THE MAGAZINE

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FINCK FOUNDATION
ANNUAL REPORT

THE LIVING LABORATORY FOR REGENERATIVE ECOLOGICAL AGRICULTURE AND FORESTRY

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1. FOREWORD

Agriculture underpins so much of what we value. It secures our food supply, shapes our landscapes, and defines our culture. Without it, functioning societies would not exist. However, today we possess greater understanding. We know that our economic system externalises costs – not only into the future but also onto society as a whole. We know that our soil, our water, and our ecosystems are not infinitely resilient. And we know that we must act. It is our responsibility to use this knowledge and adapt our system accordingly, because what we consider economically viable today will cost us dearly tomorrow.

Our agricultural system is currently at a systemic dead end. It is expected to produce healthy food, protect the climate, preserve biodiversity, develop rural areas – and still remain economically viable. All of this within a system that neither measures nor acknowledges the true costs.

The agricultural sector presently overlooks crucial factors such as soil fertility, water retention capacity, biodiversity, and resilience, all of which are essential for navigating future crises. Instead, the primary focus remains on yield per area, contribution margin, and standard performance, often independent of specific time, place, climate, or natural cycles. This approach highlights agriculture's decoupling from its intrinsic processes, its ecological embedding, and what ultimately sustains it long-term.

Responsibility for biodiversity is externalised to nature conservation laws, while water management falls under the Water Framework Directive. Notably, accountability for soil health remains unassigned.

The true costs associated with depleted soils, groundwater contamination, and the loss of biodiversity are not reflected in consumer prices. The costs for depleted soils, groundwater contamination, and the loss of biodiversity do not appear on the supermarket bill. They manifest in rising healthcare costs, the climate crisis, extreme weather events, farm closures, and economic insecurity. We, as a society, pay the price – just not at the checkout. We pay it through climate change impacts, increasing healthcare expenses, species extinction, the devaluation of rural areas, and the disappearance of farms.

A farm that builds humus-rich soil, protects groundwater, and creates habitats for insects increases the value of its land and the entire region. But under the current economic system, farms are not rewarded for these contributions – in fact, they often face higher cost

Sustainability performance often appears only as costs in business accounting. Yet, these are investments – in the future, in resilience, in the common good.

In 2024, the systemic imbalance in agriculture once again formed the starting point of our Foundation's work – its decoupling from ecological processes such as soil fertility, biodiversity, and water cycles, as well as the shifting of true costs onto society.

The imperative to cultivate resilience, not merely against individual risks but for the inherent unpredictability of the agricultural system itself, was particularly underscored by this persistent imbalance. This was clearly demonstrated, for instance, when the climate crisis exacerbated challenges through extreme weather events, such as the shift from drought to intense rainfall in 2024. Against this backdrop, we continued to critically examine this decoupling and piloted alternative approaches within our projects. Our central focus remained on facilitating this transition: operating at the interface between research and practical application, and between agricultural production and ecological regeneration.

It's about not thinking of agriculture as an isolated production unit, but as an embedded system: as part of functioning soil processes, a living water cycle, as a place for biodiversity, humus formation, evaporative cooling, and carbon sequestration. A space where yield doesn't oppose life processes but rather emerges from them.

Agriculture is the key to solving numerous global crises!

Flood protection starts with soil protection. Health begins with a healthy diet. Economic resilience begins with functioning ecosystems. Migration has many causes - but a central one is the destruction of livelihoods. Education and equal opportunities in less developed countries begin with food security.

We need methods to quantify and socially reward common good services. No 'one-size-fits-all', but regional, context-adapted solutions. We need to move away from isolated ceteris paribus considerations towards a systemic perspective.

Thanks to remote sensing, increasingly affordable sensors and the use of A.I., we can record the ecological and economic effects of agricultural measures better than ever before.

But, are we asking the right questions?

These questions arise not only in theory, but also in the work with living systems. In the Foundation's work, we ask ourselves how soil fertility can be systematically recorded. How diversity contributes to stability. What interactions arise between plants, animals, microorganisms and management decisions. And how can all of this be translated into ecologically regenerative, socially just, economically resilient and realistic agriculture?

We consistently observed that it is not enough to talk about transformation; it must be actively pursued. It requires spaces for experimentation, the courage to embrace complexity, and the patience and persistence to look at systems not only in terms of their yields, but also in terms of their ability to regenerate. Where would we be today if we had started integrating the true costs and benefits of agriculture into our economic systems 20 years ago?

Far more important: Where could we be if we start now?

This is precisely the question we had the opportunity to work on in 2024. This work is only possible thanks to the trust and support of our funding partners, collaborative networks, and companions. Transformative projects need more than just ideas; they require reliable partners who are committed to them – financially, conceptually, and institutionally. Our funders made it possible for questions to turn into concrete practice. They have not only provided support, but also helped to shape it. I would like to thank everyone who has enabled us to work on these issues in 2024 – with openness, curiosity and the willingness to take responsibility.

And I want to thank our team. Their collaborative thinking, steady progression, courage in facing uncertainty, and perseverance in their daily work are invaluable. This work thrives on people who act not only with knowledge, but with conviction.

- Benedikt Bösel, Managing Director
and Founder of the Finck Foundation

CHAPTER 2
THE LIVING LAB

2.1 ON THE PATH TOWARDS THE FUTURE

2019

April: 1st agroforestry system consisting of pasture, poplar and alder on 29.5 hectares of arable land.
May: Start of holistic pasture management (cows: 11 Salers, 9 Angus, 1 bull).
Winter: Planting a syntropic agroforestry system with 200 different fruit, nut and berry varieties, as a test site.

2020

April: 30 more cattle integrated into the exisiting cattle herd to manage the pastures.
Winter: 1. planting of an agroforestry "seed system" from our own seeds and a "deciduous pasture" to create a year-round green syntropic, silvopastoral system for cows and chickens.
2. conversion of the Christmas tree plantation into regenerative plantation with berries and chestnuts.

2021

March: Establishing the Finck Foundation gGmbH to conduct research and gather data for the trial of these approaches.
Spring: Establishment of composting system to build up the soil life, close nutrient cycles and the establishment of a tree nursery for high-quality, site-adapted planting material.
Early Summer: Establishment of the bees onto the farm. A co-operation to promote pollination performance and start of the DaVaSus research project.
Summer: 1. Carrying out soil reference sampling and analysis of 400 composite samples. These were taken from over 10.000 geo-referenced punctures in 5 different laboratories to generate comprehensive baseline for effect measurement. **2.** Planting of flower strips to promote beneficial insects and biodiversity. 3. Planning measures for biotope networking, e.g. by means of target re-naturalisation.
Winter: 1. Establishment of an agroforestry "Keyline" system for water retention by planting along the contour lines. This included comprehensive cost and effort analysis of the new agroforestry system in cooperation with the KTBL.
2. Start of monoculture conversion in the forest – including scientific data collection in cooperation with HNEE. 3. Programming of a digital twin of the agricultural and forestry areas into a separate database - with over 50.000 data points on soil, climate and fauna of the data points with sensors.

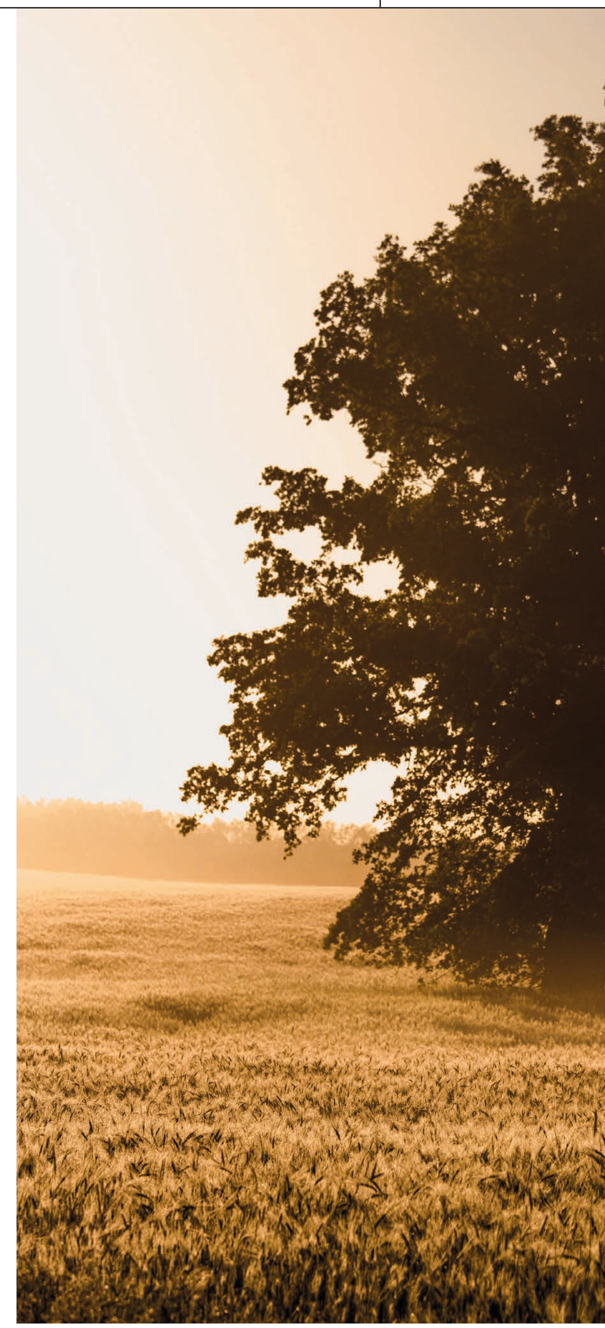
2022

Spring: Installation of 200 nesting aids to strengthen biodiversity. First compost inoculations of approximately 30 tonnes of seed for 400 hectares of arable land.
Summer: First field refinements on the agroforestry areas.
Autumn: 1. Re-naturation of four field swales to enable water collection and habitat preservation for rare amphibians. **2.** Conclusion of scientific co-operation agreements with the Julius Kühn Institute, the Leibniz Institute of Freshwater Ecology, Eberswalde University of Applied Sciences and the Board of Trustees for Technology and Construction in Agriculture. **3.** Planting of an agroforestry system on 5 hectares as a biotope network. **4.** Climate measuring stations set up.

2023

Spring: Establishment of 400,000 m² of floweringstrips on and alongside arable fields to promote beneficial insects and create habitats.
Summer: Implementation of rumen bolus technology to optimise animal health and well-being in suckler cow husbandry.
Autumn: Completion of the revitalisation of four 5,000 m² field ditches to promote biodiversity and water retention.
Throughout the Year: 23 interns, over 1,600 visitors, TV appearances, radio interviews and an invitation to the German Federal Parliament.

A LIVING LAB EMERGES FROM THE MIDST OF A FARM



2024

Summer: Virtual fencing with GPS technology was piloted in Germany for the first time, using eShepherd collars for flexible and animal-friendly pasture management.
Autumn: 1. Optimisation of soil management by using the modified Claydon drill, which applies seed, compost extract and ferments in a single pass. **2.** Expansion of long-term soil monitoring with over 360 measuring points on 1,000 hectares to record humus formation, water retention capacity and soil biology.
Winter: Establishment of a 26-hectare silvoagropastoral system.
Throughout the Year: Welcomed over 1,900 visitors from science, practice, and politics.

MILESTONES OF 2024

PIONEER STUDY *ON SOIL MICROBIOME IN AGROFORESTRY SYSTEMS*

MODIFICATION *OF THE CLAYDON DRILL*

NEW INSTALLATION *OF THE LARGEST AGROSILVOPASTORAL SYSTEM SO FAR ON 26 HECTARES*

FIRST EXTENSIVE PRACTICAL TEST *OF ESHEPHERD COLLARS IN GERMANY AND LONG-TERM MEASUREMENTS WITH RUMEN BOLUS SENSORS.*

RESTORATION *OF THE 10,663 M² + LARGE KLEEPFUHL*

GIZ CONFERENCE *WITH 70+ INTERNATIONAL AGRICULTURE AND FOOD SECURITY EXPERTS*

FIELD DAY *WITH 80+ VISITORS FROM AGRICULTURE AND FORESTRY*

2.2 RESEARCH PROJECT

THE ENTIRE RESEARCH PROJECT DAVASUS

DaVaSus - Data and value-based decision-making for a sustainable land use
// Research Project of the Finck Foundation
funded by the BMEL cooperation partners JKI, KTBL, ATB

DaVaSus is being conducted out as a collaborative project under the leadership of the Finck Foundation, the Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB), the Julius Kühn Institute (JKI), and the Board of Trustees for Technology and Construction in Agriculture (KTBL). The project is initially scheduled to run from February 10, 2023, to December 31, 2025.

It is one of 12 experimental sites funded by the German Federal Ministry of Food and Agriculture (BMEL), which researches future farms and future regions of digitalisation in agriculture. The funding guidelines aim to explore the benefits of digitalisation for domestic agriculture, enabling farms to become more productive and competitive while simultaneously promoting and improving sustainability and animal welfare, as well as environmental, nature, and climate protection. The project is administered by the German Federal Office for Agriculture and Food (BLE).

Project Partners:

Digital Twin - Visual Interactive Representation of the Living Lab
// Cooperation with AVINA and Acernis

Water Availability and Groundwater Recharge
// Research Cooperation with IGB

SEBAS - Enhancing of Biodiversity through Agroforestry
// Research Cooperation with BTU Cottbus, DeFAF, DVL

WAKS - Rewetting of Agricultural Waters as an Immediate Climate Protection Measure with JKI
// Research Cooperation with JKI

Regenerative Forest Conversion
// Research Cooperation with HNEE, TUM, and JKI

Habitat Connectivity
// Planned by the Finck Foundation in cooperation with FÖL, the Water and Landscape Management Association Untere Spree, and funded by the NaturschutzFonds Brandenburg.

ENTER THE LIVING LAB

Transdisciplinary innovation for agriculture and nature conservation

How can agriculture be productive, regenerative, ecologically valuable, and future-proof at the same time? This fundamental question lies at the core of the Living Lab – a dynamic learning environment where regenerative, multifunctional ecological agriculture and forestry are implemented by Gut & Bösel and continuously developed in close collaboration with the Finck Foundation and its scientific partners. While interdisciplinary research connects various academic disciplines, the Finck Foundation emphasises transdisciplinary research – starting where real change takes place: in actual land use. Farmers, scientists, and businesses collaborate to develop sustainable and innovative solutions for the future of agriculture. What distinguishes the Living Lab is that it does not rely on an artificially constructed test environment, but rather builds upon existing, real, existing practices in agriculture and forestry. This method offers many advantages: land-use approaches are implemented, examined, and further developed within the real economic, ecological, and social reality. As a result, the findings from this Living Lab have particular practical relevance and are directly transferable to other farms. Furthermore, the Living Lab doesn't impose rigid frameworks or experimental designs, allowing it to adapt to natural and economic changes.

Ecological, economic and social effects of land use

within the Living Lab, the effectiveness of regenerative, multifunctional land use approaches is monitored with regard to ecological, economic, and social effects. These include ecological effects such as the improvement of soil health, the promotion of biodiversity, and the optimisation of microclimates, as well as economic effects such as the increase in plant health, the improvement of yield stability, and the reduction of necessary inputs. Social effects are also taken into account, such as increasing the independence of agriculture, improving its adaptability to climatic and societal changes, and integrating societal demands into agricultural practice. To investigate these topics, the Finck Foundation collaborates with various scientific disciplines, including organic agriculture and crop production, forestry science, soil science, ecological chemistry, and plant analysis. There are close partnerships with universities and research institutes. In addition, the development of machinery and sensor technologies for the quantification and long-term monitoring of land use practices – particularly in the areas of biodiversity and soil monitoring – is being promoted. Start-ups are also involved in this work. Alongside long-term monitoring, the Living Lab also serves as a starting point for specific research projects in which individual effects of land use practices are examined in greater depth. These include projects such as SEBAS, which investigates the effects on biodiversity and microclimate in agroforestry; WAKS, which studies the potential of rewilded field swales for CO_2 storage; and DaVaSus, a project acquired and led by the Finck Foundation, which focuses on the integrated assessment of regenerative practices using digital measurement and evaluation methods, and is funded by the BMEL.

Agriculture presents farmers and foresters with complex challenges that cannot be overcome with simple solutions. Therefore, it's crucial that scientific insights and practice-oriented solutions go hand in hand.

The Finck Foundation sees itself as an intermediary between research and practice – not just as a translator of scientific findings, but also as a transformation and innovation manage.

Making results visible
formats for public relations and knowledge transfer

Transformation in agriculture only has a lasting impact if it takes place on a large scale. To achieve this, both practical experiences and scientific findings must be shared and made accessible. For this reason, the Finck Foundation is committed to transparent and interactive knowledge transfer and serves as a centre for education and knowledge exchange. This approach links scientific research with agricultural practice. Knowledge is disseminated through various formats, including specialist articles, experience reports, social media posts, presentations, and trade fair appearances. Additionally, specially developed formats are utilised, such as interactive field days, subject-specific farm tours, and "Lunch & Learn" sessions.

Complexity as a strength
Experiences from transdisciplinary collaboration

Farmers often require quick, practical solutions to pressing challenges such as climate change, market fluctuations, and political regulations, whereas scientific research needs time to deliver valid and reproducible results. Agriculture operates within a complex system shaped by seasonal cycles, market dynamics, political frameworks, and societal expectations. One of the Finck Foundation's main tasks is to translate this complexity into accessible research that is closely linked to practice. By integrating real-world experience with scientific enquiry, insights can be applied rapidly and effectively, offering innovative and applicable solutions for agricultural operations. The Foundation also fosters ongoing dialogue among scientists, practitioners, and policymakers to build bridges between these groups. This collaborative momentum empowers farmers and foresters to act as pioneers of current scientific knowledge and innovation.

2.3 ALT MADLITZ 2024

A LOCATION FULL OF CHALLENGES AND OPPORTUNITIES

The Finck Foundation's 16 DIY weather stations provide a large-scale, practice-based setup for gathering weather data within the Living Lab.

Late frost
0 degrees at the end of April

Temperatures
between -13,1 °C
and +37,6 °C

Annual precipation
662 mm

Annual temperature
10,5 °C

Heavy Rainfall Events
In June, July und August
with up to 12/Lm2
in 15 Minutes

> *The Finck Foundation's Living Lab operates not in a constructed reality, but within actual agricultural practice. Here, I experience firsthand the considerations, conflicting objectives, and challenges farmers navigate daily. We have the opportunity to scientifically support and assist Gut & Bösel in this endeavor.*
>
> \- Joke Czapla / Head of Science

Site-Specific Conditions at Alt Madlitz

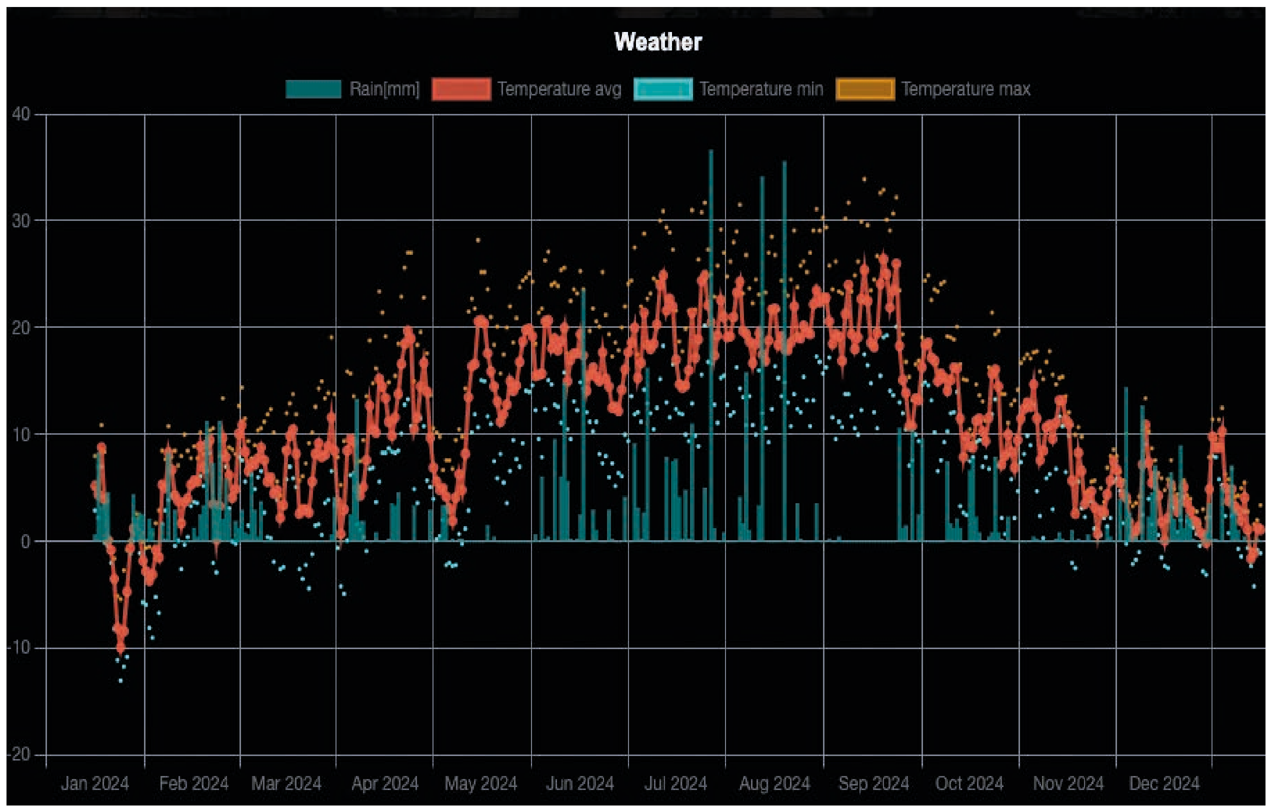
Climate and soil

The agricultural potential of any given site is fundamentally shaped by its climate and soil conditions. Within the Living Lab in Alt Madlitz, the Finck Foundation conducts continuous analyses of these factors in order to systematically assess the effects of climate change and soil properties on agricultural systems. This site-specific analyses serves as a foundation for the development of sustainable land management practices that aim to preserve soil fertility while enabling adaptation to increasing climatic extremes.

Climatic Extremes and Climate Change

Brandenburg is one of Germany's driest regions and is increasingly affected by extreme weather events. The average annual temperature has been rising continuously; 2024 was the warmest year on record, with an average temperature of 11.4 °C. While the number of hot summer days is increasing, the number of frost days is declining, and the growing season is getting longer. This development could offer advantages for crop production – provided that water availability can be reliably ensured. However, precipitation patterns are shifting. Although the average annual precipitation in Brandenburg is approximately 545.6 mm, increasingly pronounced fluctuations have been observed over recent decades. In particular, the summer months are marked by prolonged droughts, interrupted by heavy rainfall events. These, however, contribute little to groundwater recharge, as the water often runs off on parched soils without infiltrating.

These climatic developments pose major challenges for agriculture. Heatwaves cause stress in cultivated plants, while sudden heavy rainfall can lead to surface runoff and soil erosion.



In 2024, the weather station at the farm recorded a temperature range from -13.1 °C to +37.6 °C, with an average annual temperature of 10.5 °C, and a total rainfall of 662mm. This was characterised by high summer temperatures combined with heavy rainfall events in July and August, followed by dry spells in September.

Soil Health and Heterogeneity

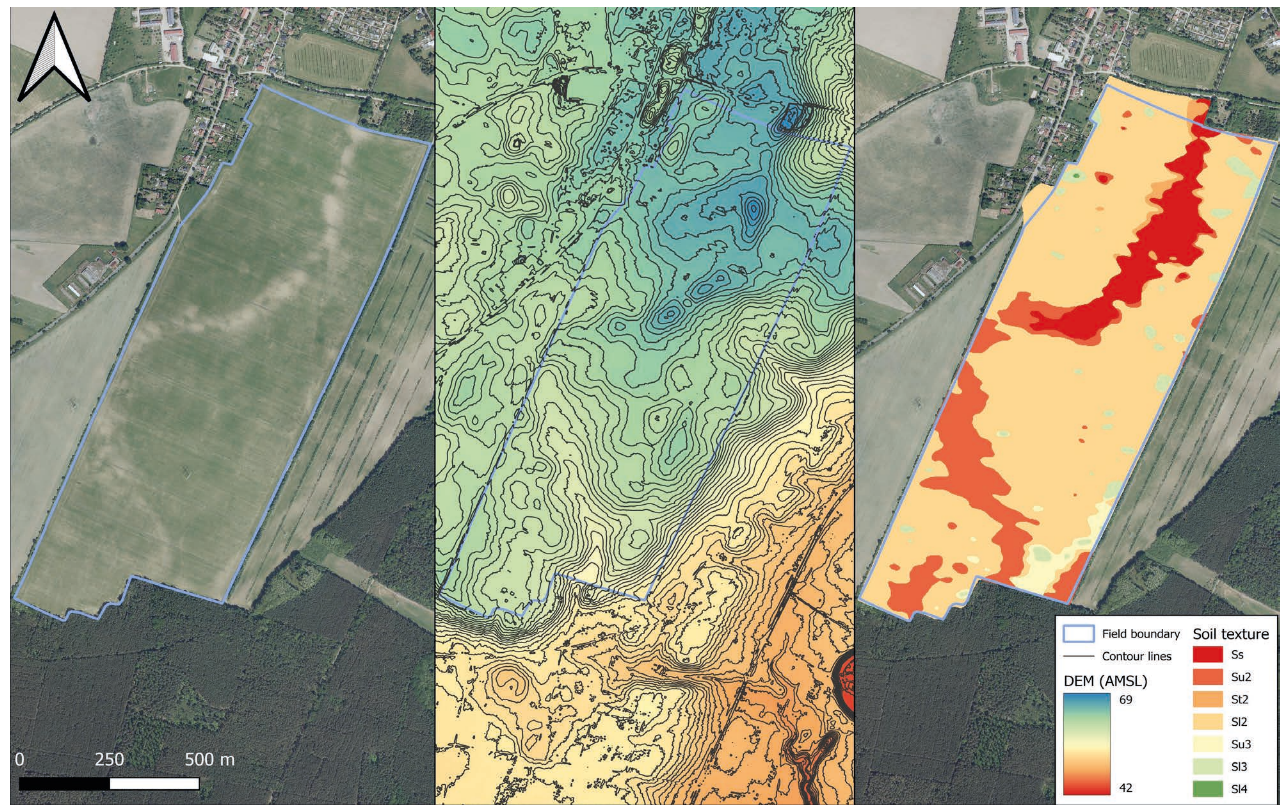
In addition to climatic factors, soil properties play a central role in ensuring yield stability. The soils in Brandenburg are predominantly sandy and have a low water retention capacity. While these characteristics support good aeration and rapid warming, they also lead to quick desiccation, posing significant challenges for agriculture.

Another defining feature is the high degree of soil heterogeneity. Within a single field, soil type, pH value, and water-holding capacity can vary considerably. While nutrient-rich depressions offer favourable growing conditions, elevated areas often consist of nutrient-poor soils that are highly susceptible to erosion. This variability is a direct result of geomorphological processes dating back to the last ice age. Managing heterogeneous fields requires tailored agronomic strategies. Uniform cultivation practices are often inefficient, which is why the Finck Foundation is actively testing site-specific management approaches adapted to local soil characteristics.

Future-proof Agriculture Research

In response to the challenges posed by climate change, the Finck Foundation pursues scientifically grounded measures aimed at preserving soil fertility and water retention capacity. Precision management, supported by geospatial data analysis, enables the optimal use of different field zones. Soil structure can be improved over the long term through humus enrichment and composting. Agroforestry systems make a significant contribution to increasing the soil's water-holding capacity by reducing evaporation and enhancing root penetration.

Erosion control measures such as flower strips, undersowing, and reduced tillage help to minimise soil loss due to water and wind erosion. Through close collaboration with scientists and farmers, the Finck Foundation develops strategies for resilient agriculture that can be applied and scaled across other farming operations in the long term.



Soil Heterogeneity Visualised: When an arable field in Alt Madlitz is displayed as an aerial image, relief map, and texture map, the diverse soil conditions become clearly visible. Even in the aerial image, differences in vegetation are apparent, revealing a serpentine low-yield zone. This zone manifests both as an elevation (blue) on the relief map and as a sand belt (red) on the texture map.

THE FINCK FOUNDATION 2024

77 ha

of agroforestry - spread across 9 systems

—

20.000+ Litres

Compost extract produced

—

330.000 m²

Biodiversity strips

—

10.663 + m²

restored small water bodies

—

1.900+

visitors

—

20

Interns

103

Diffrent bird species detected by bird monitoring

—

17.000+

Copies of Rebels of the Earth - now in its 4th edition

—

50+

Lectures throughout Europe

RESEARCH PROJECT DAVASUS 2024

5

Areas of externalities in focus

—

12

Digital measurement methods and management tools

—

4

Active APIs for the evaluation dashboard

—

15

Workshops, demonstrations and lectures to exchange ideas with practitioners, rese-archers and politicians

CHAPTER 3
RESEARCH FOCUS AREAS

The year 2024 was characterised by climatic challenges that required flexible adjustments to cultivation and harvest planning. At the same time, new composting methods and improved sowing technology provided promising insights for the further development of regenerative arable farming.

3.1 ARABLE FARMING AND COMPOSTING

Arable farming in the Living Lab relies on regenerative methods to ensure the long-term preservation of fertile and resilient soils. Targeted crop rotations, the use of compost to strengthen soil life, and innovative technologies support regenerative cultivation.

REGENERATIVE ARABLE SYSTEMS

Climate and Yields
While maize and sunflowers benefited from adequate water supply, the late sowing of peas resulted in total crop loss due to heavy rainfall. The harvest was difficult because of unstable weather conditions, which complicated the drying process. In a move to adapt, the focus shifted to lupins offering more dependable yields.

Cultivation Methods and Crop Rotations
The crop rotation has been specifically adapted to counteract climatic challenges and maintain soil fertility.

Key Measures
As an important adaptation, the cultivation of peas was abandoned in favour of lupins. The cultivation of silage maize was also expanded, as maize, being a C4 plant, is well-adapted to the location. Furthermore, cover crops were utilised for soil cover, biomass production, and to promote soil life.

Importance of Crop Rotation
In 2024, cover crops played a crucial role in arable farming and were specifically implemented. This initiative notably focused on several key areas: promoting soil life through organic matter and root exudates, reducing erosion and improving the soil's water retention capacity, suppressing weeds through dense stands and shading the soil surface, and enriching nutrients via targeted mixtures including legumes.
The area dedicated to specialised cover crop mixtures was significantly expanded from 35 hectares to 220 hectares. Additionally, all undersown crops and arable forage mixtures were individually tailored to the specific site conditions. These specialised mixtures comprise carefully combined plant species that fulfil various agro-ecological functions. For example, some are fast-growing for soil cover, others are deep-rooting to loosen compacted soil layers, legumes fix nitrogen, and flowering species promote insects and soil biology. The selection of each mixture is site-specific, based on soil type, previous crop, nutrient status, and the planned subsequent crop.
This not only purposefully builds up soil fertility but also sustainably improves the biological diversity and functionality of the soil. These measures contribute in the long term to enhanced soil health and yield stability. The ability of cover crops to suppress weeds was particularly well-regarded, as this reduced the burden on subsequent crops.

Soil Health and Compost Application
Composting played a central role in soil improvement. The use of a compost dressing in practice led to an extremely uniform emergence of the winter crops. Additionally, the following measures were implemented: fertilisation into established cover crops, seed treatment at sowing, foliar spraying with compost extract, and inoculation of fermented cattle manure. To better quantify the effects of compost application, detailed data collection through soil analyses and crop yields will be carried out in the future. This will enable a more targeted application of compost quantities and composition for optimal results.

Data Collection and Monitoring
The Finck soil monitoring provided valuable insights for the fertilisation strategy over the next three years. Soil samples were specifically utilised to optimise micronutrients for cover crops and arable forage mixtures.

Successes and Challenges
A significant success was the ploughless sowing with the new Claydon drill. Despite initial challenges due to high weed pressure, effective mechanical weed control was achieved through hoeing techniques. The successful implementation of this custom-made equipment allowed for the smooth cultivation of the fields.

CONCLUSION ARABLE FARMING: Significant progress was made in 2024 in soil improvement, crop rotation design, and technology use – key steps for regenerative agriculture. In the future, crop production in the Living Lab will expand compost fertilisation and humus-enhancing crops, optimise mechanical weed control, and promote intercropping to sustainably strengthen soil health and ecological processes.

MICROBIOLOGY IN FOCUS

COMPOST AS THE KEY TO SOIL REGENERATION

A Healthy Soil is the Basis for Long-Term Productive and Resilient Agriculture.

Compost plays a central role: it not only improves soil structure and provides nutrients but also actively promotes soil life. Crop production in the Living Lab strategically uses compost as a fertiliser to establish diverse microbiology by reintroducing microorganisms – such as fungi, bacteria, nematodes, and protists – into the soil in the form of extracts. These microorganisms enhance nutrient availability and stabilise soil structure, which in the long term supports humus formation and increases the soil's water-holding capacity.

The targeted use of compost not only promotes plant growth but is also crucial for maintaining long-term soil fertility. Compost helps create a functioning soil food web that enhances soil stability and biodiversity. These processes have been proven in practice and are supported by research, which demonstrates how compost contributes to the soil's resilience against challenges like erosion and nutrient loss. Promoting microbiology is a proven mechanism that supports long-term soil regeneration and ensures sustainable agricultural use.

Through practical applications and ongoing observations, the Finck Foundation has already gained important insights into how compost improves soil quality and soil life. These experiences form the basis for the continuous development and improvement of regenerative agricultural methods within the Living Lab.

20.000 LITRES

of **compost extract** produced, with a targeted blend of fungi- and bacteria-rich composts for maximum microbial diversity.

4.000 LITRES

compost extract was applied in the agroforestry system to give the trees a good start by providing rich microbiology.

300 TONS

of **compost** produced for arable farming, with optimised turning cycles and microbiome analyses.

HOW THE MACHINES WORK TOGETHER

Modified Claydon

Self-built Juice Mobile

A Strong Duo – Machine Innovation for Greater Effectiveness

A Powerful Duo: Machine Innovation for Greater Effectiveness
A key success of the year was the successful implementation of ploughless sowing methods. The modified Claydon drill proved to be a crucial technical innovation, having been specially adapted for use with compost extracts and soil ferments. Its unique setup, featuring two 600-litre tanks for microbial liquids and two separate tanks for seeds and fertiliser, allows for efficient soil cultivation, sowing, and inoculation in a single pass.
The system is complemented by the custom-designed and built 4,000-litre Juice-Mobil, which ensures convenient refilling directly in the field. This combination of ploughless cultivation and innovative sowing technology marks an important step towards productive yet soil-regenerating agriculture.

COMPOSTING

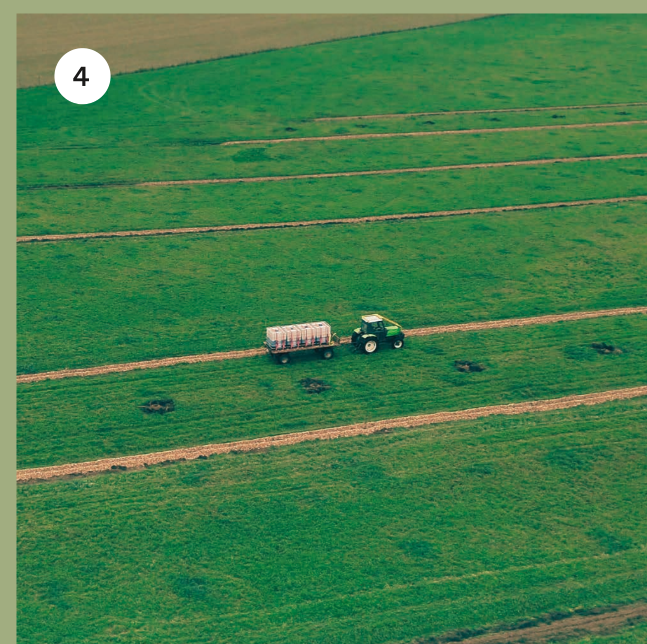
DIVERSE AREAS OF APPLICATION

(1) **Direct Fertilisation with Compost:** Compost was directly applied to the cover crops to increase the soil's organic matter, promote a stable soil structure, and introduce diverse microbiology.

(2) **Injection of Compost Extract and Ferment into the Soil:** To support plant germination and early development, compost extract and a ferment were injected into the seed trench and the soil loosening slit.

This resulted in more uniform germination and stronger root systems already in the early growth phase.

> *I'm convinced that we're in the midst of a paradigm shift that's placing biological processes at its core, prioritising the significance of microbiology in both the soil and the plant.*
>
> - Laurenz von Glahn / Manager of Nutrient Cycles and Microorganisms



(3) **Foliar Spraying for Targeted Plant Nutrition:** Compost extract and micronutrients were applied through foliar spraying to optimise plant health.

This supports the plant's metabolic processes, increases nutrient density, and boosts photosynthesis performance, which in turn aims to support humus formation. Plant immunity is also promoted, reducing pest and disease pressure.

(4) **Application in Agroforestry:** To support the growth of freshly planted and sown woody species, 4,000 litres of compost extract were applied to the agroforestry rows.

The objective was to establish a diverse microbiome to promote the health and growth of the trees.

COMPOSTING

OPTIMISATION OF PROCESSES AND PROCEDURES

Shown here: a Johnson-Su bioreactor with five aeration pipes before filling. In 2024, eight different compost variants were created and tested to develop the optimal composition for various soils. Through targeted formulas, these variants can now be applied according to specific needs, ranging from arable farming to agroforestry.

Reducing the Number of Turning Cycles for More Stable Microbiology

A key advancement in 2024 was the reduction of turning cycles from 15–20 to just 3–5 turns. This adjustment is based on the findings of Dr. Elaine Ingham and has proven to be beneficial.

Preservation of Microbial Diversity – less mechanical disturbance, especially for fungi.

Prevention of Anaerobic Processes – the compost remains aerobic, leading to better decomposition.

Targeted Monitoring of Microorganisms – regular microscopic analyses help monitor quality.

These changes enabled a significantly higher fungal content to develop in the compost, playing a crucial role in humus formation and water retention.

Planting of Compost Piles to Promote Microbiology

For the first time in 2024, plantings were integrated into selected compost piles to further enhance soil life. Plants release organic substances through their roots (root exudates), which promote the growth of beneficial microorganisms.

Positive Effects – increased fungal content in the compost, improved nutrient retention, and a strengthened soil food web.

FURTHER
COMPOST
APPROACHES

VISIBLE PROGRESS

THROUGH THE MODIFICATION OF THE CLAYDON DRILL

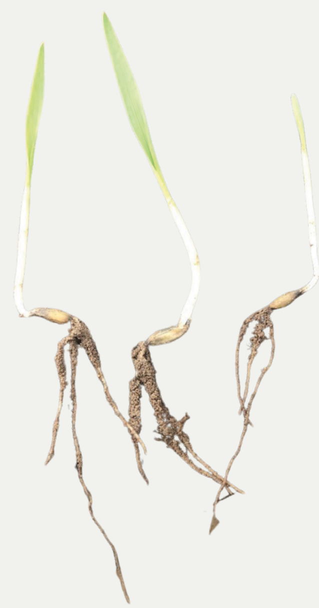
Challenges of the Past

Seed had to be manually treated before sowing.

Compost extracts were applied only after germination.

Without targeted support, roots often remained shallow, reducing the plants‘ drought resistance.

2023



Modest Root Growth

Optimization through Technology

Compost extract is applied directly to the seed. Microorganisms are active right from the start.

A second liquid (ferment of herbs and nutrients) is applied under the seed. This promotes deeper root development.

Plant roots are drawn into deeper soil layers by ferments, which helps them to survive dry periods.

2024

More Pronounced Root Dominance with Increased Fine Root Formation and More Stable Soil Attachment

Laboratory Analysis of Root Strands

Improved root development: Plants develop deeper roots with increased root mass. The abundant soil adhesion, forming „rhizosheaths“ indicates high microbial activity.
rhizosheaths indicate high microbial activity.

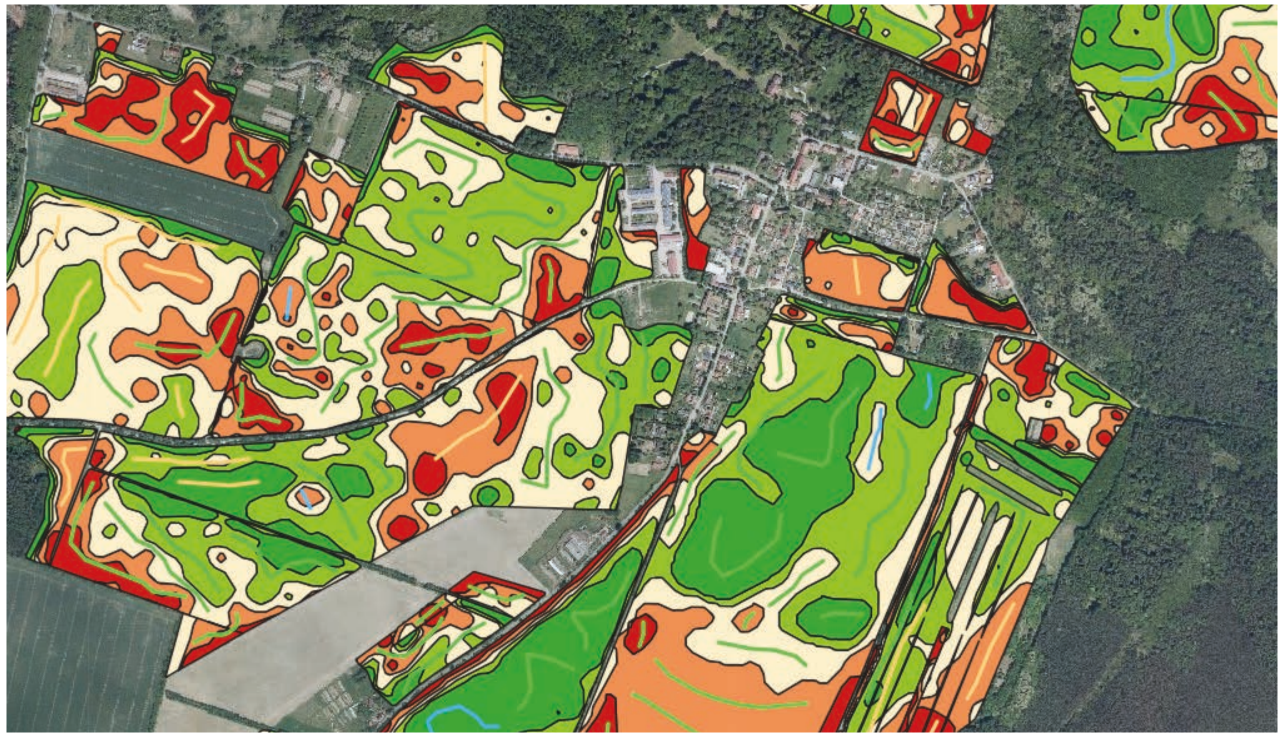
There‘s an optimal shoot-to-root ratio, suggesting greater drought resistance.

The combination of compost extract, organic matter, and biochar can significantly improve the soil‘s water-holding capacity.

COMPOST CONCLUSION: The further development of composting processes and the targeted application of compost extract made a significant contribution to soil regeneration in 2024. For the coming year, plans include increasing compost production to supply larger areas with high-quality microbial inputs, optimising foliar sprays to specifically enhance plant health, and advancing the integration of compost extract into sowing technology to improve performance and reliability.

INTENSIVE SOIL MONITORING

To precisely measure the impact of regenerative arable farming practices, compost applications, the integration of cattle into crop rotation, and agroforestry, a long-term and comprehensive soil monitoring programme was established. Every three years, over 360 sampling points are tested across 1,000 hectares of agricultural land. Each sample consists of 25–30 cores to create an accurate representation of soil conditions.



Survey Lines for the Collection of Over 360 Subsamples from Homogeneous Subareas of Heterogeneous Fields

Analytical Methods for Comprehensive Findings

The monitoring combines established and innovative analytical procedures.

VDLUFA Method: Standardised chemical and physical soil analyses that measure nutrient content and pH levels according to the Fertilisation Regulations.

Kinsey Method: Examination of soil structure and cation ratios (calcium, magnesium, potassium, sodium) as well as the cation exchange capacity (CEC).

Haney Test: Assessment of soil biology with a focus on microbial activity and nutrient availability for microorganisms.

DNA-Based Analyses: A New Standard in Soil Monitoring

A major advancement is DNA sequencing for the identification of microbial communities. In collaboration with the Julius Kühn Institute, this method was applied across the entire area for the first time in 2024. It enables a precise analysis of fungal and bacterial diversity and their activity under various cultivation methods.

This comprehensive approach provides significant insights into the interactions between soil life processes and agricultural practices. It forms the foundation for more sustainable management concepts that go beyond fertilisation measures and promote long-term soil health.

From Analysis to Practice – Implementation of Soil Investigations

Implementing Soil Surveys The Finck Soil Monitoring provides valuable insights into the development of soil fertility, forming the basis for targeted fertilisation and management strategies. The analysis results directly inform agricultural practices, combining scientific recommendations with practical operational experience.

Relevant nutrient deficiencies are addressed as immediately as possible through targeted fertilisation, while finer adjustments are spread over several years. Recommendations with high urgency (Priority 1–3) are implemented within one year, while long-term corrections happening over multiple years.

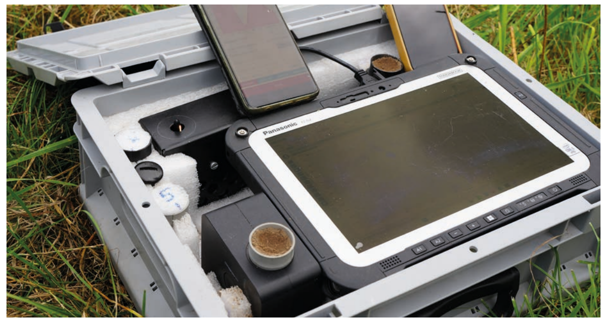
An example of this practical implementation is the sulphur fertilisation trial: A soil analysis recommended 100 kg of sulphur per hectare. According to the analysis, this amount was to be split. To determine the best way to divide it, 50% of the field received 50 kg and the other 50% received 75 kg. This aims to discover whether the larger amount has positive or negative effects on plant growth and so on.

While analyses provide a scientifically sound foundation, practice shows that experience plays a crucial role. Fertilisation recommendations aren‘t rigidly followed, but are adapted based on operational observations and seasonal conditions. This continuous exchange creates a dynamic system of soil improvement that contributes to stable yields and healthy soils in the long term.

RESEARCH PROJECT DAVASUS

DYNAMICS OF SOIL MOISTURE AND HUMUS

Soil health is also a central research area in the DaVaSus project. Particular focus is placed on two key indicators: soil moisture and humus content. Under the leadership of the ATB (Leibniz Institute for Agricultural Engineering and Bioeconomy), a comprehensive experiment is being conducted, pursuing two main research objectives:



RESEARCH OBJECTIVE NO. 1

Comparison of Soil Moisture and Humus Content under Different Management Methods

The focus here is on innovative arable farming measures such as undersown crops and cover crops, flower strips, ploughless cultivation, and agroforestry systems. These are analysed throughout the year and compared with conventional standard management practices in organic arable farming. The aim is to determine how these methods affect soil quality.

INSIGHTS

Assessments of the collected data indicate that soil moisture varies depending on the cultivation system. For example, in 2024, agroforestry systems showed higher soil moisture levels even during dry periods compared to standard organic arable farming practices.

RESEARCH OBJECTIVE NO. 2

Development of a practical Method for cost-effective Soil Analysis

In order to offer farmers a simple and efficient way to monitor the humus and water content of their soil, portable, low-cost optical spectrometers are being tested. These devices measure the light reflected by the soil in the visible and near-infrared range at different wavelengths. The spectral data obtained can be converted into specific values for soil moisture and humus content by means of a laboratory calibration. The result is to be displayed in a digital analysis app.

INSIGHTS

Developing a cost-effective and practical method for soil analysis could help farmers specifically optimise their cultivation strategies, thereby improving soil health in the long term.

Through the DaVaSus research project, valuable scientific insights are being gained, alongside the delivery of practical solutions for regenerative, resource-efficient agriculture. Data analysis reveals significant variations in soil moisture across cultivation systems. For instance, it's clear that agroforestry systems maintain higher soil moisture levels even during dry periods compared to standard organic arable farming practices.

3.2 AGROFORESTRY

Agroforestry in Focus – In 2024 the Finck Foundation made significant progress in the establishment, management, and research of its diverse agroforestry systems. The complexity of multifunctional land use presents challenges, but it also offers promising opportunities and high innovation potential. The insights we have gained and our publications make a valuable contribution to the development of future-oriented agroforestry systems – balancing ecosystem services, climate-adapted food production, and economic viability at the farm level. Shown here: The manual preparation of seeds in October 2024.

AGRO FORES-TRY SYSTEMS

AN OVERVIEW

Poplar-Pasture System

29.5 hectares with 20 rows extending over a total length of 11.6 km in both east-west and north-south orientations. Designed for crop production and livestock integration, combined with flower strips.

–

Syntropic System

A diverse system on 3.5 hectares, creating a DNA database of 200 different fruit, nut, and berry varieties.

–

Deciduous Pasture

A silvopastoral, perennial pasture on 6 hectares with 74 rows spanning a total length of 8.2 km in length for self-sufficient fodder provision.

–

Keyline

2.65 hectares with 30 rows over a total length of 2.7 km for berry and fruit production. Planting along the contour lines ensures slower runoff and a more even distribution of water within the plant rows during precipitation events.

–

Biotope Connectivity

An area of 3.8 hectares with 4.5 km of tree strips as a nature conservation measure, connecting two forests to enhance habitat networks and promote biodiversity.

TAKE A LOOK AT ALL THE SYSTEMS

Shown here: The "Biotope Connectivity" System - mown in August 2024.

9

SYSTEMS ON 77 HECTARES

Forest Conversion

Transformation of 5 × 1.5-hectare pine monocultures into climate-resilient mixed forests, promoting natural succession, biodiversity, and long-term forest resilience.

–

Tree Nursery

6.5 ha established according to agroforestry principles for the production of resilient perennials, shrubs, as well as fruit and nut trees. The focus is on drought resistance, late frost tolerance, and site adaptability to promote a stable gene pool.

–

Agrosilvopastoral New Establishment

Long-term integration of arable farming, grazing, and various agroforestry strips across 26 ha. The focus is on woody crops like apple, pear, and sweet chestnut, as well as woody plants suitable for leaf fodder. Further development of direct sowing and field grafting strategies and methodology is also a priority.

–

Seed System

2.1 hectares with 20 rows for livestock integration, focusing on sea buckthorn and high-value fruit trees. The establishment of seeds ensures system resilience, offering unmatched site and climate adaptability without the need for external irrigation. Grafting is performed directly in the field.

AGROFORESTRY AT A GLANCE

3 KEY DEVELOPMENTS

> *Our work is so exciting because we can accompany, nurture, and eventually harvest the planted and sown woody plants over many years!*
> *Through our own observations and transdisciplinary collaboration, we are constantly learning and able to further develop the concept of agroforestry.*

-Phillip Hansen and Julius Ritter / Agroforestry Team

1.

Fruit Tree Pruning and Field Grafting

This year, as part of the agroforestry management, the fruit trees were trained. The trees used came entirely from the in-house nursery and are showing good development.

The Finck Foundation focuses on establishing site-adapted and climate-resilient tree species. For the cultivation of standard fruit trees, work is being done on the technique of direct seeding of rootstocks. This method enables significantly better root growth compared to transplanted trees. The seeded wild fruit trees serve as rootstocks for climate-adapted cultivated varieties, which are grafted in the field using chip grafting.

In 2024, the first field grafts sprouted successfully – with annual shoots reaching up to two metres.

2.

New Agroforestry Drill

A major advancement was the development of a specialised agroforestry drill, converted from a potato planter. This innovative system enables more precise and efficient planting within the agroforestry strips, therefore improving establishment rates and site adaptation of the trees. This technique is particularly advantageous for direct seeding with local genotypes, such as wild pear and sweet chestnut.

3.

Grazing in Agroforestry

The 29.5 ha poplar grazing system (20 rows, totalling 11.6 km east–west and north–south) links arable farming, livestock integration and flowering strips to enhance biodiversity and improve soil health. In 2024, targeted release management was introduced on selected tree rows as winter pasture: cattle used poplars for coat grooming, selectively browsed willow shoots and grazed the undersown cover crop.

In spring, this system-critical process knowledge was confirmed – sap-flow onset demands a time-critical pasture rotation. This phase-synchronised transfer safeguards tree vitality and underpins the entire system. These insights into seasonal utilisation windows provide a foundation for improving livestock-integrated agroforestry systems

Shown here: The "Poplar-Pasture System" - grazed by the cattle herd in December 2024.

AGROFORESTRY AT A GLANCE

MAKING POTENTIALS VISIBLE THROUGH RESEARCH

Agroforestry systems are more than the sum of their parts – they create synergies that industrial land use cannot achieve. By deliberately combining trees, arable farming, and livestock, resilient ecosystems emerge: soils store more water and carbon, biodiversity increases, and new income opportunities arise. The scientific support provided by DaVaSus and partners like the JKI and ATB makes these added values measurable – demonstrating how agriculture can be both productive and regenerative.

As part of the DaVaSus project, different types of agroforestry systems are being studied. The focus is placed on the impact of trees on soil biodiversity, both in the tree rows and in the interrows, where the main crops are growing.

Collaboration with the Julius Kühn-Institute

The Finck Foundation works closely with the Julius Küh Institute to study the impacts of agroforestry systems on the soil microbiome. Together, they published a pioneering study on complex agroforestry systems. This collaboration is part of the DaVaSus project, which focuses on researching regenerative agricultural practices.

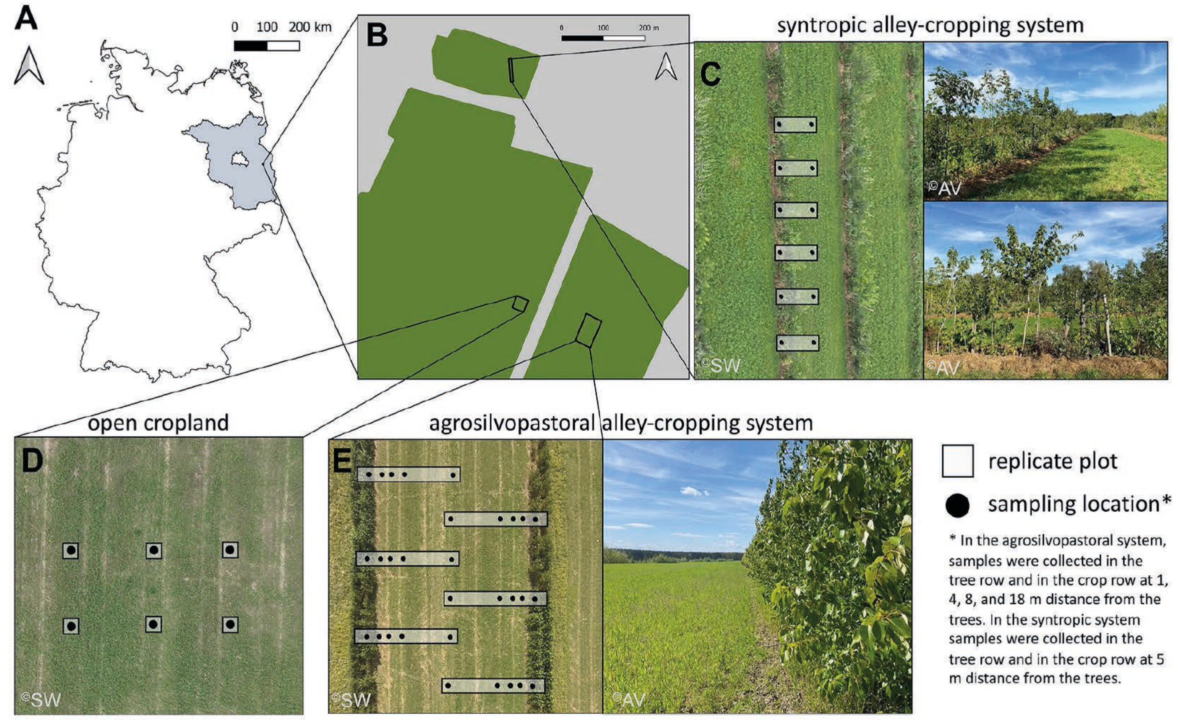
The research focused on studying the soil microbiome in various agroforestry systems, with a particular emphasis on two innovative alley-cropping systems.

TO THE FULL PUBLICATION IN SCIENTIFIC REPORTS (NATURE.COM)

1. Temperate Agrosilvopastoral System (901): A system that combines arable farming, livestock, and forestry.

2. Syntropic Agroforestry System (107): A system based on the principle of synergy between different plant species to enhance soil fertility.

The research aims to understand how trees in these systems affect soil biodiversity. Samples of the topsoil and subsoil are collected and analysed to detect changes in the microbiome.



In the agrosilvopastoral system, samples were taken from the tree row and at distances of 1, 4, 8, and 18 meters from the trees. In the syntropic system, samples were collected from the tree row and from the interrow at a distance of 5 meters from the trees.

INSIGHTS

Increase in Beneficial Microorganisms: An increase in beneficial microorganisms contributing to soil fertility was observed under the trees.

Decrease in Suspected Phytopathogens: At the same time, a decline in suspected phytopathogens (disease-causing microorganisms) was noted.

Heterogeneity of the Soil Microbiome: The soil microbiome in the agrosilvopastoral system appeared to become less heterogeneous with increased distance from the trees.

These results suggest that agroforestry systems have the potential to enhance soil fertility and reduce homogenisation, i.e., the depletion of the soil microbiome caused by agriculture. A more diverse soil microbiome can break down and process organic matter more effectively, making the soil healthier, more productive, and more resilient.

NEW ESTABLISHMENT

GROWTH
OF THE NEW
ESTABLISHMENT

THE (SO FAR) LARGEST SYSTEM ON 26 HECTARES

In 2024, the Finck Foundation established a 26-hectare agrosilvopastoral agroforestry system with nearly 8 km of tree rows. The objective is to systemically integrate arable farming, agroforestry, and holistic grazing, illustrating both ecological and economic synergies. For the first time in Germany, an agroforestry system of this scale has been realised, incorporating fruit crops into arable land with its integrated crop rotation. The emphasis is placed on practical mechanisation solutions and the development of scalable management strategies for complex agroforestry systems.

8.000+ *TREES AND SHRUBS PLANTED*

50+ *PLANT SPECIES*

36 *TREE ROWS (8 KM)*

A Multifunctional Agroforestry System
Between the agroforestry rows, 12 and 24-meter wide arable strips are planned. Potential positive effects for arable crops arise from the improved microclimate and the habitat for beneficial organisms in the tree rows. Special leaf fodder hedges were established for animal welfare, which offer shelter and scratching opportunities and can provide valuable fodder. As permanent landscape elements, the agroforestry rows are intended not only to provide diverse ecosystem services but also, primarily through the cultivation of apple, pear, and sweet chestnut, to enhance high-quality food production on the field.

Climate-Adapted Woody Species
The Foundation is increasingly focusing on the natural establishment of heat-loving, drought-resilient trees. Sweet chestnuts are a particular focus, having been both specifically planted and directly sown. This experiment aims to compare establishment by direct sowing versus planting from both an economic and ecological perspective. This involves dense plantings or sowings of seedlings from known parent varieties, which will later be selected and thinned in the field.

Biodiversity Enhancing
The new system is already showing significant environmental impacts. Birds of prey, such as common buzzards and red kites, are increasingly using the woody strips as hunting grounds, while a variety of songbirds, insects, and reptiles, including lizards and snakes, are finding new habitats there.

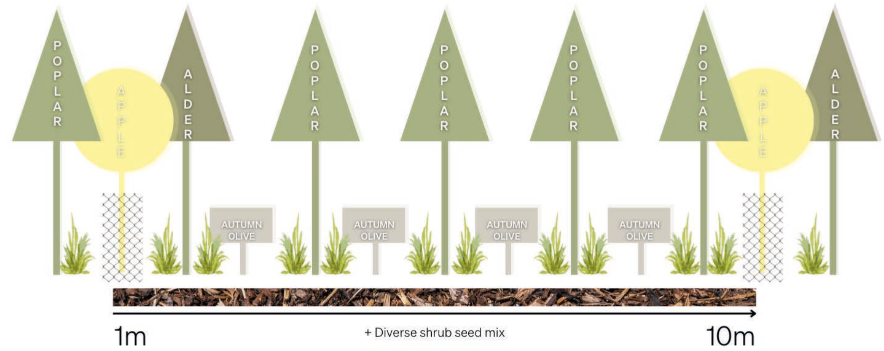
NEW ESTABLISHMENT

THE RESEARCH DESIGN OF THE AGROFORESTRY ROWS

1. ORCHARD MEADOW SIMPLIFIED

Version 1

Apple trees planted in wide rows, without additional shrubs, to isolate their impact on soil and wind protection.



3. SYNTROPICALLY SIMPLIFIED

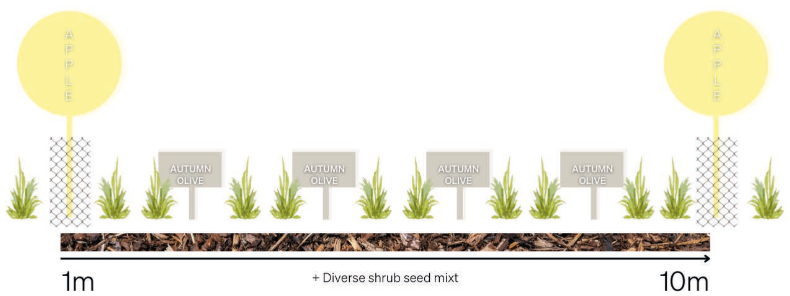
Version 3

A combination of apple trees, autumn olives (Elaeagnus), and fast-growing pioneer trees such as poplars and alders for natural soil improvement and wind protection.

2. ORCHARD MEADOW DIVERSE WITH AUTUMN OLIVE

Version 2

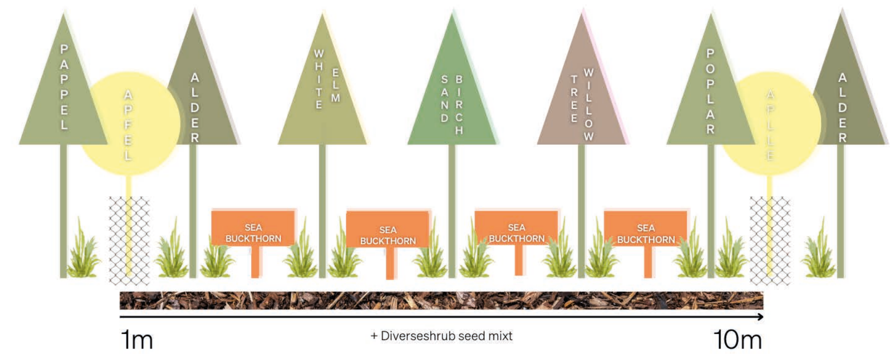
Complementing the apple rows with autumn olives (Elaeagnus) as nitrogen fixers and early-bearing companion shrubs to enhance ecological diversity. Additionally, a herbaceous layer is established through direct seeding.



4. SYNTROPICALLY DIVERSE

Version 4

Highly diverse system with sea buckthorn instead of autumn olive in the middle row, along with various mother trees and an under-sowing of woody plants like sweet chestnut and oaks.



Which designs offer the best synergies between management intensity, ecological benefits, and economic viability?

The Finck Foundation's research on new agroforestry designs focuses on the interaction between woody plants and arable farming. This especially focuses on soil fertility, water balance, microclimate, biodiversity, and agricultural yields. The study area comprises two opposing woody triplets with four distinct variants. These variants differ in their planting density, species diversity, and complexity. To reliably quantify the effects of these varied tree-strip designs, a 0.7-hectare reference area was also established to the east of the field. This area contains no tree strips but is managed identically and serves as a control for ecological and yield-related measurements. All variants and the reference area are being systematically and comparatively investigated. This experimental setup allows for a sound evaluation of the individual design elements regarding their agroecological and economic effects.

A Future-Oriented System

This project sets new standards by specifically optimizing the synergies between woody plants and arable farming. It's not only the Finck Foundation's largest and most diverse agroforestry system to date, but also one of the first in these latitudes to equally combine syntropic design principles and arable farming. Through close collaboration with research partners, genuine learnings are being drawn from this system. The goal is to specifically further develop agroforestry systems and secure their future viability.

AGROFORESTRY CONCLUSION: The establishment of the field laboratory within the Living Lab in 2024 laid the foundation for practical investigations of agroforestry systems under real agricultural conditions. The combination of research and on-farm practices is essential for making agroforestry economically viable and seamlessly integrated into farm operations. It provides valuable insights to further develop and scale this regenerative and future proof form of land use.

NEW ESTABLISHMENT

THE FIELD LAB IN THE LIVING LAB

Agroforestry Meets Research

In parallel to practical implementation, the Finck Foundation is continuing to advance the scientific investigation of agroforestry systems. The new 26-hectare site consolidates insights gained from the eight existing agroforestry systems and serves as a platform for researching various tree strip designs. A section of the area has been established as a field lab to study the ecological, economic, and social impacts of different designs, with six tree rows specifically reserved for scientific studies.

Two Approaches in One System

1. Yield Rows where economically valuable woody plants such as apples, pears, sweet chestnuts, sea buckthorn, and autumn olives are cultivated.

2. Biodiversity Strips consisting of species-rich hedgerows and herbaceous plants. These not only enhance ecological diversity but also are a source of leaf fodder for the suckler cow herd, therefore contributing to a closed nutrient cycle.

Research Focus Areas in collaboration with the Finck Foundation's scientific partners:

Soil Health

Earthworm populations, soil microbiology, water infiltration, humus formation, carbon sequestration.

—

Microclimate

Impact of tree rows on temperature, humidity, and wind flows.

—

Water Balance

Soil moisture, water retention capacity, infiltration performance.

—

Plant Health and Development

Root growth, synergies and competition between trees and arable crops, protection against nutrient leaching.

—

Biodiversity

Pollinator Activity, Use of Tree Rows by Wild Bees, Bats, and Birds.

—

Economy

Yields of tree and arable crops, maintenance requirements, farm integration capability, economic viability.

—

Socioeconomics

Mechanisability, acceptance in agriculture, transferability of the system.

Through the use of modern sensor technology, targeted ecological measurements, and GIS-based monitoring, this data is to be recorded and analysed over the long term—with the aim of generating reliable insights for sustainable agriculture.

3.3 TREE NURSERY

> *Only when people have no alternatives left they will find their way back to farming in harmony with nature.*
>
> - Johannes Harms / Head of Tree Nursery

2.000 Comfrey rhizomes, 150 cornelian cherry plants, 50 plum trees, 50 Turkish hazel trees, and 100 sweet chestnut trees have been planted in the new establishment.

100 Sweet chestnuts and Turkish hazels were grown with the airpruner system.

4.000 Wild pears and sweet chestnut seedlings are being produced in six new airpruning systems.

6,5 Hectares of Tree Nursery.

600 Apple, pear, plum and peaches were grafted in the spring, 500 more were grafted during the summer.

300 Hybrid alders were planted, and hybrid poplar cuttings were prepared for planting in spring 2025.

Cultivating Regeneration: Practical Insights

Certain crops, such as serviceberries, gooseberries, and cornelian cherries, have encountered difficulty in establishing themselves within the region and are therefore not recommended for yield-focused cultivation. In contrast, crops such as apples, pears, peaches, and plums have been successfully propagated by field grafting onto wild fruit rootstocks.

A significant advancement has been the transition from Root Pouches to airpruning beds (air-permeable modules whose exposed edges naturally prune emerging roots, resulting in a uniform, fibrous root network). This technique allows for the production of more plants within a smaller area, with reduced effort and higher quality. Moreover, biomass-producing species planted at a high density (minimum of four per metre) have proven effective in suppressing competing grasses in agroforestry systems.

Experience clearly show that newly established agroforestry systems require an approximately two-year establishment phase. In this period, the development of a stable root system, which forms the basis for later yields, is critical. Only after this phase does the full above-ground growth begin, which expresses itself in significantly increased biomass production.

Significance for the Region and Beyond

The Finck Foundation's nursery doesn't only bring structure to the cultural landscape but also closes nutrient and water cycles, prevents erosion, enhances soil formation, and fosters biodiversity. A notable achievement in 2024 was the successful establishment of all plantings without irrigation – a compelling demonstration that high-maintenance crops such as apples, pears, and plums can be established in Central German demanding soils without supplementary irrigation.

Expansion of the Nursery

The nursery was expanded by 3,000 square metres, with approximately 400 trees and shrubs planted across five 40-metre rows. These include autumn olives, mulberries, hybrid sweet chestnuts, and 15 varieties of hazelnut shrubs. In 2024, to create a comprehensive collection of varieties, a very diverse replanting was done within the entire nursery area.

CONCLUSION TREE NURSERY: The Finck Foundation's tree nursery serves as a vibrant exemple of the potential of regenerative agriculture. With each row of trees planted, each field refinement, and each new insight gained, the Finck Foundation advances towards the objective of a regenerative, resilient, and biodiverse agriculture.

3.4 ANIMAL WELFARE

200

eShepherd collars were integrated into the herd for the first comprehensive practical test to research virtual fencing in Germany.

–

29.5

Hectares of agroforestry grazed by the cattle.

–

74

Healthy calves born, including three pairs of twins.

–

2

New Salers bulls were brought in for the genetic advancement of the herd.

–

3

Decelerated runs in the modified cattle crush following Temple Grandin's method for health check-ups

PASTURE MANAGEMENT IN TRANSITION

> *As a farmer, I am firmly convinced that observing patterns and behaviours in nature, on our farms, and among our animals is indispensable if we aim to practise healthy and regenerative agriculture.*
>
> - Luciano Arangoitia / Herd Manager

Health and Performance of the Animals

The health and well-being of the cattle are essential. Their productivity is determined by their diet and the pastures provide access to a diversity of grasses, herbs and legumes. The legumes, such as clover and alfalfa, not only supply vital nutrients but also fix nitrogen in the soil. However, an excess of protein, for instance in wet weather, can create health challenges such as hoof issues. Preventive measures, including annual hoof trimming and adapted pasture management, can help address these challenges.

The Finck Foundation places importance not only on the physical health of its cattle, but also on their social well-being. The cattle remain together throughout their lives, and therefore, the Finck Foundation's pasture management emphasises respectful handling, particularly in stressful situations such as medical treatments. A practical example of this is the modification of the handling facility based on a method by Temple Grandin, which adapts to the animals' needs and thus minimises stress.

Cattle Farming in Regenerative Land Use Systems

The work of the Finck Foundation aims to integrate various approaches into a multifunctional system. Through targeted pasture management, soil fertility has been further increased, photosynthesis maximised, and the nutrient cycle has been strengthened. Diverse plant communities ensure a balanced diet, while rotational grazing systems allow for uniform grazing and the regeneration of the land.

Digital Product Passport - for Greater Transparency and Dialogue

The Digital Product Passport, developed within the Finck Foundation's DaVaSus research project, enables customers to access detailed information about the animal their meat originates from and to view real-time sensor data simply by scanning a QR code on the packaging.

For the Individual Animal: Age, breed, and weight of the animal – recorded via eShepherd collars.
For the Herd: Distance travelled and the number of hours spent ruminating – determined through rumen boluses.

Additionally, customers can participate in an integrated survey through which the Finck Foundation aims to discover: What is the level of knowledge about circular economy? Are they interested in the connections between meat consumption and agriculture? And is the QR code perceived as a helpful tool? The answers will help to further develop the project and promote dialogue about sustainable agriculture.

The digital product passport is more than just a tool – it is a step towards greater transparency, awareness, and sustainable consumption of meat.

CATTLE CRUSH DESIGN
INSPIRED BY
TEMPLE GRANDIN

FUTURE-ORIENTED TECHNOLOGY SOLUTIONS

As part of the DaVaSus research project, the Finck Foundation is testing technological innovations to optimize pasture management and improve animal welfare.

Health monitoring with Rumen Boluses

These sensors, originally from dairy farming, continuously record data on the body temperature, rumination activity, water intake, and general activity of the animals. In 2023, 100 suckler cows and heifers were administered rumen boluses. The data is sent to a cloud in real-time, and the herd manager receives push notifications about any anomalies. This allows for early problem detection and intervention, which improves animal welfare and minimises stress for the animals.

The data is analysed by the ATB. Individual animals are compared based on their readings, both among themselves and over time, to identify normal states and moments of stress within the herd. Additionally, the rumen bolus data is compared with other data sources, such as the smaXtec oestrus detection index and calving predictions, to increase its accuracy.

Objective: The sensors are intended to enable automated animal welfare assessment and support the management of animals kept outdoors year-round.

Virtual fences - GPS Technology for Flexible Pasture Management

This technology is intended to support the animal-friendly but labour-intensive husbandry system without compromising animal welfare.

As part of the DaVaSuS project, the Finck Foundation is conducting the first large-scale practical test of the eShepherd system in Germany, in which 185 cattle were fitted with the collars. This test marks a milestone for the introduction of innovative pasture management technologies in German agriculture.

The eShepherd collars, funded by the BMEL, are equipped with GPS technology and enable virtual fences. The animals are to be prevented from crossing the fence line fully automatically by a warning signal from the collars – without human intervention. This technology supports the foundation's animal-friendly but labour-intensive husbandry system without compromising animal welfare. An additional benefit is that the movement data from the collars is networked with rumen bolus data, weather data and drone data. This enables integrated conclusions to be drawn about animal welfare under different environmental conditions.

Drone Technology for Biomass Prediction

The Finck Foundation is using drone technology to closely monitor pasture growth and improve biomass forecasting. The aim is to develop a model for determining plant dry matter using drone-supported multispectral and photogrammetry data.

Georeferenced measurements will be carried out regularly over the course of a year in a test area. Multispectral images and RGB images are taken with a DJI Mavic 3T drone to generate a Digital Surface Model (DSM).

The DSM is combined with terrain models and grass cuttings samples to determine the growth height and biomass.

Grass Sampling

Grass samples from the Alt Madlitz site are combined with drone-based multispectral and RGB data to create a site-specific model for determining the dry mass of pasture growth.

Collaboration: Data is collected by the Finck Foundation's DaVaSus team, while the University of Kassel supports data analysis and further develops its own biomass prediction models.

Objective: The drone technology is intended to optimise pasture management and enable automated feeding of the herd throughout the year while improving soil fertility at the same time.

These innovative technologies – rumen boluses, virtual fences and drone technology – are not only a contribution to animal welfare, but also a step towards more efficient and regenerative agriculture. They enable the Finck Foundation to continuously monitor the health and well-being of the animals, manage pastures more flexibly, and optimise resource utilisation.

NEW TECHNOLOGIES
IN USE ON THE
PASTURE

CHAPTER 4
NATURE CONSERVATION

4.1 KLEEPFUHL RENATURALISATION

A WIN FOR BIODIVERSITY AND THE CLIMATE

The Finck Foundation successfully completed the renaturation of the Kleepfuhl near Wilmersdorf in 2024. It‘s an important component of the regional wetland biotopes.

Strengthening Aquatic Ecosystems through Sediment Removal

For decades, increasing silting, sediment deposition, and reed expansion led to the impairment of ecological functions and a decline in amphibious species. To counteract this, targeted measures were implemented. By removing sediment, the water surface area could be enlarged, and water retention capacity improved. This measure helps keep the body of water stable even during dry periods.

Permanent Wetland Biotope Promotes Biodiversity and Water Retention

The Kleepfuhl isn‘t a temporary body of water; it‘s a permanent wetland biotope that serves as a water reservoir and a habitat for numerous animal species. The measure was scientifically monitored to evaluate its long-term effects on biodiversity and water retention. Initial investigations show that the rewetting is contributing to the stabilization of amphibian populations.

10.663+ m² Kleepfuhl

4.864+ m² Renaturalised Field Ponds

15.527+ m² total area

THE PROCESS OF RENATURALISATION

Renaturalisation Strengthens Habitat Connectivity for Migratory Species

The Kleepfuhl is part of a network of small bodies of water that promotes habitat connectivity for migratory species like the Great Crested Newt and Fire-Bellied Toad. Since 2021, the Finck Foundation has already renaturalised four field ponds, and the renaturation of the Kleepfuhl has nearly doubled the total area of revitalised water bodies. This measure creates new shallow and deep water zones that strengthen the ecological stability of the area.

The WAKS Research Project

This project examines the extent to which the removal of carbon-containing sediments can contribute to reducing CO_2 emissions. Drained wetlands often release large quantities of greenhouse gases, as organic materials stored in the soil decompose under the influence of oxygen. Rewetting stops this process, allowing the areas to once again function as carbon sinks. Furthermore, the long-term effects on carbon storage, biodiversity, and water retention are being researched to gain well-founded insights for future renaturation measures

4.2 WILDFLOWER STRIPS TO BOOST BIODIVERSITY

Flower strips are an important contribution to promoting biodiversity in intensely utilised agricultural landscapes. They help maintain and stabilise populations by providing numerous animal species, especially insects, birds and small mammals, with food, shelter and refuge. They also support agroecological functions such as pollination and pest regulation by beneficial insects. In the long term, they improve the soil structure, the water balance and increase structural diversity in the landscape, which is important for the biotope network.

In 2024, the area covered by wildflower strips amounted to more than 30 hectares. The combination of various native wild plant species ensures continuous flowering, guaranteeing a consistent food supply for insects.

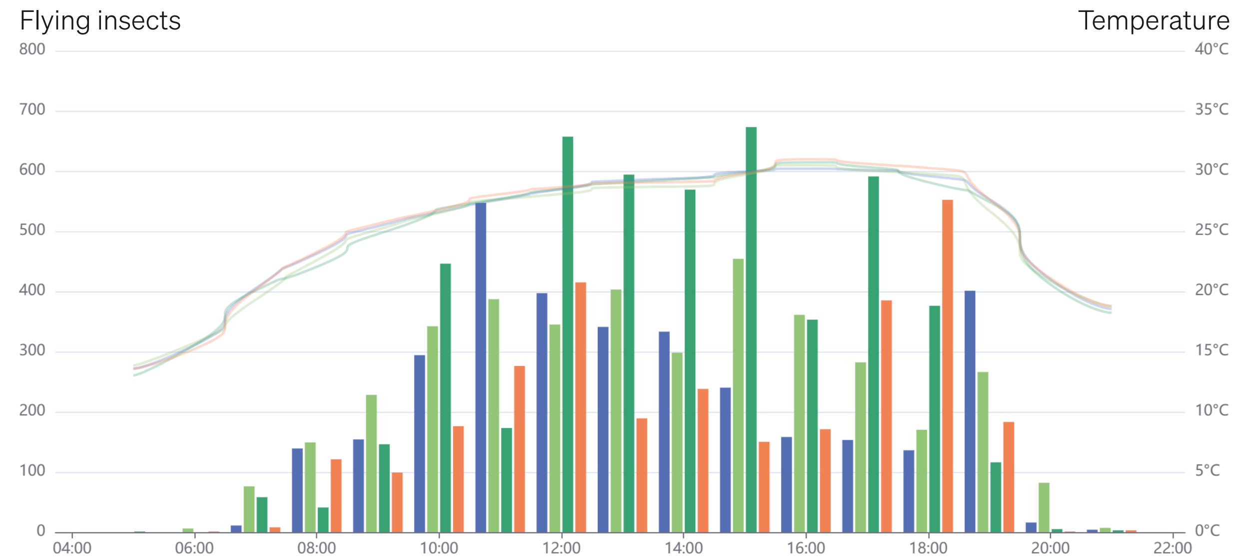
A unique feature of these wildflower strips is their layout: they not only run along the edges of the fields but also cross them centrally. This creates additional structural and refuge areas within large fields, extending deep into the agricultural landscape and significantly enhancing their ecological effectiveness.

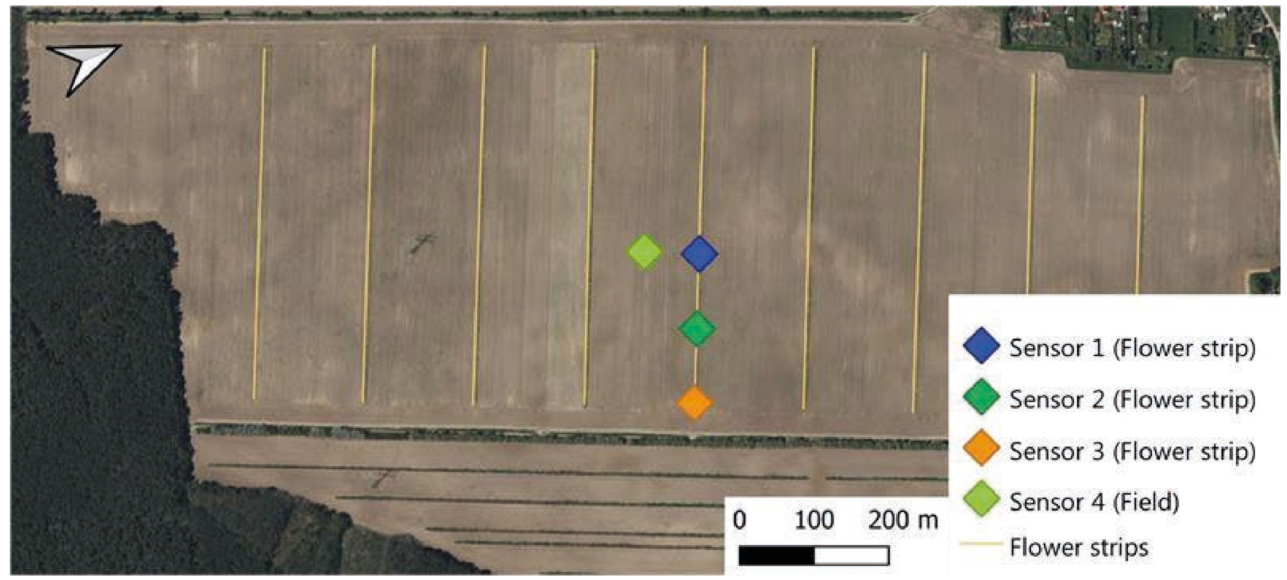
To assess the potential of wildflower strips for resilience in arable farming, biodiversity conservation, and soil health, and to compare these benefits with the economic input, they are scientifically monitored as a regenerative measure within the Finck Foundation's Living Lab, as part of the research project.

As part of DaVaSus, extensive field investigations were carried out in collaboration with the Julius Kühn Institute. A key focus is on their impact on soil biology. The aim is to better understand soil biological processes, for which, among other things, the quantity and species diversity of earthworms, as well as the presence of fungi and bacteria, are recorded as indicators of soil fertility and health. Sampling takes place at various times during the vegetation period and at different distances from the wildflower strip to examine both temporal developments and spatial effects on adjacent arable land.

Additionally, seven insect sensors are used to automatically record how insect populations and biodiversity develop within the wildflower strips and adjacent arable land. For landscape-level planning, an analysis is also performed to identify where structural elements like perennial wildflower strips can achieve the greatest ecological effect. This includes evaluating the erosion risk of individual fields to derive targeted suitable measures. The evaluation of the data collected in 2024 is still pending, and there are plans to publish the results.

In the long term, investigations will also be conducted into whether and how cultivation conditions change when wildflower strips are converted back into regular arable land after several years of use. Potential impacts on soil structure and water balance will also be considered.





Seven sensors – three in the flower strip and four in the neighbouring cereal field – are, among other things, used to continuously record the activity of flying insects. An example of 16 August 2024 shows: Insect activity increases significantly from 7 A.M., peaks around midday and subsides again in the evening. There are differences between the measuring points, the causes of which cannot be determined. Factors such as vegetation, weather and microclimate play a central role. The data collected helps to better understand such correlations – and to evaluate the ecological effect of flower strips using different criteria. Only the three sensors in the flower strip and the sensor in the field furthest from the flower strip are shown. The remaining sensors located in the field are positioned between sensors 1 and 4.

4.3 BIRD MONITORING

BIRDS AS INDICATORS OF INTACT AGRO-ECOSYSTEMS

The Nesting Aid Project to Support Cavity-Nesting Species

As land use continues to intensify, natural breeding sites for cavity-nesting birds, bats and small mammals are becoming increasingly scarce. To counteract this, the Finck Foundation has installed 190 specifically designed nesting boxes since 2022.

These include classic tit boxes for Blue Tits and Great Tits, bat roosts for species like the Brown Long-eared Bat, nesting sites for endangered species such as the Hoopoe or the Boreal Owl, and special boxes for dormice, particularly Fat Dormice and Hazel Dormice.

The selection of locations and the construction of these nesting aids were precisely adapted to the specific requirements of each species. The nesting aids are recorded, and their use documented, with the help of a Geographic Information System (GIS). An initial evaluation showed a very high occupancy rate of 89.5%, confirming the urgent need for such structures.

Bird Monitoring in Cooperation with biometrio.earth

A comprehensive bird monitoring programme was launched in collaboration with the start-up biometrio.earth to systematically record birdlife. With the help of modern microphones installed at various kilohertz frequencies (48 kHz for birds and 384 kHz for bats) and wildlife cameras, 103 different bird species were detected in the Finck Foundation's Living Lab.

These include not only common species, but also several endangered and rare species that are considered particularly worthy of protection in Brandenburg:

Black kite *(Milvus migrans)*
Red kite *(Milvus milvus)*
Red-backed Shrike *(Lanius collurio)*
Hoopoe *(Upupa epops)*

The hoopoe

The Hoopoe is one of Europe's most charismatic bird species and a true symbol of natural cultural landscapes. With its striking plumage in warm ochre tones, black and white wings, and characteristic feathered crest, it's unmistakable. It prefers semi-open landscapes featuring old trees, extensive meadows, and sandy soils. Its long, curved beak is primarily used to forage for large insects.

Particularly remarkable

Is its breeding behaviour: The hoopoe likes to use cavities in old trees, crevices or nesting boxes, actively protecting its nests from predators by secreting an intensely odorous fluid from its brush gland. The birds´ decline in Germany is closely linked to the loss of such suitable breeding sites – measures such as the targeted provision of nesting aids (see photo above) therefore play a crucial role in protecting this species.

CONCLUSION BIRD MONITORING: The nature conservation and biodiversity measures implemented in 2024 have further demonstrated that integrative agriculture can have positive environmental effects. Research into targeted renaturalisation offers promising approaches for improving climate protection within agricultural landscapes. Simultaneously, flower strips and nesting aids contribute to specifically promoting biodiversity on the Finck Foundation's land. Collaboration with research partners and innovative technologies will continue to play a key role in understanding and optimising long-term effects.

CHAPTER 5
EDUCATIONAL AND PUBLIC AFFAIRS WORK

5.1 A HOLISTIC APPROACH TO EDUCATION

The Finck Foundation sees education and public affairs as key levers to inspire and empower people for a sustainable future. By connecting insights from science and practical application, the Foundation not only creates knowledge but also inspiration and hope – hope for an agriculture that is in harmony with nature and offers sustainable solutions to global challenges. With practical educational formats, digital communication and international cooperation, the foundation promotes dialogue, inspires action and demonstrates that change is possible.

Holistic Learning and Action-Orientation

The Finck Foundation combines ecological, social, cultural and economic dimensions in its educational work. Through systemic thinking, practical formats and participatory methods, learners are empowered to make sustainable decisions and actively implement regenerative approaches. Simultaneously, the Foundation creates spaces for reflection, allowing for the further development of personal and societal values.

Cooperation

Education is seen as a joint undertaking. Innovative educational approaches are developed through co-operation with research institutions, universities and civil society. The Finck Foundation focuses on hope and the power of knowledge: education should inspire and encourage people. The aim is to demonstrate possibilities, develop solutions together and change the world positively step by step – for today and for future generations.

The Finck Foundation‘s Approach to Education

The Finck Foundation understands education as a holistic, practice-oriented process that extends beyond traditional learning environments Through a diverse range of offerings – from publications to practical formats and international collaborations – knowledge transfer is strengthened. The goal is to encourage people to shape positive changes in their environment and work together for a future worth living.

1. Fostering a Regenerative Mindset

A deep understanding of ecological connections and the power of regenerative processes is awakened, demonstrating that a close connection between people and nature is future-proof and sustainable.

2. Developing Capacity for Action

Practical skills and knowledge are shared to develop solutions for ecological and societal challenges – and to enable concrete steps towards their implementation.

3. Encouraging Innovation and International Collaboration

Collaboration between science, practice and civil society creates space for new ideas and transformative approaches – strengthening the outlook for a globally regenerative future

4. Strengthening Individual and Social Responsibility

Empowering people to take responsibility for their actions and bring about positive change - a contribution to a sustainable and resilient future.

5. Promoting Equity and Participation

Education is designed to be inclusive and diverse in order to offer fair opportunities to all people regardless of age, background or educational level - and to enable a sustainable future for all.

5.2 EDUCATIONAL INITIATIVES AND COLLABORATIONS

Host for BFD and FÖJ

Since 2024, the Finck Foundation has served as a placement site for the Federal Voluntary Service (BFD) and the Voluntary Ecological Year (FÖJ). Three young volunteers currently support the daily work on the farm, where they gain hands-on experience in regenerative agriculture and deepen their understanding of ecological systems. Over the course of a year, they actively contribute to meaningful environmental work while exploring career paths in sustainable land use.

Erasmus+

As part of the EU-funded Erasmus+ Farms initiative since 2024, the Finck Foundation has joined a European network of agricultural projects committed to innovation and sustainability. This programme enables the exchange of knowledge and experience with farms throughout Europe, allowing participants to learn from each other and jointly develop pioneering approaches for sustainable agriculture.

Lunch & Learn:
Knowledge Exchange in Compact Form

With “Lunch & Learn“, the Finck Foundation is creating a platform for direct dialogue between science and practice. During the lunch break, scientists from the Living Lab present current research results and discuss their practical relevance directly with practitioners from arable farming, forestry and agroforestry. The aim is to incorporate findings directly into agricultural work and strengthen the link between theory and practice.

Interns Experience and Learn
about Regenerative Agriculture

This year, 20 interns from Europe, Australia, and Asia spent three months with the Finck Foundation, gaining valuable experience in agroforestry, tree nurseries, composting, and pasture management. The practical transfer of knowledge is central to their experience, offering deeper insights into sustainable agriculture. This international exchange brings new perspectives and significantly enriches the work on site.

FARM TOURS

In 2024, the Foundation once again welcomed numerous interested people from diverse fields for farm tours. These visitors included representatives from the Fraunhofer Institute for Economic Research, the State Office for Environmental Protection, the German Academy for Urban and Regional Planning, and many others

Finck Foundation Receives GIZ Delegation

In December, the Finck Foundation received a delegation from the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). The visit, organised as part of the project to promote International Agricultural Research (FIA) on the initiative of the German Federal Ministry for Economic Cooperation and Development (BMZ), brought together over 70 international stakeholders from the agricultural and food security sectors. The focus was on exchanging views on the importance of regenerative agricultural practices and strengthening global dialogue.

Field Day

In 2024, the Finck Foundation successfully hosted its first Field Day, which saw over 80 experts from both practical farming and research attend. The event showcased measures from the HumusKlimaNetz and SEBAS projects, both of which focus on humus building and biodiversity. This occasion fostered dialogue between practitioners and researchers and was recognised as a valuable contribution to knowledge transfer.

Lectures

A core component of the Finck Foundation's work is the dissemination of knowledge about regenerative agriculture and biodiversity. In 2024, the team delivered over 50 presentations in various countries, including Germany, Great Britain, Switzerland, France, Austria, and Hungary. These talks targeted farmers, scientists, policymakers, and the general public, helping to raise awareness of sustainable farming methods and the vital role of biological diversity in agriculture.

Information Booth

On farm festivals and public events, the Finck Foundation's information stand offers explanatory materials for all age groups – from photo books for children to infographics for adults. However, the focus is on personal dialogue. The local environment, the neighbourhood, the village community, surrounding farms and visitors from further afield are all important target groups for the Foundation's educational work.

Digital Presence

The Finck Foundation's website promotes transparency and accessibility by presenting projects, initiatives and insights into regenerative agriculture, sustainability and social responsibility. It also provides practice-relevant educational resources and publications. The development of an Instagram community aims to communicate complex topics in a simple and understandable way. English-language posts, videos and infoposts on the foundation's core topics create initial points of contact for an audience outside the specialist areas.

Obama Foundation

In 2024, Benedikt Bösel was selected as one of 36 participants for the Obama Foundation Leaders Europe programme. This six-month programme supports leaders who are developing innovative solutions to societal challenges. His selection recognises his commitment to regenerative agriculture and soil health as central building blocks for a sustainable future. Participation enables exchange with international experts and strengthens the reach of the Finck Foundation's work.

Book 'Rebels of the Earth'

17,000 copies of the Finck Foundation book have been sold since it was first published. The 4th edition was published in 2024. The continuing high demand shows the growing interest in regenerative agriculture and sustainable land use. The book makes knowledge about sustainable farming concepts accessible to a wider audience and communicates it in a practical way. The book is currently only published in German, with an English edition expected in 2025.

CONCLUSION EDUCATION: The Finck Foundation considers education to be a key lever for the sustainable transformation of agriculture. Through practical formats, international partnerships and targeted knowledge transfer, it not only imparts scientific knowledge, but also demonstrates concrete application possibilities and empowers individuals to actively shape sustainable change.

5.2 THE FOUNDATION TEAM

The Foundation team is a transdisciplinary group ranging from 19 to 61 years old, with members from across Germany, Switzerland, Italy, Peru, and, of course, directly from Alt Madlitz.

From field to research and across agroforestry and arable farming, vibrant collaboration drives a common mission: advancing regenerative ecological agriculture and forestry.

The Finck Foundation is dedicated to research and inspiration. Together, courageously, with passion. For fertile ecosystems of soil, plants, animals and people. As a foundation for our health and the future of generations to come.

Johannes Harms – Tree Nursery Manager

Joke Czapla – Head of Science

Anne Kathrin Seemann – Office Manager

Max Küsters – Strategic Project Manager

Benedikt Bösel – Managing Director

Julia Toups – Scientific Lead for the DaVaSus Project

Laurenz von Glahn – Microorganism and Nutri-ent Cycle Manager

Petra Mühlichen – Team Assisitant

LEARN MORE ABOUT THE HISTORY OF THE FINCK FOUNDATION

Julius Ritter – Agroforestry Team Member

Mats Ricke – Team Member for Data, Innovation, and Technology in the DaVaSus Project

Sam Waltl – Content Creation und Documentation

Philipp Hansen – Agroforestry Team Member

Nico Albrecht – Nature Conservation Team Member

Natascha Bosch – Head of Education and Communications

Felix Else, Stella Bardua, Nils George – Voluntary Ecological Year (FÖJ)

Clemens Bodt – Team Member for Data, Techno-logy and Programming in the DaVaSus Project

Mareike Borchert – Nature Conservation Team Member

CHAPTER 6
CLOSING

6.1 OUTLOOK

Agriculture faces significant challenges: climate change, declining soil fertility, and increasing economic pressure demand innovative solutions. In 2025, the Finck Foundation is specifically focused on advancing regenerative cultivation and management concepts to make farms more resilient and ecologically sustainable. Scientific findings and practical implementation will continue to be closely integrated, creating solutions that are both applicable and transferable.

The year 2025 marks a crucial milestone for the DaVaSus research project, as its initial phase successfully concludes. The extensive data collected over recent years offers valuable insights into the ecological, economic, and social impacts of diversified agroforestry systems. These research findings will be shared at several scientific and practice-oriented events, including the Ökofeldtage, the EAAP Annual Meeting, the DaVaSus Field Day at Gut & Bösel, and the Multifunctional Farming Conference.

A primary focus involves the systematic evaluation of the comprehensive field trials conducted over the past two years. This includes precise biomass forecasts using drone technology, the deployment of insect sensors for detailed biodiversity monitoring, and the further development of the digital product passport within animal welfare research.

Additionally, a new eShepherd trial with heifers will take place in summer 2025, complemented by a new telemetry trial in Precision Farming utilizing a precision spreader and exatrek, a system for automatic machine data acquisition.

Plans are also in place to release a digital decision-support tool, offering farmers data-driven guidance on sustainable farming strategies. At the same time, the continuation of the DaVaSus project is being actively pursued to ensure long-term research and the development of sound strategies for resilient agricultural systems.

The expansion of the Living Lab also remains a central focus. In collaboration with research institutions such as the ZALF and the JKI, an experiment on diversity is being launched within a silvoagropastoral agroforestry system to investigate the influence of biodiversity-enhancing measures on agroecosystems. At the same time, the research areas are being expanded, in particular through the establishment of new silvoagropastoral systems. The scientific monitoring of these areas is being intensified and a comprehensive guideline for agroforestry systems is being developed. This identifies key research questions and serves as a basis for future studies. In addition, strategic partnerships are being expanded and funding opportunities developed to enable larger research projects, while the further development of the scientific infrastructure in Living Lab plays a central role in future research activities. By expanding the research areas and implementing new experiments, agroecological relationships are to be investigated even more precisely. The focus is on integrating new monitoring technologies that enable data-based analyses of ecological and economic factors. State-of-the-art sensor technologies will be used to record microclimatic conditions, soil moisture or the growth of catch crops, for example.

In addition to technical innovations, research work in the areas of soil health, biodiversity and climate protection will be expanded. The influence of regenerative methods on soil biology, in particular through the increased use of composting and soil ferments, remains a central field of research. The monitoring of these measures is being expanded in order to record long-term trends in carbon storage, humus formation and microbial diversity.

A large-scale research project on agroforestry in Germany is planned for October 2025. Independently, our education and, especially, our knowledge transfer efforts will be consistently pursued. Alongside keynote speeches, lectures, and workshops, several publications in the form of practical guides covering key topics will be produced. These include soil health and humus building, effective strategies for planning agroforestry systems, alternative financing models for agricultural transformation, and the economic analysis of holistic pasture management.

Parallel to the Foundation‘s publication activities, the acquisition of new research projects is being intensively pursued to further secure the long-term monitoring of regenerative agriculture.

Existing research partnerships will be expanded and complemented by new collaborations. Furthermore, our monitoring methods will be refined to gain deeper insights into the long-term developments of soil fertility, biodiversity, and carbon sequestration.

Despite these advancements, challenges remain in implementing regenerative concepts. The long-term scaling of agroforestry systems requires close collaboration with practical agriculture, as economic factors and investment hurdles often slow down change. Knowledge transfer also needs to be more targeted to bring innovative methods to a wider audience more quickly. Additionally, the technical implementation of new sensor technologies poses a challenge, as adapting them to various farms is complex and requires continuous evaluation.

The continuous advancement of scientific monitoring remains a crucial factor for the success of regenerative agriculture. Through the use of new technologies, the integration of digital tools, and the expansion of interdisciplinary collaborations, our research will become even more professional and practically relevant. In 2025, the Finck Foundation will continue to play a central role in the scientific oversight of regenerative land use, actively driving the transformation towards resilient, biodiversity-promoting, and climate-positive agricultural systems.

6.2 ACKNOWLEDGEMENTS

Implementing innovative projects for sustainable agriculture and forestry requires more than just commitment and expertise – it needs partners who make bold ideas and visionary concepts possible. Regenerative agriculture and forestry thrive on experimentation, on the courage to try new things and on partners who do not insist on guaranties but push for impact.

As a unique Living Lab for regenerative agriculture and forestry, the Finck Foundation directly implements forward-thinking approaches. The Finck Foundation views public funding as a crucial building block, but the generous support from patrons, partners, and supporters provides the flexibility and independence needed to implement visionary solutions quickly and effectively – especially in a time when urgency matters.

This operational freedom truly is the bedrock upon which we can conceive novel, practical approaches and put them into action.
Your support is more than just funding; it's the fuel for a movement. It has created a unique research platform and produced practice-proven innovations that serve as a model nationwide.
In doing so, concrete blueprints have been developed that demonstrate that regenerative agriculture and forestry isn't a compromise, but a win for the environment, society, and the economy.

Thanks to this support, we've been able to build a robust infrastructure and a dedicated team of experts who passionately spread regenerative approaches. The Finck Foundation would like to thank all its patrons, partners, and supporters for their foresight and trust.

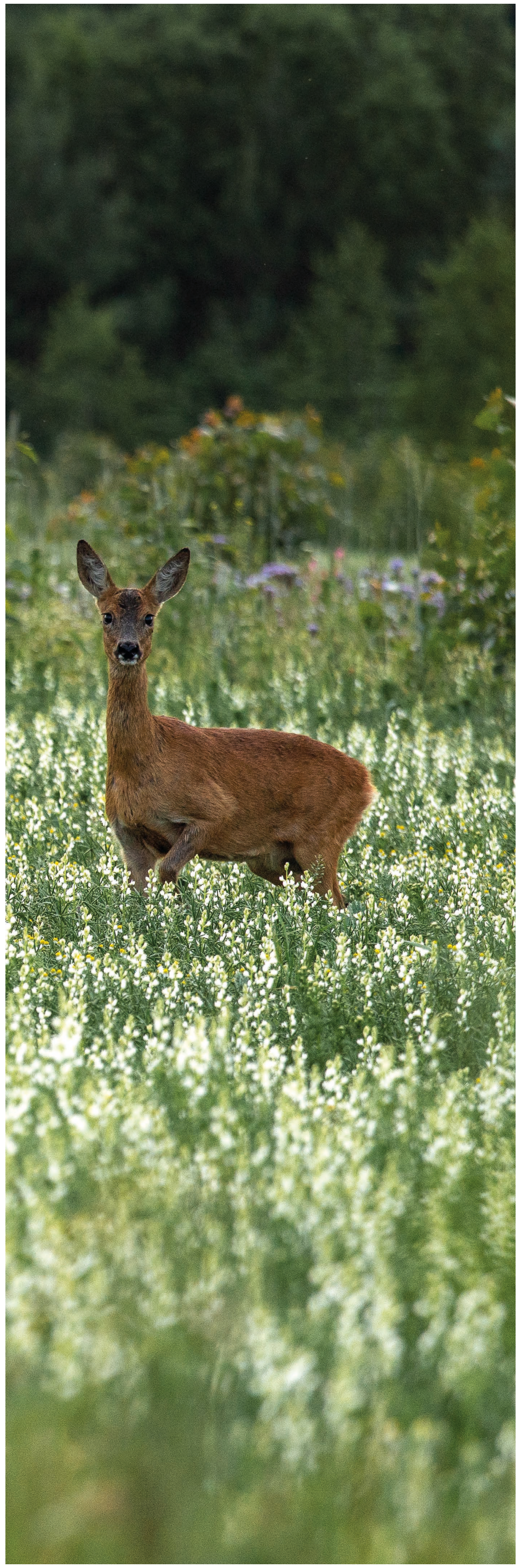
AVINA Foundation

BURDA Foundation

SALTA Foundation gGmbH

Hartwig!Stiftung

We also wish to acknowledge all those who, in both large and small ways, enable this work to continue.



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