

CREATIVE SCIENCE, NON-TOXIC RESULTS

NONTOXECO LABS

Non-toxic science for crops, flocks and herds.

NONTOXECO LABS LLC · Wyoming, USA
Bangkok · Jerusalem · Manila



WHO WE ARE

Physics and biology, not new poisons.

NONTOXECO LABS converges advanced molecular research and scientific ingenuity to deliver non-toxic solutions for agriculture and animal production. We build from food-grade and GRAS-listed inputs, test in commercial conditions, and design for the registration path from day one.

25+

years of formulation R&D behind the portfolio

5

technologies across crops, poultry and cattle

3

continents: Asia, Europe and North America

OUR APPROACH

Four rules behind every technology

Known, safe inputs

Food-grade and GRAS-listed raw materials with existing regulatory precedent, which shortens the toxicology dossier.

More than one mode of action

Stacked, independent mechanisms give pests and pathogens no single target to mutate around.

Delivery is the product

Matrices, emulsions and prills that put the active where it works, at the time it works.

Cost farmers accept

Commodity inputs and simple mix-and-heat production that can be toll-manufactured near each market.

TECHNOLOGIES

Five platforms, two fields

Crops

EIR BIOSIMULANT

Botanical fungicide
and biostimulant

Crops

EIR PESTOX

Bio-rational
insecticide and
acaricide

Animal housing

EIROLITTER

Acidifying bedding
microgranule

Cattle

EIR BOVIBIOME

Rumen-protected
butyrate feed
additive

Laying hens

EIR AVIBIOME

Gut and eggshell
support feed additive

Crop protection for growers who need results without a residue problem. Animal-health tools for integrators who need healthier flocks and herds without antibiotic-style claims.



FUNGICIDE & BIOSTIMULANT

EIR BIOSTIMULANT

A dual-action botanical platform built on a GRAS-listed plant-defense molecule and a patentable emulsion system for solubility, stability and uptake.

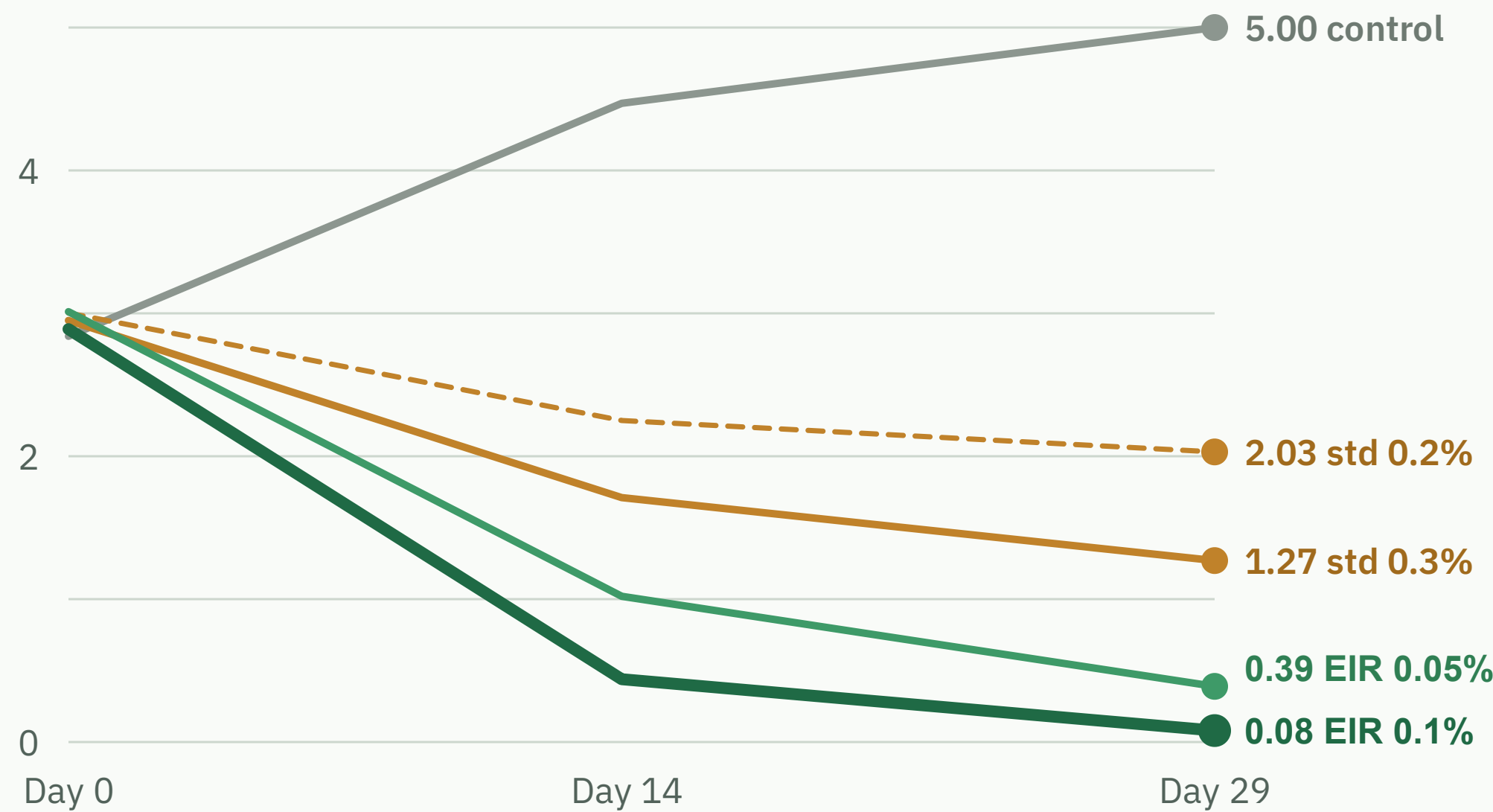
Suppresses fungal and bacterial plant pathogens

Activates the plant's own immune response

Effective at 0.05–0.1% field dilution

Stage: greenhouse-validated

Phytophthora severity over 29 days



97.2%

severity reduction with EIR BIOSTIMULANT 0.1%,
from 2.89 to 0.08

56.9%

best result for the chemical standard
(fosetyl-Al + fluopicolide, 0.3%)

250 m², five 50 m² zones · foliar sprays on day
1 and day 14 · AI-scored severity, 0 = healthy,
5 = full infection

INSECTICIDE & ACARICIDE

EIR PESTOX

Three independent modes of action (physical, sensory and metabolic) in one droplet. Built from food-grade raw materials, with no synthetic residues.

Targets aphids, whiteflies and phytophagous mites

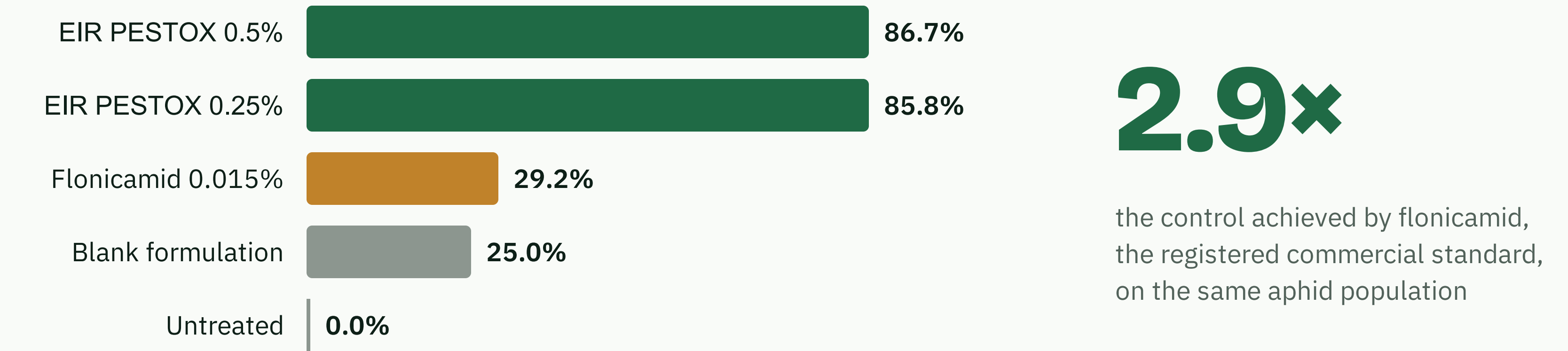
0.25% spray dilution working rate

About \$15 of concentrate per hectare

Stage: working prototype, two field trials



Aphid control on pepper, 3 days after treatment



4 replicates, 3 assessors. Dose response: 54% at 0.05%, 66% at 0.10%, plateau from 0.25%. Differences are observed means; statistical analysis is the next step.



BEDDING TECHNOLOGY

EIROLITTER

Stage: commercial trial completed

A low-dust acidifying microgranule for poultry, cattle and equine bedding. It treats the litter reservoir in one pass.

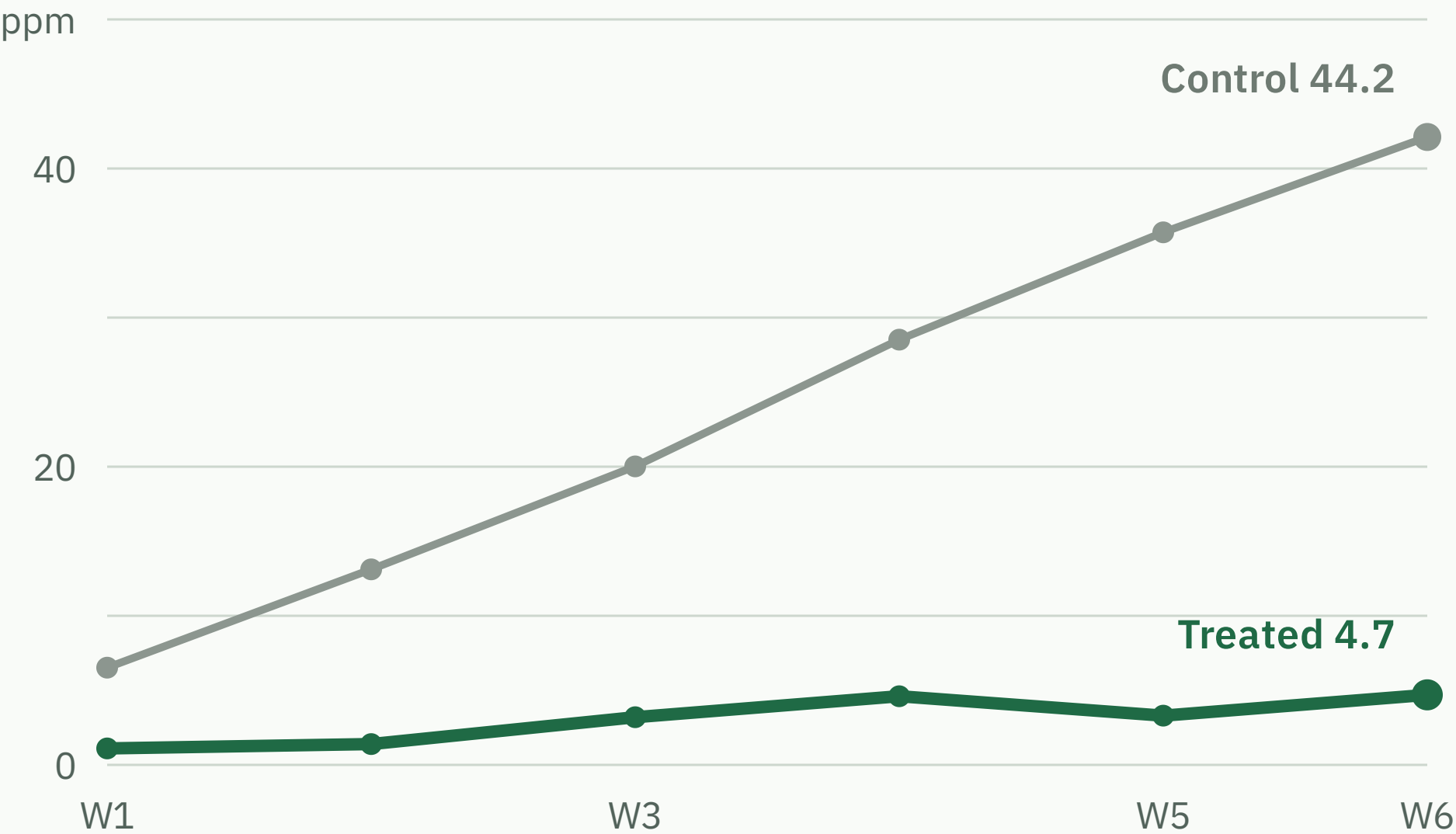
Lowers litter pH and airborne ammonia

Moderates moisture and odor

Salmonella and arthropod data under lab conditions

EIROLITTER • 50,000 ROSS 308 BROILERS, 2 HOUSES × 25,000

Ammonia at bird-head level, week by week



1–5 ppm

ammonia in the treated house for the whole cycle

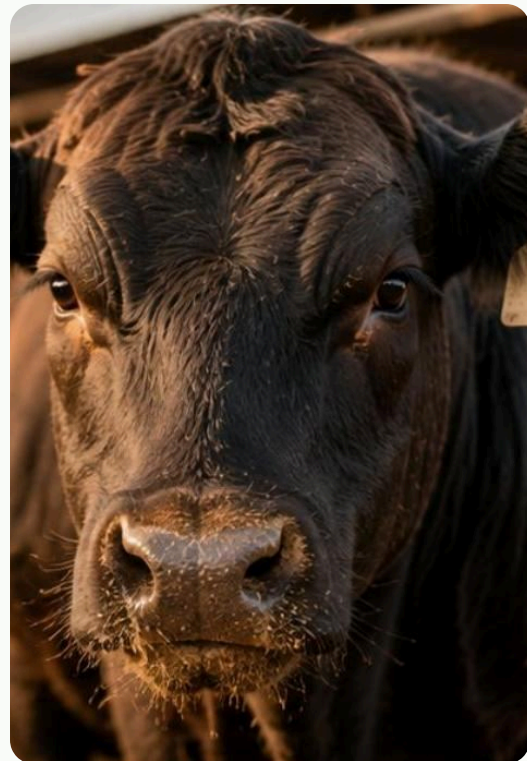
+14.4%

day-42 body weight: 2,798 g treated vs 2,446 g control

Also tested: Salmonella no-growth at an accredited lab, red-mite study with the Hebrew University, goat-flea and mite/tick assays

ANIMAL HEALTH • FEED ADDITIVES IN DEVELOPMENT

One delivery system, two species



EIR BOVIBIOME

A rumen-protected, enzyme-responsive butyrate prill that releases in the small intestine, not in the rumen.

One homogeneous 1.0–1.4 mm prill • built for U.S. feedlots



EIR AVIBIOME

The same philosophy for laying hens: timed intestinal butyrate plus a dedicated eggshell-support module.

Gut resilience • calcium, D3 and shell quality

Both support gut barrier function and microbial balance without antibiotic-style claims. Performance claims will follow controlled trials.

The right payload, in the right place

01

Feed mixer

Hard, free-flowing prills survive shear and do not segregate.

~100% protected

02

Rumen

A hydrophobic lipid matrix stays solid near 39 °C and limits water ingress.

≥60% kept after 24 h

03

Abomasum

Transit, not a trigger: release is not pH-dependent.

matrix stays coherent

04

Small intestine

Bile and lipase erode the matrix and release butyrate where the gut absorbs it.

≥85% released in 6 h

05

Hindgut

Any residue releases slowly, without a bolus.

sustained residual

EIR AVIBIOME follows the same logic in hens: feed, crop and gizzard, small intestine, ceca. The percentages are design targets, not trial results.

PIPELINE

Where each technology stands

Technology	Formulate	Lab/pilot	Field	Register	Launch	Next milestone
EIR BIOSIMULANT						Thailand pilot and registration, then ASEAN
EIROLITTER						Registration and pilot production, EU and US
EIR PESTOX						Formulation lock, toxicology, multi-site trials
EIR BOVIBIOME						Pilot batches and release testing
EIR AVIBIOME						Poultry GI simulation and layer trials

Solid = done · hatched = in progress · grey = ahead

THE VISIONARIES

Science and strategy under one roof



Ido Eco Ofek

Founder, Chief Scientist & Lead Inventor

25+ years in chemistry, microbiology, agronomy and animal science. Filed registrations with the Israel Ministry of Agriculture and the U.S. EPA; holds a self-developed pesticide registered in Israel.

B.Sc.Agr & M.Sc.Agr, Hebrew University · MBA, University of Derby · U.S. O-1A visa, 2024



Guy Shafrir

Strategic & Operational Leadership

20+ years in global financial services and risk management. Leads the commercialization of the portfolio.

From formulation to registration, end to end

2004–2016

Ecologic R&D and Ecologic Technologies

CEO and Chief Scientist.
Raised \$1.3M; filings with Israel MOA and U.S. EPA.

2016–2020

Nontoxeco Ltd and Agrometix

New eco-friendly pesticides, 4 registrations filed, 6 patent applications.

2022–

GLA-ECO, Singapore

Chief Scientist for eco-friendly agricultural technologies; pilots in Asia.

2023–2025

G.A 770 LLC, Arizona

Co-founder and President. 2 patents registered; developed STEMWORK.

2025–

NONTOXECO LABS LLC

Chief Scientist for ecological agricultural and animal-health technologies.

Recognized with the U.S. O-1A Extraordinary Ability visa in 2024.

PARTNERS · DISTRIBUTORS · INVESTORS

Let's talk about your market.

Technical dossiers, trial reports and business plans are shared
after a mutual NDA.

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