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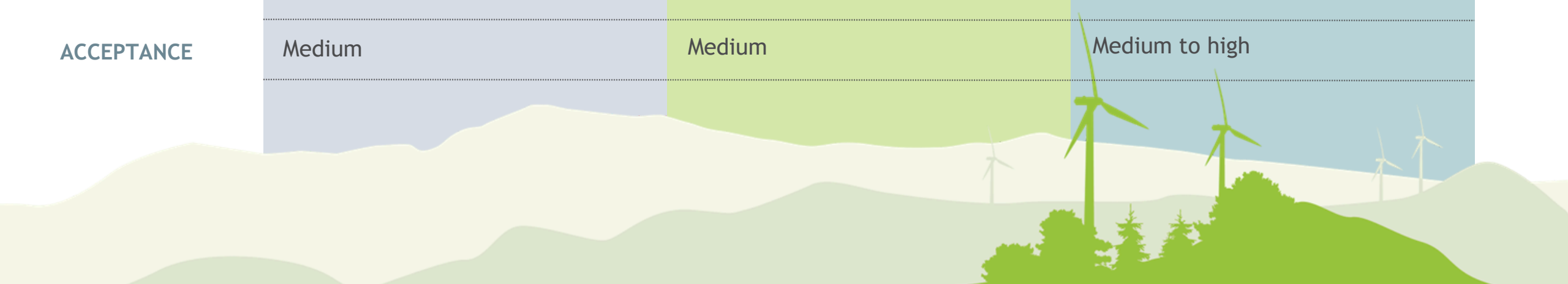
Carbon Farming CE

PILOT TESTING CARBON FARMING TECHNIQUES

	EXTERNAL ORGANIC FERTILIZERS	RELOCATION OF HARVEST RESIDUES	ADDITIONAL COVER CROPS
TESTED IN WHICH COUNTRIES?	Czech Republic, Croatia, Hungary, Italy, Poland, Slovenia	Austria, Czech Republic, Croatia, Slovakia, Slovenia	Austria, Croatia, Germany, Hungary, Italy, Poland, Slovenia
ADVANTAGES	• Soil health improvement • Soil fertility • Carbon storage • Climate resilience • Soil biodiversity • Reduced chemical input dependance • Waste reduction	• Increase in soil organic carbon • Improved soil health and fertility • Suppression of weeds • Reduced soil erosion • Retaining soil moisture • Cost-effective and cooperative fertilization • Reduction of carbon loss	• Soil protection • Simple cultivation • Enhance humus content • Improvement of soil structure and water retention • Reduction in herbicide use, fertilizer and fuel costs • Low investment
DISADVANTAGES	• Higher costs • Complex logistics • Higher weed pressure • Lower field capacity • Limited available nutrients • Legal restrictions • Odors	• High initial investment and operational costs • Labor and time intensive • High energy input • Lack of knowledge • Uncertain impact on yield • Pest problems	• Lack of advanced knowledge • Difficult termination timing • Seed costs of valuable mixtures • Rigid CAP rules • Time management of crop rotation • Misinterpretation of workload
ENVIRONMENTAL IMPACTS & BIODIVERSITY	Using organic fertilizers builds up soil health, boosts fertility, holds water better, and cuts the need for chemical fertilizers—helping crops grow strong and diversifying soil biota.	Returning crop leftovers to soil boosts carbon storage, soil life, and fertility. It cuts chemical use, supports biodiversity, and helps fight climate change—if managed the right way.	Cover crops boost soil health, hold water, cut erosion, and reduce herbicide use. They store carbon, support soil life, and help farms handle climate extremes—if managed well.
IMPACT	Medium to high	Medium to high	Medium to high
FEASIBILITY	Medium	Medium	Low to medium
ACCEPTANCE	Medium	Medium	Medium to high



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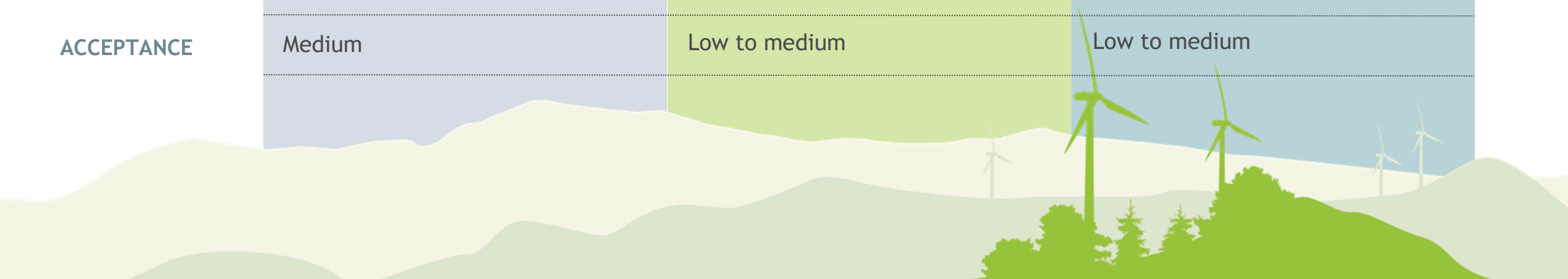
PILOT TESTING CARBON FARMING TECHNIQUES

	DIVERSIFICATION IN CROP ROTATION	AGROFORESTRY	REDUCING TILLAGE
TESTED IN WHICH COUNTRIES?	Austria, Czech Republic, Croatia, Germany, Hungary, Italy	Germany, Poland	Austria, Czech Republic, Hungary, Italy, Poland, Slovakia, Slovenia
ADVANTAGES	• Increased biodiversity • Stability of yield • Improved plant protection • Lower fertilizer costs • Increase in carbon stocks • Prevention of soil erosion • Great synergy with other techniques	• Deep rooting systems and shedding of foliage • Avoidance of wind erosion • Enhanced biodiversity • Reducing impacts of droughts and extreme rainfall • Shading and sheltering livestock	• Reduced fuel costs • Reduced soil compaction • Improved soil health • Conservation of moisture • Climate resilience • Simplified logistics • Synergies with other techniques
DISADVANTAGES	• Lack of knowledge and expertise • Complexity of machinery needed • Lower short-term financial return • Lower yields	• High initial costs • High care requirements of agroforestry system in first years • Need for large land areas	• Potential weed & pest pressure • Need of special equipment • Cost of technical adaptation • Decrease in yield • Modification of management • Dependency on specific soil types
ENVIRONMENTAL IMPACTS & BIODIVERSITY	Monoculture and heavy farming harm soil. Rotating and diversifying crops builds humus, cuts CO_2, boosts soil life, holds water, and reduces pests—leading to healthier and more resilient soil.	Returning crop leftovers to soil boosts carbon storage, soil life, and fertility. It supports biodiversity, works towards agro-ecosystem resilience, and helps fight climate change—if managed the right way.	Climate extremes hurt the soil. Reduced tillage keeps moisture, builds humus, cuts fuel use, and supports soil life—saving time, money, and protecting the land long-term.
IMPACT	Medium to high	Medium	Medium to high
FEASIBILITY	Medium	Low	Medium
ACCEPTANCE	Medium	Low to medium	Low to medium



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PILOT TESTING CARBON FARMING TECHNIQUES

LIMING EFFECT

TESTED IN WHICH COUNTRIES?	Croatia, Germany, Slovakia
ADVANTAGES	• Increase soil structure • Soil pH regulations • Higher yields in acidic soils • Increase of microbiological activity • Flexibility of calcium provision via lime or gypsum • Soil organic carbon storage
DISADVANTAGES	• Various ways of application • Adequate machinery needed • Short-term carbon farming goals hard to achieve
ENVIRONMENTAL IMPACTS & BIODIVERSITY	Liming improves soil pH, boosts fertility, helps roots take up nutrients, and builds stable humus. It also protects soil life, cuts erosion, and supports long-term soil health.
IMPACT	Medium
FEASIBILITY	Medium
ACCEPTANCE	Medium

WHICH CARBON FARMING TECHNIQUES ARE MOST SUITABLE FOR FARMERS?

As part of the CARBON FARMING CE project, partners tested and evaluated seven carbon farming techniques. Each technique was scored based on three criteria:

- Carbon sequestration potential
- Feasibility (costs and labor needs)
- Acceptance by farmers, consumers, and the public

The evaluation and ranking were based on votes collected during national field trials in Austria, Croatia, Czech Republic, Germany, Hungary, Italy, Poland, Slovakia, and Slovenia.

The techniques, ranked by overall performance, are:

1. Diversified crop rotation
2. Additional cover crops
3. Relocation of harvest residues
4. External organic fertilizers
5. Reduced tillage
6. Liming
7. Agroforestry

WANT TO KNOW MORE ABOUT CARBON FARMING TECHNIQUES?

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