



HOLISTIC RESOURCE MANAGEMENT FOR
CLIMATE RESILIENCE OF FARMING

Farm Survey (Documentation) ClimateFarming

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Farm Survey

Documentation form

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Contact

Name	
Address	
E-Mail	
Telephone	

1. General farm information



(mean, min, max, per season, peaks)	
Temperature [°C] (mean, min, max, per season)	
Average amount of days < 0°C per year	
Experienced/ historic extreme weather events	<input type="checkbox"/> yes <input type="checkbox"/> no if yes, please specify:
Personal estimation of future climatic tendencies	
Vulnerable sites within farm	

1.1. Farm overview



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1.2. Ownership structure & decision making



Climate adaptation measures	
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1.6. Formulation of goals and priorities

How important are...	Very Important	Important	Positive side effect	Not important
Economic performance				
Providing a livelihood for yourself/ family/ employees				
Diverse product range				
Self-sufficiency				
Higher yields				
Local/ heritage varieties				
Processing				
Biodiversity				
Biotope connectivity				
Promoting beneficial insects/ animals				
Wind protection				
Improving soil health/ soil quality				
Preventing soil compaction				
Improving water balance (on landscape level)				
Preventing nutrient leaching				
Reducing greenhouse gas emissions / climate mitigation				
Carbon storage				
Climate adaptation				
Shade for animals				
Fodder quality				
Scenery/ landscape design				



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Independence from external inputs				
Other:				

2. Site Assessment

2.1. General information



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Tillage regime	
Machinery use	
Other practices	

2.3. Protection status



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★ Phenological indicators	
★ Species composition	
★ Plant communities	
★ Growth rate, yield	

2.7. Existing cultures



3. Soil Assessment

Date & Time:
Authors:
Weather: Air temperature: _____ °C

3.1. Visual Soil Assessment and Extended Spade Test



3.1.5. Aggregate stability test / Slaking test

Horizon	# stable aggregates	# completely slaked aggregates	% stable aggregates	Notes
Topsoil (0-15 cm)				
Subsoil (15-30 cm)				

3.1.6. Assessment Score

Soil structure index

$$= \left(\frac{\text{Root score}_{\text{topsoil}} \times \text{aggregate stability}_{\text{topsoil}}}{2} \right) + \left(\frac{\text{soil score}_{\text{subsoil}} \times \text{aggregate stability}_{\text{subsoil}}}{2} \right)$$

Zone ID	Horizon	Root score	Soil structure score	% stable aggregates	Overall soil structure index
	Surface (0-1 cm)				
	Topsoil (0-15 cm)				
	Subsoil (15-30 cm)				
	Total (=Topsoil + Subsoil)				

3.2. Root indicators

- **White root tips:** none few moderate many all
- **Soil attached to roots:** none little moderate a lot
- **Smell:** pleasant/earthy foul/putrid/rotten eggs fungal/ fresh forest soil like the plantation (e.g. carrots) no smell (also not earthy) other, describe:

- **Root nodules on legumes (per plant):** none few moderate many on every root
- **nodule colour on the inside:** reddish/pink greyish green or brown other,



describe: _____

- **Root orientation/ root barriers (mechanical/ chemical):**

- **Root depth:** most roots: _____ cm, deepest root: _____ cm

- **Visible Mycorrhizae:** none few moderate many

Space for additional notes:



Remember to:

- draw a map of zones within every field
- take pictures of the soil pits with a measuring tape
- take soil samples and note sample IDs



Time needed to assess this zone: _____



If you are doing the base case scenario, you are done with the Soil Assessment. Well done!

★ **For best-case scenario, continue:**

3.3. Soil texture (Soil Ribbon Test)



- **Moisture:** dry slightly moist moist very moist wet

- **Smell:** pleasant/earthy foul/putrid/rotten eggs fungal/ fresh forest soil like the plantation (e.g. carrots) no smell (also not earthy) other, describe:

- **Colour:** dark brown light brown grey/blue/greenish white reddish/orange
 other, describe:

- **Mottles:** none gray/blue/greenish orange/red; **if present, how many?**
_____ %

- **Soil pit:** describe and sketch:

depth of A-horizon:_____ cm

- **Compaction:** yes no; if yes, at which depth: _____ cm/ _____ cm/ _____ cm

- **Soil depth:** _____ cm, **Bedrock depth:** _____ cm,
Groundwater depth: _____ cm

- **Volumetric stone content:** _____ %

Space for additional notes:

3.5. Earthworms



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3.6. Infiltration test