



Breaking the hamster wheel and building a regenerative, water-centred farm on 1,300 hectares



"There is no life without water. This applies from the very smallest organism up to human beings, and I subordinate everything to water."

Attila Szeredi

From Soil to Landscape

Szeredi Kft.

Attila Szeredi

Hungary · Kiszombor, Csongrád-Csanád

FARM AREA

Total: ≈1,300 ha
Regenerative: 100 %

PRODUCTION

Arable crops;
70 ha oak forest

FARMING APPROACH

Regenerative

FEATURED PRACTICE

No-till and
cover crops

REGENERATIVE SINCE

2017

Small trials built confidence to expand.

CASE STUDY HU02



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Farm at a glance

Farm factsheet

Information	Farm details
Farm name	Szeredi Kft.
Type of production	Arable; no livestock yet
Country	Hungary
Region / location	Kiszombor, Csongrád-Csanád
Altitude / climate	Dry Great Plain; 80 m
Average annual rainfall	≈ 500 mm
Soil type / texture	Heavy clay (≈70%); river-alluvial loam/silt
Total farm area	≈ 1,300 ha: 1,200 arable + 100 forest
Area under regenerative practices	≈ 100 %
Featured practice area	No-till: almost all arable except 9 ha lavender
Farming approach	Regenerative; not certified organic
Regenerative practices from	2017
Crops / livestock / products	Durum, sunflower, maize, alfalfa, peas, beans, oregano (54 ha), lavender (9 ha)
Other relevant data	≈ 1000 ha owned; Bunge programme
Farmer or farm contact	Attila András Szeredi · András Zoltán Szeredi farmers – Szeredi Ltd.

Case focus

A Hungarian arable farm's gradual transition to no-till, cover cropping and crop diversification to improve soil health, drought resilience and economic stability.

Introduction and context

Szeredi Kft. is a 1,300-ha arable farm in Kiszombor, Hungary, in the drought-prone Great Hungarian Plain. Since 2017, the farm has gradually shifted from conventional tillage towards no-till, cover cropping and crop diversification, alongside a broader landscape-scale effort to improve water retention and ecological resilience.

Starting challenges

Residues alone did not prevent annual re-compaction. Repeated deep tillage produced clods or dust, while income swung between poor and good years. Attila felt trapped in a “hamster wheel” and wanted a living soil system and a more predictable and dependable business.

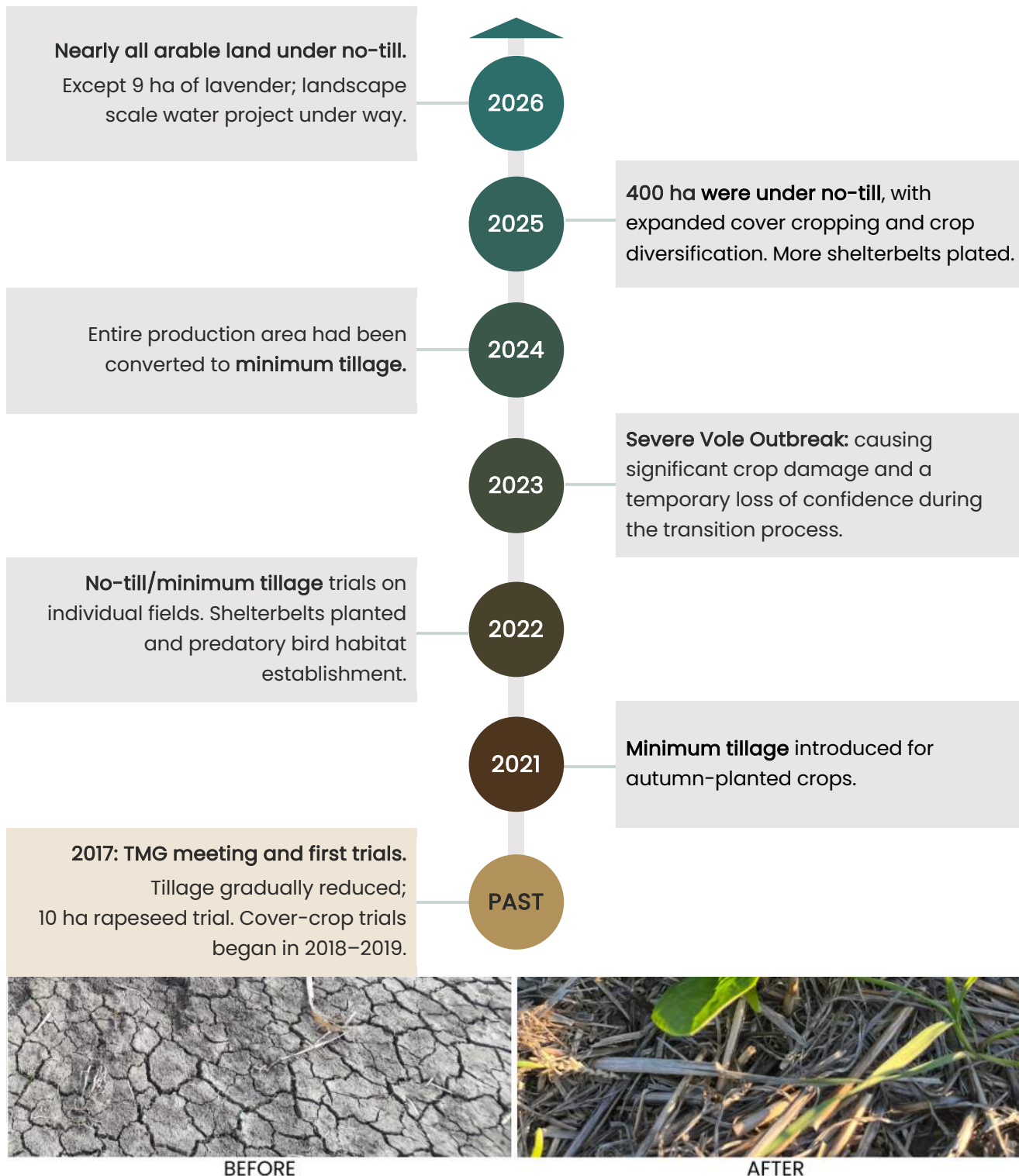


Szeredi Ltd. farm headquarters

Regenerative transition timeline

Future plans

Livestock integration, expanded water-retention and ecological restoration, continued biodiversity measures, and eventual transition toward organic production.



From innovation to local practice

The regenerative practice

Guided by water retention, this practice combines no-till planting under surface residue with self-formulated cover crop mixes, crop diversification, and reduced synthetic inputs. Together, these steps rebuild soil biology, earthworm populations, and long-term stability and drought resilience across the entire farm.

First steps and sequence

After the 2017 decision, a 10 ha rapeseed trial within a 28 ha field used a semi-direct drill. A parallel direct-sown sunflower trial also matched conventional yield without tillage costs, encouraging gradual expansion.

Tools and resources

The farm owns an autumn direct-drill and rents a spring drill, with purchase planned. A soil probe helped assess every field. Wide, low-compaction tyres were fitted to transport and handling machinery.



No-till drilling into wheat residues • [Attila Szeredi, 2025]

Time and seasonal requirements

The nine-year transition shifts overall labor from repetitive tillage to managing new crops, water-retention projects, and landscape ecology. Though fieldwork simplifies, flexible seasonal timing remains crucial to avoid risks like late-October harvests.

Support and learning

TMG peer network provides meetings, documentation and farmers to contact or visit. Continuous learning relies on stepwise field trials, annual soil sampling, and observing nature directly.

Difficulties and responses

Major transition challenges included initial staff scepticism, late-season weather risks, and pest outbreaks like slugs and voles. Attila resolved these through gradual field trials, flexible seasonal adjustments, targeted remedies, and peer support.



Soils become more aggregated • [Attila Szeredi, 2022]

Further implementation detail

Large cover-crop seeds are saved on-farm; small seeds are bought through farmer contacts. Seed is an annual cost. Time released from tillage goes into new crops and landscape work; total workload has not fallen.

Before and after: what changed

Measured results

-74%

Machinery and fuel cost

Tillage → No-till

Source: farm calculations

10X

Earthworm count

Compared to neighbours' field

Source: SZTE University

-60%

Nitrogen fertilizer use

2020 → 2025 in corn and sunflower

Source: farm data

Practice before and after

Previous approach	Regenerative approach / new practice
Plough/disc cultivation; repeated loosening; residues retained, no cover crops.	Almost all arable land under no-till except lavender; residues plus cover crops.
Repetitive annual work and sharply fluctuating income.	Diverse crops and landscape work; continual adaptation and reportedly steadier business.

Evidence and observed change

Indicator / evidence	Before	After / change	Source
Earthworms per spade	0–1: neighbouring conventional field	15–20: Attila's field; different-field comparison	University research observations (SZTE)
Machinery cost including maintenance (per ha)	150 EUR: conventional tillage	40 EUR: direct drilling	Farmer records

What was difficult

Major farming difficulties on the farm included severe pest losses from a vole outbreak and slugs in spring of 2025. Additionally, grassland burned out, herbicides remain a bottleneck, and late sowing posed serious risks of crop damage from autumn rains.



Vole outbreak in 2023

What worked well

No-till trials matched conventional yields without tillage costs. NPK fertilisers were reduced without losing yields, while significantly boosting soil biology, water infiltration, and business stability. Reportedly better soil structure and life, fewer cracks, more birds.



Increased soil biology even in April drought 2026

From ploughing to no-till

Ten years of field-operation cost data from the transition from conventional tillage system to full no-till. The table below shows costs of the soil cultivation systems used on Attila Szeredi's farm up to sunflower sowing including fuel, labor, depreciation, and spare parts.

Tillage system	Operation	Equipment used	Depth (cm)	Cost €/ha	Total /ha	Relative cost
Conventional tillage	Stubble cultivation	Fradisk 6 m	15	25	158 €	100%
	Ploughing	Rába-W 5-furrow	35–40	81		
	Winter disking	Fradisk 6 m	15	28		
	Seedbed preparation	Agrikon UM 5.6 m	5–10	25		
No-plough tillage, with subsoiling	Stubble cultivation	Fradisk 6 m	15	25	153 €	96%
	Mid-depth subsoiling	Fralaz 5–7 tine	40–45	75		
	Finishing / levelling	Carrier 6 m	10	28		
	Seedbed preparation	Agrikon Unimat 5.6 m	5–10	25		
Reduced tillage	Stubble cultivation	Carrier 9 m	10	25	106 €	66%
	Deep cultivator	Väderstad Opus 5 m	25–30	56		
	Seedbed opening	VS Aggressive 10 m	5–10	25		
Min-till	Stubble cultivation	Carrier 9 m	10	25	50 €	32%
	Autumn seedbed	VS Aggressive 10 m	5–10	25		
Min-till + cover crop	Early stubble cultivation	Carrier 9 m	10	25	67 €	42%
	Cover crop seeding	Horsch Pro NT 6 m	5	42		
No-till + cover crop	Cover crop seeding	Horsch Pro NT 6 m	5	42	42 €	26%

Benefits and farm viability

Attila judges actual costs and whole-farm results, not yield alone. Profit is partly reinvested in ecological infrastructure. Soil, water and biodiversity benefits remain unquantified.

Lessons from this farm



Opportunities for other farms

A gradual route for medium-to-large arable farms in dry lowlands, including heavy clay and river-alluvial soils. Attila sees potential for lower long-term input costs, drought resilience, steadier income, peer learning and wider landscape benefits.

Conditions and adaptations

Adapt to local soils, equipment and ecology. Existing shallow cultivation tool, such as disc harrows and cultivators can serve the early transition; direct seeding later needs suitable machinery. Landscape work needs secure land access and specialist support. Mentoring and documentation enable knowledge transfer.



Practical lessons

Patience, field observation and honest relationships support technical change. Monitor soil life, water, pests, yield and costs together.

- 01** Start with one small field trial and an honest conventional comparison before scaling up.
- 02** Put water first: let availability guide soil, crop and livestock decisions.
- 03** Adapt rather than copy another farm or programme; large untested changes can destroy motivation.
- 04** Spend time in the field. Soil smell, crumbs, earthworms and water depth help reveal how the land responds.



Attila's own cover crop mix, including spinach, which supports glomalin production and improves soil structure.

Further information

TMG farm profile: <https://tmg.hu/presenter/szeredi-attila/>

TMG – Talajmegújító Gazdák Egyesülete (Regenerative Farmers Association of Hungary).

From innovation to local practice continued

Thinking big

A water-retention project is under way with University of Szeged (SZTE) hydrology researchers, the Lower Tisza Valley Water Directorate and an ecology team including. A planned wetland on a former Maros oxbow, "Marosér", would support grazing once water reliably sustains the farm's biology from June to October.

About 1,000 ha are owned. Attila considers ownership crucial for long-term wetlands, shelterbelts and water retention. Beekeeping and bird boxes are starting. Benefits could extend beyond the farm through water retention and habitat.



Enhancing biodiversity, Photo: Attila Szeredi

Farmer voice

Attila describes the change as "a rearranging of things within ourselves". Attila Szeredi conveys deep humility, conviction, and practical wisdom forged through transition.

Moving away from the frustrating "hamster wheel" of conventional tillage, he speaks candidly about aligning farming with ecological healing and water retention.

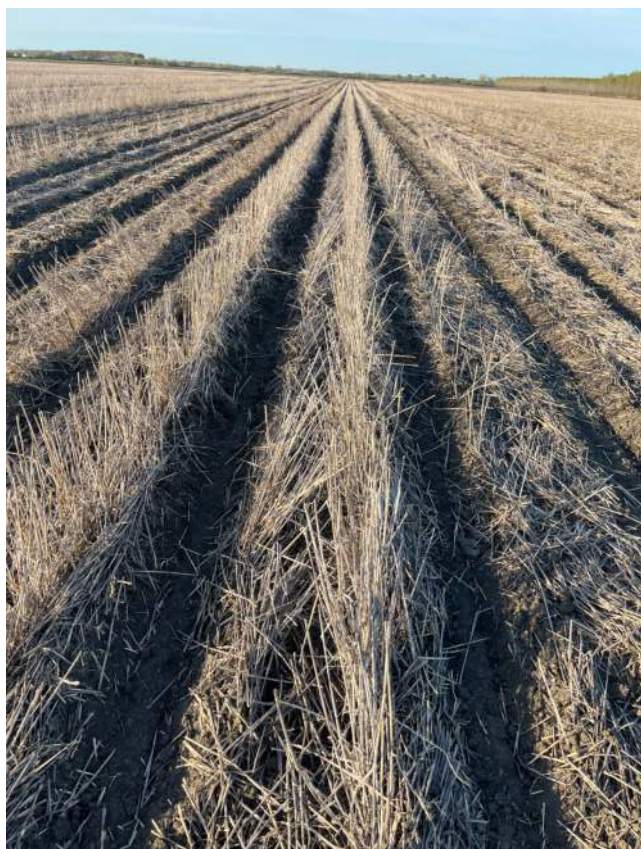
Rather than chasing short-term yields, his perspective prioritizes long-term resilience, continuous field observation, and honest human relationships.

He views agriculture not as a mechanical routine, but as a creative, faith-driven partnership with nature that rebuilds soil capital and landscape health.



Attila Szeredi speaking at TMG REAG conference, 2026

The farm in pictures





Credits



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REGE-FARMS

Warm thanks to **Attila Szeredi** for sharing time, experience and practical knowledge to help other farmers consider what could work on their own farms. We also thank the **European Union for co-funding REGE-FARMS through Erasmus+**, enabling farmers to share knowledge and learn across Europe.

To support practical learning, REGE-FARMS case studies use an adapted **PICO model—Problem, Innovation, Comparison and Opportunity**—to connect each farm's challenges and practices with observed changes and lessons for other farmers.

REGE-FARMS helps farmers across Europe transition to regenerative agriculture through practical knowledge and tools, digital training, case studies and hands-on field days. It supports soil health, biodiversity and carbon sequestration, strengthening climate resilience and the long-term sustainability of farming systems.

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