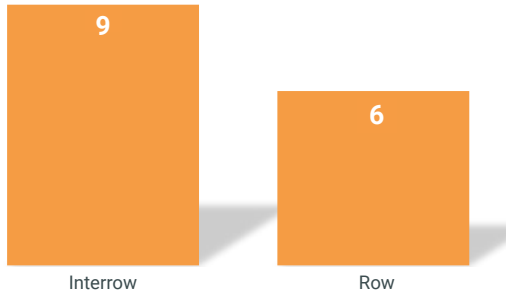


Fig. 6. Soil moisture content after a long non-rainfall period.

Soil protection thanks to crop residues



Fig. 7. Plant residues (mulch) in interrows.

MZURI PRO-TIL TECHNOLOGY:

Crop yield

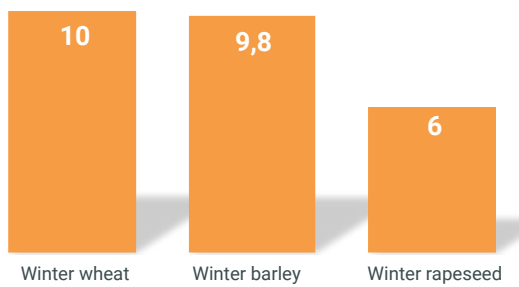


Fig. 8. Winter plant yields in favourable agricultural and habitat conditions

Crop yield in unfavourable habitat conditions

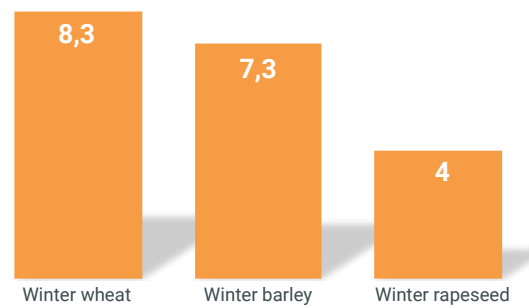


Fig. 9. Average long-term yields of winter plants in unfavourable habitat conditions (varied soil, dry periods, frosting).

DEALERS

WE ARE EVERYWHERE

FIND A DEALER

HAVEN'T FOUND A DEALER
IN YOUR COUNTRY? CONTACT US

info@mzuri-agro.eu



AGRICULTURAL MACHINES FOR SPECIAL TASKS

MZURI PRO-TIL

The MZURI Pro-Til are implements for tilling narrow strips of soil, applying fertilisers to the entire depth of the cultivated strip, and sowing seeds at a controlled depth in a single pass after harvesting the forecrop. The tillage tines or legs and compaction wheels are arranged alternately in two rows to leave large spaces for the crop residue to flow through. Each tillage tine and seeding coulters are included in the independent hydraulic systems, which ensure even pressure on each section. This guarantees a precise working depth.

MZURI PRO-TIL MAJOR FEATURES:

- tillage tines with hydraulic protection device,
- variable seeding rate,
- single and double row seeding coulters,
- hydraulically driven fan,
- seed flow sensor,
- hydraulic bout marker,
- hydraulic adjustable harrow,
- semi-pneumatic dispenser,
- RDS Artemis management computer,
- independently pivoting arms with seeding coulters coupled with adjustable pressure wheel with hydraulic protection device.

Specification	3T	PRO-TIL 3T	PRO-TIL 4T	PRO-TIL 6T
working width	3 m	3 m	4 m	6 m
transportation width	2.95 m	2.95 m	2.95 m	2.95 m
tank capacity	1200 l	3400/5400 l	3400/5400 l	4300/6500 l
split container	---	40/60	40/60	40/60
row spacing	33.3 cm	33.3 cm	36.3 cm	35.3 cm
number of rows	9	9	11	17
Power requirement (min.)	150 HP	150 HP	200 HP	300 HP
working speed (km/h)	6 - 15 km/h	6 - 15 km/h	6 - 15 km/h	6 - 15 km/h
suspension type	suspended	trailed	trailed	trailed
fan drive	hydraulic	hydraulic	hydraulic	hydraulic
seed flow control	+	+	+	+

mzuri PRO-TiL



**A LOT OF OPTIONS
WITH A SINGLE PASSAGE**

MZURI PRO-TIL 4tx

The Pro-TIL 4Tx cultivation unit is a multifunctional machine that widens the spectrum of strip-till capabilities. The machine's major hopper has an enhanced storage capacity of 5,400 litres with an option of further upgrading. The dual hopper (front /rear hopper) contains seed and fertiliser on 40/60 % basis. The hopper can be retrofitted with two optional hoppers with the capacity of 500 l each. With the optional hoppers fitted, the volume ratio is as follows: 40 % first hopper 40% second hopper, 20% optional hoppers (1 hopper = 10% volume). The optional hoppers can be used for sowing e.g. oilseed rape, after-crops (lupin, field beans, peas, etc.), micro-granulated products for pest control, micro-fertiliser used for top fertilizing and other configurations depending on the farmer's needs. The upgraded frame is fully capable of carrying all the loads during operation.

MAJOR FEATURES OF MZURI PRO-TIL 4TX:

- a unique 4-frame design for continuous operation in a variety of terrain configurations,
- tines and seed coulters hydraulically secured,
- variable seeding rate of seeds and fertilizers (depending on application maps - precision farming), an option of seeding up to 4 types of fertilizers and seeds with variable dosage,
- single and double row sowing coulters for a clean seedbed,
- hydraulically driven fan,
- seed and fertilizer flow sensors,
- hydraulic bout marker - optionally (practically 90% of customers are in the possession of GPS-equipped tractors),
- hydraulically adjustable following harrow,
- RDS Artemis management computer equipped with ISOBUS,
- independent swinging arms with sowing coulters, hydraulically secured, connected to an adjustable pressure wheel,
- full pressure adjustment from 20-200bar of each seeding section centrally controlled according to soil moisture,
- a self-cleaning tyre compacting roller arranged in 2 alternate rows that also plays a transport role.



mzuri PRO-TiL 4Tx



mzuri

XZACT



PRECISION AT THE HIGHEST LEVEL

MZURI XZACT

An innovative precision cultivating and seeding machine for precise sowing of maize, soya, rape and sunflower. The XZACT system comes with an electronic seeding unit for the precise placement of individual seeds. Constant hydraulic pressure on each seeding coulter arm ensures an even sowing depth. The system features a vacuum-adjustable dosing unit for precise seed distribution regardless of their size.

Each seeding section is fitted with a dosing disc and a separation device for preventing seeds from being omitted or double-drilled. An independent electric motor drive is provided to keep seeds in uniform spaces even at varying speeds. In contrast to the conventional hoppers in precision seed drills, the mini hoppers mounted on the Pro-Til XZACT coulter arms are re-filled automatically with seed using the feed mechanism fitted in each dosing section. The seed is supplied from the main tank of the MZURI unit, which extends continuous operation time and reduces downtime. The arm of the seeding unit moves in two planes, vertical and horizontal, which makes it possible to work in the upper layer of the tilled soil strip. Thus, the seed is placed precisely in its centre. The Pro-Til XZACT implement is also equipped with special pressure and compaction wheels for compact soil. This prevents the formation of highly aerated zones in the soil, which in turn promotes uniform seed sprouting and reduces soil drying. Depending on the type of plant being sown, interchangeable seeding discs are available.

Specification	XZACT 3T	XZACT 4T	XZACT 6T
working width	3 m	4 m	6 m
transportation width	2.95 m	2.95 m	2.95 m
containers capacity	24 l (52 l)	24 l (52 l)	24 l (52 l)
point dosing units	9/5	11/6	17/9
row spacing	33.3/66.6 cm	36.3/72.6 cm	35.3/70.6 cm
number of rows	9/5	11/6	17/9
Power requirement (min.)	150 HP	200 HP	300 HP
working speed (km/h)	6 - 15 km/h	6 - 15 km/h	6 - 15 km/h
suspension type	trailed	trailed	trailed
fan drive underpressure	hydraulic	hydraulic	hydraulic
seed flow control	Standard	Standard	Standard
section control	Standard	Standard	Standard

ONE MACHINE FOR EVERYTHING

MZURI PRO-TIL SELECT

The SELECT series machines are prepared both for seeding cereals, rape and also for seeding crops grown in wide rows, e.g. maize, sunflower, etc. MZURI Pro-Til SELECT, like Pro-Til, allows you to cultivate narrow strips of soil, apply fertiliser and sow seeds all in a single pass. The MZURI Pro-Til Select features a quick changeover of row spacing and interrow width done with a single push of a button. This allows the user to enable or disable every second section. The SELECT feature is used for seeding crops such as maize, rape and sunflower at both narrow (33.3; 36.3; 35.3 cm) and wide (66.6; 72.6; 70.6 cm) row spacing. The wide row spacing allows very good access for sunlight to the plants, reduces competition between plants in adjacent rows, allows more air in the field and solves the problem of accumulation of plant debris between the working components of the implement. To obtain the row spacing for seeding cereals, leguminous plants, phacelia and the like, it is necessary to activate all sections.

MZURI PRO-TIL SELECT MAJOR FEATURES:

- quick and easy changeover of row spacing,
- tillage tines and seeding coulters with hydraulic protection device,
- variable seeding rate,
- single and double row seeding coulters,
- touch control drill management system with new RDS Artemis software,
- hydraulically driven fan,
- seed flow sensor,
- hydraulic bout marker,
- hydraulic adjustable harrow,
- semi-pneumatic seed dispenser,
- independent pivoting arms of seeding coulters with adjustable pressure wheel (narrow and wide).

Specification	PRO-TIL 3T SELECT	PRO-TIL 4T SELECT	PRO-TIL 6T SELECT
working width	3 m	4 m	6 m
transportation width	2.95 m	2.95 m	2.95 m
tank capacity	3400/5400 l	3400/5400 l	4300/6500 l
split container	40/60	40/60	40/60
row spacing	33.3/66.6 cm	36.3/72.6 cm	35.3/70.6 cm
number of rows	9/5	11/6	17/9
Power requirement (min.)	150 HP	200 HP	300 HP
working speed (km/h)	6 - 15 km/h	6 - 15 km/h	6 - 15 km/h
suspension type	trailed	trailed	trailed
fan drive	hydraulic	hydraulic	hydraulic
seed flow control	+	+	+



mzuri SELECT



RELIABLE SOIL MAINTENANCE MACHINE

MZURI REZULT

REZULT is a soil maintenance machine which facilitates straw and crop residue management through even distribution across the field which allows for faster decomposition. The machine is a great help in seedbed preparation. It is also an ideal tool for managing weeds and snail activity.

MZURI REZULT MAJOR FEATURES:

- independent front discs installed on springs,
- hydraulically adjustable rake angle,
- hydraulic folding with automatic locking for safe transport,
- spring tines that are virtually unbreakable,
- five rows of tines for high working efficiency.

REZULT SMART

This compact unit impresses with its multifunctionality. It is the ideal tool for managing the soil. It facilitates the handling of straw and crop residues, perfectly mixes organic fertilisers or plant protection agents with soil, reduces weeds and snail activity, and prepares the seedbed and the field for sowing. Thanks to its low power demand and single circuit hydraulic system it can be coupled with low power and older generation tractors. Its compact dimensions mean this unit is ideal for irregularly shaped fields. Rezult Smart features five rows of spring tines and a set of front discs that perfectly cut, shred and distribute straw and crop residue evenly across the field surface. These tines are made of wear-resistant steel, which makes them virtually unbreakable.

Specification	REZULT	REZULT SMART
working width	7.5 m	3 m
transportation width	2.95 m	3 m
transport lock	standard	not applicable
road lights	standard	standard
teeth spacing	60 mm	86 mm
disc spacing	310 mm	400 mm
Power requirement (min.)	120 - 200 HP	48 HP
working speed (km/h)	10 - 20 km/h	10 - 20 km/h
hydraulic system	dual circuit	single circuit



mzuri REZULT



MODERN SUBSOILER WITH LOW SOIL DISTURBANCE MZURI REHAB

Rehab is a specially designed subsoiler that offers minimum soil surface disturbance. It increases the amount of available oxygen and nutrients in deeper layers, stimulates root growth and improves plant health. The narrow working tines come with wings in their lower section for loosening the soil, especially in the lower layers. This, combined with the operation of the front discs, ensures minimum interference with the surface layer. The remaining plant residues protect the water and reduce erosion. The loosening effect in the subsoil promotes rapid water penetration, good rooting and vigorous plant growth, oxygenation and increased activity of microorganisms. The well-aerated soil warms up quickly in spring, allowing early seed drilling, and limiting later water losses. The REHAB subsoiler is available with an optional seed drill – ideal for sowing rape, deep root crops, cover crops and intercrops. The coulters provide an accurate seeding depth in a loosened but moist seedbed. This creates ideal soil conditions for seed germination, emergence and plant growth. Deep soil loosening promotes plant rooting. The row spacing of 600 mm and wide interrows promote light access, field ventilation and airing. The plants are healthy and grow quickly. The seeder can be easily mounted and removed in just a few minutes by removing the three pins. The front cutting discs mounted on arms use a controlled pressure to cut through the residue remaining on the soil surface. Each disc arm has a hydraulic protection device for a consistent ground contour following.

The subsoiling sections with hydraulic protection device have two-part working components of a tine and a replaceable wing (a choice of wings available). The hydraulically controlled consolidation and compaction section consist of tyre wheels. It closes the opening behind the subsoiling section, leaving compact soil structure without the risk of drying out.

Specification	REHAB
working width	3 m
number of rows	5
distance between rows	600 mm
working depth	200 - 400 mm
working speed	6 - 10 km/h
Power requirement (min.)	150 - 300 HP



mzuri REHAB



ADDITIONAL OPTIONS FOR EVERY PRO-TIL SEED DRILL

ADDITIONAL OPTIONS FOR EVERY PRO-TIL SEED DRILL



DISCS WITH HYDRAULICALLY ADJUSTABLE WORKING DEPTH

Each of the MZURI Pro-Til implements can be fitted with a set of discs to cut through the crop residues of a forecrop plant. This enables machine operation without the risk of blockage of the cultivating tines and seeding coulters with plant mass. The depth of their operation can be adjusted directly from the tractor's cab. Each disc comes as standard with spring protection and adjustable pressure force. These elements are equipped with a steering system that protects the discs from damage when turning.



CENTRAL LUBRICATION SYSTEM

The central lubrication system is used in the MZURI units to extend their life and reduce to a minimum the time to prepare a machine for work. The MZURI units are designed to work in the heaviest soil conditions with high loads acting on working components, which are thus exposed to wear. You can keep your machines running efficiently by lubricating them regularly.

The central lubrication system helps with that; the system includes the following elements:

- electric programmable piston pump with a grease tank,
- set of distributors for dosing precisely the right amount of grease to each pin individually,
- set of flexible supply hoses,
- tube for topping up the grease tank.

AL

ADDITIONAL FERTILISER AND SEED HOPPER

The MZURI implements can be equipped with single (300 litres) or dual (2 x 300 litres) fertiliser and seed hoppers (applicators), e.g. for intercrop seeding. The dual applicator used in the machines allows the simultaneous seeding of two different products in separate doses. The applicator dosing units can be adjusted for seed placement either into the soil, onto its surface or into seed area.



NEW

DURABLE SOLUTIONS FOR DEMANDING WORK

MZURI iCUT

The iCUT mulchers are designed to work in heavy-duty conditions and are suitable for mowing roadsides, meadows, stubbles and ditches. iCUT is a versatile solution for farmers, service providers and local authorities. The iCUT mowers are ideal for dealing with dense bushes by reducing the plant residue to a fine mulch, evenly distributed over the entire width of the machine.

MZURI iCUT MAJOR FEATURES:

- shock-resistant rotor with heavy-duty forged hammer beaters or knives,
- self-cleaning, adjustable rear levelling roller and full-size skids,
- high-quality components and design,
- hydraulic side extension,
- front and rear coupling,
- electronically balanced rotor,
- front protective flaps,
- openable flap for operation,
- double-layer housing and high-quality design.

ROBUST SHREDDING SYSTEM: KNIVES OR FORGED HAMMER BEATERS

Forged hammer beaters or knives, mounted on the rotor, easily remove bushes and tall grass, distributing plant residues evenly across the width of the two-layer housing. The mowing height adjustment is easy thanks to the use of the rear shaft with forged spherical tips which reduce setting time and the adjustable, full-length mounted skids.

iCUT 260 LA

A well-thought-out design of the mulcher ensures a wide movement range both in horizontal and vertical planes. The hydraulic adjustment of the arm allows access to every place, even those hard-to-reach. It is ideal for mowing roadsides and ditches.

Specification	135 LA	260 LA	280/280+	300/300+	600
working width (m)	1.35	2.6	2.8	3.0	6.0
power demand [HP]	60 - 100	80 - 160	70 - 150	70 - 150	120 - 300
gearbox (rpm)	540	540	540	540	1000
shredding system	hammers 16 /knives 05	hammers 16 /knives 05	hammers 16 /knives 05	hammers 16 /knives 05	hammers 16 /knives 05
number of hammers/knives	18	24	26	28	56
method of suspension	TPH attachment	TPH attachment	TPH attachment	TPH attachment	TPH attachment
double wall	standard	standard	standard	standard	standard
hydraulic hose	standard	standard	standard	standard	-
weight (kg)	215	1100	980	1030	2160

mzuri
iCUT



CBR

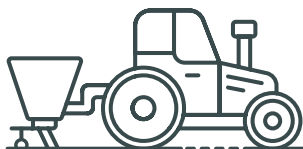
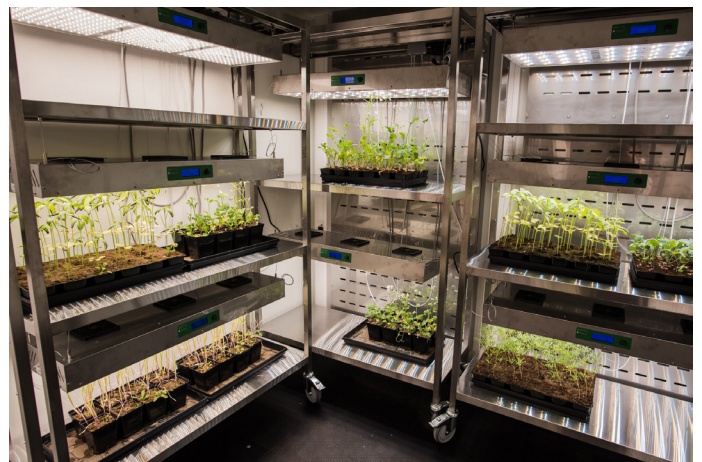
RESEARCH AND DEVELOPMENT CENTRE

Agro-Measures-Technology

The Research and Development Centre is one of the most modern centres of its kind in the world, specialising in the comprehensive research and development of strip-till one-pass technology. Advanced research is currently underway in the fields of materials science, construction and operation of agricultural machinery in line with Agriculture 3.0 and Agriculture 4.0. At the Centre, also based on nanotechnology, innovative foliar fertilisers and starter fertiliser micro-granules containing functional additives are being formulated. The results of the above research in terms of the effects of measures, techniques and technologies on soil and plants are continuously monitored in the field using mobile analytical and measurement equipment, in specialised laboratories and in a vegetation chamber. The chamber, with fully regulated environmental factors such as light, temperature and humidity, allows biological research to be carried out regardless of the season.

COOPERATION

The Research and Development Centre cooperates with a number of scientific institutions around the world. In Poland, these include the Warsaw University of Life Sciences, the Bydgoszcz University of Technology, the Poznań University of Technology and the Institute of Soil Science and Plant Cultivation (IUNG) in Puławy. We are also trusted by universities in Ukraine, Germany and Lithuania, among others.



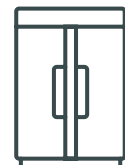
MACHINE TESTS



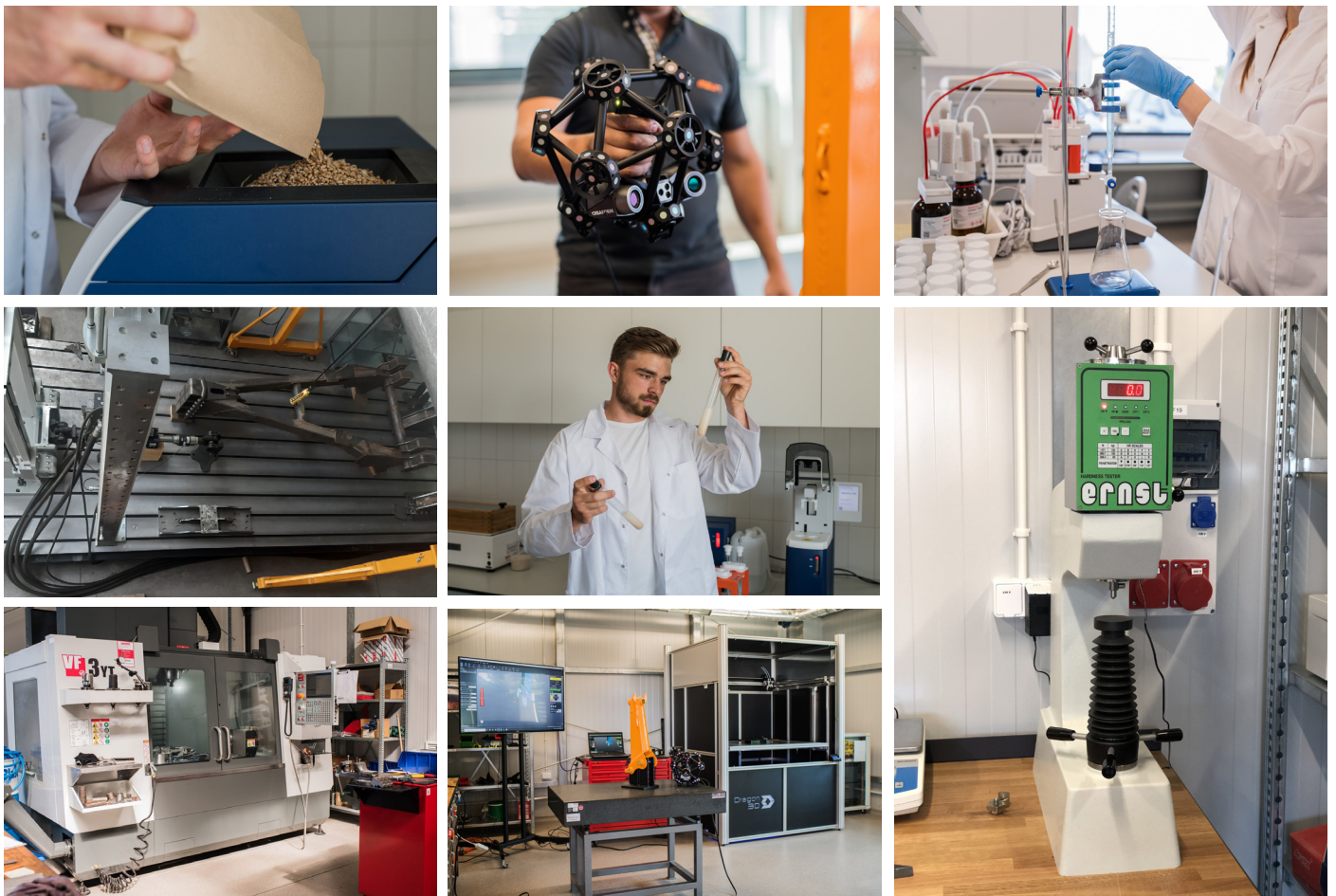
LABORATORY TESTS



FIELD TESTS



PHYTOTRON CHAMBER



TECHNOLOGIES

Modern technologies applied to field crop production pursue the basic objectives of modern agriculture and are in line with the principles of sustainable development and green deal. The essence of the innovative plant growing technologies developed at the Research and Development Centre is to minimise inputs and pressure on the environment with maximum efficiency. The essence of these technologies is the utilisation of the natural production potential of the habitat, mainly the soil, and its enhancement by rationally applied inputs, including fertilisers. Such action requires a great deal of knowledge and specialised machinery and resources of the highest quality.

Strip-till one-pass, the flagship technology being researched and implemented at the Research and Development Centre, is based on the operation of Mzuri Pro-Til multitill hybrid machines. A single pass of the machine, without any previous agro-technical treatments, enables deep loosening of narrow strips of soil, the application of soil doses of fertilisers, seed sowing and additional agro-technical treatments. The growth of plants cultivated with this technology is supported by micro-granules of starter fertilisers applied at seed sowing and later by foliar fertilisers.

Foliar fertilisers come in a unique gel form or contain a gelling agent in the formulation. This makes them effective in action and safe for the environment.

GREEN DEAL

IMPLEMENT THE EUROPEAN GREEN DEAL TOGETHER WITH MZURI

SELECT MZURI PRO-TIL TECHNOLOGY AND IMPLEMENT THE EUROPEAN GREEN DEAL:

- ✔ less mineral fertilisers
- ✔ fresh air – reduced CO₂ emission
- ✔ pure water
- ✔ healthy soil
- ✔ biodiversity
- ✔ integrated and organic farming

REGULAR APPLICATION OF THE MZURI PRO-TIL TECHNOLOGY IS A GUARANTEE OF:

- ✔ high yields with a 30 – 50% reduction in mineral fertilisation
- ✔ increased organic carbon content in the soil
- ✔ higher soil water content despite lack of precipitation
- ✔ reduction in fuel consumption and CO₂ emission
- ✔ lower CO₂ emission from cultivated soil
- ✔ more microorganisms in the soil
- ✔ more earthworms

OWNING MZURI MACHINES MEANS IMPLEMENTING ECOSCHEMES AND RECEIVING SUBSIDIES:

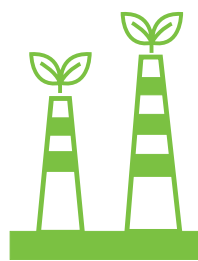
- ✔ simplified soil cultivation systems
- ✔ winter intercrops/supplementary intercrops
- ✔ areas with melliferous plants
- ✔ diversified crop structure
- ✔ application of liquid fertilisers by other methods than spray application, i.e. application into soil
- ✔ management of crop residues in the form of mulch (matting)
- ✔ plant production in the system of Integrated Plant Production
- ✔ organic farming



The subsidy for a strip-tilled field of **500 – 1000 ha** is equivalent to the cost of the **Mzuri Pro-Til unit**. In subsequent years you have it for free!



SOIL MANAGEMENT



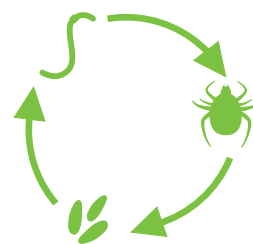
CO₂ EMISSION
REDUCTION



PROTECTION OF
WATER IN THE SOIL



FOOD SECURITY



BIODIVERSITY



MZURI

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