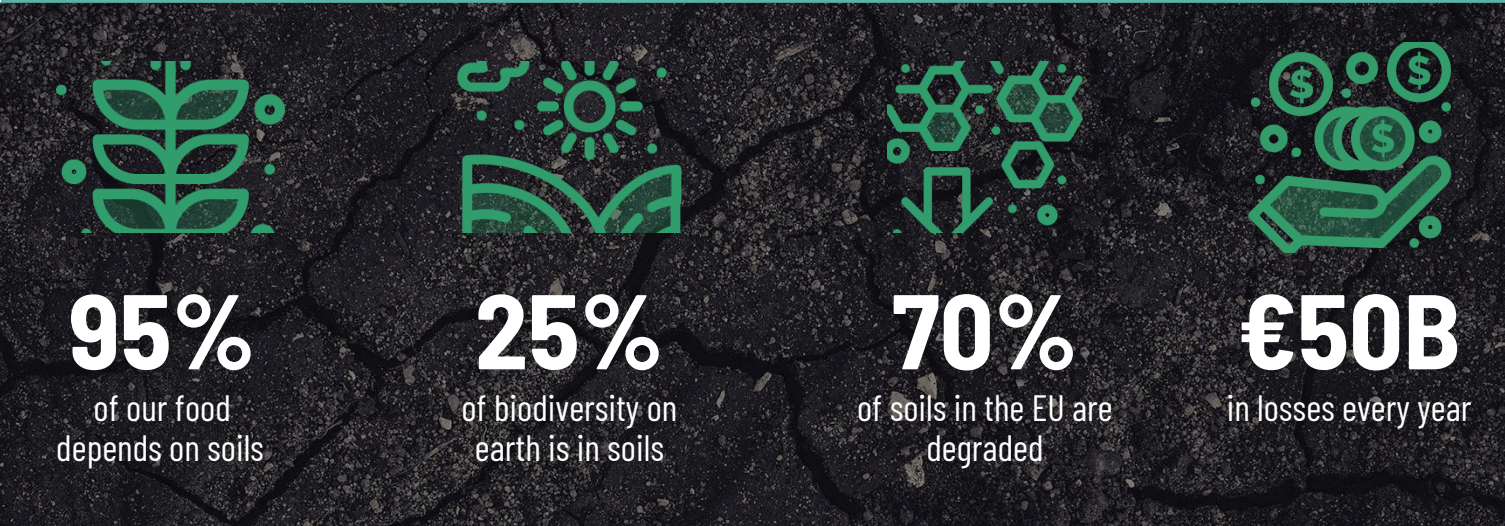


Automated Imaging and Taxonomy-Guided AI for Accurate and Scalable Soil Biodiversity Diagnosis

Ziad Matar, Vojtech Kurfürst, Adam Cervenka, Kanta Tanahashi, Sanaz Zarei, Gido Verheijen, Aisling Wigman, Richard Janissen

1-Soils are highly degraded. The EU Soil Monitoring Law wants to fix it.

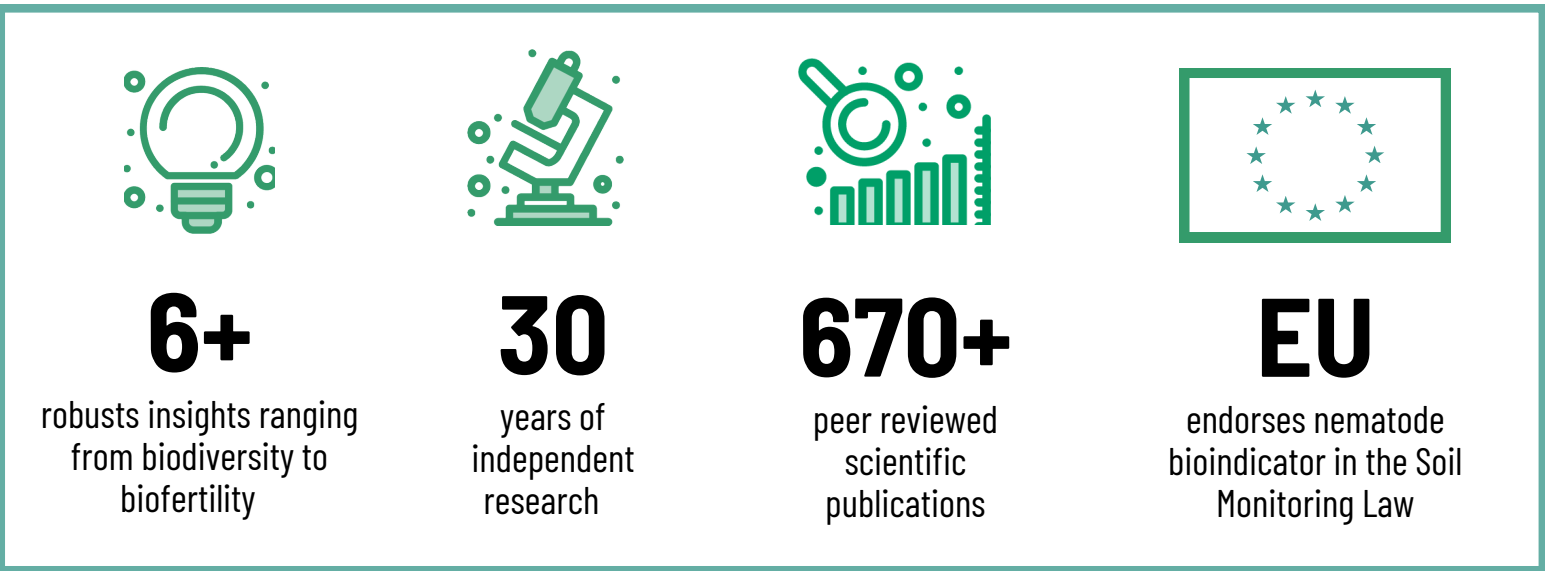


The EU's new **Soil Monitoring and Resilience Directive** sets a framework for the **mandatory monitoring and assessing soil health & biodiversity** to manage soils sustainably and restore them by 2050. Set to be voted by the end of 2025, **member states will have less than three years to comply and implement the law, as early as 2027**. With a budget of €28-35 billion per year, the **EU estimates that for every euro invested in soils, two euros can ultimately be saved**.

The **European Innovation Council** has recognised **Veridi Technologies BV's scalable AI and automated microscopy approach** as a **key enabler of the Soil Monitoring Directive** by making soil biodiversity diagnostics more accurate, more affordable and scalable than current manual approaches being accessible to all due to its ease of use.

2-Nematodes: The best indicator for soil biodiversity

Nematodes are microscopic worms living in all soils. Thanks to their extensively studied role in soil ecology, Nematode Based Indicators emerged as a key, policy enabling soil biodiversity indicator. Being represented on all trophic levels of soil ecology, they give valuable information on the current state of soil biodiversity. They tell us about carbon cycling, soil disturbance & degradation, nutrient availability, fungal vs bacterial dominance, plant parasites and much more.



3-Veridi Technologies: Making soil biodiversity measurements accessible to everyone with AI & automated microscopy

- ✓ **What we do: soil biodiversity & plant disease diagnostics**
Veridi is an award-winning Dutch company measuring soil biodiversity and plant diseases on an industrial scale, focusing on microscopic worms called nematodes.
- ✓ **Our technology: pioneering AI & automated microscopy**
Veridi's pioneering custom hardware & proprietary database allow scalable diagnostics, fitting existing workflows. The machines can be operated with minimal training.
- ✓ **Business model: no upfront costs, maximum flexibility**
With no up-front costs, we work with laboratories and agro-consultancies on a pay-per-sample basis, scaling rapidly.

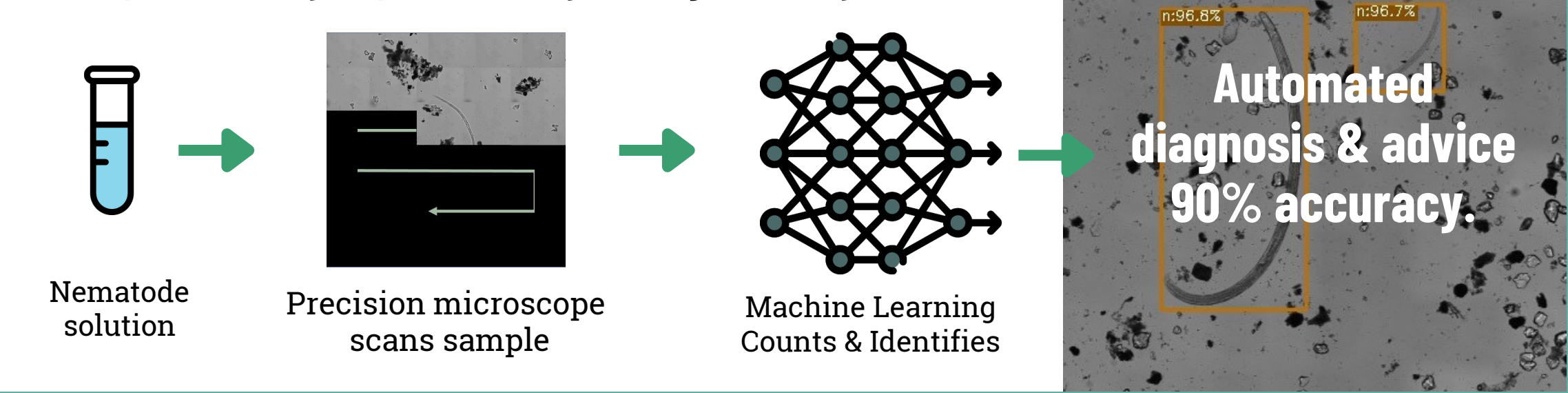
For the Farmer

Lead time	4-14 days, Act on Time	60-120 days
Counting organisms	Yes, quantitative approach	No
Live/dead distinction	Yes, Avoid false positives	No
Scientific Framework	Mature	Immature
Education level needed	High School biology level	Doctorate



We Are Democratising Access to Advanced Soil Diagnostics.
In-depth, genus level soil biodiversity analysis used to only be accessible to experts. With Veridi, anyone can do it!

Veridi Optimizes a key step in an already existing laboratory workflow



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