

mzuri



**WE CARE
FOR THE EARTH**

- 📷 @mzuriworld
- 📘 @MZURI WORLD
- 🎵 @mzuri_world
- 📺 @mzuriworld

A green banner with white text and environmental icons. The text "WE CARE FOR THE EARTH" is written in a bold, white, sans-serif font, centered on the banner. The background is a solid green color. Scattered around the text are several white icons: a cloud with "CO2" and two downward arrows, three water droplets, a small plant with two leaves, a thermometer, a globe, and a recycling symbol.

WE CARE FOR THE EARTH



MZURI – INNOVATIVE AND SUSTAINABLE AGRICULTURE

MZURI WORLD is a Polish company whose mission is to provide modern and efficient solutions for agriculture. For 30 years, we have been engaged in farming, basing our activities on scientific and technical knowledge, as well as on many years of experience in managing a 1,500-hectare farm. We create, promote, and implement the latest technologies tailored to the needs of modern farms.

For the past 15 years, the MZURI brand has been developing dynamically, presenting an innovative approach to soil management and technologies that work in harmony with nature. Our cultivation systems are the foundation of regenerative agriculture, offering comprehensive solutions that enable the restoration and protection of soil resources.

The MZURI technology sets new standards in organic matter management, carbon sequestration, soil structure management, water resource management, and resilience to climate change. It also contributes to building biodiversity, which is crucial for global food security.

For over a decade, we have been implementing strip-till technology, revolutionizing agriculture in Europe and worldwide. Today, our innovative machines operate in over 40 countries across 5 continents. The MZURI Pro-Til technology is not just a tool – it is the future of regenerative agriculture, ensuring higher crop efficiency, soil protection, and sustainable development of farms around the world.



BENEFICIAL CHANGES FOR THE ENVIRONMENT

The MZURI Pro-Til technology is a solution that supports sustainable agriculture by combining high efficiency with environmental responsibility. Thanks to strip tillage, the soil maintains its natural structure, while crop residues protect its surface from erosion and moisture loss. The reduced number of field passes significantly lowers fuel consumption and

CO₂ emissions, and the precise placement of fertilizer near the seeds allows for more efficient use of nutrients. As a result, the Pro-Til technology improves soil fertility, supports the development of soil organisms, and contributes to creating a lasting, healthy agricultural ecosystem.



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.



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.

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.



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.



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.





MZURI PRO-TIL TECHNOLOGY

The MZURI Pro-Til strip-till technology provides an optimal environment for crop growth and yield.

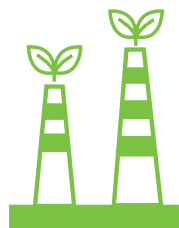
The MZURI Pro-Til technology involves cultivating only narrow strips of soil where fertilisers and seeds are to be sown. Crop residues remain in uncultivated interrows. This helps retain water and preserve organic matter to improve soil structure, fertility and productivity. This can only be achieved with specially designed tines and seeding coulters. These coulters only work in the cultivated strips of soil where the plant seeds are placed.

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.





**SOIL
MANAGEMENT**



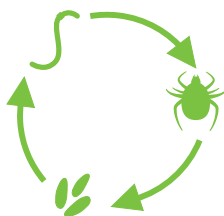
**CO₂ EMISSION
REDUCTION**



**PROTECTION OF
WATER IN THE SOIL**



**FOOD
SECURITY**



BIODIVERSITY



MZURI WORLD CARBON

SCIENCE – BASED FARMING

The only agriculture carbon certificates that are based on innovative and deeply researched MZURI Pro-Till Technology dedicated for soil cultivation.

THE ONLY CERTIFICATES BASED ON PATENT PROTECTED TECHNOLOGY

(MZURI Pro-Till Technology) for revolutionary soil cultivation.

3 IN 1

The certificates confirm that the undertaken actions allow for both reducing CO₂ emissions, accumulating organic CO₂ in the soil, and increasing soil biodiversity.

PROTECTED AGAINST GREENWASHING

Control of the cultivation process based on information technology solutions and the actual work of the machine – guarantees the highest quality of carbon certificates and eliminates the risks associated with irregularities in the issuance process.

GREEN DEAL 100% COMPLIANT

Combating erosion, water conservation, reducing the use of chemicals and fertilizers, reducing CO₂ emissions, production of emission-free food.

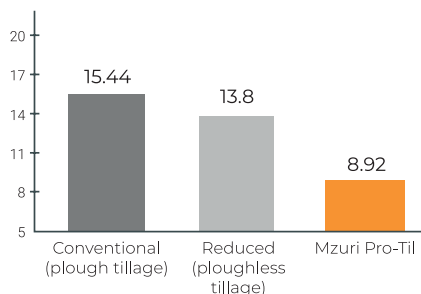
VERRA OFFICIAL CERTIFICATES

MZURI World Carbon project is in process of validation in frames of VM0042 Methodology for Improved Agricultural Land Management.

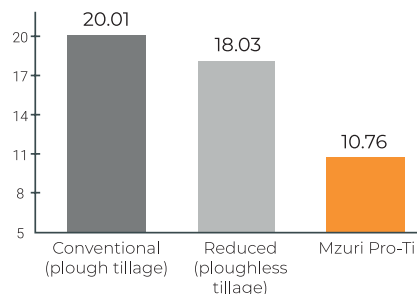


CO₂

MZURI Pro-Til technology – simultaneous tillage, fertiliser application and seed sowing – significantly reduces CO₂ emissions into the atmosphere. Loosening only narrow strips of soil instead of conventional whole-area tillage reduces soil aeration, organic matter burning and direct carbon dioxide emissions. Moreover, MZURI Pro-Til technology allows fuel, fertiliser and seed consumption to be reduced by several times.

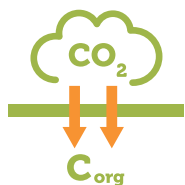


CO₂ emission in t CO₂ ha⁻¹ Annual Crop Cycle - winter wheat.



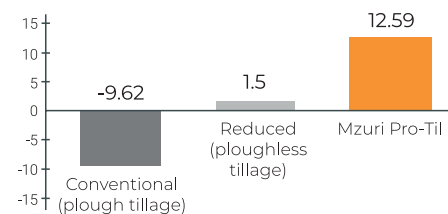
CO₂ emission in t CO₂ ha⁻¹ Annual Crop Cycle - maize.

Source: own research.

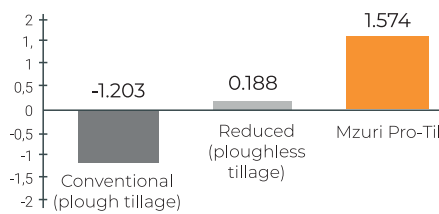


SEQUESTRATION

MZURI Pro-Til technology leads to the sequestration of large amounts of organic carbon in the soil. Pre-crop plant residues and intercrop biomass undergo biological transformation with the participation of microflora and mesofauna (earthworms) towards humification. The humus that develops perpetuates the aggregate structure of the soil, and the regulated air and water conditions make it sustainable.



Carbon Sequestration in Soil (topsoil layer 0-20 cm) in 8 - years period equivalent in t CO₂ ha⁻¹.



Carbon Sequestration in Soil (topsoil layer 0-20 cm) year average equivalent in t CO₂ ha⁻¹.

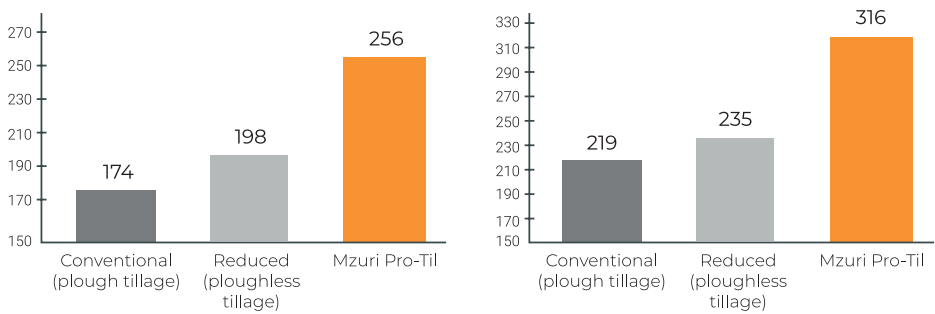
Source: own research, based on the publication: Jaskulska I, Romanekas K, Jaskulski D, Gałęzewski L, Breza-Boruta B, Dębska B, Lemanowicz J. Soil Properties after Eight Years of the Use of Strip-Till One-Pass Technology. Agronomy. 2020; 10(10): 1596.





WATER

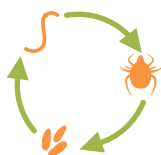
MZURI Pro-Til tillage optimises water management. The large amount of plant residues – mulch – on the field surface and the limited loosening of the soil lower the soil temperature and reduce water evaporation. Compacted soil in the unprocessed inter-rows retains large amounts of water, becoming a reservoir for plants during periods of rainfall shortage, which is important for field crop production in the face of increasingly frequent periodic water shortages.



Soil water reserve in the 0–20 cm topsoil layer in the sowing period - winter crops (t ha⁻¹).

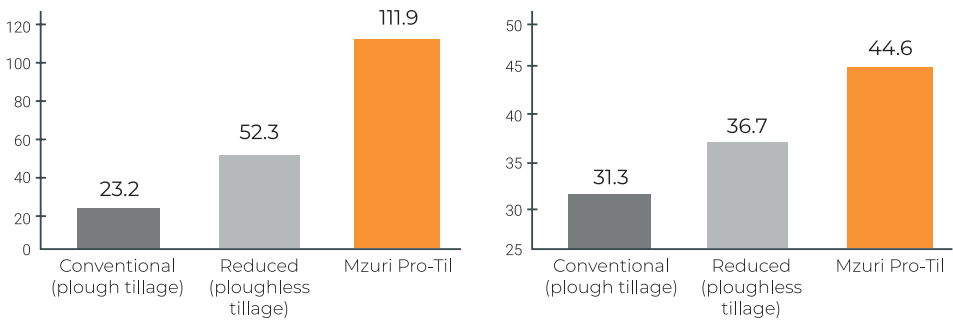
Soil water reserve in the 0–20 cm topsoil layer in the sowing period - spring crops (t ha⁻¹).

Source: own research, published by Jaskulska I, Romaneckas K, Jaskulski D, Wojewódzki P. A Strip-Till One-Pass System as a Component of Conservation Agriculture. Agronomy. 2020; 10(12):2015.



BIODIVERSITY

The deep tillage of narrow strips of soil with MZURI Pro-Til technology aerates the soil well, while the wide, unbroken strips of soil in the inter-rows holding water and the large amount of organic matter create favourable conditions for micro-organisms and mesofauna. Therefore, MZURI Pro-Til technology supports biodiversity and encourages its development both in the soil and in the plant environment. The emerging balance in the agroecosystem promotes soil and plant health, which is crucial for regenerative agriculture.



Earthworms mass (g m⁻² of topsoil layer 0-20 cm).

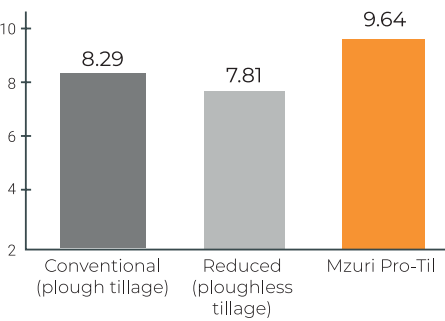
Biodiversity factor - bacteria (10⁶ cfu g⁻¹ of soil).

Source: own research, published by Jaskulska I, Romaneckas K, Jaskulski D, Gałęzewski L, Breza-Boruta B, Dębska B, Lemanowicz J. Soil Properties after Eight Years of the Use of Strip-Till One-Pass Technology. Agronomy. 2020; 10(10):1596.

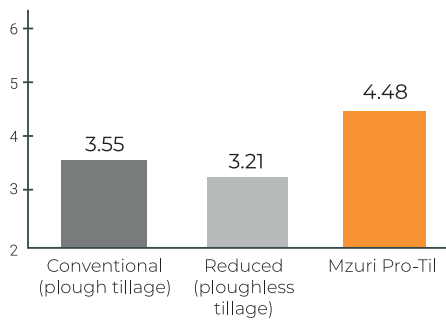


CROPS

MZURI Pro-Til technology is a guarantee of a large crop of the highest quality. They are the result of favourable soil conditions, biological balance within the field and efficient use of water resources. Plant productivity is also encouraged by the precise application of fertilisers by MZURI machines in the loosened zone of the soil and seed sown. MZURI Pro-Til technology reduces fuel, seed and fertiliser inputs, reducing costs and increasing crop yields.



Differentiation of the grain yield - winter wheat - harvest 2023.



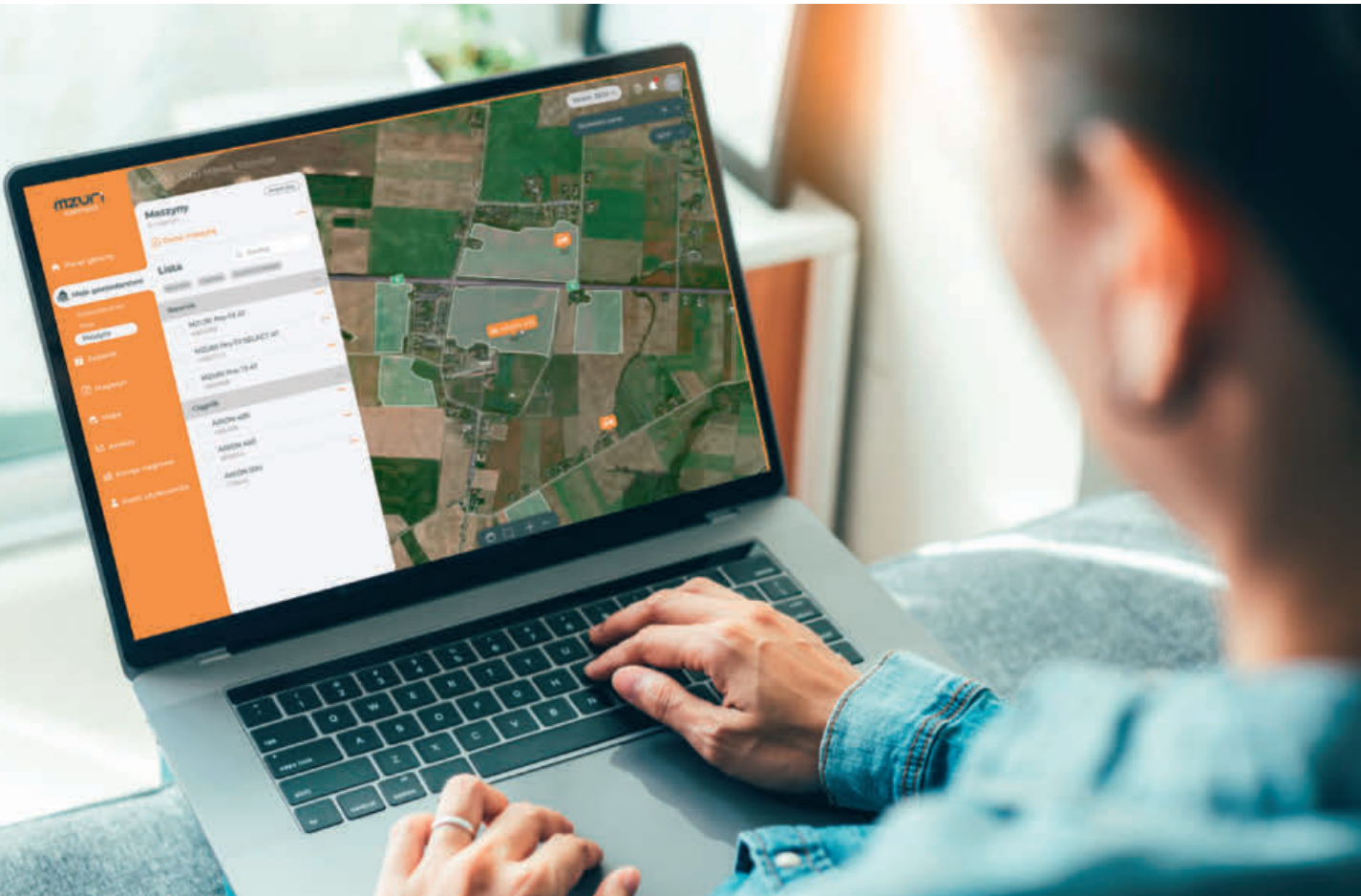
Differentiation of the seed yield - winter rape - harvest 2023.

Source: own research.

MONITORING



Monitoring of environmental parameters and emissions and sequestration of CO₂ with MZURI Pro-Til technology is based on precise measurements of sensors and machinery performance directly in the field, providing reliable data from real-world operation. MZURI machines are equipped with state-of-the-art sensors and measurement systems. An ongoing analysis of the field habitat conditions allows the machine performance to be automatically optimised in real time and data to be collected on the platform for further analysis.









WE CARE FOR THE EARTH

Sales department:

Łukasz Lewandowski, phone +48 725 900 917 | Angelika Wagner, phone +48 725 900 927

MZURI WORLD sp. z o.o. | ul. Stawowa 1, Śmielin, 89-110 Sadki, Poland
NIP 558 186 51 92 | www.mzuriworld.com