THE LOCAL TASTE

The local taste
Cultivating Reciprocity through Regenerative Farming

P5 Research Report
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Preface

1 | *Apple harvest* , photograph by author, 2024.

Memories

During my childhood, I spent a lot of time on an old farm in the German countryside. Located in the Münsterland region, in the most rural area of the state of North Rhine-Westphalia. My grandparents leased the field to the neighboring farmer and only made a small part of the old farm building habitable. Nevertheless we could spent most of our time outdoors, in the woods or the orchard that they planted. My earliest memories of being immersed in nature -whether in the fields, the forest, or the orchard- are rooted in this place.
It was here that I learned about the concept of seasons, and to help with the harvest of wild apple, pear and plums.
Growing up and returning year after year, my perception of this place changed. Studying architecture and landscape architecture made me thinking about the relationship humans have with nature, I started to see the development and the agricultural practices in the region more critically. Realizing how romanticized my view on this landscape and farming is, I asked myself the question:

What do we see when we look at these landscapes? And more importantly, what do we not see?

2 | *Corn field in Laer* , photograph by author, 2024.

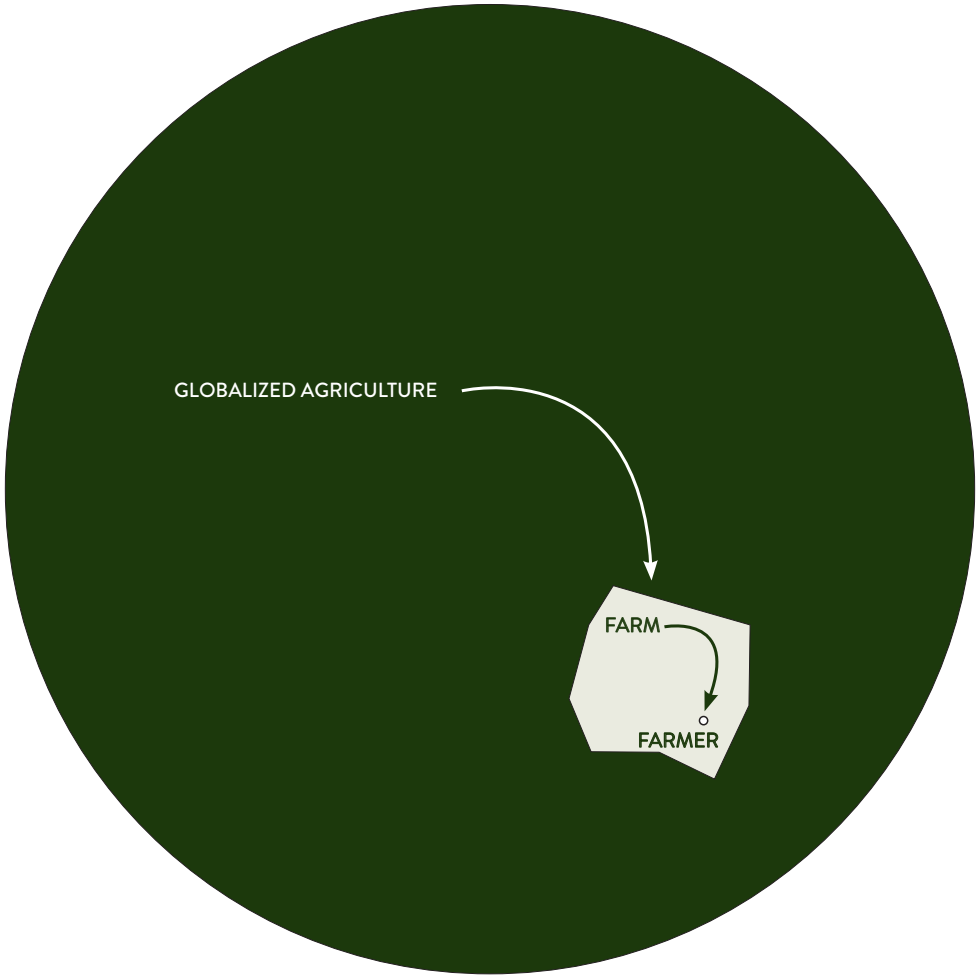
Realizing

Today, the landscape tells a different story. Large monocultural fields, dominated by crops like maize, are primarily grown to maximize biomass production. Much of this produce is destined for further processing, such as animal feed or biogas power plants. The presence of industrial farming is marked by large, functional structures. The disconnect between what is grown, how it is processed, and what is ultimately consumed is striking.

4 | *Industrial typologies on a Münsterland farm*, photograph by author, 2024.

Global and Local

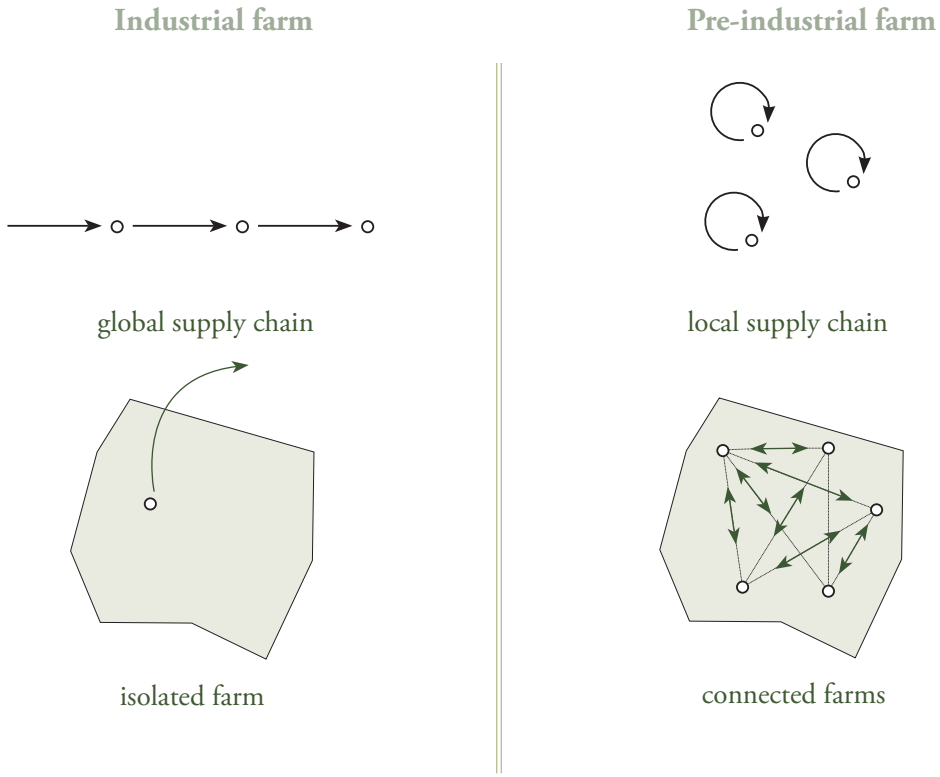
To grasp the complexity of today's food system, it is crucial to understand the interplay between global and local dynamics. For this research, I see the current global agricultural system, the system of a farm, and the farmer who operates a farm, as three systems that interlock. They are interconnected and influence each other.



5 | *Global Industrial agriculture*, scheme drawn by author, 2024.

The modern farm: globally connected, locally alienated

The global market operates through linear processes that create dependencies on global supply chains. The globalized food industry results in big farms that are disconnected from their regional context but serve in a global supply network, visible in the figure below on the left. At the same time, the food that is being consumed in the place is a globalized product that is often not connected to the local ecosystem. While in the pre industrial time, farms were mostly operating as local autonomous systems , they have become isolated and dependant instead.



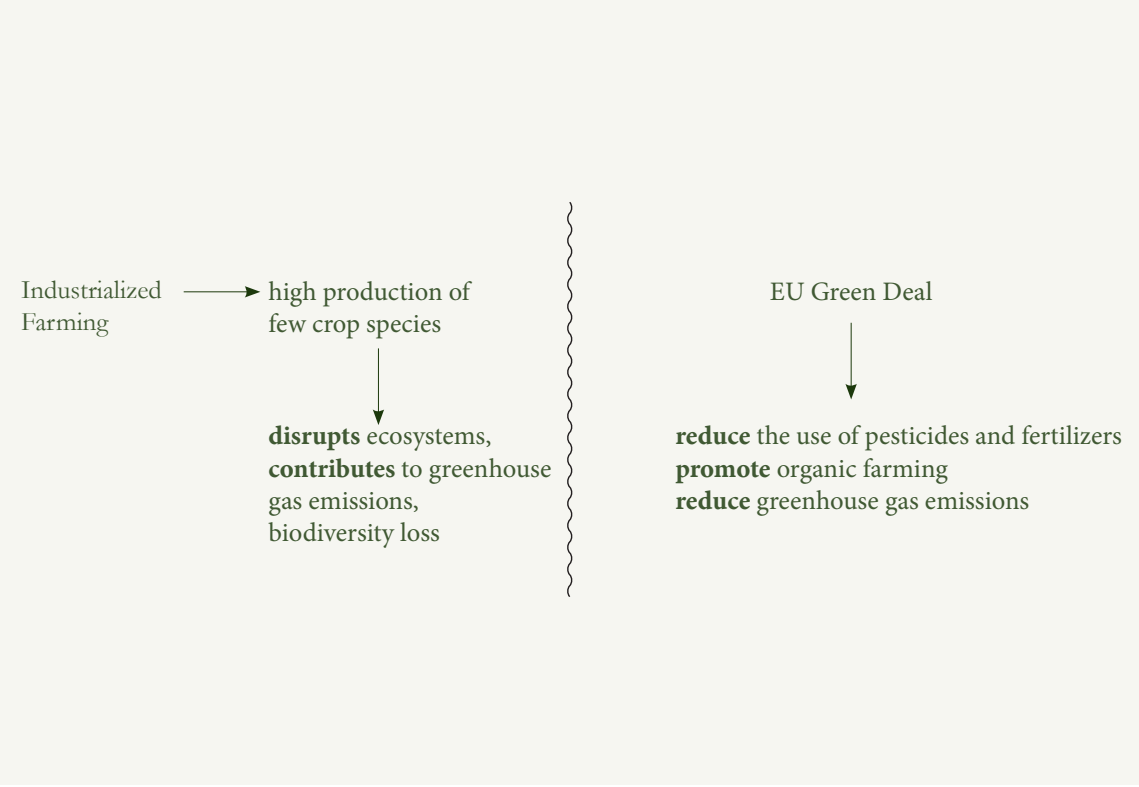
Subsidies in farming

To secure food safety in the years after the second world war, Germany started subsidizing farmers in the 1950s. Through the so called green revolution, meccanization, modified crops and chemical pesticides and fetilizers reached the farming sector and transformed it. In 1962, the European states of Germany, France, Italy, the Netherlands, Belgium, and Luxembourg decided to collectively organize production and distribution in agriculture through their common agricultural policy (CAP). The common agricultural policy aimed to avoid overproduction and ensure fair competition between the regions, centered on family farms. This marks the start of European agricultural politics (CAP at a Glance - European Commission, 2024).

5.2 | *Cropduster spraying pesticides*, (Charles O'Rear, n.d.)

Climate Crisis, the EU and the Green Deal

In retrospect, this upscaling and industrialization of agricultural practices that focus on high production of a few plant species has a negative impact on the environment. They disrupt ecosystems, contribute to greenhouse gas emissions and accelerate biodiversity loss.
The EU has recognized the impact of the agricultural sector on the environment and has extended its focus from securing food safety to aiming for more sustainable farming models. As part of the Green Deal, a policy framework that targets various sectors to reduce greenhouse gas emissions, promote biodiversity and switch to sustainable practice, the EU plans to transform the agricultural sector. Through this initiative, Europe aims to become the first climate-neutral continent by 2050. The Green Deal aims to reduce the use of pesticides and fertilizers, promote organic farming, and reduce emissions while ensuring food security and a fair income for farmers. It also introduces the Farm to Fork strategy, which sets a special focus on regional and seasonal food production and strengthens connections between producers and consumers (Agriculture and the Green Deal - European Commission, n.d.).



6 | *From efficiency towards diversity*, scheme drawn by author, 2024.

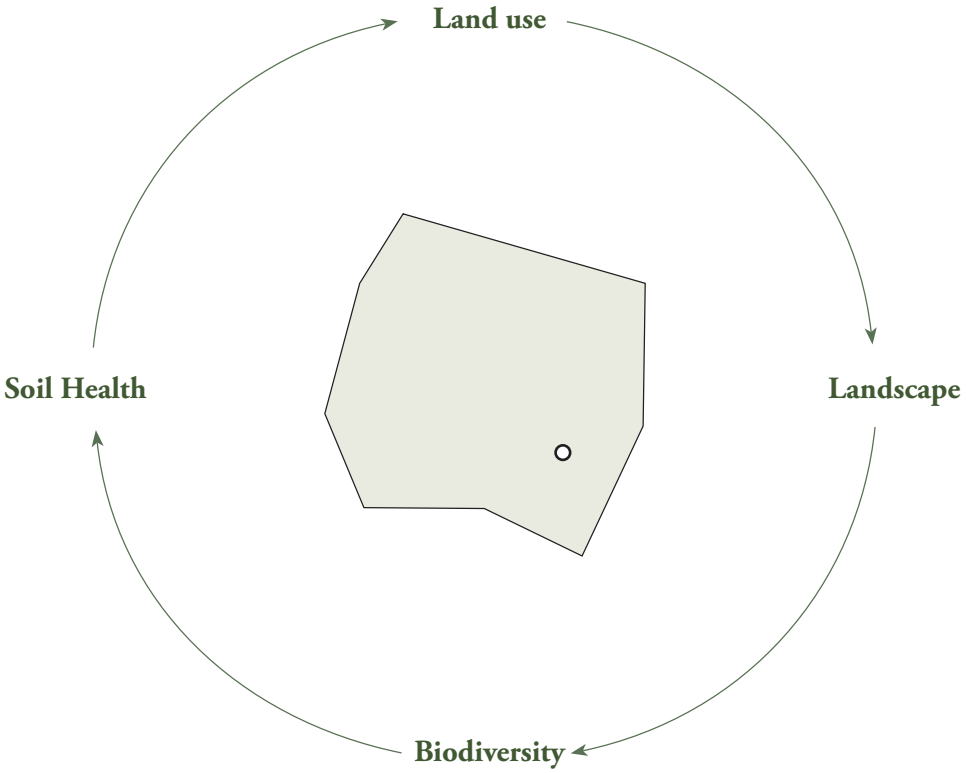
Research Question

The food system is facing challenges on many levels. Farmers are expected to bring about change that is largely shaped by political decisions over which they have little influence. At the same time, globalized agriculture has disconnected farms from their local environment, leaving many people alienated from locally grown food and its ecological context.

Farming is inherently tied to local ecological cycles like seasons, soil health, and water availability. However, land use changes through industrialized farming have disrupted these rhythms, contributing significantly to the current climate crisis.

This transformation has created disconnection on multiple levels. To understand how this has developed, this research investigates how the rhythms of cultivation have shifted through industrialized farming, focusing on its effects on the landscape, soil health, and biodiversity of the local ecosystem.

How did industrialization change the cycles of a farm in the Münsterland region?



8 | *Interconnected dynamics of land use, landscape, biodiversity, and soil health*, diagram by author, 2024.

9, 10 | *Farming typologies in the Münsterland region*, photograph by author, 2024.

Theoretical Framework

A small german farm

This research explores the Farm Laer as a landscape shaped by time, practice, and meaning. To approach this complexity, the theoretical framework draws from a set of thinkers who each examine the relationship between humans and nature on different scales. These theories serve as a lens to frame not only the role of agriculture, but more fundamentally, the notion growing food as a foudnation of ecological identity. While farming itself is rarely the subject of architectural theory, it embodies a deeply physical and symbolic act of reconnection with the land. In this project, theory helps to reveal the cultural and ethical layers beneath the surface of agricultural practice, grounding the design in a deeper understanding of care, responsibility, and cohabitation in an ecosystem.

Questioning the economic model

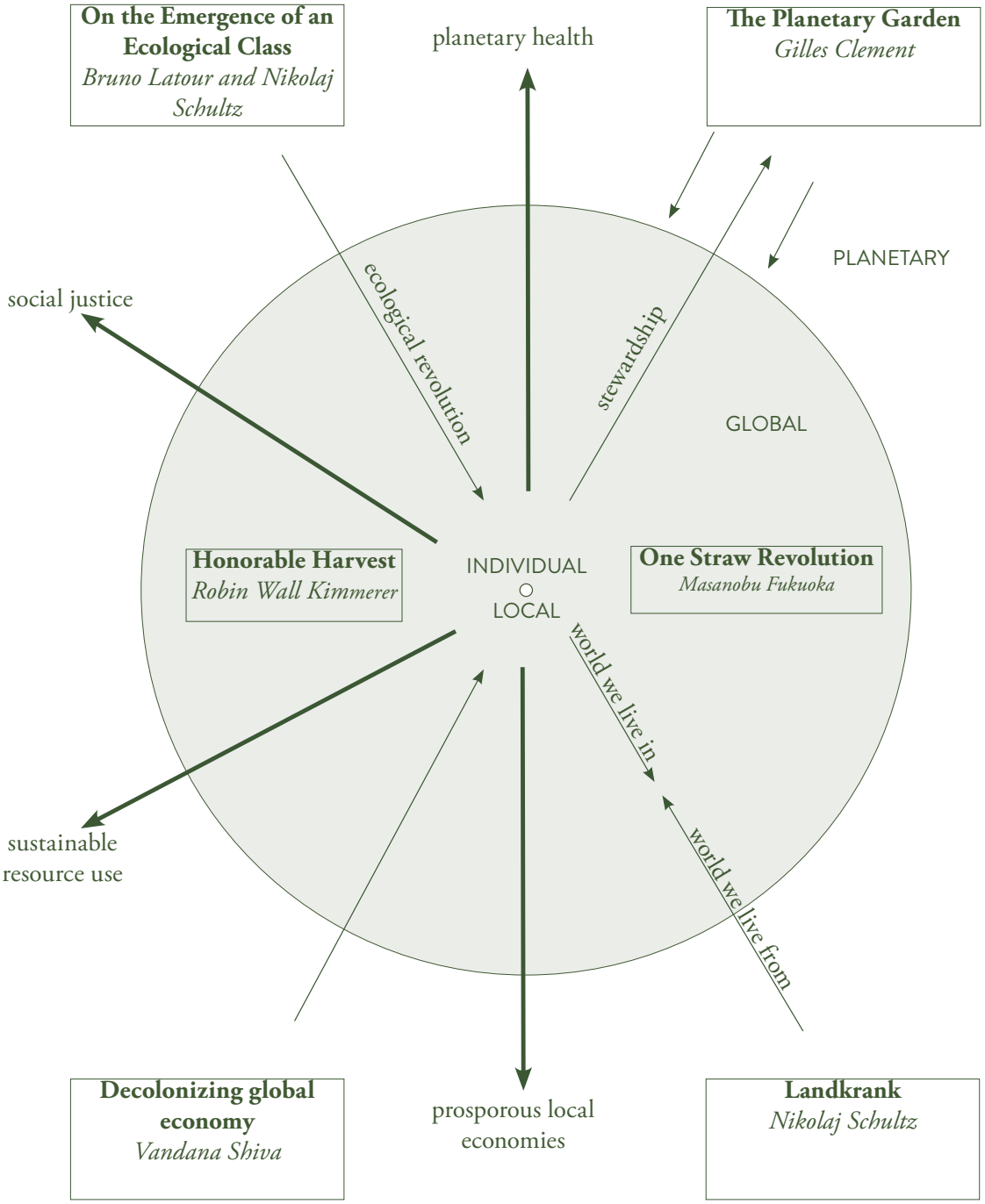
Industrialized farming plays a significant role in the climate crisis, reflecting a broader capitalist system that exploits natural resources unsustainably. Facing the climate crisis requires a major shift in how we think about society and the economy. In *On the Emergence of an Ecological Class,* Bruno Latour and Nikolaj Schultz argue that climate change demands a new collective Identity that overcomes traditional class divisions, uniting people across economic and social boundaries around ecological concerns. They call for the formation of an ecological class that recognizes the interconnectedness of social justice, environmental health, and sustainable resource use. This perspective challenges economic practices, like industrialized farming, that focus on profit and efficiency at the expense of ecological balance, risking the collapse of natural systems. Instead, Latour and Schultz advocate for a system based not on exploitation but on maintaining the health of our ecosystems to sustain our future (Latour & Schultz, 2023).

Decolonizing global economy

The current economic practices are rooted in colonialization. Vandana Shiva contends the need for a decolonization of the global economy. Arguing that international trade is ancient, it was there before the industrialization and climate crisis. Economic democracies are based on the diversity of prosperous local economies instead of globalized economies in the hands of a few corporations. She asks for rejuvenating our economic models, our paradigms, and our values to make everyone profit from it (Global Landscapes Forum - GLF, 2022). This also applies to the food industry. Diverse local farming methods not only benefit the local economy, but also preserve the local ecosystem and the livelihoods of the people who will inhabit this place in the future.

12 | *Rotterdam market*, photograph by author, 2024.

The diagram (13) brings the theories together and sorts them according to scale and similarities. Despite their varied perspectives, ranging from the planetary reflections of Gilles Clément to the personal, rooted insights of Robin Wall Kimmerer, the selected theorists share a belief in the significance of the individual as a site of transformation. At the core of each approach lies the idea that ecological identity is not abstract, but lived. It is through sensory engagement, cultivation, and attention to a local context that people form lasting bonds with the ecosystems they inhabit. The theoretical framework provides a foundation for reimagining the role of humans within ecosystems, moving beyond an anthropocentric worldview toward a more reciprocal model of land stewardship. These ideas later guide the project toward design strategies that align with natural rhythms and foster long-term relationships between people and place. The research, however, takes the form of a sensitive, site-specific investigation of the farm in Laer.

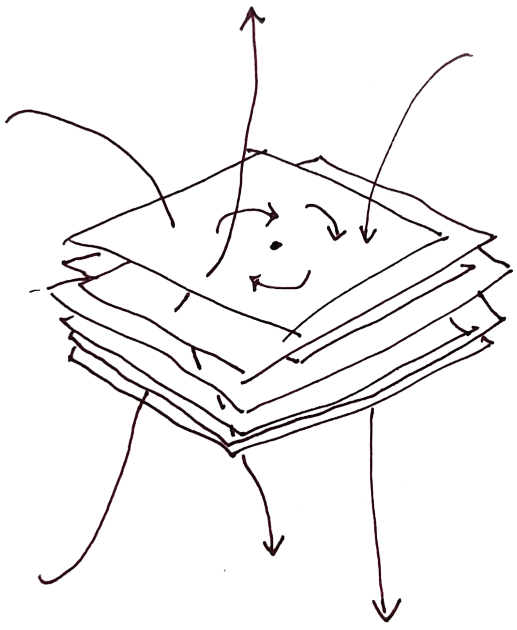


13 | *Theoretical framework*, diagram by author, 2024.

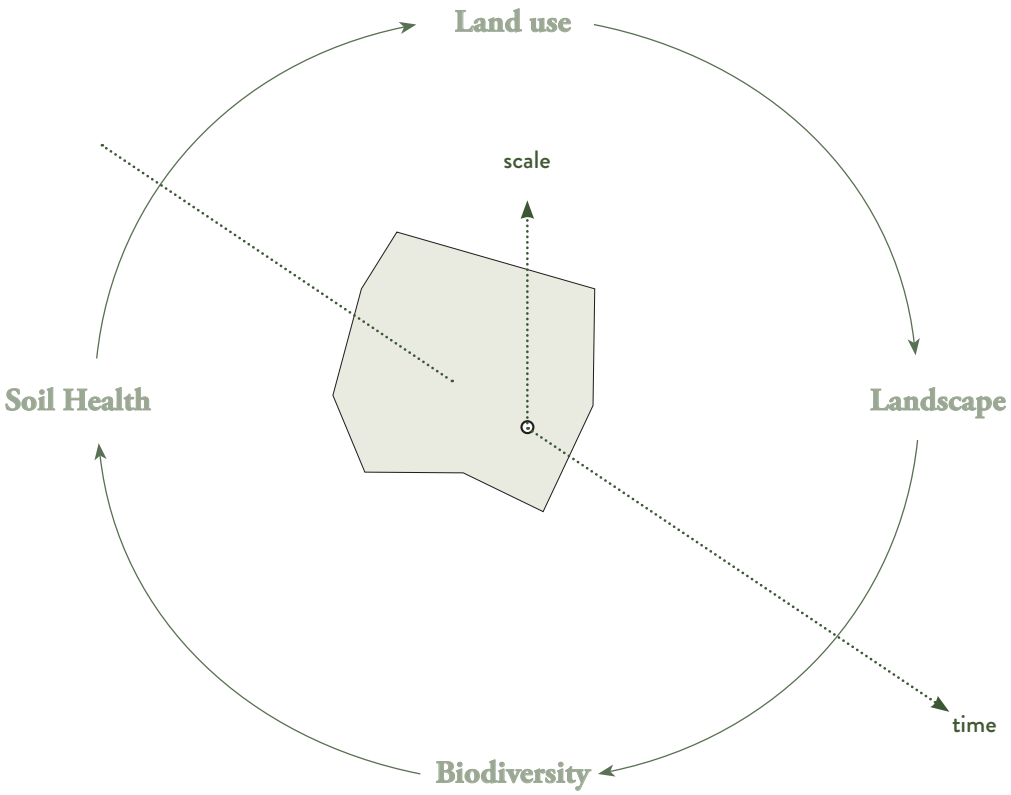
Understanding the local context

How to set up the research

The research is site-specific, focusing on the Farm Laer, a small farm in the Münsterland region of Germany as a case study. It begins with an exploration of Germany's agricultural structure and the role of the Münsterland region within it. From there, the focus narrows to the municipality of Laer. Understanding the landscape on a territorial scale involves analyzing how topography, hydrology, and geomorphology shape the region.
Next, the spatial development of the landscape around the farm is examined through archival research to build a model of the landscape over time. This step explores how cultivation practices have transformed the area and how farming cycles have changed. Here, the research also investigates material cultures in the Münsterland region in the past. Exlporing what the land has to offer, historical building practices that make use of local resources, are investigated. To further analyze the impact of farming practices, soil chromatography is conducted on three soil samples from different cultivation areas on the farm. This tactile method provides a detailed understanding of how cultivation practices influence soil health, complementing the broader landscape analysis. By connecting scales from the territorial to the soil level, this approach reveals the cycles of farming across time and space.



15 | *Layering of diverse methods*, diagram by author, 2024.



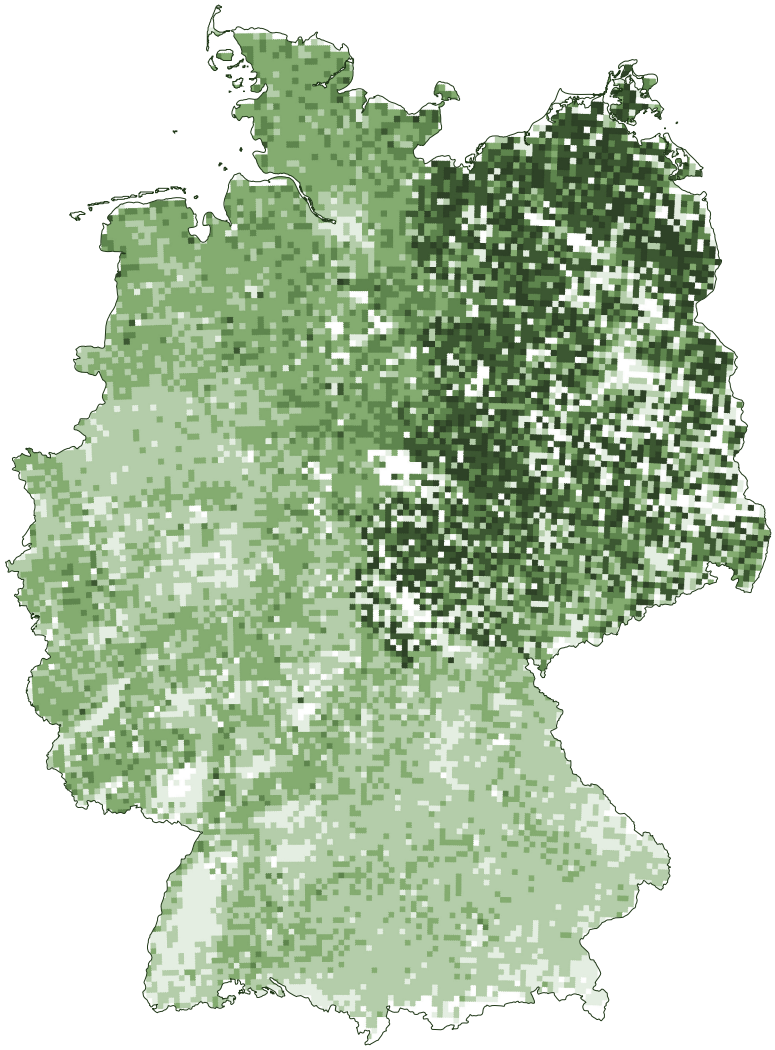
16 | *Layering across time and scale*, diagram by author, 2024.

Layering is a key method used throughout the research to uncover relationships and underlying patterns that are not immediately visible. Territorial mappings, soil chromatographs, and other elements are combined to analyze these connections in depth. A varietey of methods that all have a focus on engaging with a topic through visual or physical experimentation are used to understand the connections in depth. This layering is done through territorial models, drawings over existing photographs, and visual analysis to highlight essential elements. This method reflects the palimpsest nature of the landscape, where visible features carry traces of their history.

The goal of the research is to unravel the interconnectedness of land use, how it shapes the landscape, influences biodiversity, and affects soil health, which in turn loops back into land use. This cycle is essential to examine across different time periods in order to understand why certain practices emerged and how they evolved. For me, the next step is to re-evaluate these criteria in light of the current context, particularly the climate crisis and the growing disconnection between people and the products they consume. These considerations will form the foundation for reimagining agricultural practices at Farm Laer and will guide the direction of the design phase.

17 | *The quiet surface of the industrial farm*, photograph by author, 2024.

Farm sizes in Germany



Average size of farms in 2020

- > 25 ha
- 25-50 ha
- 50-100 ha
- 100-200 ha
- 200-400 ha
- > 400 ha

0 50km 200 km

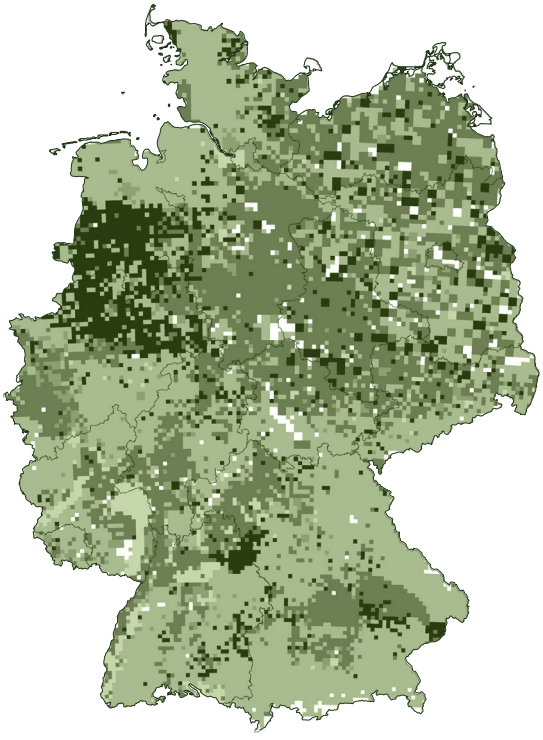
19 | *Map of germany indicating the average size of a farm in 2020*, Reproduced from Agraratlas, 2020

Germany's agricultural landscape

The Münsterland Region

The Münsterland region is strongly shaped by agriculture, with approximately 60% of its land dedicated to farming. With a population density of 265 inhabitants per square kilometer and a total population of 1.6 million, around 29,000 people are directly employed in agriculture, representing 1.8% of the population. The region is renowned for its agricultural landscape, where smaller-scale farming structures have largely been preserved. Economically, the agricultural sector plays a significant role. The Münsterland is particularly known for its production of milk, beef, pork, and increasingly poultry, making it one of the most efficient refinement regions globally (Landwirtschaft im Münsterland Daten-Fakten-Analysen, 2022). Maps of agricultural land use, pig density, and maize content reveal that the Münsterland's role as a refinement hub results in a high concentration of both pigs and maize.

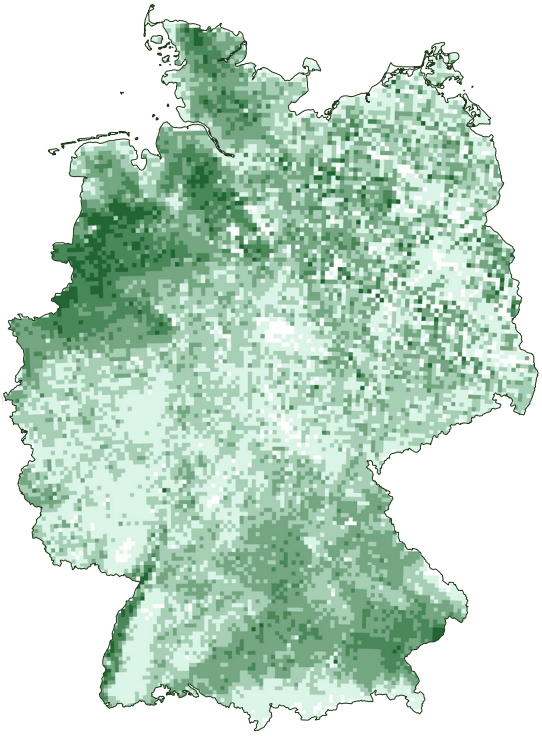
Production type



Production direction with the greatest contribution to production value 2020

- Pasture
- Forage
- Arable farming
- Refinement

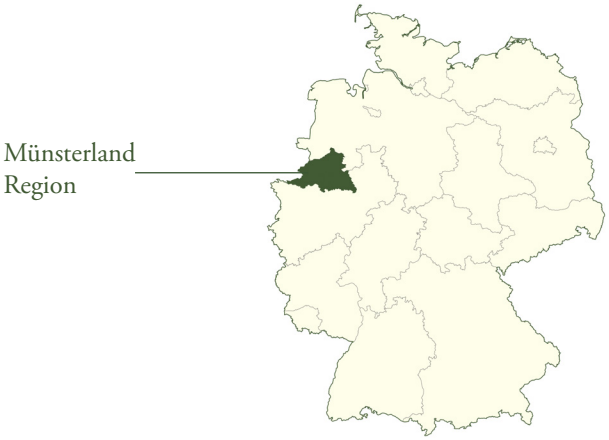
Maize content



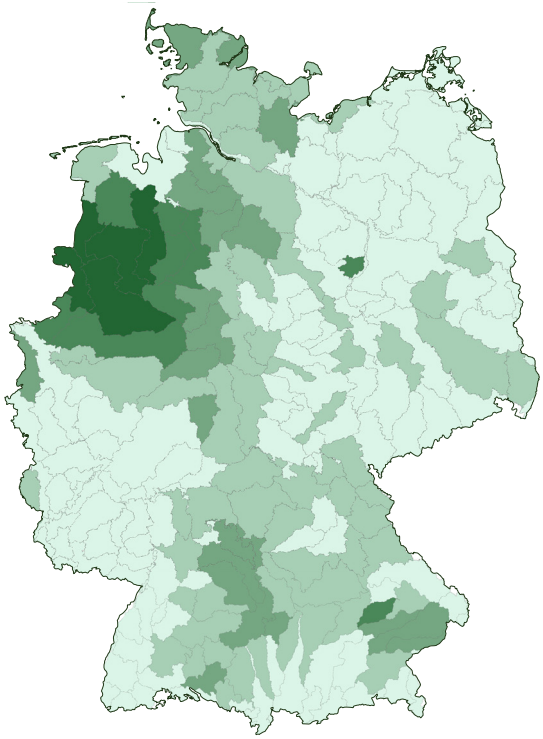
Share of maize area in the utilised agricultural area 2020

- <5 %
- 5-15 %
- 15-30%
- 30-45 %
- >45%

0 50km 200 km



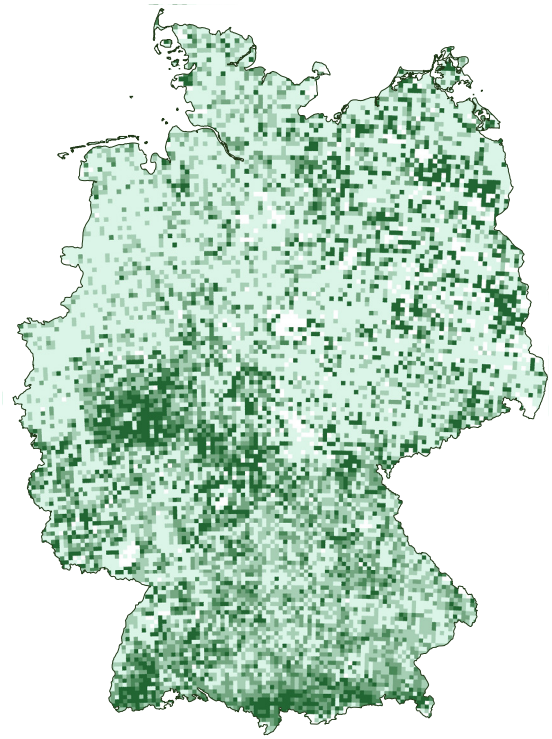
Pig density



Number of pigs per 100 hectares of utilised agricultural area 2020

- >50
- 50-150
- 150-300
- 300-600
- >600

Ecological farming



Organically farmed area in relation to the utilised agricultural area in 2020

- <10%
- >30%

0 50km 200 km

21 | *Maize harvest in Laer*, photograph by author, 2024

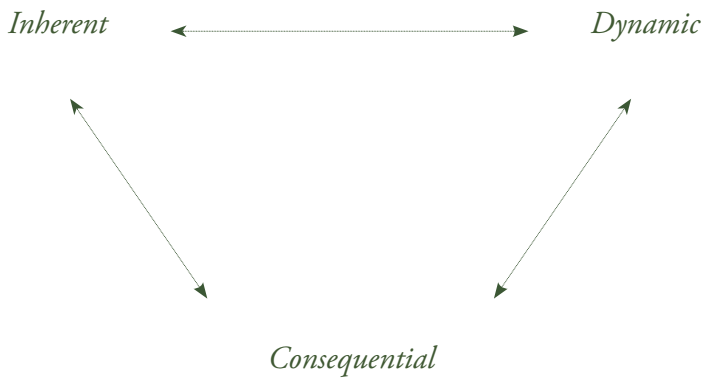
Understanding the Territory

Layers of the landscape

To understand the context, it is essential to first look at the landscape and its territorial layers. The landscape consists of an *inherent* layer, including the soil type and the hydrology. The municipality of Laer is located in an area of germany where clay is the most dominant soil type. The density differs from clay to silt to sandy clay.
A more *dynamic* layer is shaped by land use and other human-induced changes, such as infrastructure (Braimoh, 2013). The sparse road network reflects the rural character of the area, with only a few major roads connecting villages and agricultural fields. Since the Industrial Revolution, land use practices have increasingly harmed the environment, contributing to global climate change.

The interplay of these two layers has led to the emergence of a third layer, referred to here as the *consequential* layer. It shows climate stress in the area, such as drought and waterlogging.

By layering these elements, a clearer understanding of the region emerges, revealing the interconnectedness of land use and the underlying natural landscape.



22 | *Layers of the landscape*, diagram by author, based on (Braimoh, 2013)

Historical development

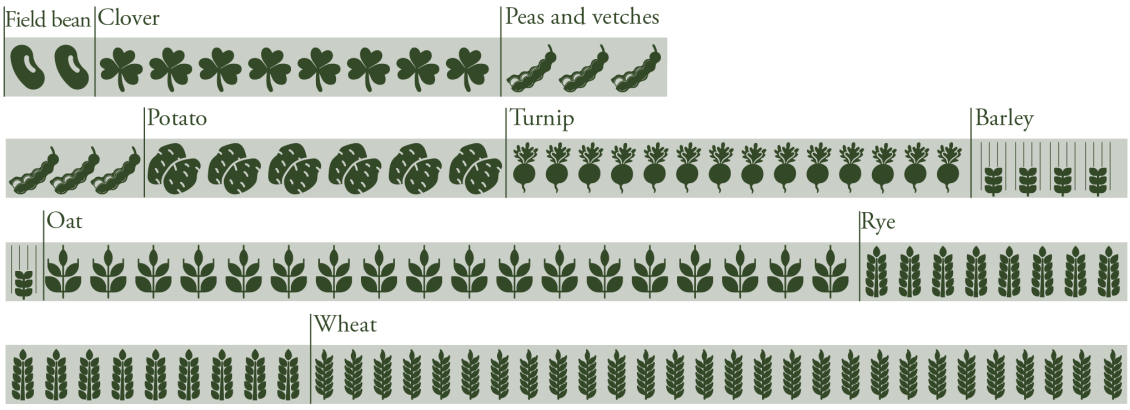
Period 1925-1936

Due to labor shortages after the First World War, pasture fields became bigger again. This lack of workers also led to first farmers purchasing tractors with petrol engines. The demand for animal products also increased, with many people working in a factory and renting a piece of land to grow vegetables and potatoes for their own use (Schwinger, 1988).

Cropland in hectare

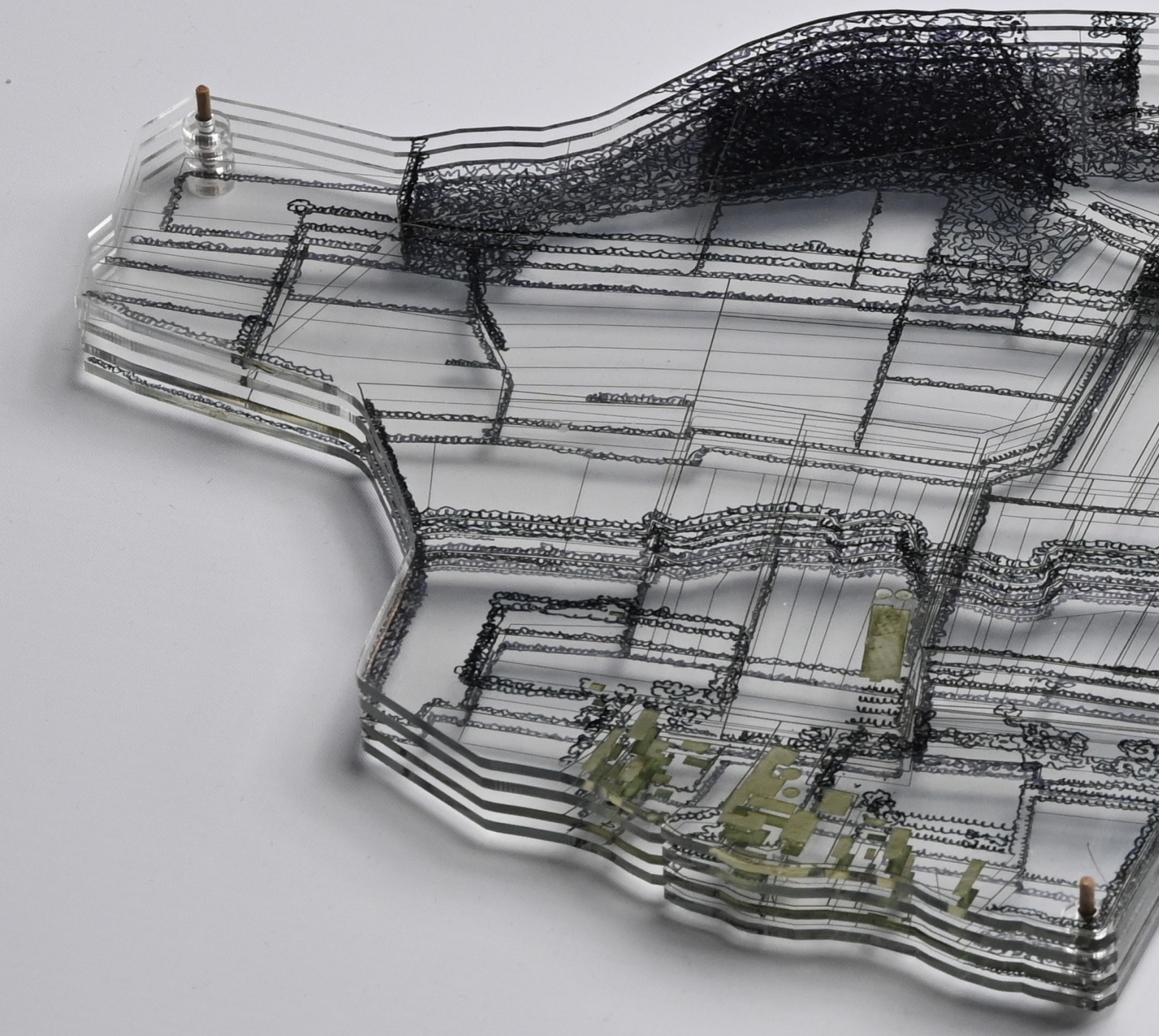
30	Field bean *Vicia faba*
100	Clover *Trifolium*
100	Pea *Vicia pisiformis*
120	Potato *Solanum tuberosum*
150	Turnips *Brassica napus subsp. rapifera*
65	Barley *Hordeum vulgare*
275	Oat *Avena*
190	Rye *Secale cereale*
270	Wheat *Triticum aestivum*

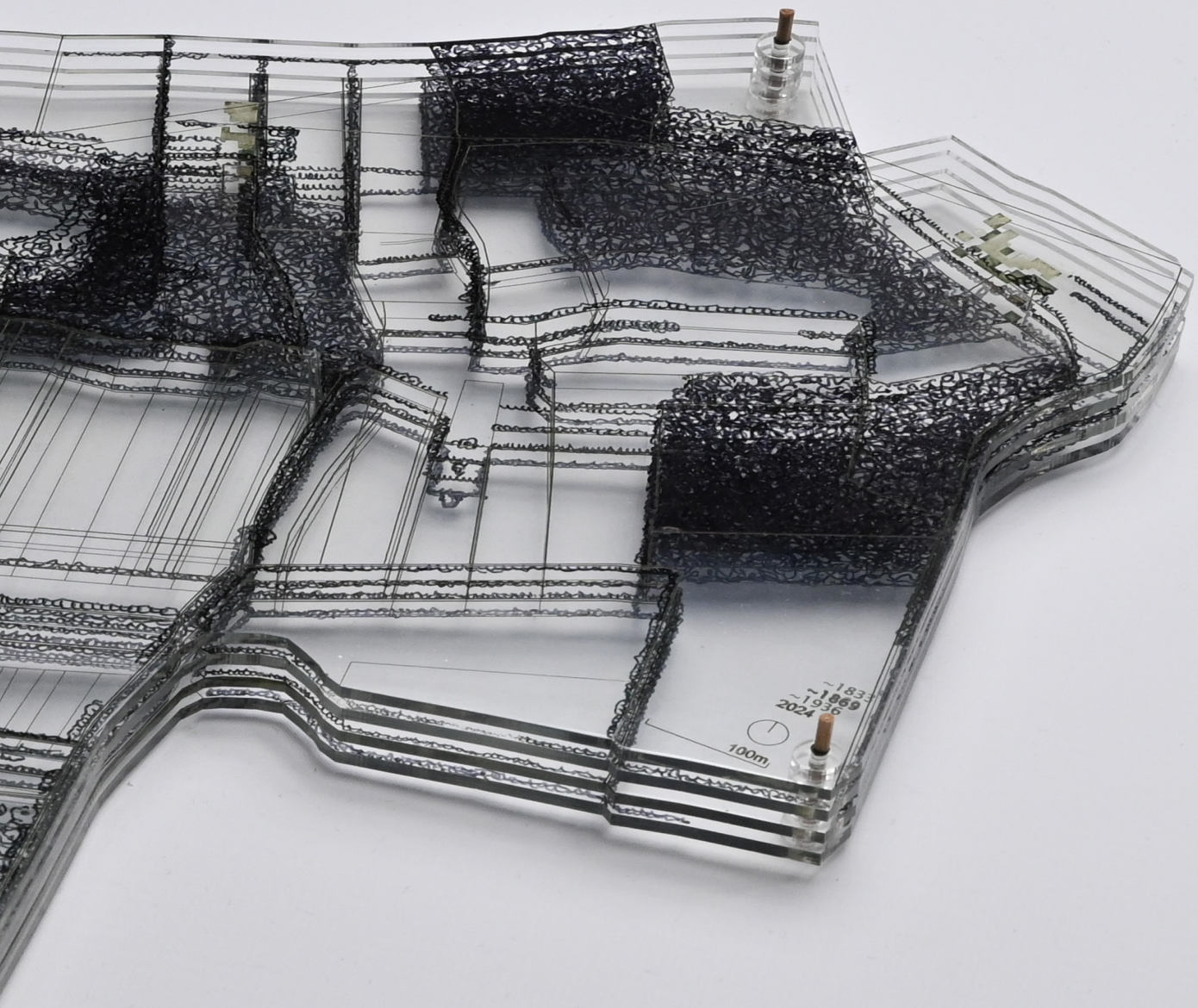
Cultivated land in 1925



Revealing the palimpsest

Layering the development of the landscape allows for a deeper understanding of the palimpsest of the place by revealing how cultivation practices have shaped its spatial configuration over time. By overlapping the plot sizes from different time periods with the existing tree cover of those eras, it becomes clear how dynamic the landscape has been, constantly being shaped by human use. This method highlights the direct impact of cultivation practices on the spatial compostition of the landscape, showing both traces still visible today, and unraveling historical patterns.



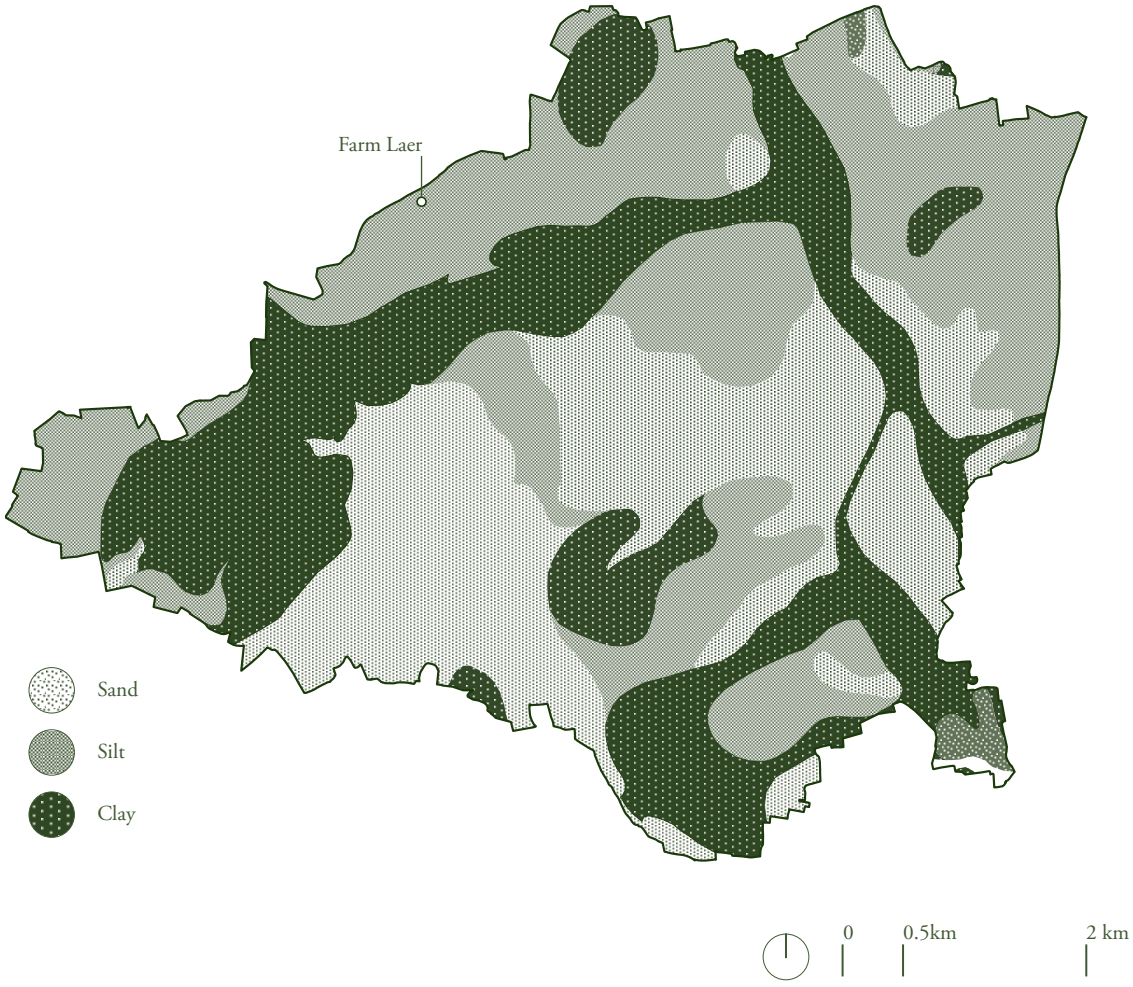


29 | *Historical parcellation development,* photograph by author

Inherent Layer

The Municipality of Laer is located in an area of mostly clay soil. The range from sand to clay difffers in the size of the soil particles. The landscpae is characterized by ditches separating and draining the fields. Due to its small particles, the clay landscape contains water well and is therefore suitable for agriculture.

Soil type in Laer



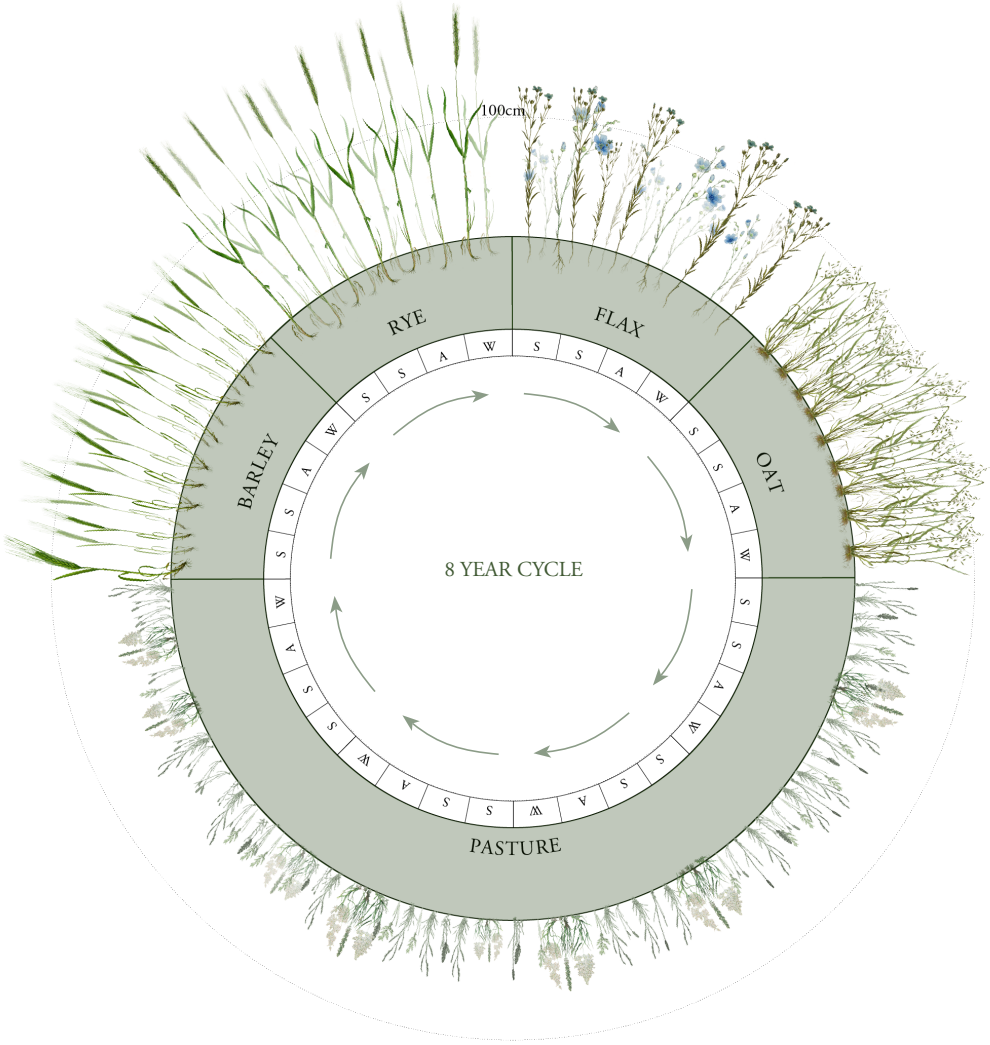
32 | *Soil types in Laer,* map created by author, based on (TIM online, 2024)

Dynamic Layer

Crop rotation

In the time of the common fields, land was farmed by one farmer for four years, then used as a four-year common pasture and then given to the next farmer for four years.
During this time, the land was farmed according to a specific crop rotation. There were rules as to which crops could be cultivated well in succession and others that did not grow well afterwards. This combination of shared ownership and a specific planting scheme should sustain soil health for the future.

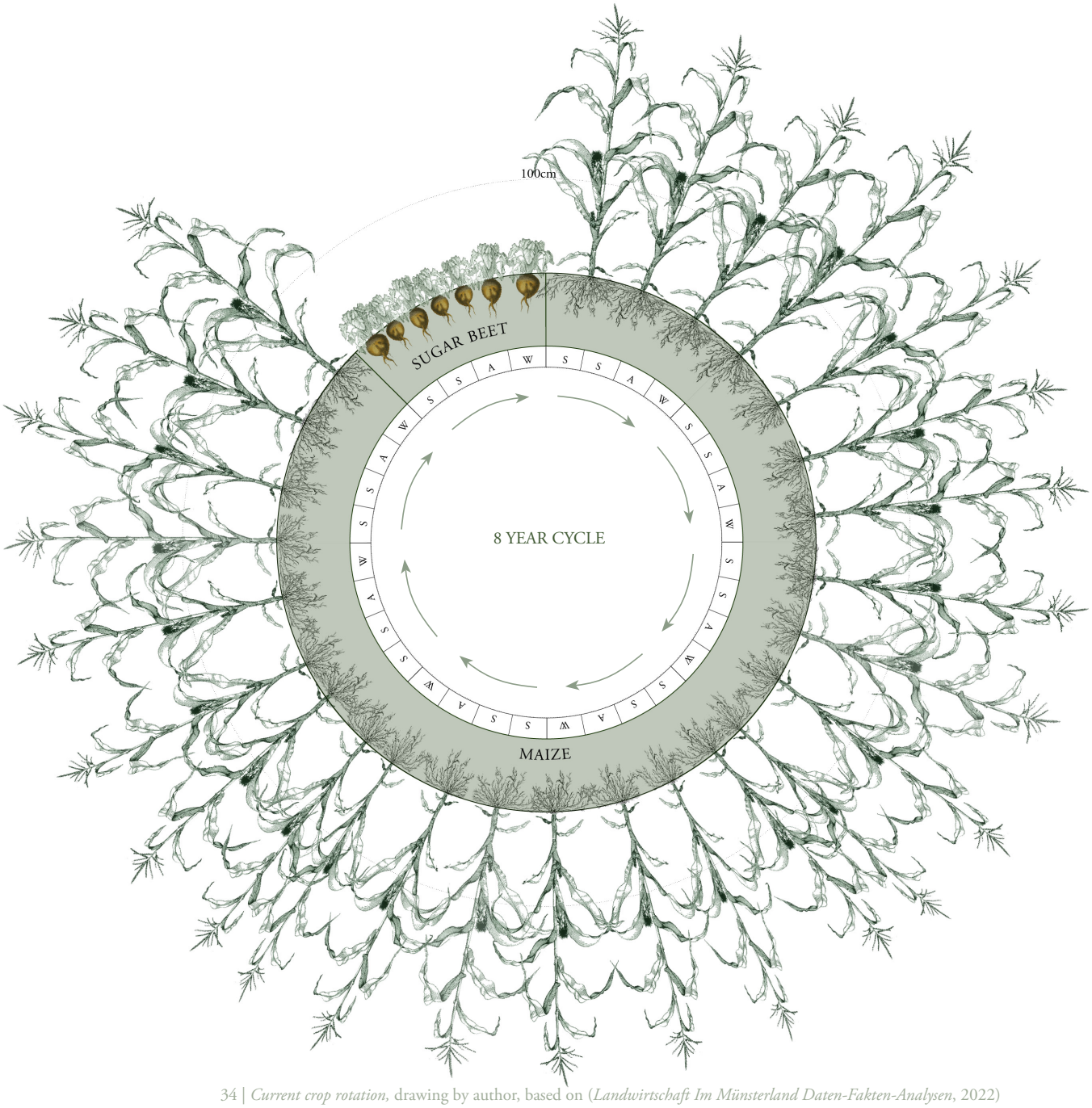
8-Year crop cycle from 1817



33 | *Historical crop rotation,* drawing by author, based on (Schwinger, 1988)

Nowadays, in contrast, there is often little use of specialized crop rotations. In order to keep the soil fertile, intercropping is carried out regularly. However, the higher production of fewer different species makes it difficult to achieve the kind of crop rotation that existed in the past.

8-Year crop cycle today



34 | *Current crop rotation,* drawing by author, based on (*Landwirtschaft Im Münsterland Daten-Fakten-Analysen*, 2022)

Material culture

Reading the Landscape Through Materials

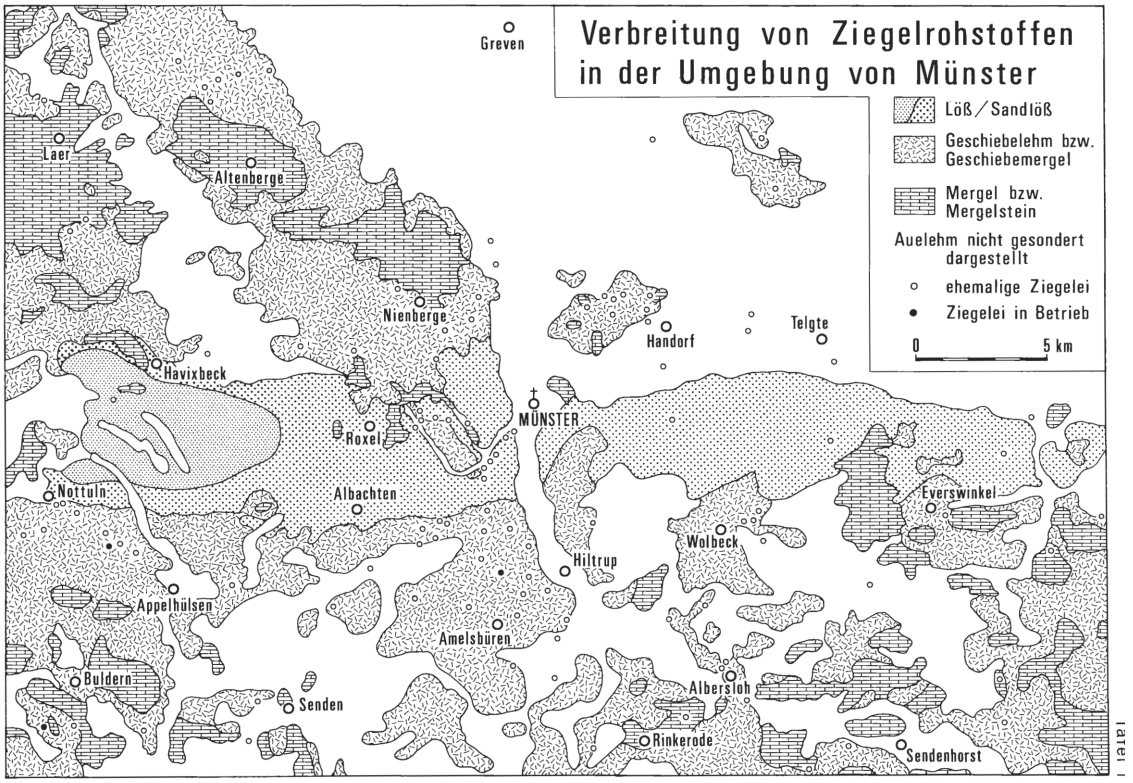
35 | *The farm Laer,* photograph by author, 2024

The clay-rich soils of the Münsterland region are not only highly fertile for agriculture, but have also historically provided a valuable raw material for construction. Understanding the landscape means also understanding the building culture that emerged from it. In times when agricultural practices were more closely tied to local conditions, architecture followed the same logic. Brick, alongside natural stone, became the most common building material in the region (Pieper, 1955). The old buildings of the Farm Laer are a clear example of this tradition, constructed from red brick made from the local soil.

36 | *Ziegelei Tecklemburg,* photograph from archive (Kreisarchiv Streinfurt, n.d.)

Brick factories have played a crucial role in shaping the Münsterland region, where traditional buildings were predominantly made from locally produced red bricks. The abundance of clay deposits, especially in the western and southern parts of Münsterland, supported a thriving brick industry. Numerous brick factories and field kilns dotted the landscape, providing materials for farmhouses, churches, and town fortifications (Speetzen, 1990). The characteristic red brick buildings, still seen in historical towns and rural areas, reflect the region's architectural heritage.

Soil types for brick firing in the region



37 | *The distribution of brick raw materials in the Münsterland region,* (Speetzen, 1990)

Clay marl and marlstone (Upper Cretaceous)
-Contain 30-35 % lime, 20 % quartz, 20 % mica, 15-20 % kaolinite
-Well suited if decalcified or mixed with other materials before firing

Boulder clay (ground moraine from the Saale glacial period)
-Contains 10-25 % lime, quartz, kaolinite, mica, feldspar
-Widespread in the region, often decalcified and used as boulder clay
-Good properties for brick production

Loess and loess loam (Weichselian cold period)
-High quartz content (55-65 %), 10-15 % lime, 10-15 % mica
-Particularly suitable for the production of roof tiles and lightweight bricks

Feldbrandöfen

38 | *Feldbrandofen,* historical photograph from (W. Leinemann , 1927)

Field ovens, or *Feldbrandöfen*, are a traditional method of producing bricks directly at the site where the clay is excavated, linking construction closely to the material cycles of the land. These temporary kilns were typically built on location, using simple masonry and local materials to enclose the unfired bricks and create a chamber for combustion. The stacked bricks formed both the firing chamber and the product itself, with heat generated by burning wood or coal in dedicated flues or channels. This process, although labor-intensive and difficult to control precisely, reflects a deeply site-specific way of building that ties the act of making to the landscape it emerges from. In regions like Münsterland, where clay was widely available, this practice shaped not only the architecture, marked by red brick farmhouses and outbuildings, but also the working relationship between people and land (Aufbau Des Feldbrandofens Im LWL-Ziegeleimuseum Lage, n.d.). Reconnecting to these material practices offers a way to engage with place beyond cultivation, restoring a more holistic relationship to local resources and building traditions.

To be native to a place we must learn to speak it's language.

-Robin Wall Kimmerer

1 Orchard

Wild apples, plums and pears. Grassland, sometimes grazors (sheep) there.

2 Maize field

Industrialized agriculture, monoculture of Maize and other animal feed crops

3 Forest

Small forest next to the house, mixed species:

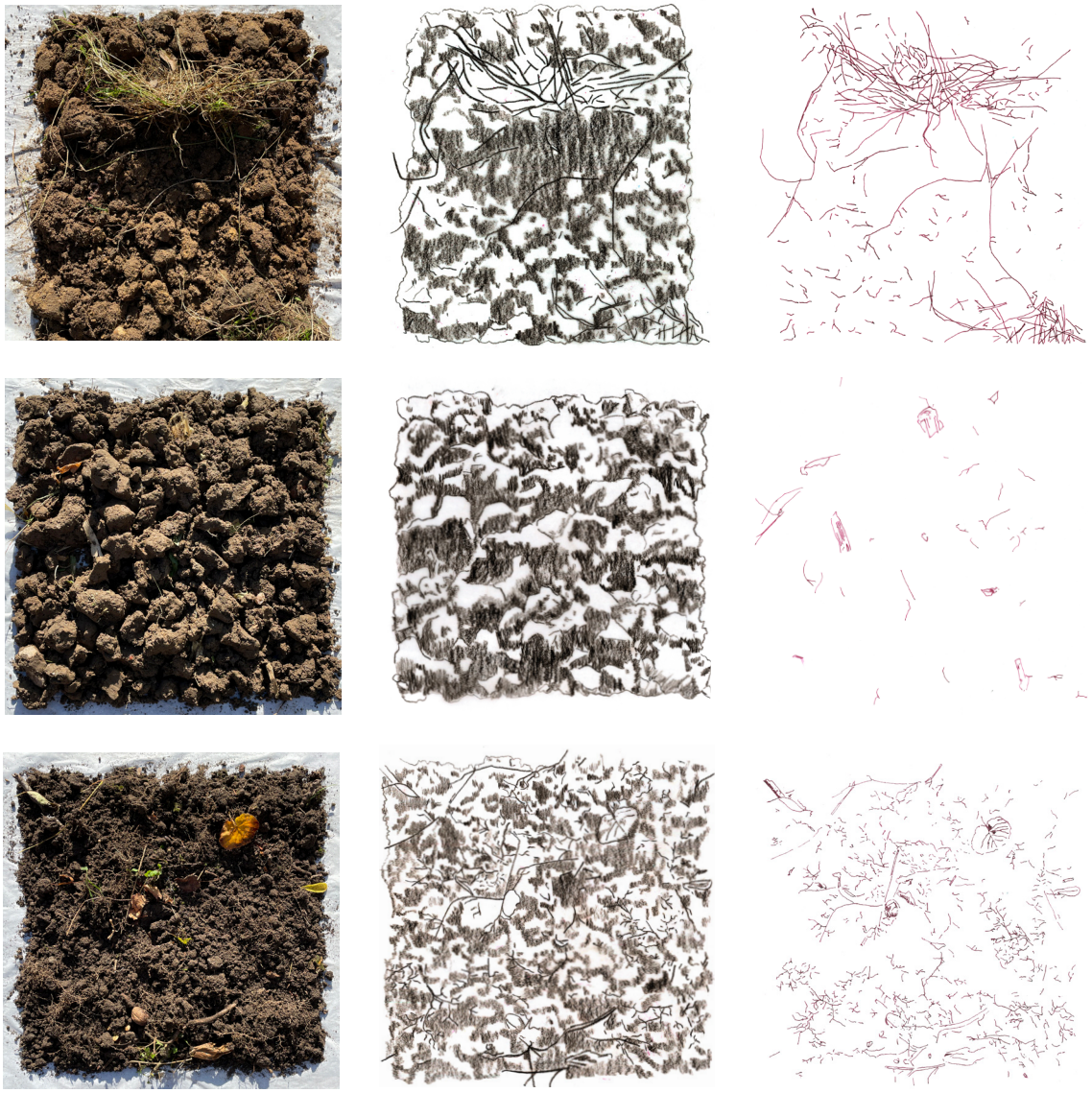
40 | *Collecting soil samples from three places,* photographs by author, 2024

Sensory Observation

Soil from three different places

In a first steps, the soil samples are laid out, photographed and observed. It is visible, that texture, grain and colour of the soil samples differ a lot. The texture of the different samples is particularly interesting. While the sample from the field is very compact and hardly falls apart, almost sticking together, the soil from the forest is drier, lighter and more fragmented. Organic material, small animals that live in the soil and root structures of plants can be noticed in different varieteys. Already through taking a moment and looking at the samples, many things show. Drawing is used as a method of visualizing different densities and structures. Through layering of different techniques and overlapping them, it is possible to decompose the soil into elements of organic material and the underlying structure of the soil. This physical way of using the human senses to visualize what is seen is consistent with the value of gardening and farming. Both use their bare hands to create value and understanding of nature's systems. This first step of engaging with the earth and perceiving it with one's human senses is a great value of this method for me. The focus is on the two parts that count here: the human being and the soil.

Soil Sample **Soil Strucutre** **Organic Matter**



41 | *Drawing soil samples,* photographs and drawings by author, 2024

Soil Chromatography

Visualizing patterns of the soil

The creation of connection to the soil only happens through experiencing it, and tactile methods where you use your hands tp create knowledge, are a great tool. To deepen the understanding of the quality of the soil and the relation between the land use and the soil health, Pfeiffers circular chromatography can be used as a method to visualize the composition and quality of soils.
This technique visualizes soil properties through chromatographic patterns created on treated filter paper. The soil samples from three locations on the farm: the orchard, the maize field, and the forest, were analyzed. The process involved creating a soil extract, which was applied to pre-treated filter papers using capillary action. The resulting chromatograms revealed distinct concentric patterns representing organic matter, mineral content, and microbial activity.

42 | *Running soil chromatographs*, photograph and by author, 2024

Soil Chromatography

Preparing soil samples

The taken soil samples have been drying for a few weeks. As a first step, they are being photographed to document their difference in nature. Grass, rocks, and debris were carefully removed. The soil was ground into a fine powder using a mortar and pestle to prepare it for the chromatography process. Then sieved to remove particles larger than 2 mm. To extract soluble components from the soil, 5 g of soil was weighed and mixed with 50 ml of 1 % sodium hydroxide solution (NaOH) in a clean container. The mixture was stirred briefly, left to rest for one hour and then stirred again. After a total resting time of six hours, the supernatant was carefully decanted to prevent solid particles from being transferred. This liquid extract was then used to develop the chromatograms.

Sample 1, Orchard

Sample 2, Field

Sample 3, Forest

Sample 1, Orchard

Sample 2, Field

Sample 3, Forest

Sample 1, Orchard

Sample 2, Field

Sample 3, Forest

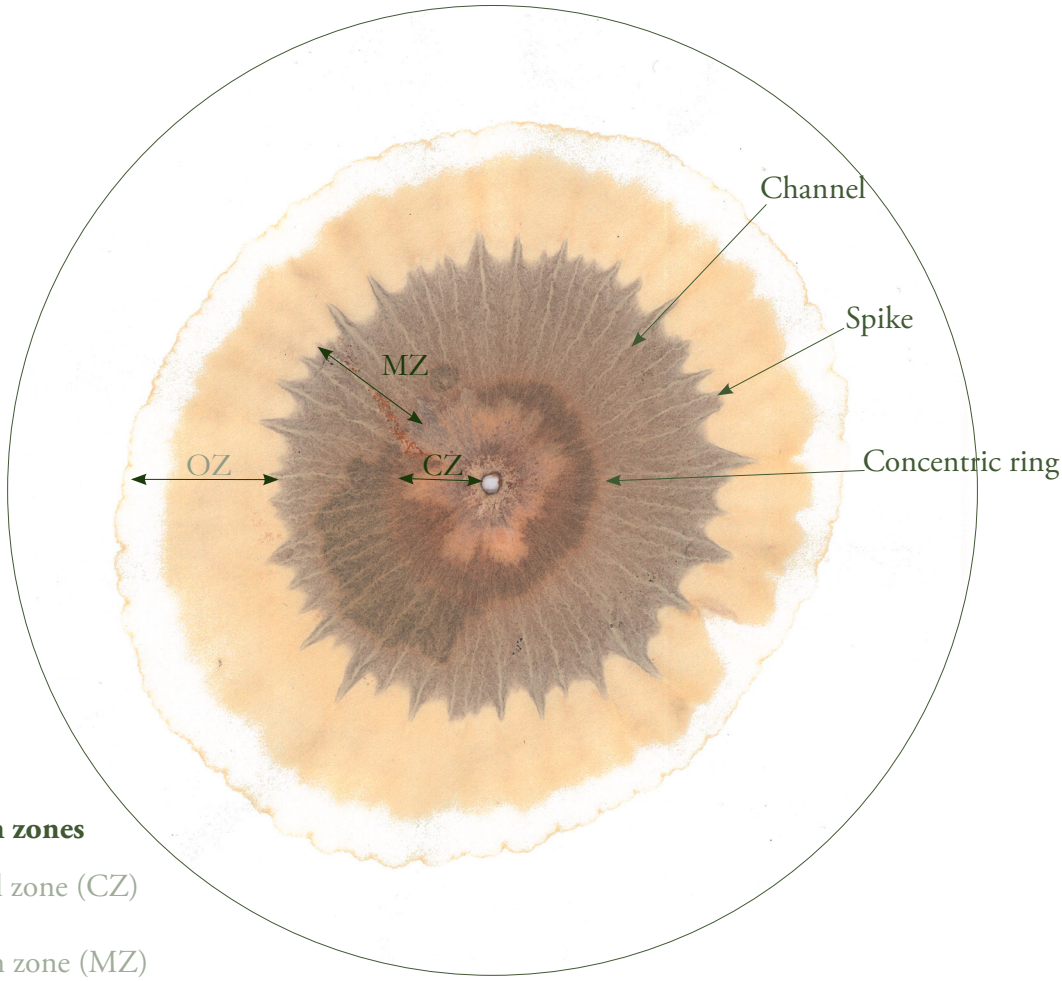
43 | *Preparing soil samples*, photograph and by author, 2024

Sample 1, Orchard Sample 2, Field Sample 3, Forest

Sample 1, Orchard Sample 2, Field Sample 3, Forest

44 | *Dissolving soil samples*, photograph and by author, 2024

Pattern characteristics



Pattern zones

Central zone (CZ)

Median zone (MZ)

Outer zone (OZ)

46 | *Pattern characteristics*, drawing by author, 2024

1. Orchard	Total Radius	Central Zone	Median Zone	Outer Zone (OZ)
1.1	45	10	18	16
1.2	55	14	20	20
1.3	55	15	18	20
2. Field				
2.1	50	15	15	18
2.2	53	15	15	20
2.3	50	13	13	23
3. Forest				
3.1	65	24	6	35
3.2	55	25	6	25
3.3	48	25	8	18

47 | *Measured values from three different soils*, drawing by author, 2024

Soil Chromatography

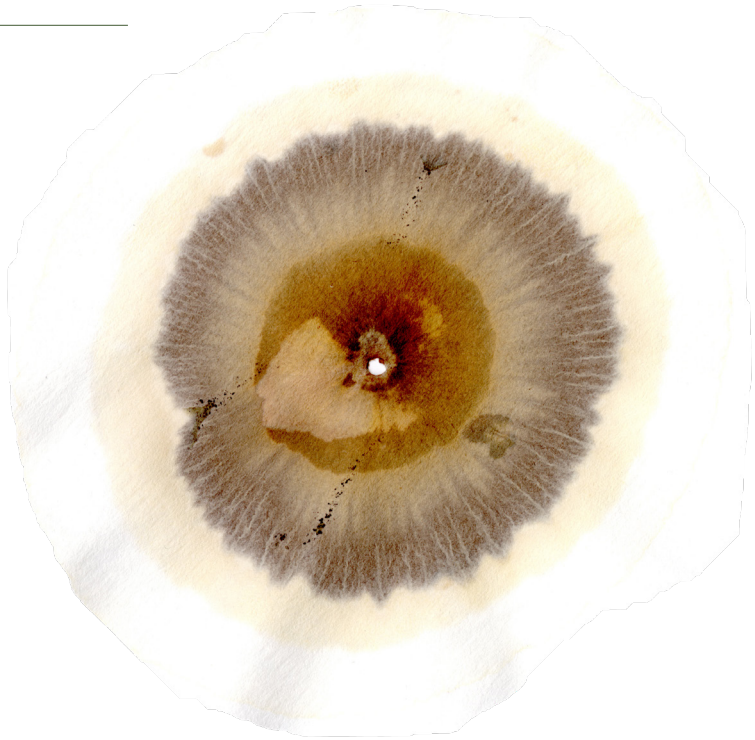
Land use and soil health

It is evident, that both the samples collected on the Orchard, and the samples from the forest show clear radial features like channels and spikes. These are related to positive soil characteristics, such as high contents of organic material, total nitrogen, phosphorus, bromine and sand. Whereas the more concentric pattern features of the third sample, that was collected from the corn field, speak for a more poor soil quality. These features indicate high contents of clay and silt, low contents of organic matter, total nitrogen, phosphorus and bromine. Characteristics like high soil compactness, also align with the observations from the sensory mapping tha twas undertaken before the chromatographs. The interpretation of the chromatographs can be further analyzed and deepened at this point, but this method already clearly shows that the different cultivation practices have an influence on the quality of the soil, which was the goal.

1 Orchard

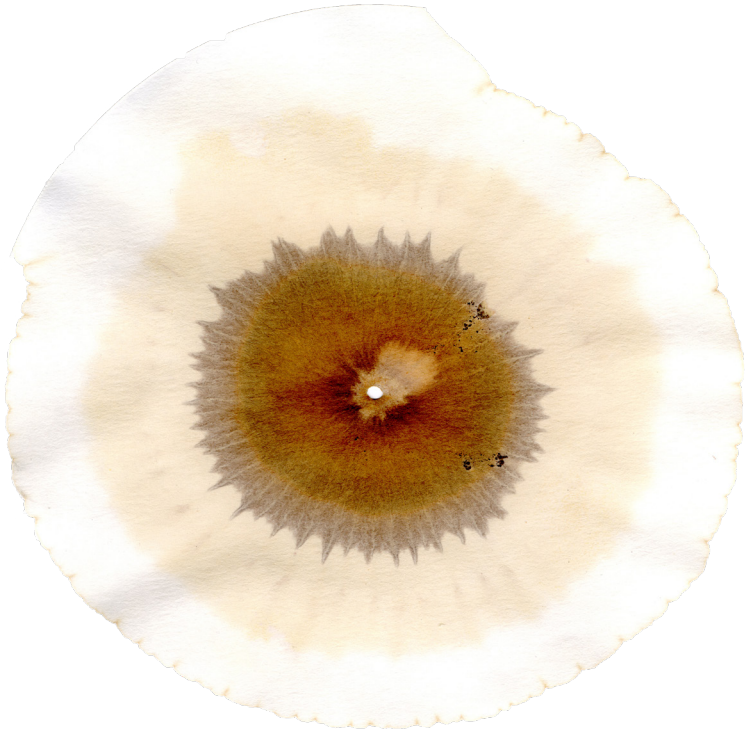
48 | *Sample 1- Orchard*, drawing by author, 2024

2 Maize field



49 | *Sample 2- Maize field*, drawing by author, 2024

3 Forest



50 | *Sample 3- Forest*, drawing by author, 2024

Conclusion

The local taste- Ecological Identity through sensory experiences

This research explored how the rhythms of a farm have changed over time, tracing the evolution of land use practices and landscape development across multiple scales. It revealed the deep interdependence between soil health, land cultivation, and landscape formation. Where farming was once guided by the natural cycles of the ecosystem, industrialized agriculture has disrupted these rhythms, leading to ecological degradation and a growing disconnection between people and the food they consume. Restoring a reciprocal relationship between humans and the land means reimagining farming as part of the ecosystem, instead of being imposed upon it. Food, through its sensory and cultural agency, can foster the emergence of a renewed ecological identity. The title of the project, *The local taste roots* draws on this sensory engagement. As the garden can be seen as a condensed version of the landscape, the food can be seen in a similar way. It embodies all the cycles of growth in one finished product, carrying the story of soil, climate, care, and time, brought together in one edible result. In this way, the farm becomes a site of reconnection. While most farms today reflect industrial logic, this project explores an alternative typology, rooted in diversity, care, and shared value through a productive garden. This leads to the central design question of the project:

*How can we design a **productive garden** that supports reciprocal cultivation while integrating **food processing** (food cycle/chain) as a cultural experience, in order to reconnect humans with their landscape?*

The garden becomes a site for engagement, reflection, and taste. A space that not only produces food, but also cultivates ecological awareness.The proposed design envisions a garden that accommodates different levels of cultivation, from wild to carefully managed plots, and integrates food processing as part of a holistic, sensory-based experience. In collaboration with a local restaurant, the farm will host residential spaces for chefs and gardeners to co-create seasonal menus and share knowledge. The boundaries between architecture and landscape are intentionally blurred. Spaces emerge not only through walls and built structures, but also through the spatial language of planting, evolving throughout the year in rhythm with the seasons. The archival image of a countryside picnic in Münsterland evokes a time when food, place, and community were closely intertwined. This project seeks to revive that spirit in a contemporary context.

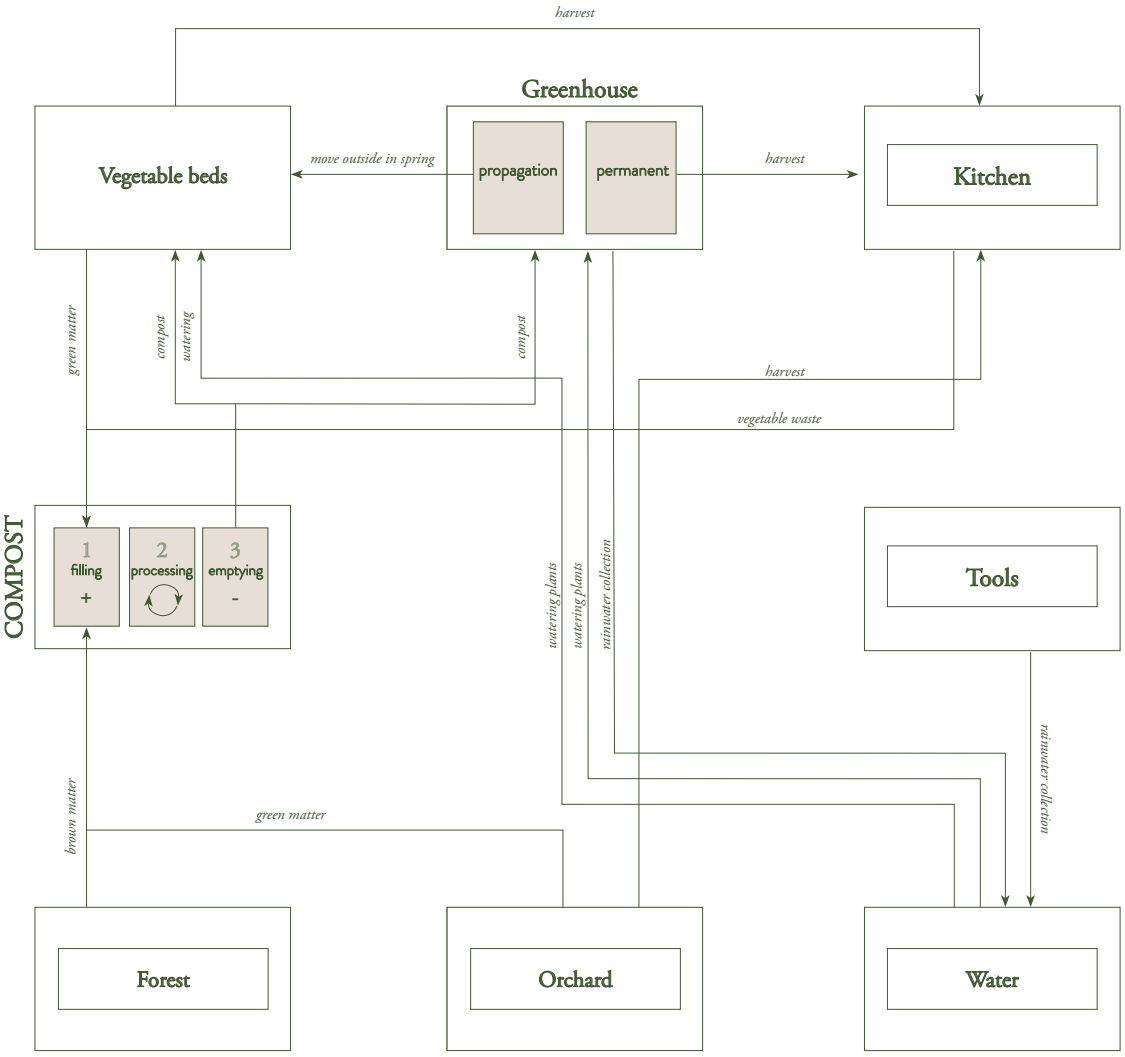
51 | *Coffee and cake under open skies*, photograph from (Kreisarchiv Steinfurt, n.d.)

52 | *Soil on the field of the farm in Laer*, photograph by author, 2024

Elements of the Garden

Understanding Relations

The productive garden follows the principles of regenerative farming, depending on this reciprocity: working with the land rather than against it. A first sptep is to define the elements of the garden: compost, vegetable beds, greenhouse, orchard, forest, water, tools, and the kitchen. The needs and rhythms of each element are deifned and placed in relation to one another.
Through schematic analysis and mapping of these interactions, the underlying logics of the garden, are designed. The ultimate goal is to find a balance in which the garden can function efficiently while remaining attuned to ecological processes. The addition of an outdoor harvest kitchen plays a key role in this vision: it turns the act of cooking into part of the cycle, connecting food cultivation directly to the sensory and social experience of preparing and sharing meals in the garden.



53 | *Relations in the garden*, drawing by author, 2024

Forest

Planting new trees to expand the small forest is essential. As wood has to be regularly taken from the forest to replace rotten parts of the garden, sustainable tree management is important. A renewable material repository that also functions as a diverse ecosystem.

54 | *The local Forest*, photograph by author, 2024

Orchard

The orchard is part of the cylce. Cuttings in spring serve as brown matter for the compost. Fallen fruits either stay on the ground or are green matter for the compost.

55 | *The Orchard*, photograph by author, 2024

Tools

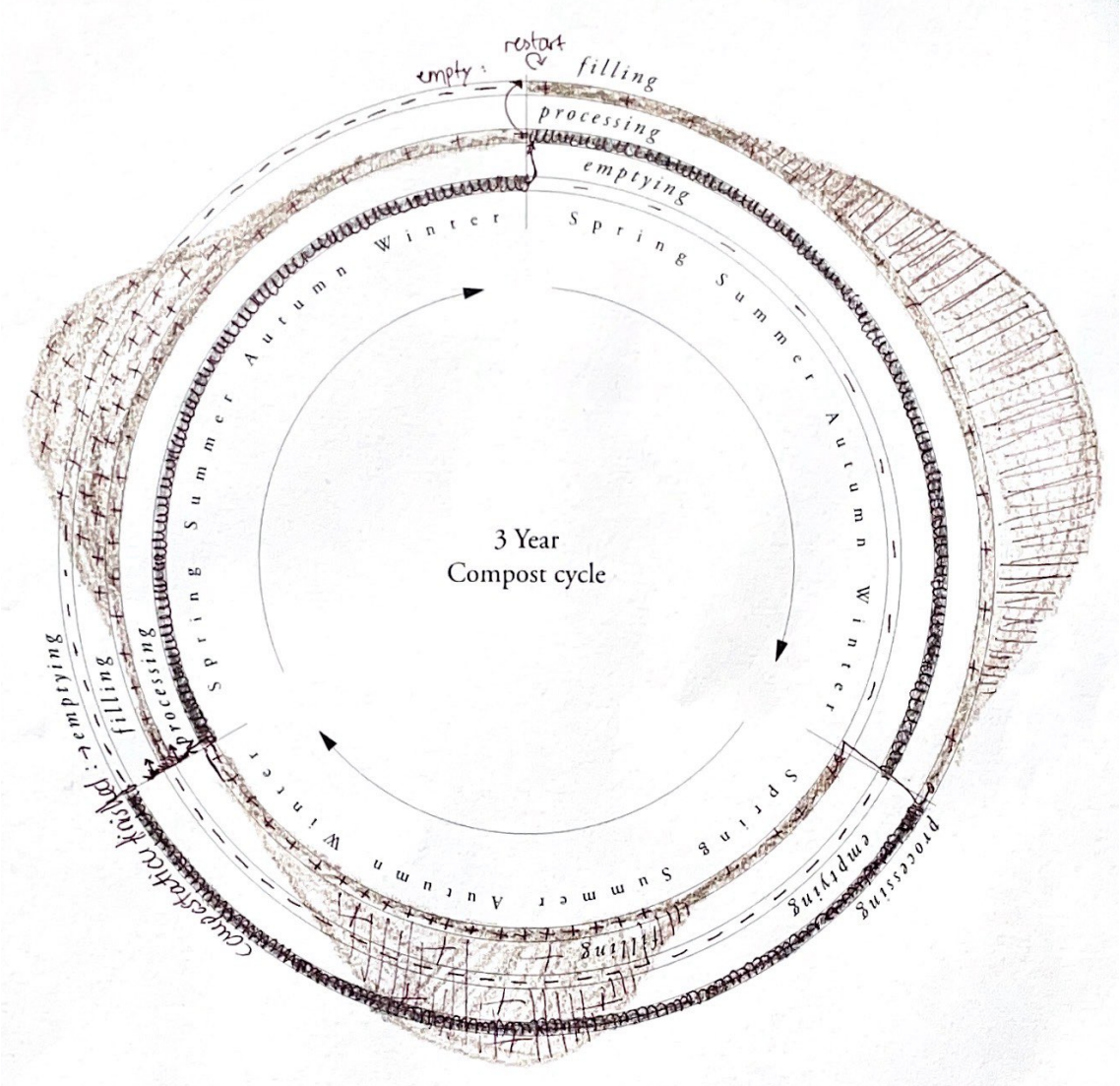
Essential part of the workflow. The day of the gardener starts with picking their tools. They need to be stored sheltered but be accessilbe for short distances in the garden.

57 | *Tools storage*, photograph by author, 2024

Compost

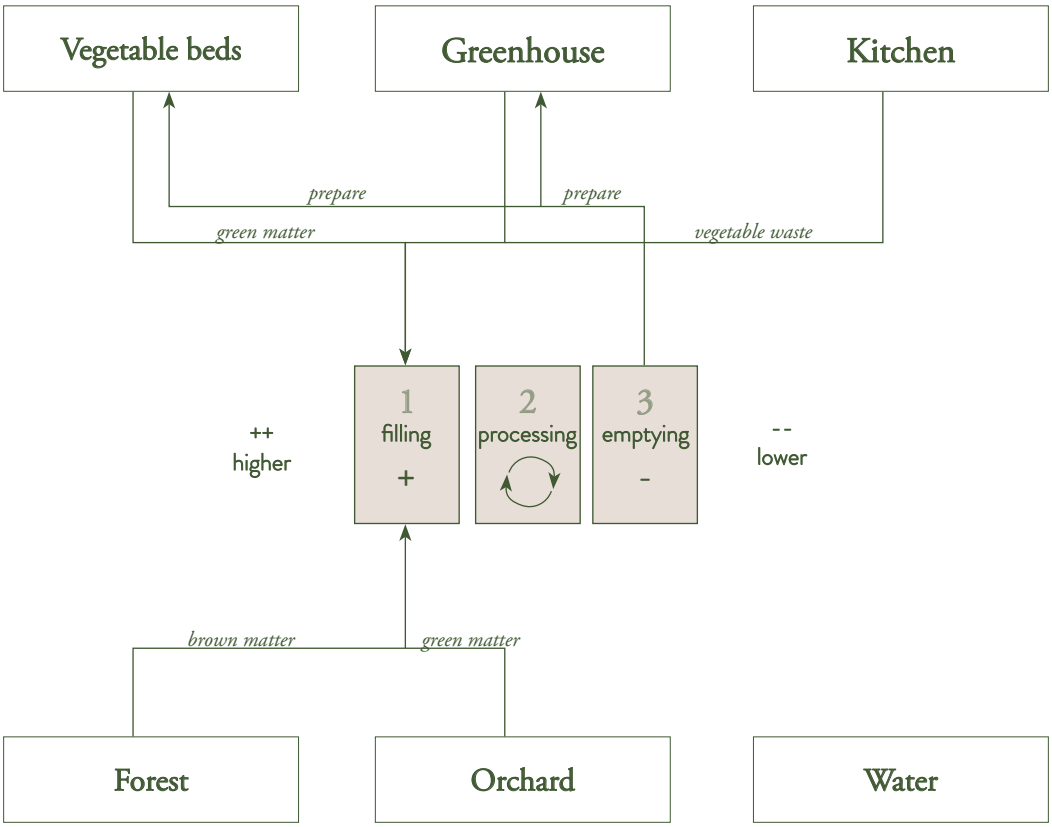
3 Year cycle

The compost cycle runs on a three-year rotation, with three distinct piles working in parallel. In the first year, one pile is actively filled with organic material. The second pile rests and composts, while the third is mature and ready to be used as nutrient-rich soil for the vegetable beds. A healthy compost needs the right balance of *green matter* (nitrogen-rich materials like kitchen scraps, cut greens, or fallen fruit) and *brown matter* (carbon sources like straw, woodchips, or dry leaves). It also relies on *moisture* and *oxygen*, which is why good airflow is essential. This natural process turns organic waste into fertile soil, contributing to regeneration of the land.



58 | *Compost cycles*, drawn by author, 2025

Schematic logics

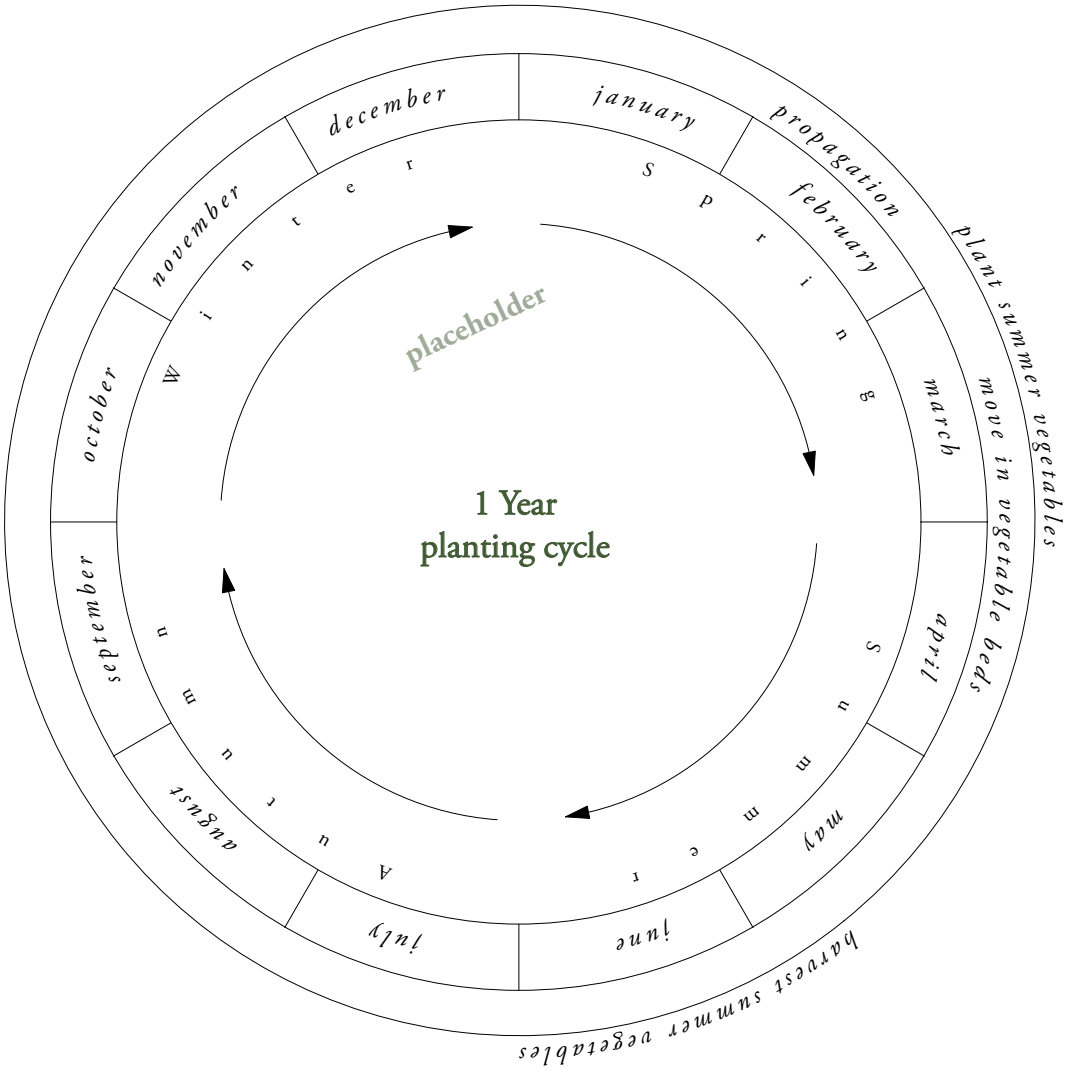


59 | *Compost-garden relations*, drawn by author, 2025

Greenhouse

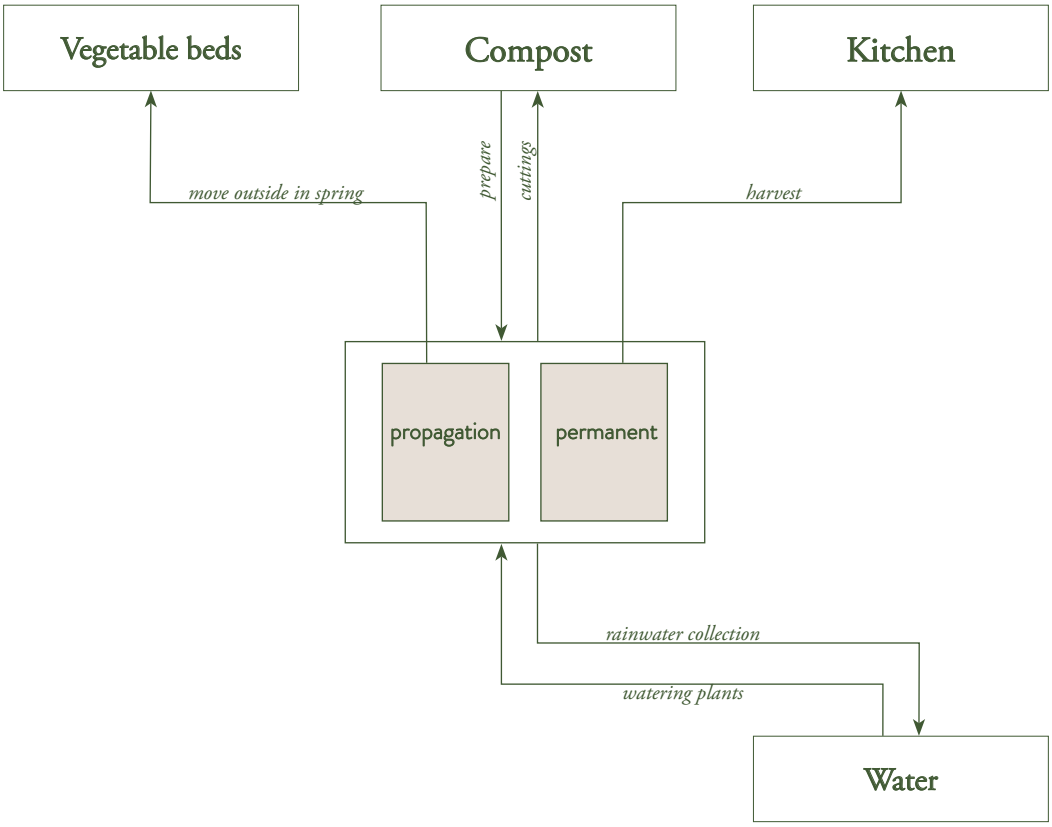
1 Year planting cycle

The greenhouse is used in different ways throughout the year. Some plants start here as seeds in small pots with sandy soil and are later moved to the vegetable beds. Other plants stay in the greenhouse for their whole growing time. These need more space, compost, and deeper soil. The greenhouse also helps to grow plants that need warmer or more protected conditions than the local climate usually allows.



60 | *Greenhouse cycles*, drawn by author, 2025

Schematic logics

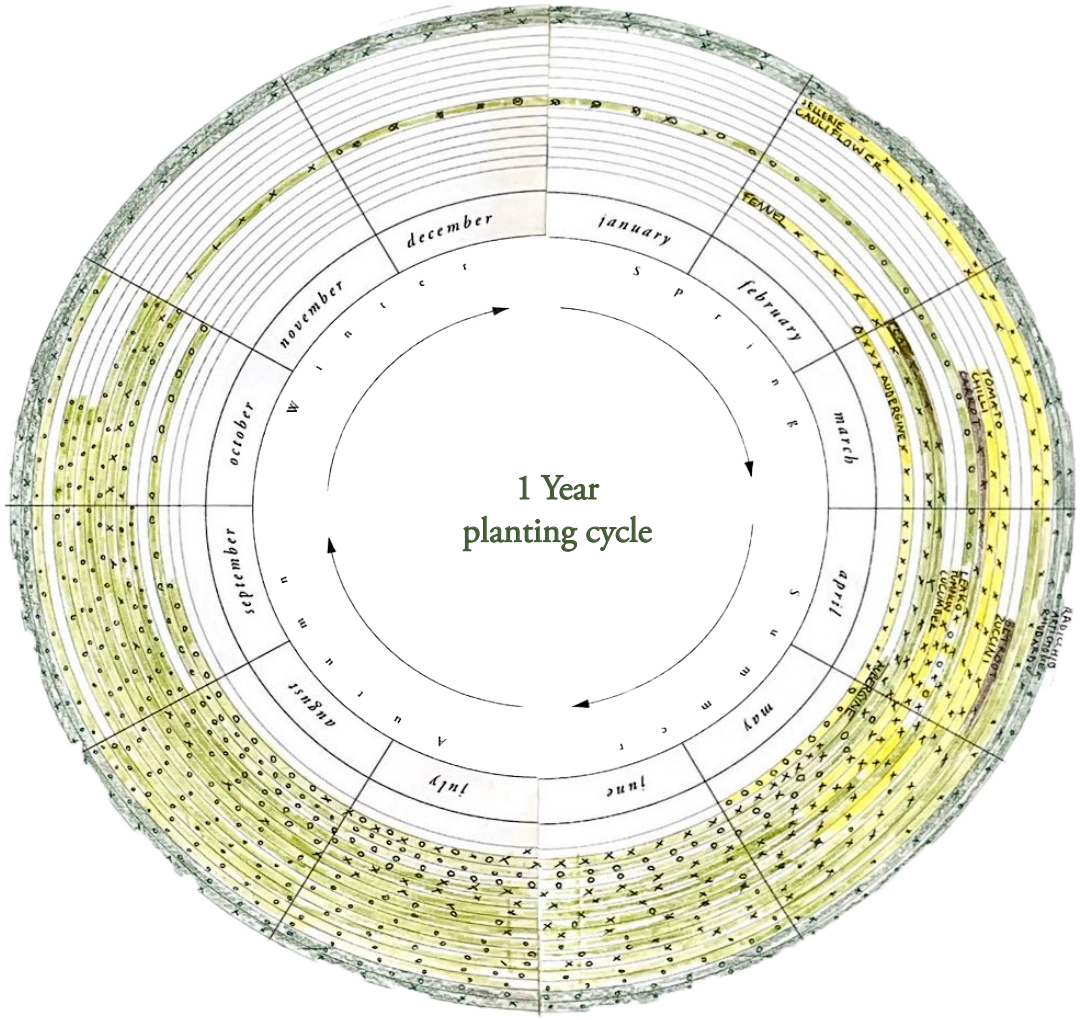


61 | *Greenhouse-garden relations*, drawn by author, 2025

Vegetable bed

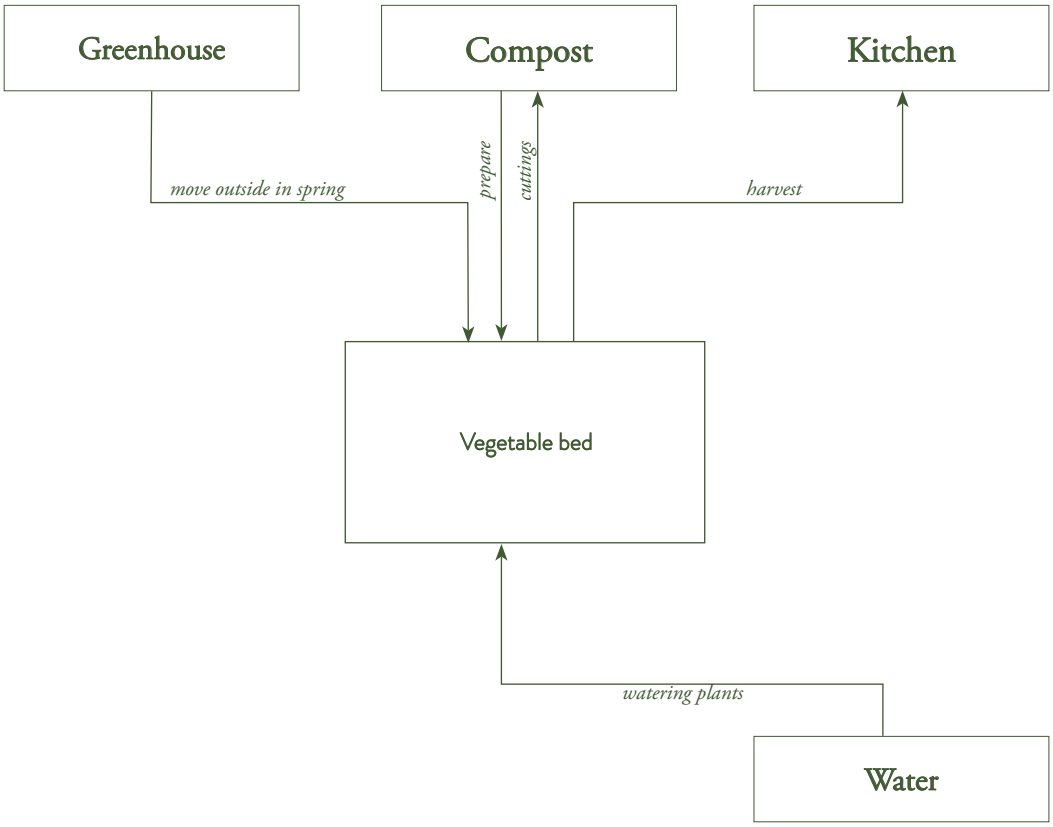
1 Year planting cycle

The vegetable beds are where most of the food is grown. Some crops can be planted directly into the soil, while others are started in the greenhouse and then moved here once they are strong enough. To keep the soil healthy and rich, the beds are regularly fed with fresh compost. Depending on the type of plants, the beds may be covered with nets for protection or fitted with structures to support climbing plants.



62 | *Vegetable cycles*, drawn by author, 2025

Schematic logics

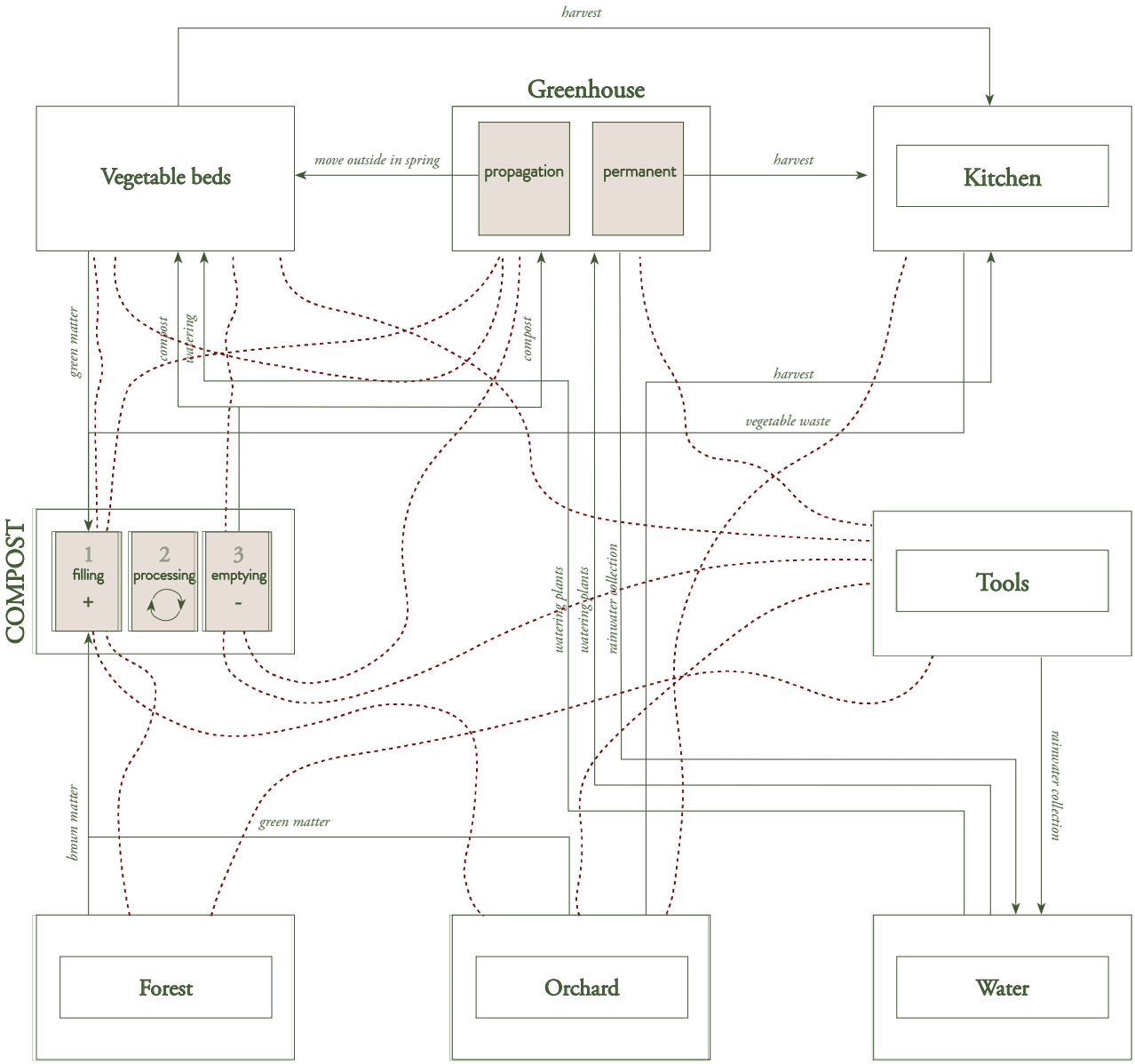


63 | *Vegetable bed-garden relations*, drawn by author, 2025

Garden logics

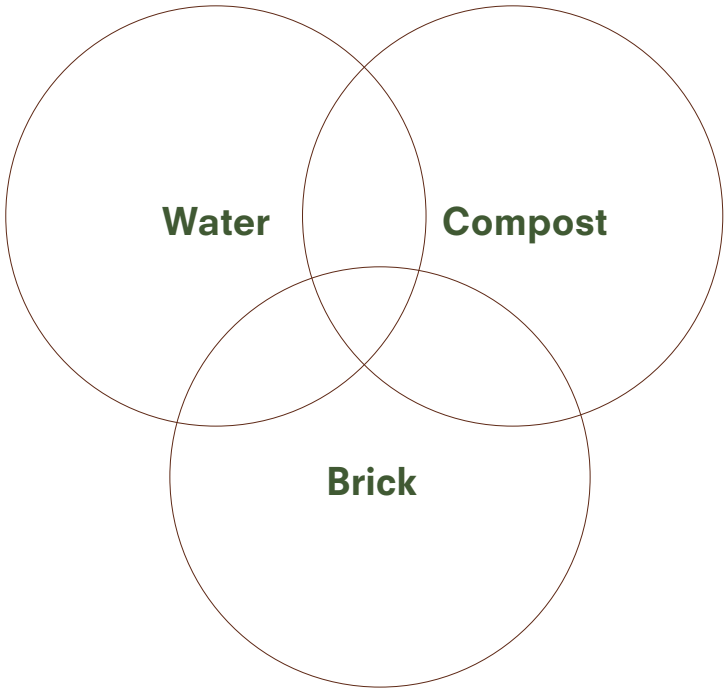
Designing a workflow beyond efficiency

The scheme visualizes, how all these elements that all follow different rhythms are related to each other in the garden. A dotted line indicates the human cultivation layer, highlighting the gardener's workflow as a key design aspect. Since the gardener's time and energy are limited, the layout needs to support practical and efficient work routines. By combining ecological processes with functional relationships and daily tasks, the diagram helps clarify how the garden operates as an organized and manageable system.



64 | *Relations in the garden with human workflow,* drawn by author, 2025

The conclusion of this theoretical schematic analysis is that water, compost, and the human workflow emerge as the most essential underlying patterns within the garden system. Water sustains life and sets natural rhythms; compost regenerates organic waste into fertile ground, closing vital nutrient loops; and the gardener's movement and attention shape the daily choreography of care. Together, these three elements form the foundation upon which the garden functions. What remains is to translate these relationships into spatial form, through material. Material becomes the medium that binds these patterns together, giving them structure, weight, and presence. It enables a design that supports ecological processes while responding to the gestures, needs, and limitations of the human hand.



65 | *Water-compost-brick*, drawn by author, 2025

Burning Bricks

Forming Bricks from the Field

To explore the material potential of the soil beyond agriculture, clay was collected directly from the field and shaped into bricks by hand. This hands-on process allowed for a direct engagement with the landscape, using simple tools and intuitive methods. Each piece reflects the character of the local earth and marks the beginning of transforming degraded farmland into a place of renewed ecological and cultural value.

1_taking samples

66 | *Taking samples*
photograph by author, 2025

Walking over the field and taking samples. I look at the color of the soil and take it into my hand to feel if it is sticky. the sticky parts, I take with me.

2_drying clay

67 | *Drying clay*
photograph by author, 2025

The clay was dried and broken into smaller pieces using a stone, preparing it for the next step.

3_kneading

68 | *Kneading clay*
photograph by author, 2025

Adding water gradually, the clay is kneaded to increase plasticity.

4_forming

68 | *Forming clay*
photograph by author, 2025

Rolling out the clay and cut it into shapes of bricks at scale 1:20. Letting them airdry slowly.

Burning Bricks

An irreversible Step

As a final step, the bricks are placed into the fire. Heated to temperatures between 750-1000 degrees Celsius, the clay undergoes a transformation that hardens it and makes it durable to withstand humidity and weather conditions.

To be able to use the bricks in the garden, they need to be fired. Used in the garden infrastructure in form of raised beds, paths or edging, they allow for a more intentional, human-controlled way of cultivating. I was wondering a lot about this step of firing the bricks, because it also means that they will ultimately change their properties and no longer return to the soil. They will not decompose; they will not be soil again.

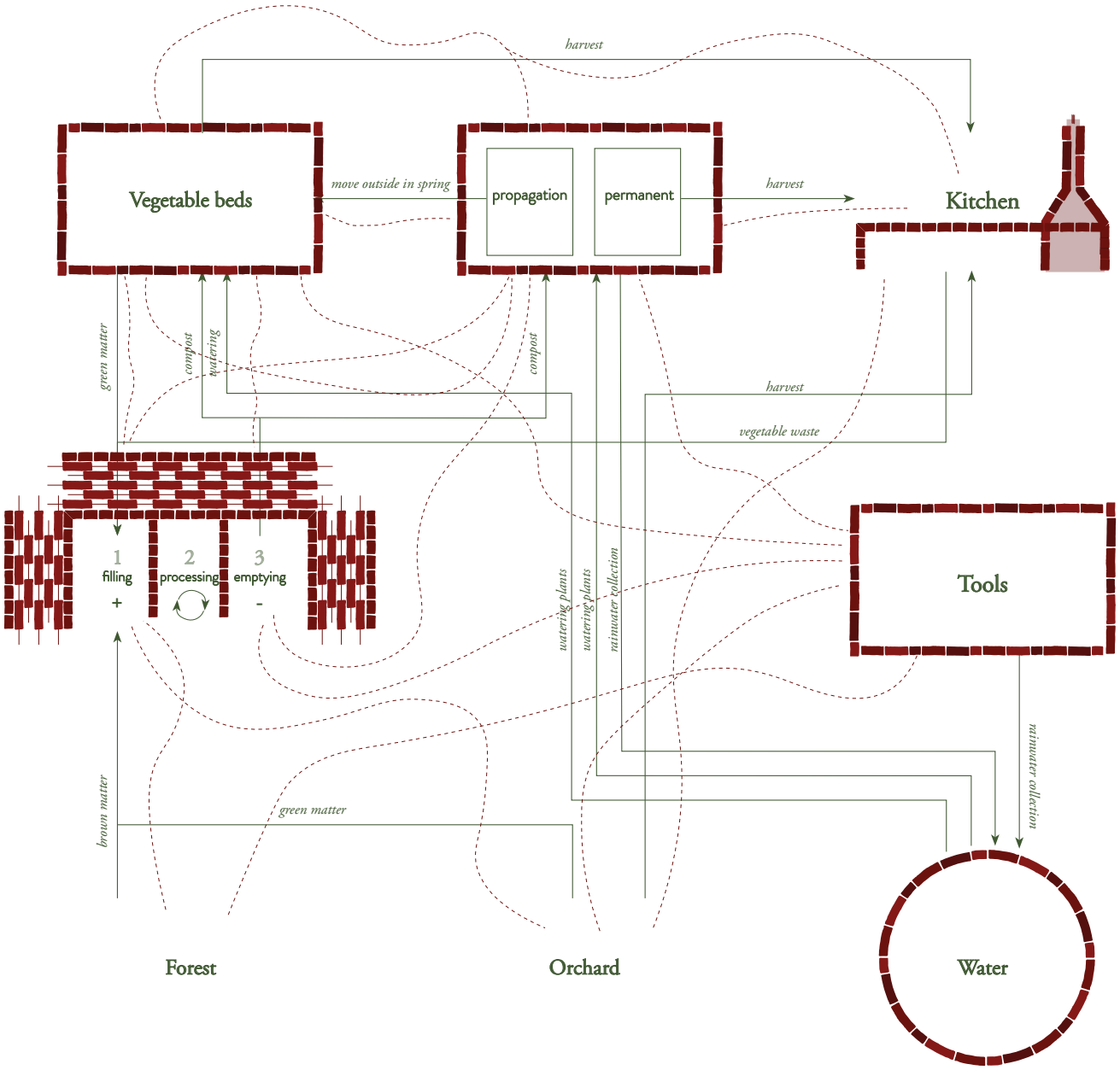
Building a partly walled garden on the field means the bricks will stay embedded in the landscape. This permanence carries weight. It made me reflect on the role of humans in shaping the land, and what it means to mark it in this way. What are my conclusions from the past? Human cultivation has always been part of the cycle, and it is not harming the ecosystem. It is more about how the cultivation practice is carried out. The brick structure is a permanent intervention, but it will enable the cultivation of a land in a small, and diverse scale. In that sense, the bricks can become more than just a building material, they become a physical reminder of a shift in agricultural practice. Almost like a quiet monument that says: this land will not be used as it was before. And that's not a loss, but the beginning of a new way of cultivating, rooted in the spirit of traditional kitchen gardens, reimagined for today.

69 | *Burning bricks,* photograph by author, 2025

Building connections

Material representation of design principles

How can the brick serve the material needs of the different elements of the garden the best? And how can it be used in such a way that it guides the workflow and the experience through the garden? Since this is the act of reconnecting, through the act of farming, or through the act of making bricks from the site, the material extracted from the site, plays an important role. But not only the brick itself, rather the form it takes. What are the shapes that connect the different activities in the best way? How to I asses this? What are my criteria for the shaping of the forms? Through this research of the schematic underlaying logics and relations of the garden, I could get a more clear image of practicalities and how things are related to each other. The next phase, is to also bring this togeher with the sensory elements that shape the experience in the garden. Water and compost are the main ingredients, shaped by the brick. Together, they are generating this new food cycle.



70 | *Relations in the garden shaped through brick,* scheme by author, 2025

71 | *Maize field after the harvest in Laer,* photograph by author, 2024

Reflection

This project explores how the transformation of farming practices has shaped both the landscape and our relationship to it, proposing a design that reconnects ecological processes, material culture, and food production on a small-scale regenerative farm.

Getting started
In the beginning, the research set out with a broad investigation into agriculture and the global food industry. This quickly revealed the complexity and political nature of farming today, and how deeply it is tied to subsidy systems, economic pressures, and globalized structures. One of the most difficult moments was confronting the current state of industrial agriculture and questioning whether real change requires structural reform or whether a single, situated design can already make a difference. Faced with such a large and systemic issue, questions arose: Can design meaningfully intervene? Would it require structural change, or could a single, place-based response be enough?
Rather than trying to solve farming at large, the project turned toward understanding one specific place: the farm in Laer. Understanding this place, its soil, rhythms, and history, became the guiding method. From there, it became clear that meaningful change can emerge from small-scale, context-specific interventions- many of which, together, can lead to broader transformation. As the saying goes, the next big thing is a lot of small things.

Design and Research
The research and design were closely interwoven. Artistic experimentation, model making, and material tests helped to visualize findings and translate them into design principles. These methods were essential not only for exploring spatial and ecological relationships but also for engaging with the site in a tangible way. To complement the theoretical work in the design phase, I started volunteering in a local garden. Talking about the sensory activity of having your hands in the soil all the time, this became an important testing ground and at the same time reassured me every time, that this is such a special act, the act of gardening.

Reimagining Cultivation and Material Culture
The project's ambition was to remain realistic, offering practical alternatives for a different kind of cultivation. Material decisions followed this logic. Rather than sourcing externally, the design explored what the land itself could provide. Firing bricks from raw field clay emerged as a key move. The irreversible nature of firing the brick was another moment, that made me wonder and think about the responsability that comes with a design. Though irreversible, this gesture aligns with the idea of creating a new material culture rooted in local conditions. It also serves a functional purpose, supporting a more sustainable form of cultivation and restoring a micro-topography flattened by mechanized farming.
Striking a balance between tradition and innovation remained a consistent aim. The project reintroduces building culture from the past, like the field oven, while also embracing interventions like a greenhouse that extends growing seasons. The value lies in finding equilibrium, designing systems where interventions work in harmony with natural processes, such as using compost-generated heat to warm the greenhouse in winter.

Interweaving spatial pracitces
The project also reflects an effort to bridge two disciplines: architecture and landscape. Rather than prioritizing one over the other, both are treated as equally essential. This is evident in the spatial organization, where the design gives equal weight to the processing spaces in the old farm buildings and the cultivation areas in the garden. Proximity to the farm determines the intensity of intervention: more structured and productive near the building, becoming gradually wilder towards the forest.
This project explores how cultivation can be reimagined as a more balanced and reciprocal relationship between humans and the environment. Materials, particularly the bricks, are shaped to support human workflows while respecting ecological processes. Theories from the research phase, especially those centered on ecological awareness through embodied practice, fed directly into the design logic. Gardening and food are seen not just as outcomes, but as sensory tools for reconnection.

A slow cooking project
The project proposes a place where food production and culinary experience come together, restoring a severed relationship between people and the ecosystems that feed them. This ambition was pursued not through efficiency, but through layered engagement: drawing, model-building, soil experimentation, and revisiting traditional material cultures. These time-intensive methods reflect the labor and care required to regenerate such places and demonstrate that design can also be a process in itself, not just an outcome.

Academically and societally, the project interprets historical practices in a contemporary way. It aims to be realistic, though the definition of realism in design remains complex. Financially, the proposal relies mostly on materials available on site, with labor time becoming the main cost. This reinforces the core design principle: human labour is the most precious resource, and workflows must be thoughtfully arranged to balance productivity with moments of pause and reconnection.

The broader intention is to show that alternative ways of growing food already exist and they just need to be implemented. Research confirmed that much of the landscape is shaped by policy. The current farming crisis, visible in protests and economic pressure, signals the urgency to explore new paths. This project offers one such vision.

By embracing the specificity of place, the design resists generic, industrialized solutions. It doesn't aim to be replicable in form, but the approach and underlying principles- working with the land, prioritizing local resources, and designing for mutual benefit-could be applied elsewhere. As small farms continue to disappear in Germany, this project points to their potential: not just to feed, but to heal the relationship between humans and land.

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