Soil Capitalization & Post-Chemical Agriculture

Strategic Investment in Humic Technologies for Global Food Security

Davos Strategic Forum | 2028

Global Challenges: The Triple Stress

40%	3–5x	9 Billion
Degrade rA rable Lond	Climate Extremes by 2000	770 100% More Food Demand

The Paradigm Shift in Agriculture

Chemical-Intensive Model	Soil Capitalization Model
40% Degraded Arable Land	3-5x Climate Extremes by 2050
9 Billion +70–100% Plore Bepacler	+70–100% More Food Demand

Humic Technologies: Nature-Based Solution

Restores Organic Matter

Activates Soil Microbiome

Stabilizes Yields Under Stress

Geo-Economic Implications

Food Security
Stable Yields

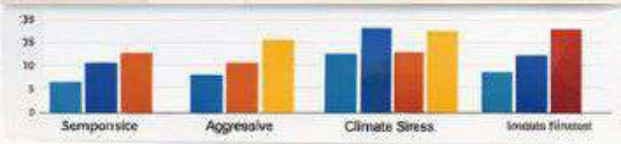
Climate Security
Carbon Sequestation

Investment Leverage
ES6 & Green Finance

Ferm
National
Global

ROI & Financial Scenarios

Scenario	Area	Cost	Yield Stabilization	ROI
Conservative	1,000 ha	560K	+3%	4–6x
Aggressive	100,000 ha	56M	+8%	10–15x
Climate Stress	100,000 ha	56M	+15%	20–30x



SDG Alignment: Impact Metrics

12 **2** Zero Hunger
Stabiiized Yields

12 **12** Responsible Production
Reduced Inputs

13 **13** Climate Action
+0.8–1.5 t Ci/harcy/ha

SDG Alignment: Impact Metrics

- Climate Risk Reduction
- Production Stabiity
- Supply Chain Security
- Food Autonomy

Scaling Model: From Pilot to Global

Long Term Soil Capitalization

1. Soil as Strategic Asset
2. Integrate Humic Tech
3. Climate & ESG Finance
4. Cross-Border Collaboration
5. Measure ROI & SDGs

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Soil Capitalization & Post-Chemical Agriculture

Strategic Investment in Humic Technologies for Global Food Security

Davos Strategic Forum | 2026

Global Challenges: The Triple Stress

40%	3–5x	9 Billion
Degrade ol rable Land	Climate Extremes by 2000	770 100% More Food Demand

The Paradigm Shift in Agriculture

Chemical-Intensive Model	Soil Capitalization Model
High Input Costs	Biological Productivity
Degraded Soil Health	Sustainable Soil Aesth
Environmental Damage	Carbon & Ecosystem Value

Humic Technologies: Nature-Based Solution

Restores Organic Matter

Activates Soil Microbiome

Stabilizes Yields Under Stress

ROI & Financial Scenarios

Food Security
Stable Yields

Climate Security
Carbon Sequestration

Investment Leverage
ESG & Green Finance

ROI & Financial Scenarios

Scenario	Area	Cost	Yield Stablization	ROI
Conservative	1,000 ha	$60K	+3%	4–6x
Aggressive	100,000 ha	$6M	+8%	10–15x
Climate Stress	100,000 ha	$6M	+15 %	20–30x

SDG Alignment: Impact Metrics

- 2 Zero Hunger — Stabilized Yields
- 12 Responsible Production — Reduced Inputs
- 13 Climate Action — Carbon Sequestration

Global Risk Mitigation

- Climate Risk Reduction
- Production Stability
- Supply Chain Security
- Food Autonomy

Scaling Model: From Pilot to Global

Soil Biological Capital	Climate Resilience Capital	Food Security Capital
+4–6% SOM	+0.8–1.5+ C/ha	Stable Yields & Supply

Long-Term Soil Capitalization

1. Soil as Strategic Asset
2. Integrate Humic Tech
3. Climate & ESG Finance
4. Cross-Border Collaboration
5. Measure ROI & SDGs