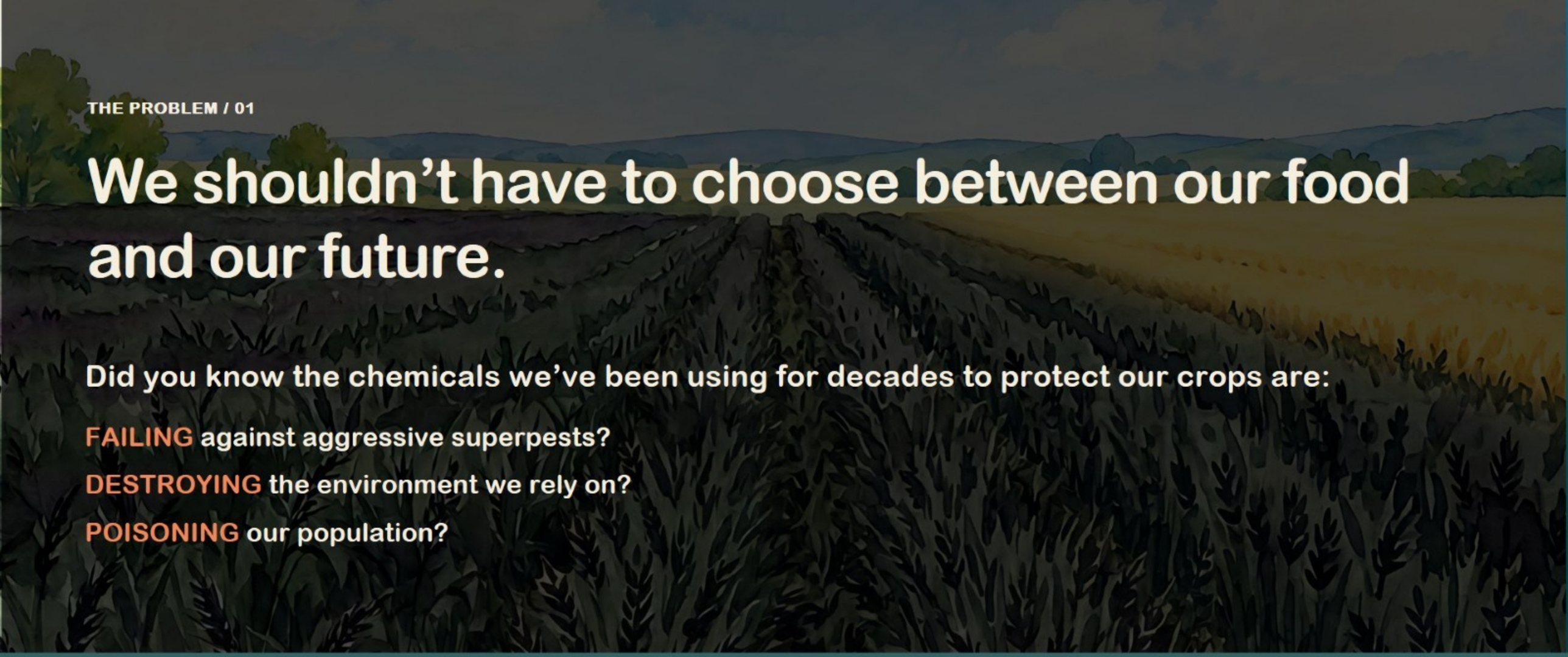
ryza bio

The future of agriculture starts with discovery



THE PROBLEM / 01

We shouldn’t have to choose between our food and our future.

Did you know the chemicals we’ve been using for decades to protect our crops are:

FAILING against aggressive superpests?

DESTROYING the environment we rely on?

POISONING our population?

86

Pesticides have been lost to EU farmers in the last 7 years

1

new pesticide has been registered to replace them

80%

of our most important food supplies are at risk globally

THE PROBLEM / 02

How do we re-ignite pesticide discovery?

AI predicts thousands of promising chemistries in weeks. Validation is the real bottleneck:

Chemical testing has been mostly unchanged for decades:

Plant trials take weeks to show visual symptoms

Lab experiments cost more than most can afford to show how chemicals work

99%
of chemicals fail from lab to field

12yrs
to develop one new ingredient

$300M
in cost, per ingredient

THE SOLUTION / 03

A miniature greenhouse in the lab.

Young plants react strongly to their environment.

We pair them with low-cost sensors to capture the chemical warning signs they release the moment they are under attack

Hours

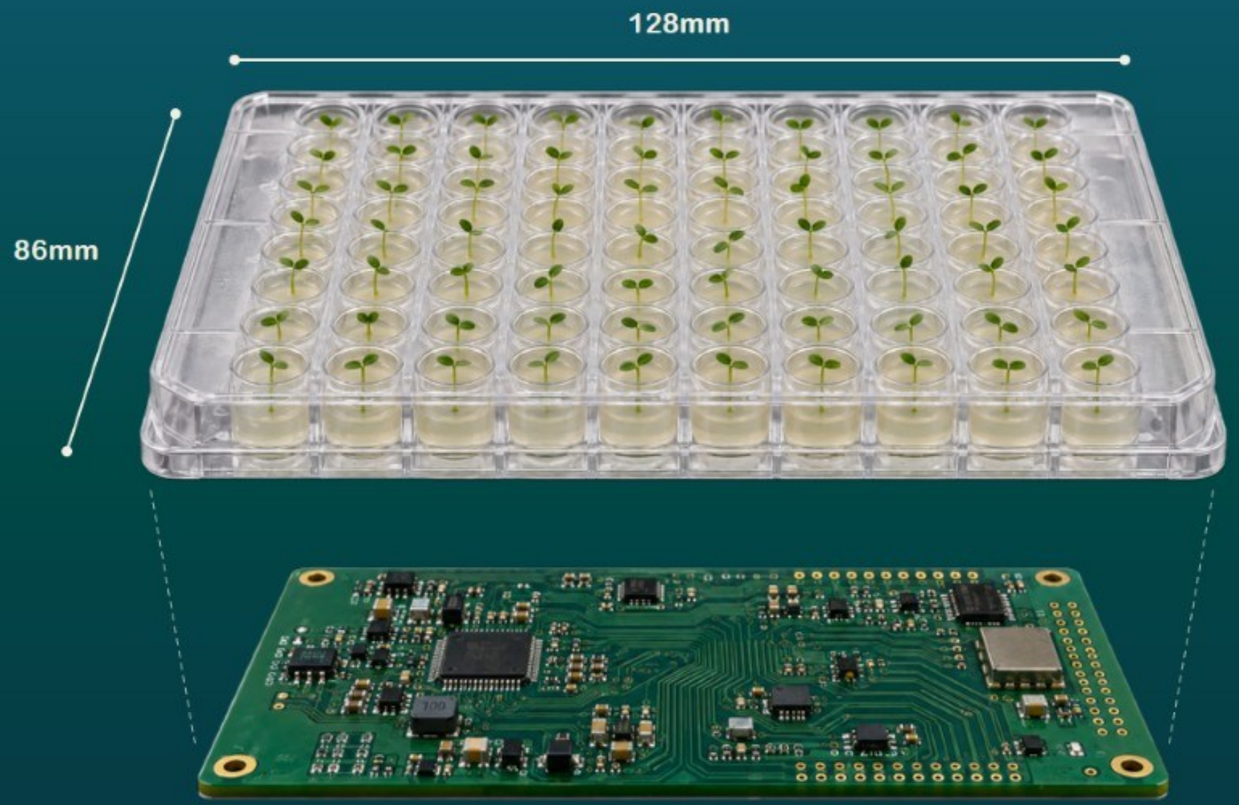
replace days of waiting for symptoms

7-day runs

replace weeks of lead time

One platform

replaces multiple isolated experiments



THE SOLUTION / 04

More than just “does it work?”

We generate a unique chemical fingerprint of each pesticide within hours of application that tells us not just if it works, but how.

Competitors

only see whether a chemical creates its targeted effect

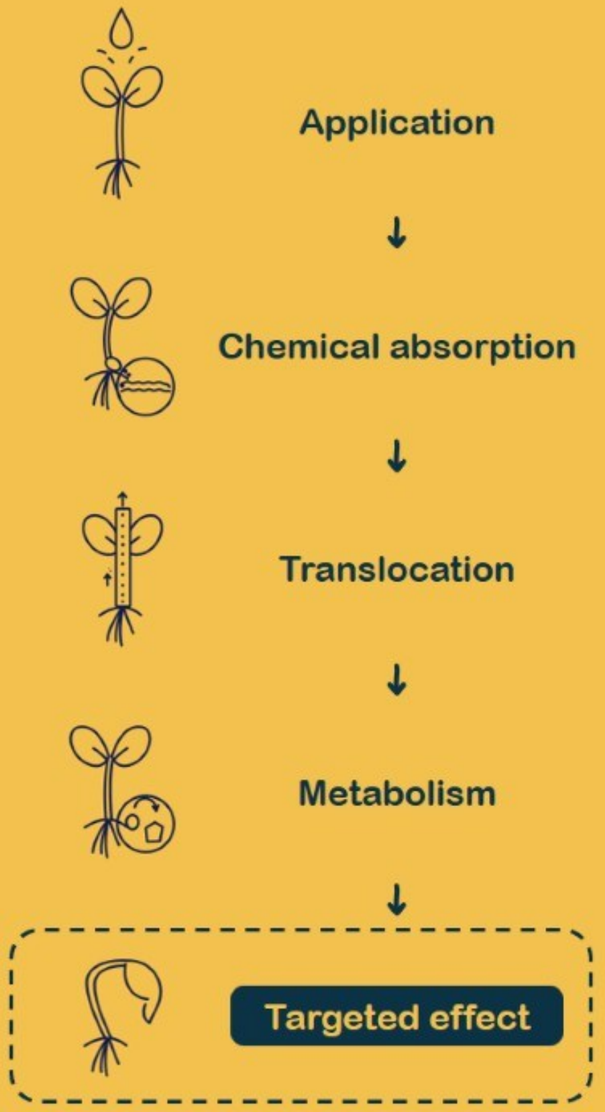
Our fingerprints

show the plant’s response at every hurdle, catching failures BEFORE they leave the lab

6yrs
shaved off the discovery pipeline

10x
cheaper than current methods

A CHEMICAL’S BIOLOGICAL OBSTACLE COURSE IN THE FIELD



Selin Olenik, PhD
Founder / CEO

5+ years research in electrochemical sensing

Years of industry biotech experience

Prof. Firat Guder
Founder / CSO

Pioneer of chemical plant phenotyping

World renowned innovator: Three deep tech startups

Baris Bilen
Advisor
Kaloma Ventures

Julia Espeso Bischofberger, MSc
Advisor
Bezos Centre for Sustainable Protein

A B2B model for pesticide companies.

01 NOW

Screening service

AGILE SMEs

Market trust

Quick traction with companies priced out of high-quality testing

02 NEXT

Licensing chemistries

MULTINATIONALS

Recurring revenue

They formulate and register our chemistries as their own products

THE DATA ADVANTAGE

Our proprietary datasets feed the AI design models replacing chemical design, weeding out dead-end chemistries at step one and moving us further up the value chain.

Watch us grow…

European
Herbicide Market
$2B

SOM

Global
Crop Protection Market
$78B

SAM

Global
Agrochemical Market
$235B

TAM

WHERE WE START

Soaring resistance, regulatory pressure, and a 40 year innovation drought

WHERE WE GROW

This bottleneck isn't specific to herbicides, and neither is our platform

TRACTION / 08

Early results, real interest.

6-HOUR DETECTION
of multiple herbicides with prototype platform

PILOT
secured with Bionomic BV

Confidential talks with market's
LARGEST PLAYER

£100k
raised to date

UKRI Innovate UK

Undaunted The Greenhouse

BEZOS CENTER FOR SUSTAINABLE PROTEIN

RE-IGNITE discovery.

Bring agriculture into the 21st CENTURY.