



Jenna Lang, PhD
Microbiome Scientist

TechCrunch

Forbes

THE WALL STREET JOURNAL.

AGFUNDER

FASTCOMPANY

A close-up photograph of a green garden trowel scooping dark, rich soil. The soil is moist and contains small green plants and organic matter. The background is a light-colored, slightly textured surface.

Comprehensive microbial evaluation
for soil health & disease management

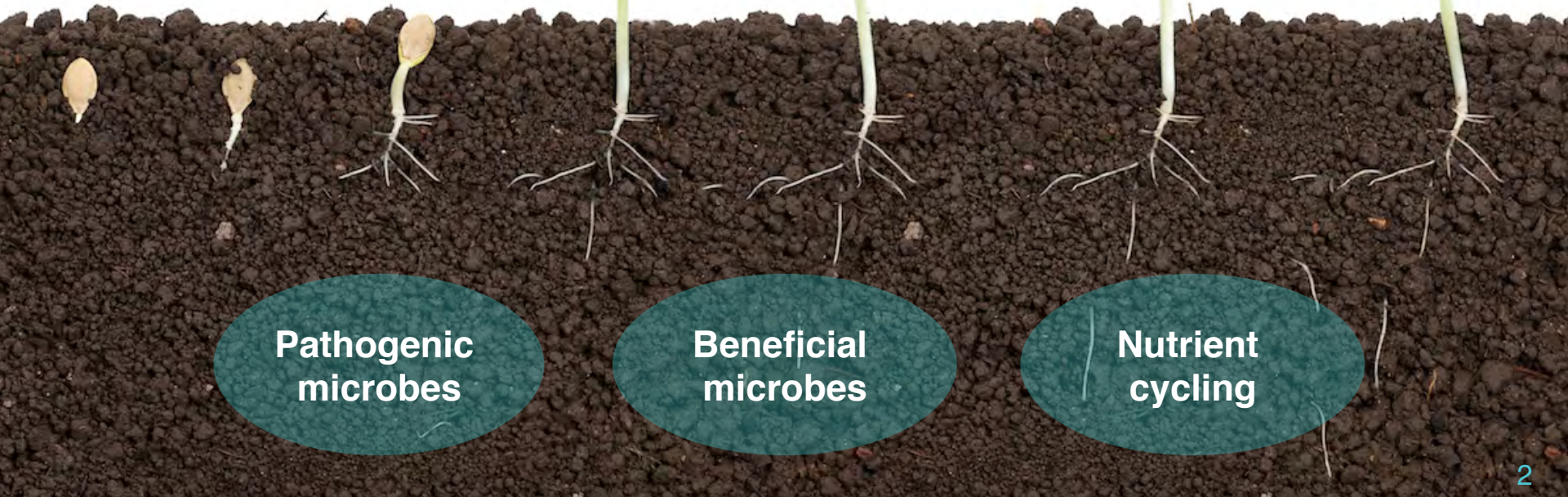
Factors influencing soil health



Soil
Treatments
and
Management
practices



Physical
and
Chemical
properties



Pathogenic
microbes

Beneficial
microbes

Nutrient
cycling

First scalable microbiome test for agriculture



Pathogenic
microbes

Nutrient
availability

Beneficial
microbes

Capture biological state of the soil



Disease Panel

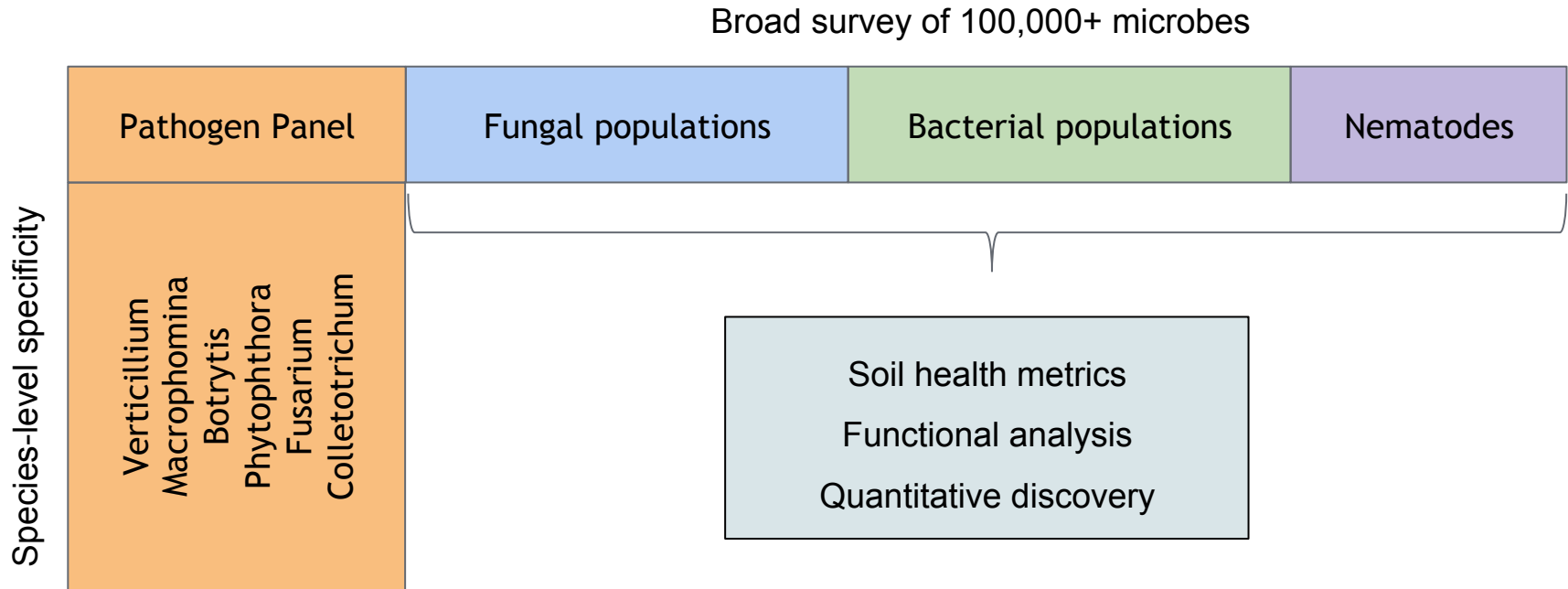
Soil Health

Nutrient Cycling

Genomics and analytics deliver a snapshot of soil disease and health

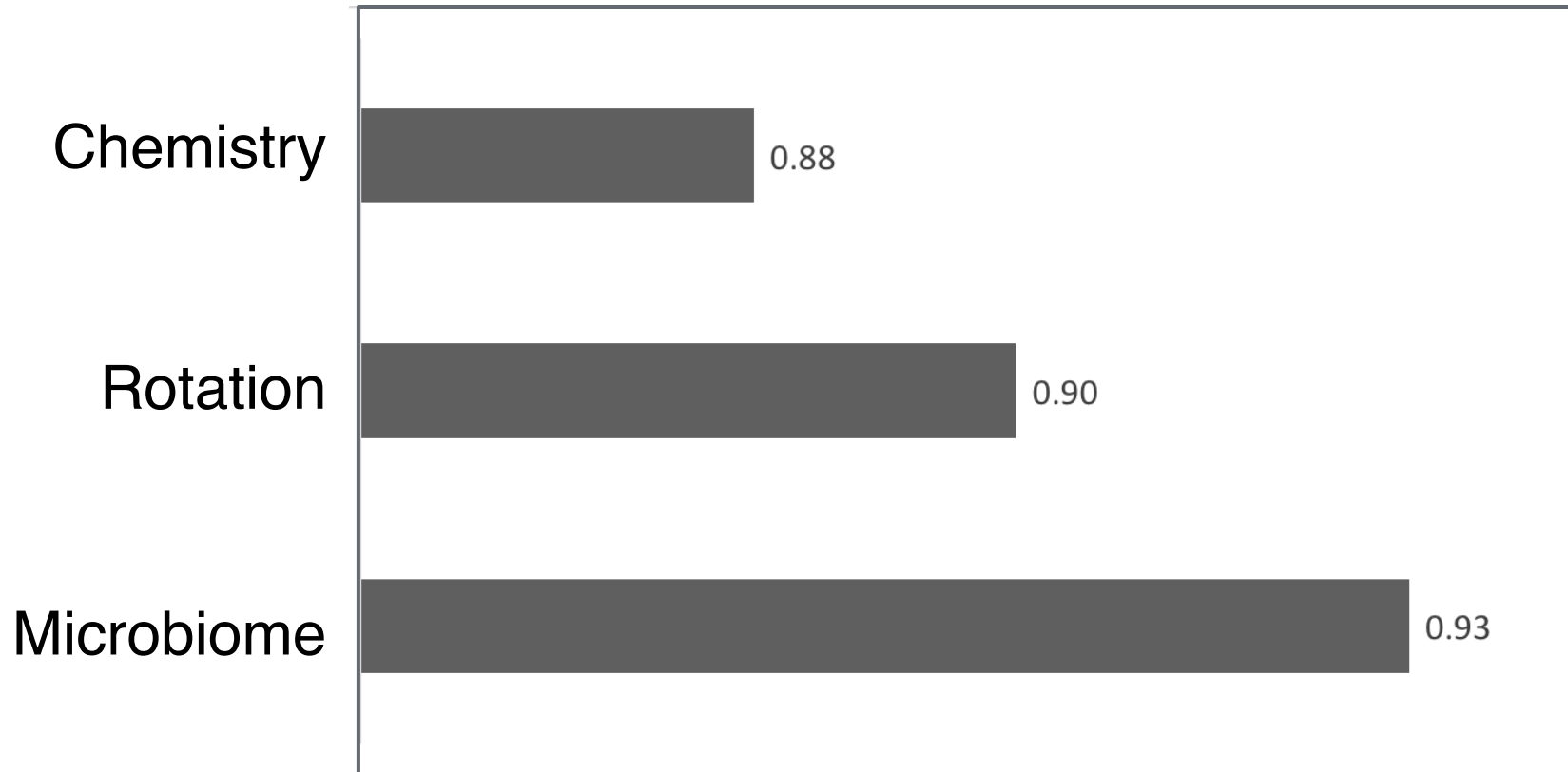
Proprietary Microbiome Technology

Simultaneous Broad and Deep Microbial Profiling



Case study: Microbes are predictors of yield

Yield Prediction Accuracy



Annu. Rev. Phytopathol. 2004. 42:243–70
doi: 10.1146/annurev.phyto.42.012604.135455
Copyright © 2004 by Annual Reviews. All rights reserved
First published online as a Review in Advance on April 2, 2004

MICROBIAL DIVERSITY IN SOIL: Selection of Microbial Populations by Plant and Soil Type and Implications for Disease Suppressiveness

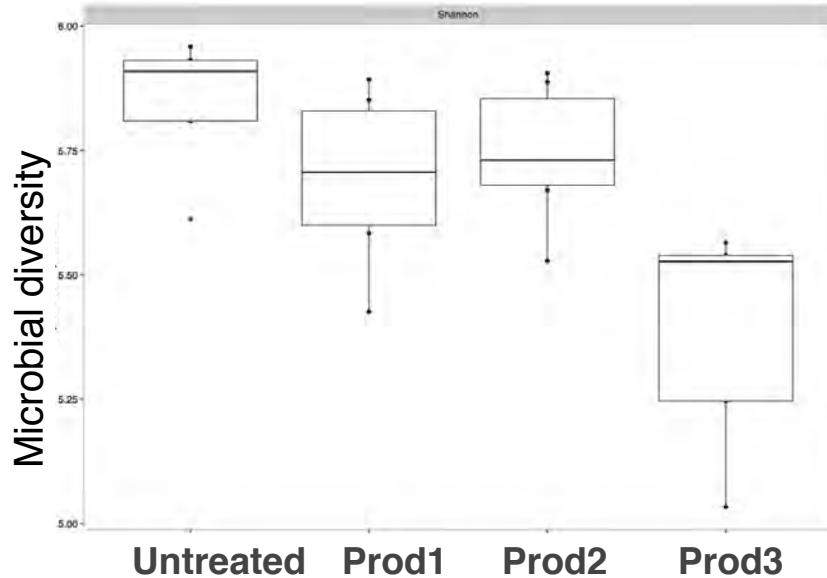
P. Garbeva,¹ J.A. van Veen,¹ and J.D. van Elsas²

Healthy soils have higher diversity

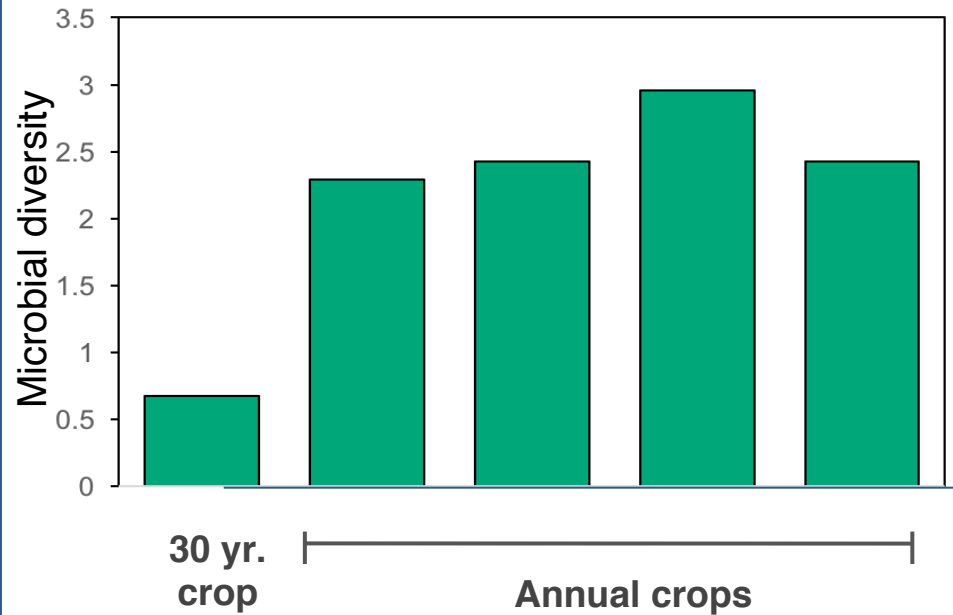
- More resilient to disease pressures
- Correlation with higher yield
- More sustainable

Case study: Microbial diversity

Effects of products and fumigants on soil microbial ecosystem



Continuous cropping reduces soil diversity



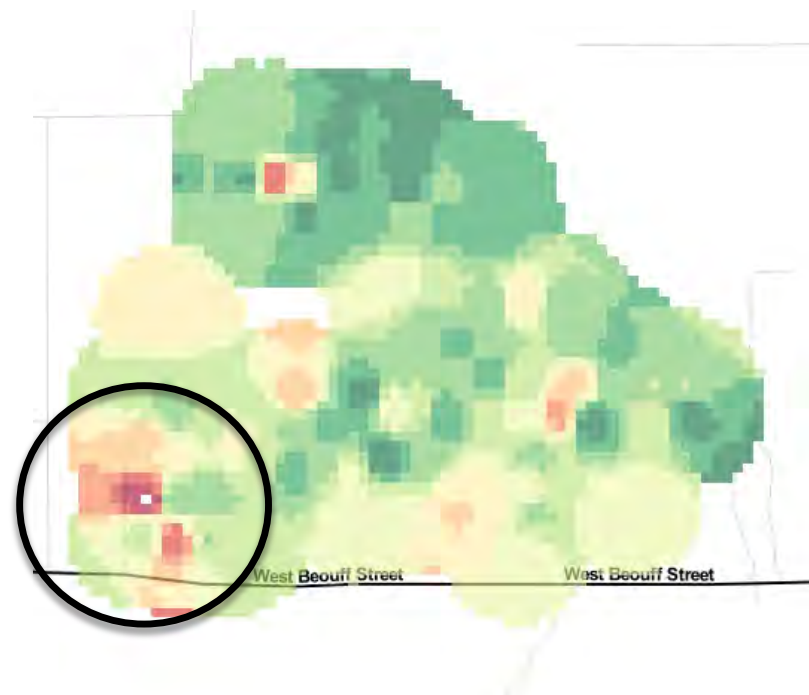
Products and practices have dramatic effects on microbial diversity

Soil Health: Mapping soil health metrics

Microbial diversity

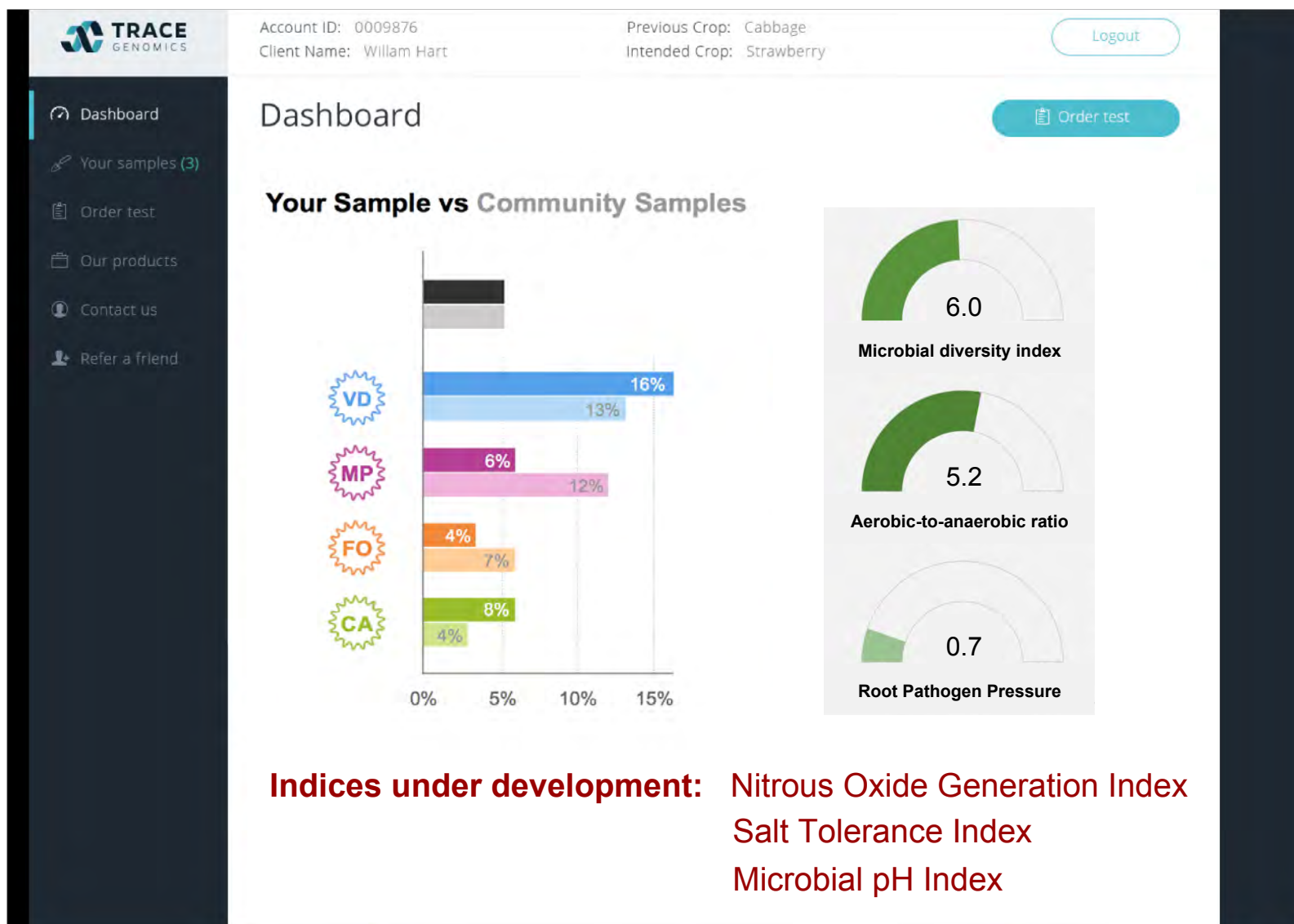


Aerobic/anaerobic ratio



Low soil health indices revealed an area impacted by flooding

Soil health and disease





Use Cases

Yield Differentials

Low vs. high yield

Operataional Impacts

Cover cropping, tillage, plastic mulch, rotation

Product Treatment

Soil and seed treatment effects

Field Trials

Soil biology shifts during field trials



Thank you!
info@tracegenomics.com