



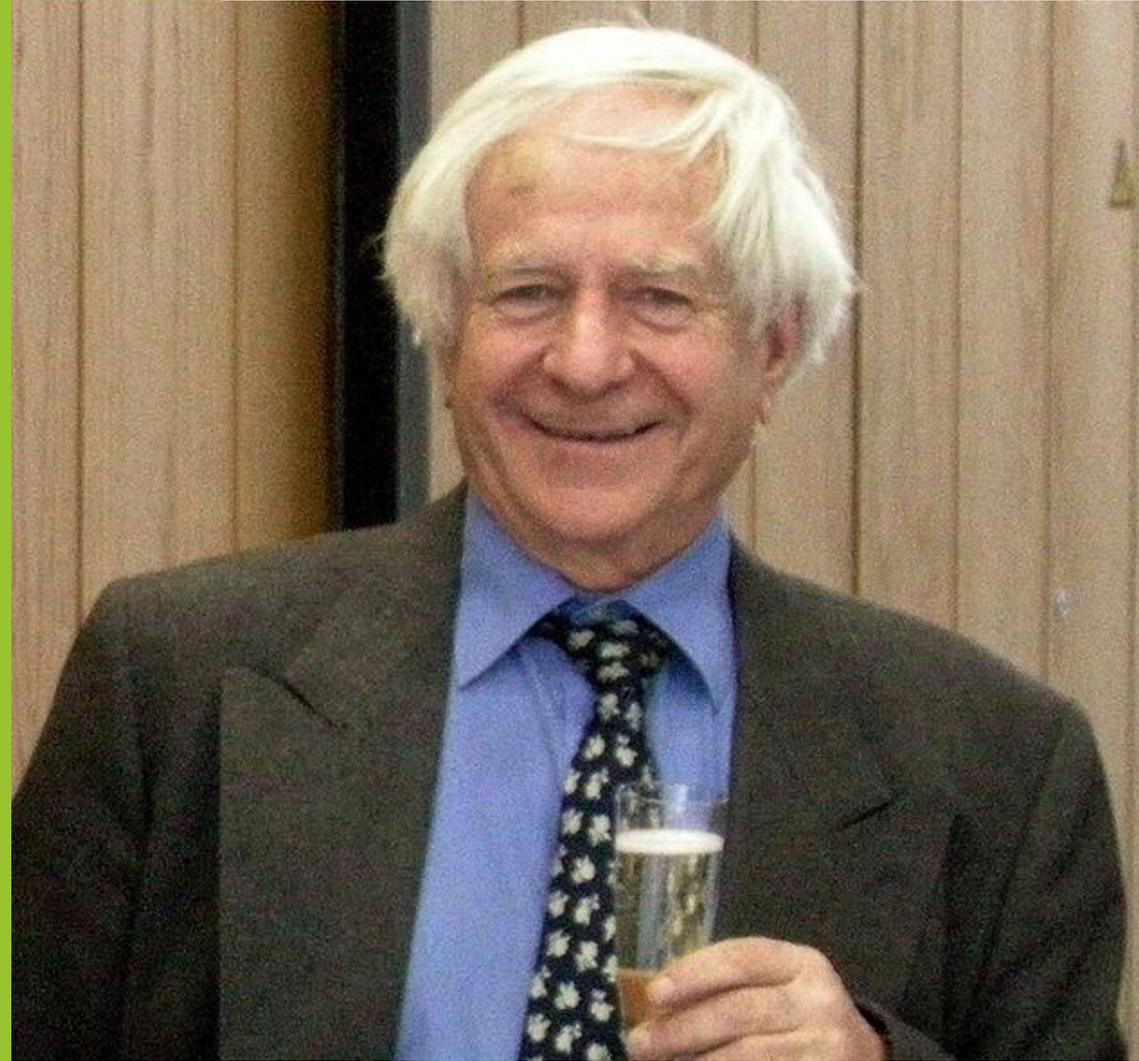
# Bernard Blum Award 2025



THE FOUNDING FATHER OF IBMA

# Bernard Blum

1934 - 2014



# 10 years of Bernard Blum Award

- An independent jury selects a winning biocontrol product to receive a Gold, Silver or Bronze award trophy.
  - Demonstrate an effective solution in the management of pests or diseases while having a low impact on human health and the environment
- 2021: introduction of the best innovative product assisting the uptake of biocontrol
- This year we received over 25 high quality applications
- Thank our media partners who offer an interview and advertisement in the following publications:

**New AG**  
**International**



# The Panel of Judges



**Johannes Jehle**  
Julius Kühn-Institut,  
Darmstadt  
Germany



**Alberto Urbaneja**  
Valencian Institute of  
Agricultural Research  
(IVIA)  
Spain



**Helma Verberkt**  
Artemis  
Netherlands



**David Cary**  
Coordinator & Chair  
UK

In the case of a tie David Cary has a casting vote

# What we look for?

Each entry is scored independently by each judge against four criteria:



**Scientific** Foundation and Merit



Degree of **Innovation**



Contribution to **Sustainable Agriculture**



**Commercial** opportunity

- Has to be for **biocontrol**
- Has to be **registrable** if required
- Has to be **novel**
- Has to have the potential to **make an impact in the market**

# Scoring

- Each judge evaluates every entry against the four criteria (equal weight):
  1. Scientific,
  2. Innovation,
  3. Sustainable Agriculture
  4. Commercial
- Adding the scores for each criteria gives a total score for that entry
- The entries are then ranked first to last by each judge
- All the rankings are then combined to give an overall rank – first to last
- The products Assisting Biocontrol Uptake are also assessed using the same criteria



# Finally

Please consider entering your product in the future

Remember to highlight the four essential criteria

## Best of luck!





BERNARD BLUM  
AWARD 2025

**Best innovative product assisting  
the uptake of biocontrol**

**WINNER**

# Best innovative product assisting the uptake of biocontrol

**WINNER**

PlatyForm Gel





BERNARD BLUM  
AWARD 2025

**Best Product of the Year**

**BRONZE**

# Best Product of the Year

**BRONZE**

Bellator

  
**IPL**<sup>®</sup>  
Biologicals

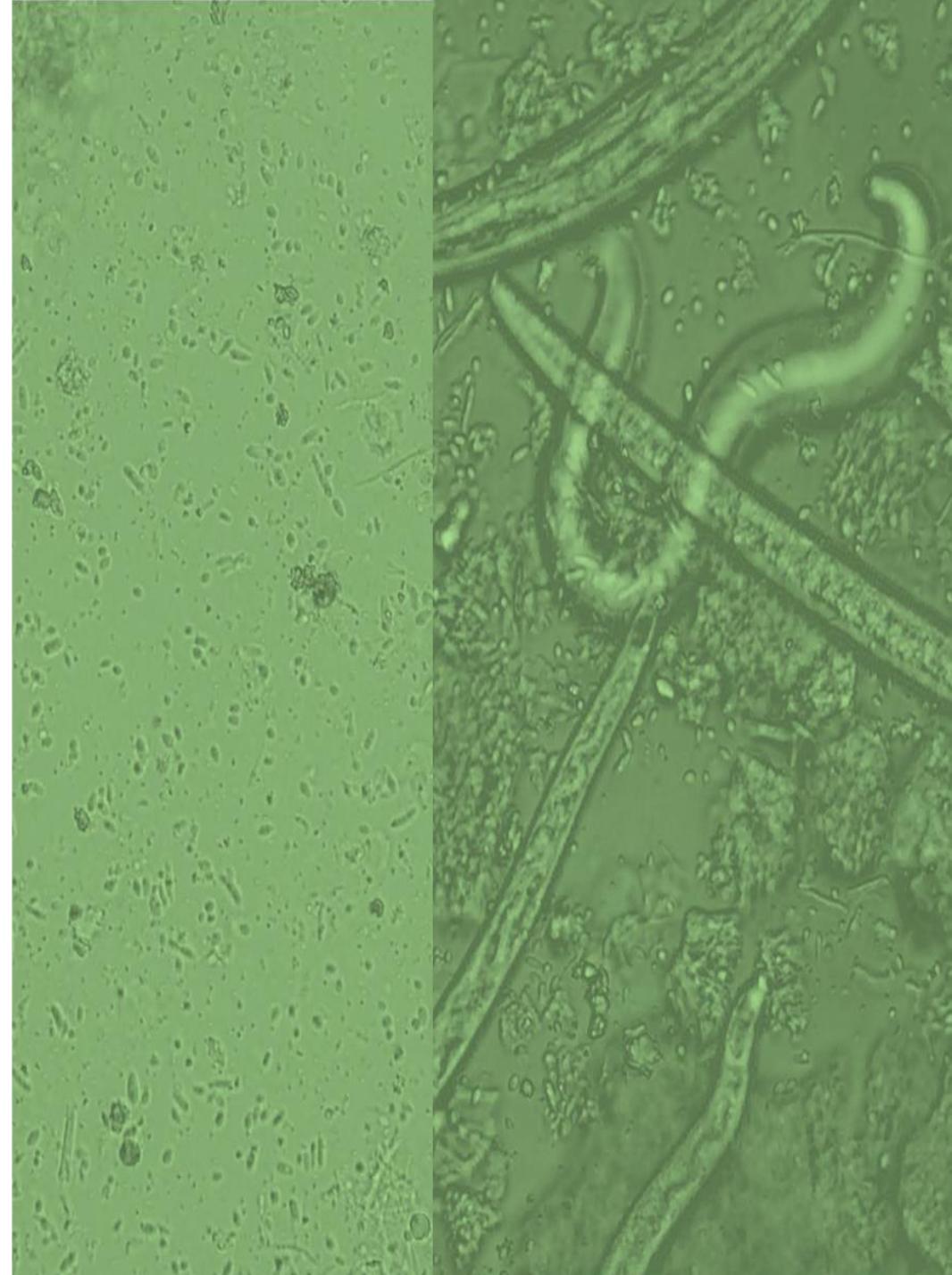
**Bellator**<sup>®</sup>

**N A G**

**BIOLOGICAL NEMATOCIDE**

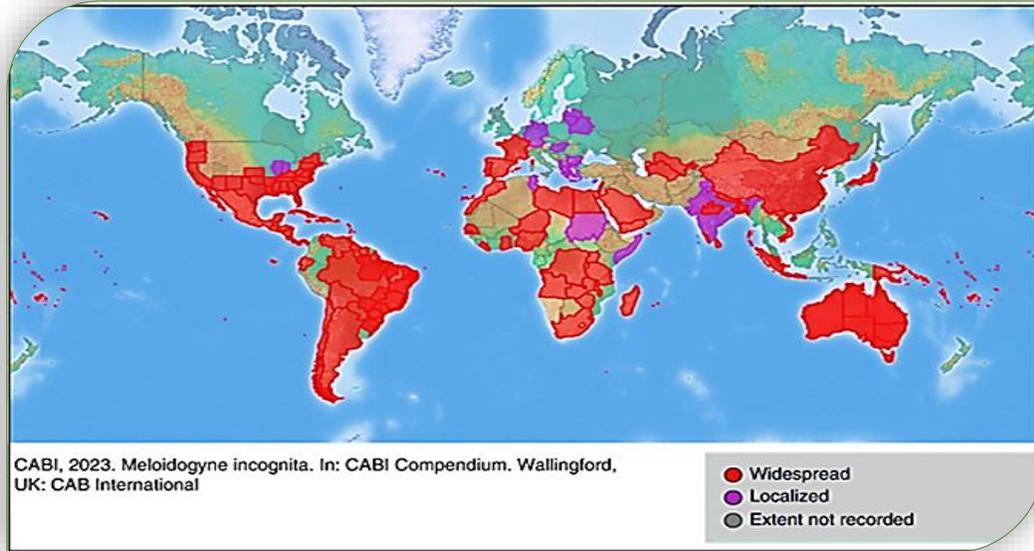
**ULV-HD-SP MICROBIAL  
CONSORTIA POWERED BY OMICS**

**Dr. Vimala Prakash,  
IPL Biologicals Ltd, Gurugram,  
Haryana, INDIA**



# Plant-Parasitic Nematodes: Global menace to crop production

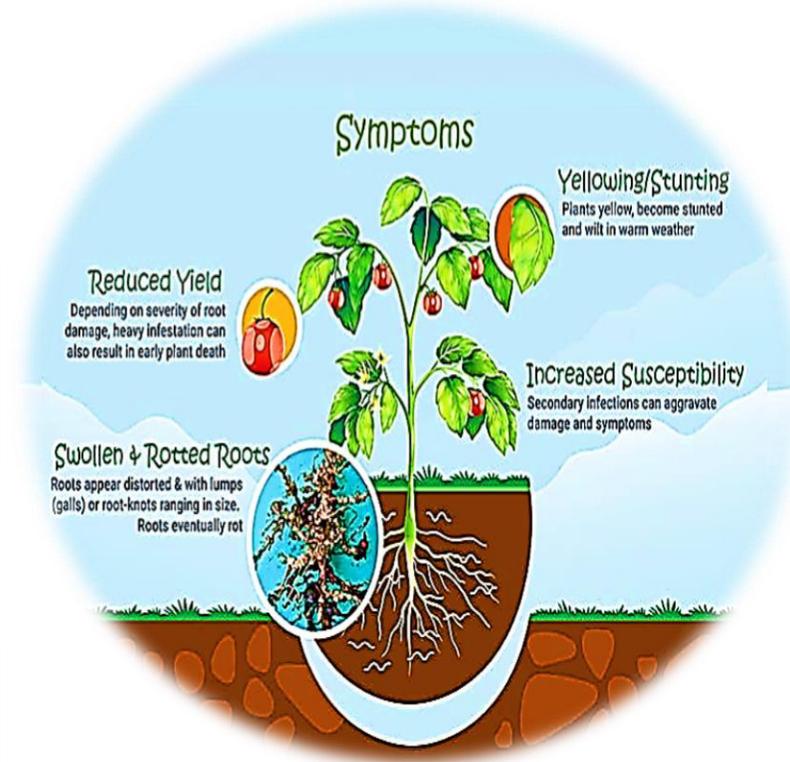
## The Problem



12.3% annual global crop losses, estimated to \$173 billion

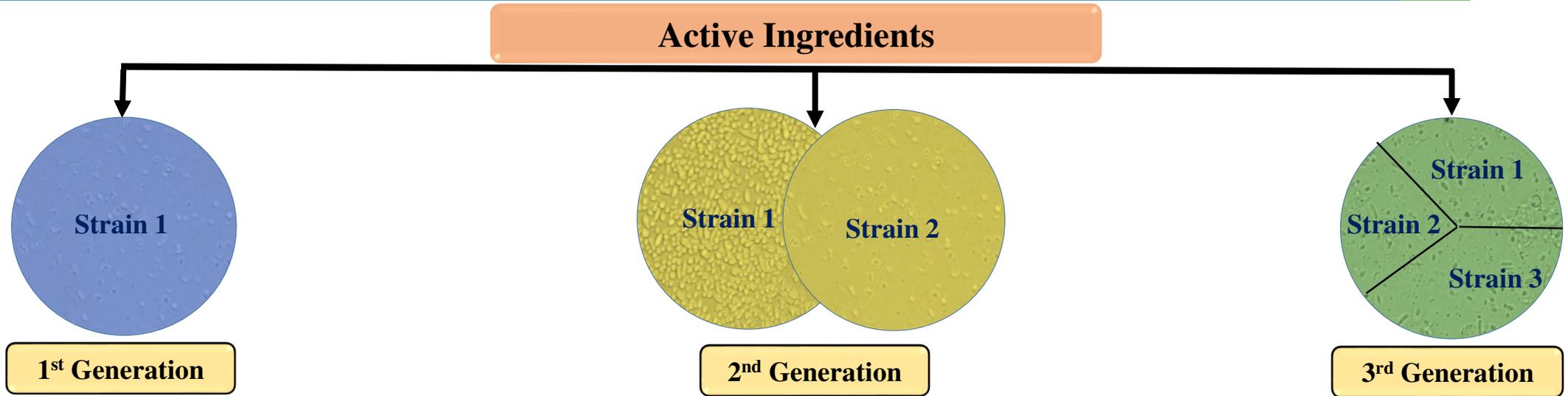
80% annual crop losses in India due to PPNs under protected cultivation

Alone 67% yield losses in cucurbits under protected cultivation



- Afzal, A., & Mukhtar, T. (2024). Revolutionizing nematode management to achieve global food security goals-An overview. *Heliyon*, 10(3).
- Walia, R.K., & Sabir, N. (2024). Nematode Problems of Vegetable Crops in Protected Cultivation Systems: The All-Weather Plastic Heavens. In *Cambridge Scholars Publishing Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK*. pp 308-321

# Biological solutions for nematodes- IPL's Journey so far



Single strains often have narrow targets :

- Nematicidal fungal strain 1 → mainly nematode eggs
- Nematicidal fungal strain 2 → nematode eggs + juveniles + females
- PGPR → fast-colonizing PGPR with biofilm formation property

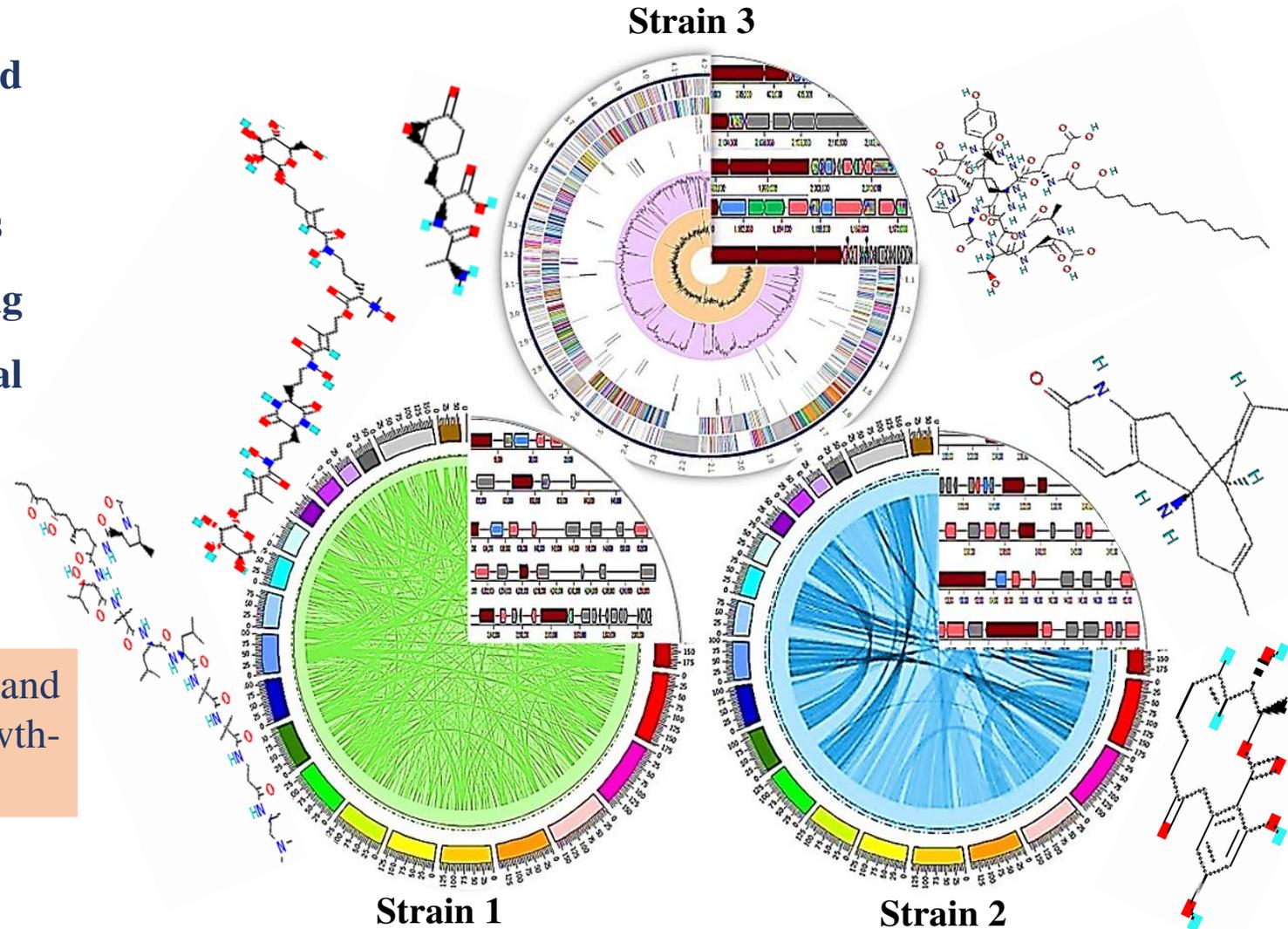
- **Bellator NxG** has multiple mechanisms of action in the soil environment and each organism in the consortium manages PPNs using different strategies. Whereas, a single strain usually works by single mode (e.g., parasitism or antibiosis) of action.
- It also exhibits improved colonization and persistence in soil due to combined resilient fungal spores (long survival), fast-colonizing PGPR with biofilm formation property that help them persist near roots.

# Bellator NXG Powered by OMICS

➤ All three strains were isolated from diverse soil ecologies in Uttarakhand, India (South Asia). It is the first product from India to integrate:

- Whole genome sequencing (WGS) based secondary metabolites
- Biosynthetic gene clusters (BGCs) analysis
- Antimicrobial resistance (AMR) profiling into the development of a **Multifunctional Microbial Consortium.**

➤ It combines two nematophagous fungi- strain 1 and strain 2, with a stress-tolerant, plant growth-promoting rhizobacteria (PGPR)



# Bellator NxG ULV-HD-SP Microbial Consortia



## Mode of Action



Fungal Strain 1



Fungal Strain 2



Bacterial Strain



Bellator NxG

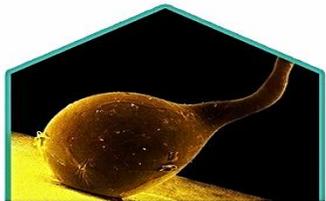


- Production of extracellular enzymes
- Parasitizes nematodes eggs, juveniles and females

- Exclusively ovoparasitic
- Produces serine proteases and chitinase

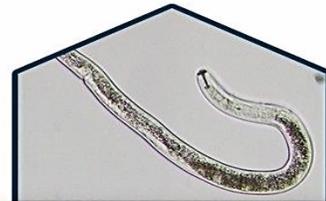
- Induced systemic resistance
- Plant growth promotion (IAA, mobilize potassium and solubilize phosphorus, zinc & iron)

Bellator NxG has a broad spectrum of biocontrol activity with a notable expansion of the targets Nematodes



ROOT KNOT

Potato  
Soybean



CYST

Tomato  
Rice

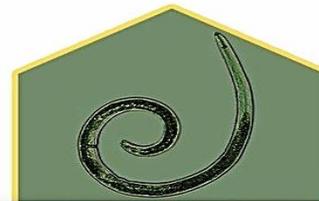


LESION

Vegetables  
Maize

Oilseeds  
Pulses

RENIFORM

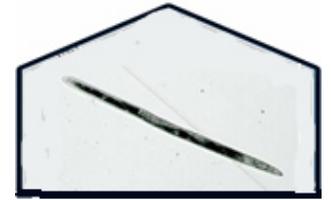


SPIRAL

Vegetables  
Banana

Tomato  
Capsicum

RING



STUBBY ROOT

Vegetables  
Fruit Crops

# Bellator NxG ULV-HD-SP Microbial Consortia

The Solution

Why Bellator NXG ULV HD SP for nematode management



WP

- Inhalation hazard and handling risks
- Poor wettability and dispersion
- Bulky packaging
- Low persistence



AS

- High packaging and transport costs
- Mycelial clogging
- High Sedimentation rate



ULV HDSP

- Higher shelf life
- Highly effective at low doses
- Easy to transport and store
- No clogging in sprayers
- Reduced contamination risk
- Easy to transport and store



# Commercialisation capabilities

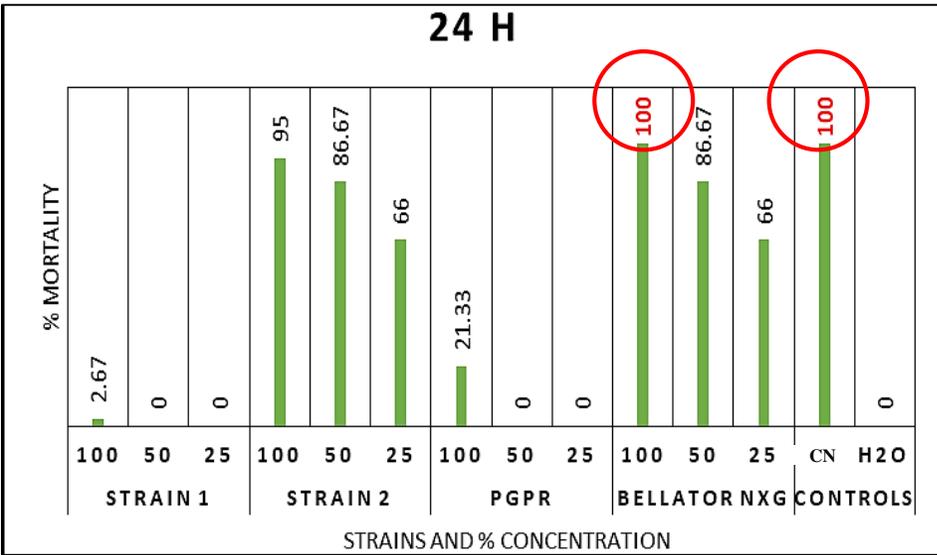
**State of art facility can scale up to 1000 tonnes of production capacity-  
Meeting the Biological nematode management in 1.6 million hectares**



# Commercialisation capabilities

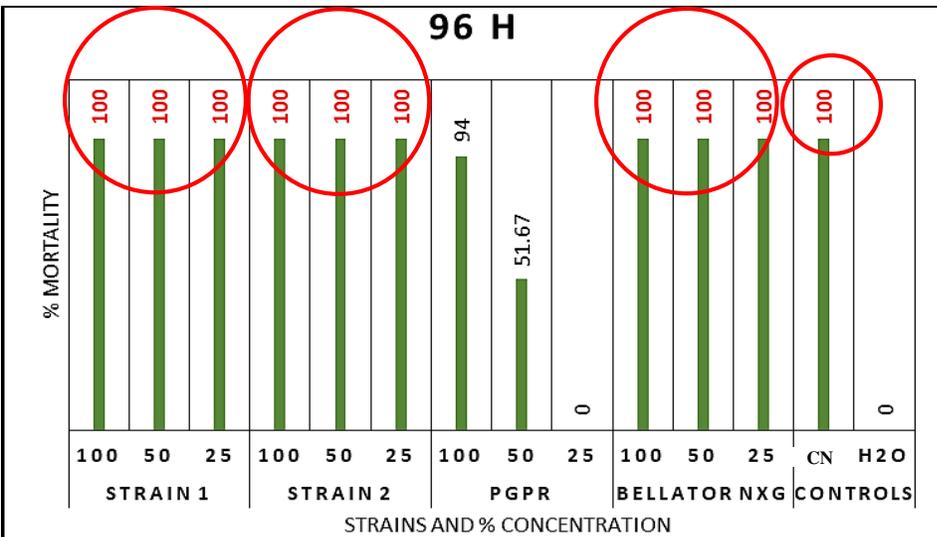
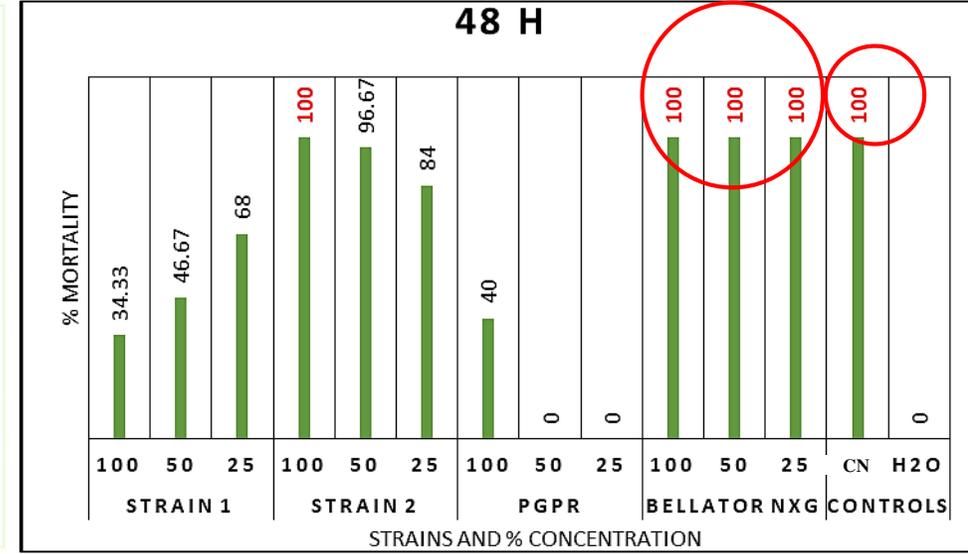


# In-vitro Bioefficacy Evaluation against Nematode Juveniles

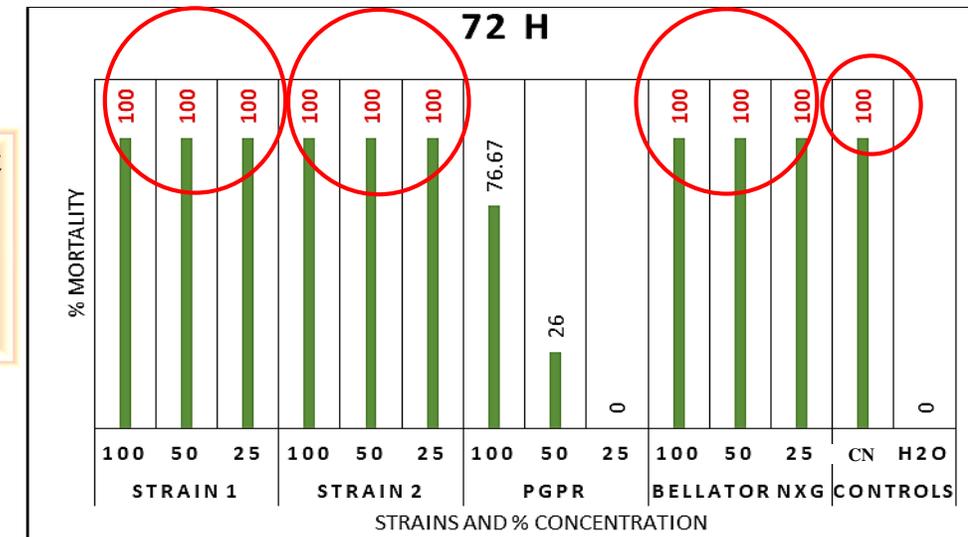


Extensive *in-vitro*, pot and field trials across crops confirmed:

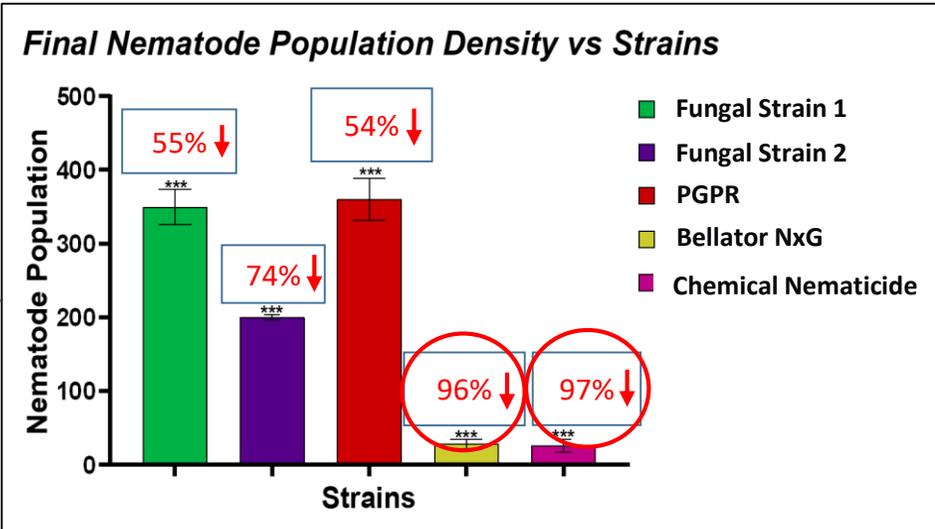
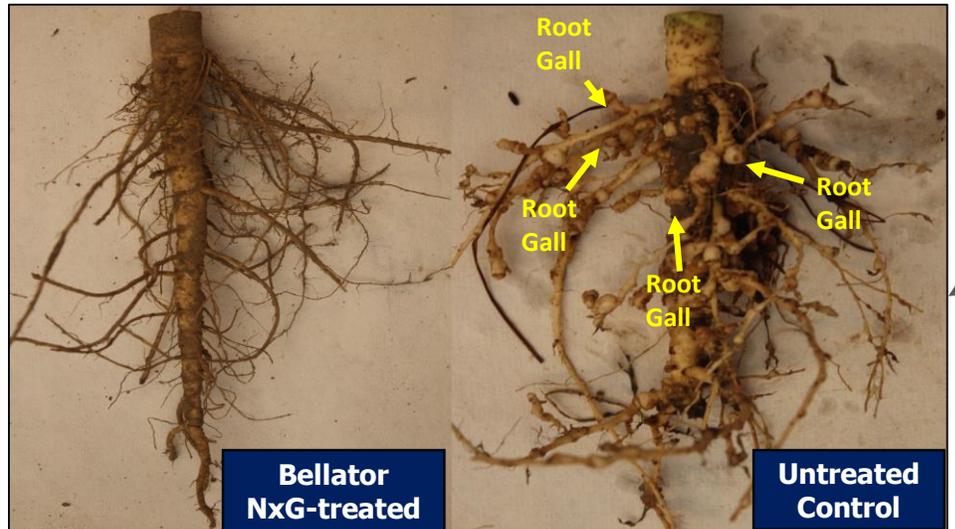
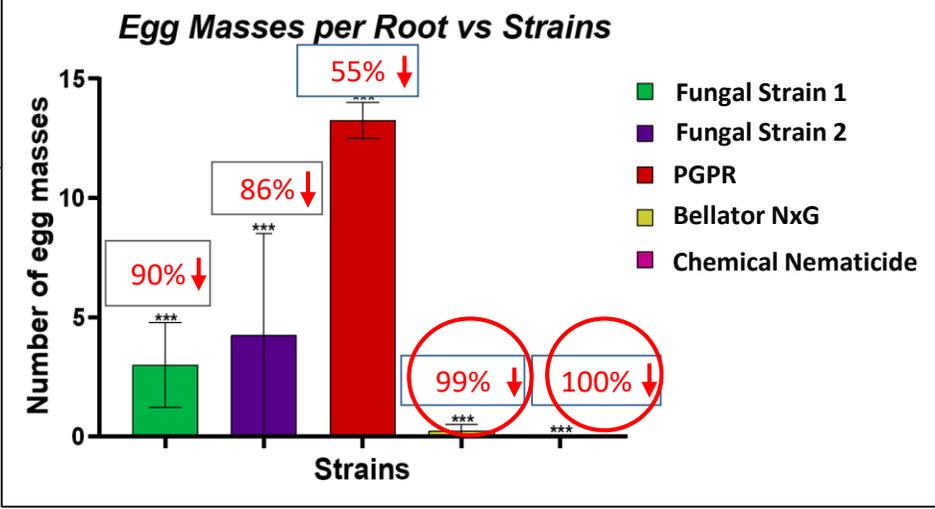
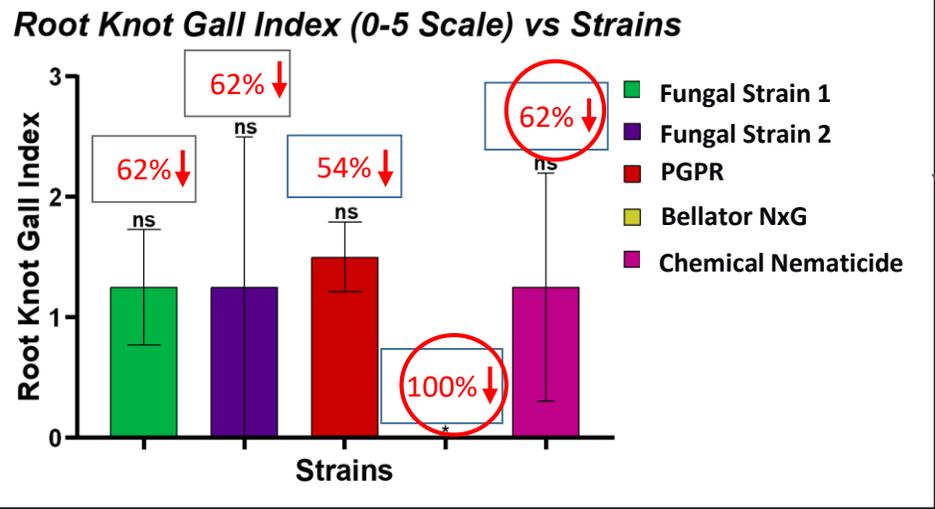
- Effective suppression of *Meloidogyne* spp., *Heterodera* spp., *Pratylenchus* spp., and *Radopholus* spp. etc.
- Significant increases in, plant vigor, yield with increased stability and activity under drought, salinity, and variable pH
- No phytotoxicity or harm to beneficial soil organisms



The formulation has shown consistent performance in vegetables, cereals, and fruit crops, offering scalable utility for both smallholders and commercial farmers.

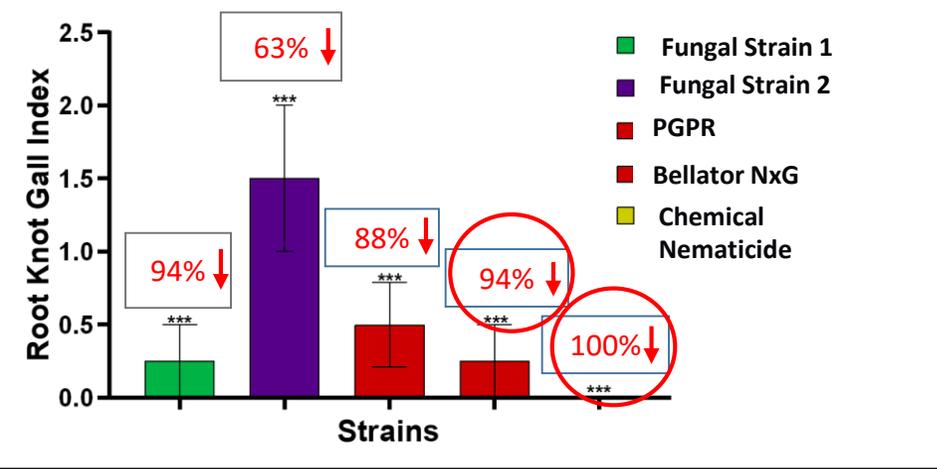


# Bioefficacy Evaluation: Pot Trial in Tomato (*Solanum lycopersicum*) against Root-Knot Nematode in India

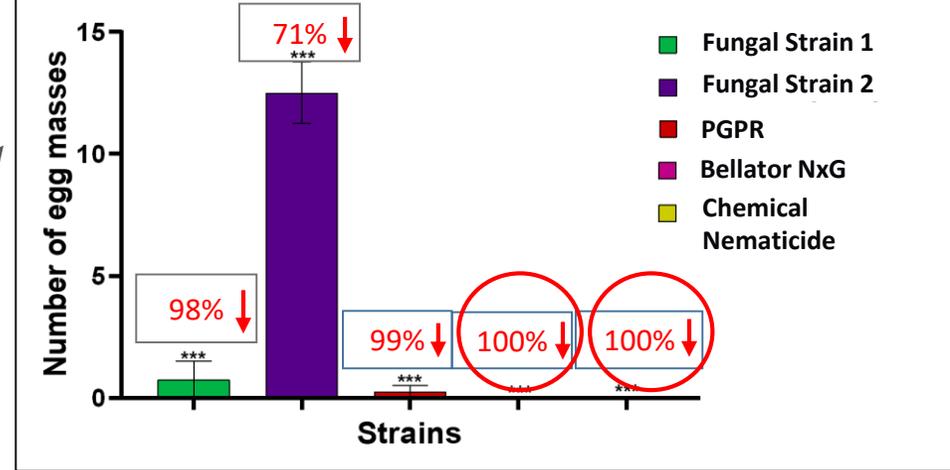


# Bioefficacy Evaluation: Pot Trial in Brinjal (*Solanum melongena*) against Root-Knot Nematode in India

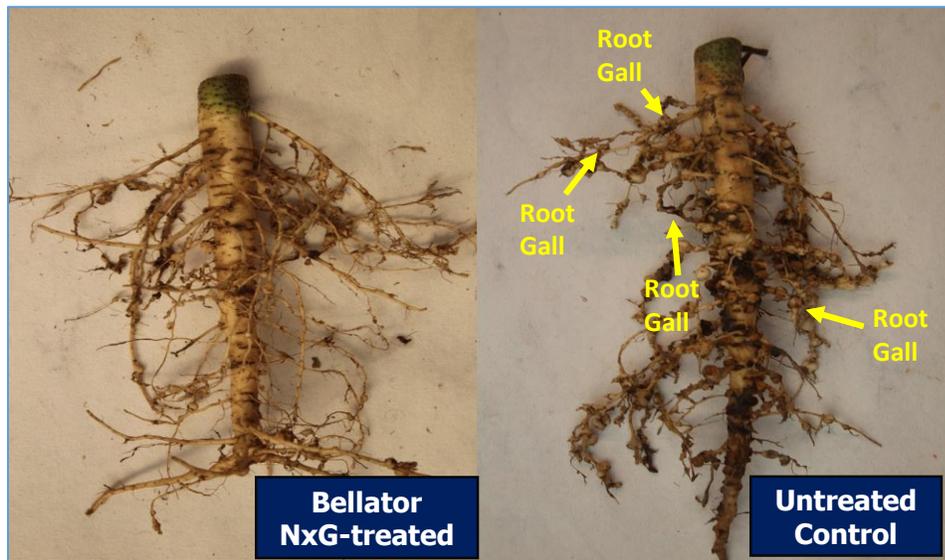
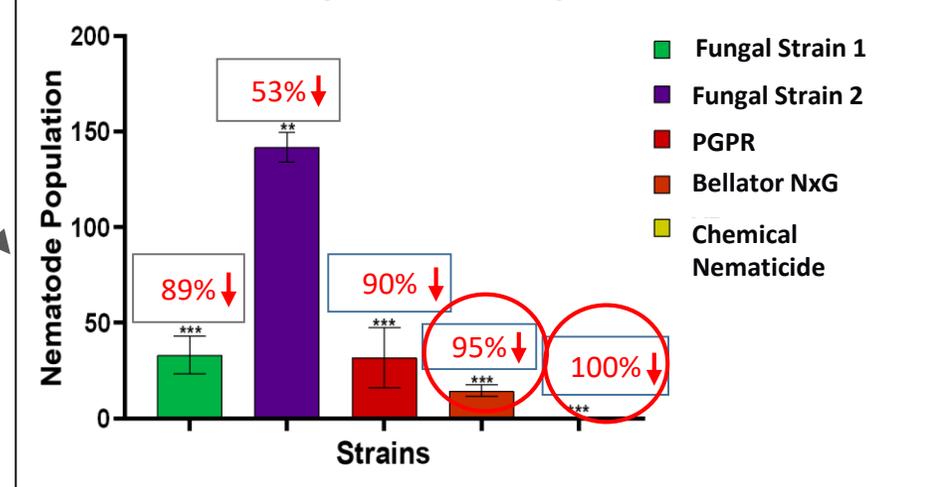
**Root Knot Gall Index (0-5 Scale) vs Strains**



**Egg Masses per Root vs Strains**



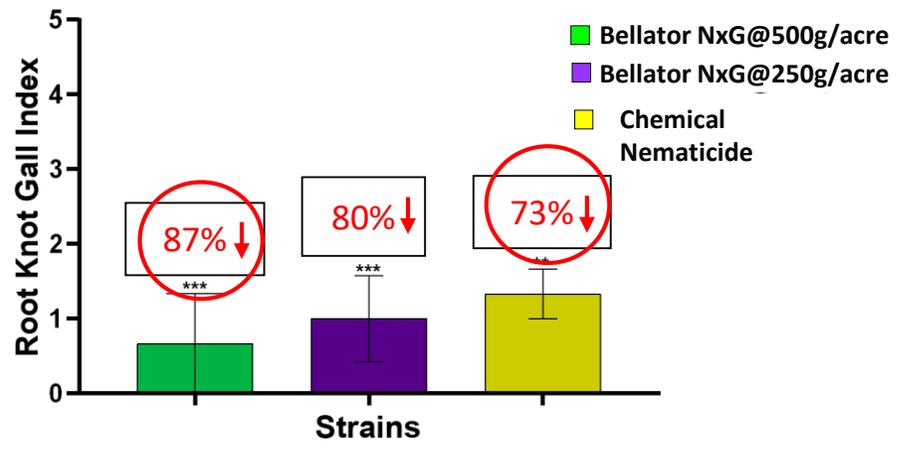
**Final Nematode Population Density vs Strains**



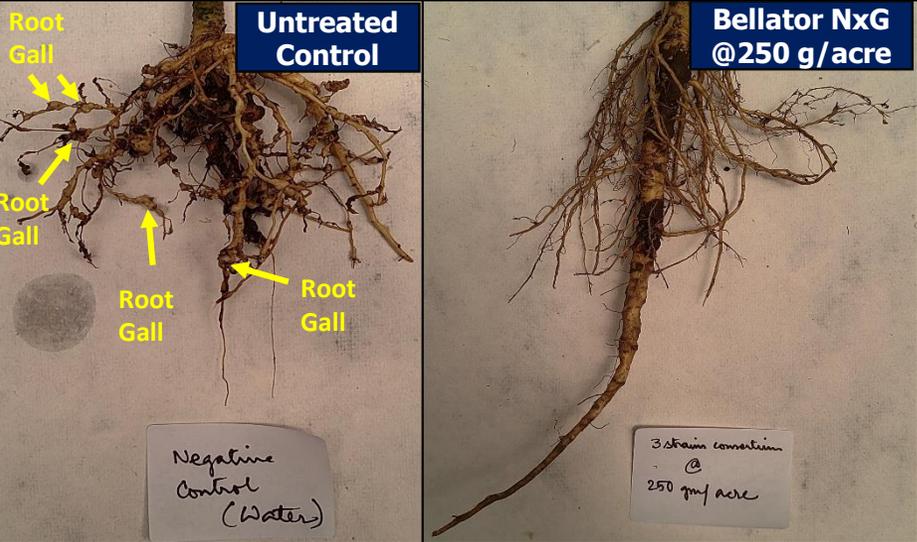
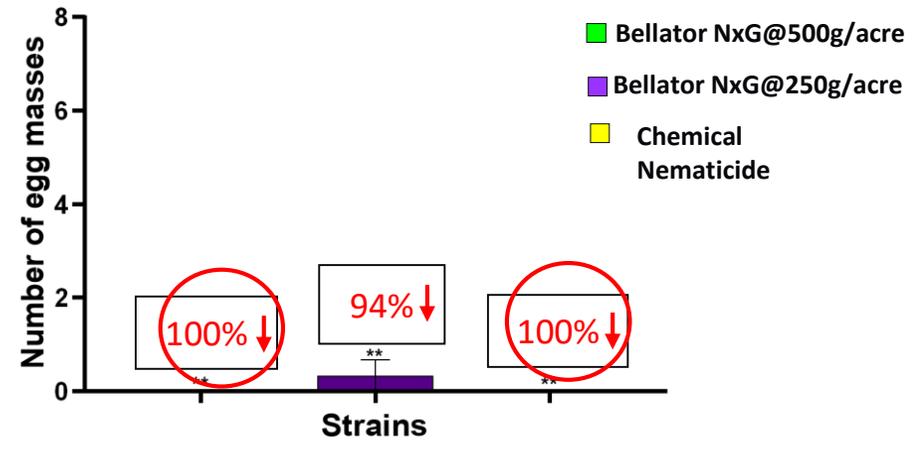
# Bioefficacy Evaluation: Field Trial in Okra (*Abelmoschus esculentus*) against Root-Knot Nematode in India



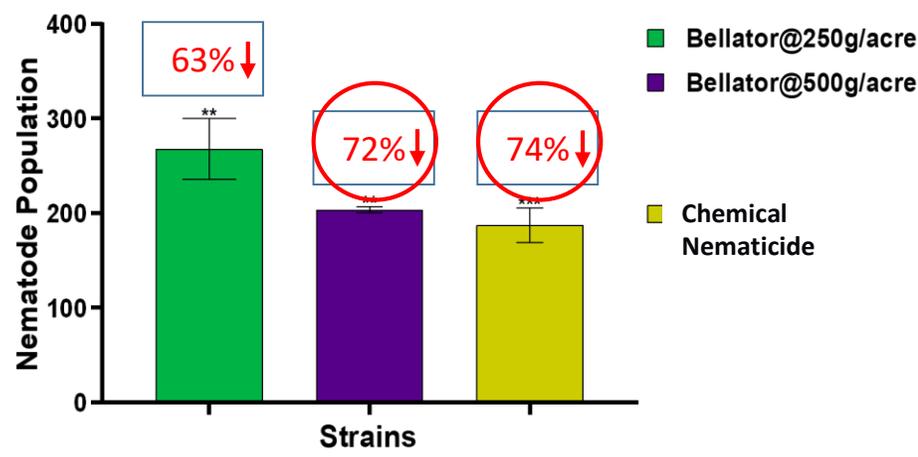
**Root Knot Gall Index (0-5 Scale) vs Strains**



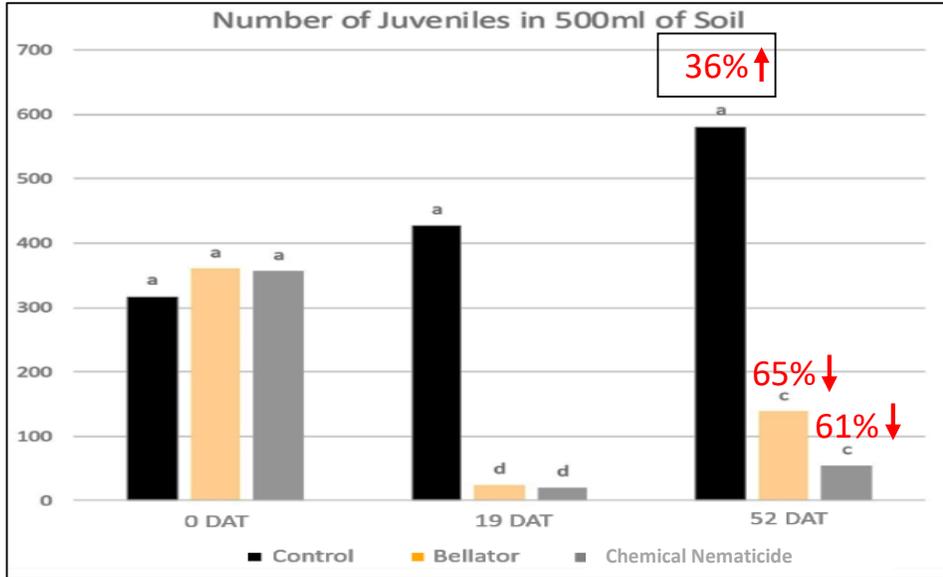
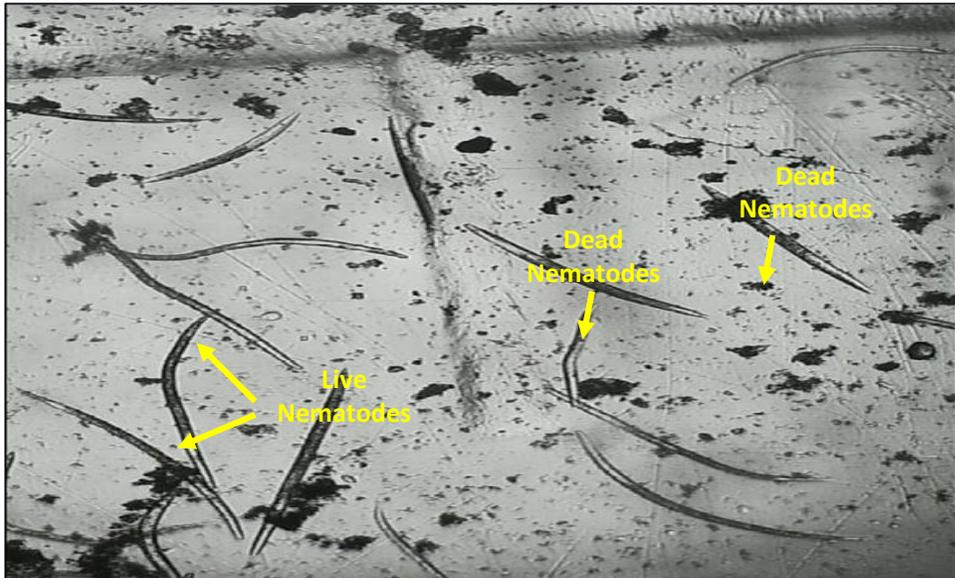
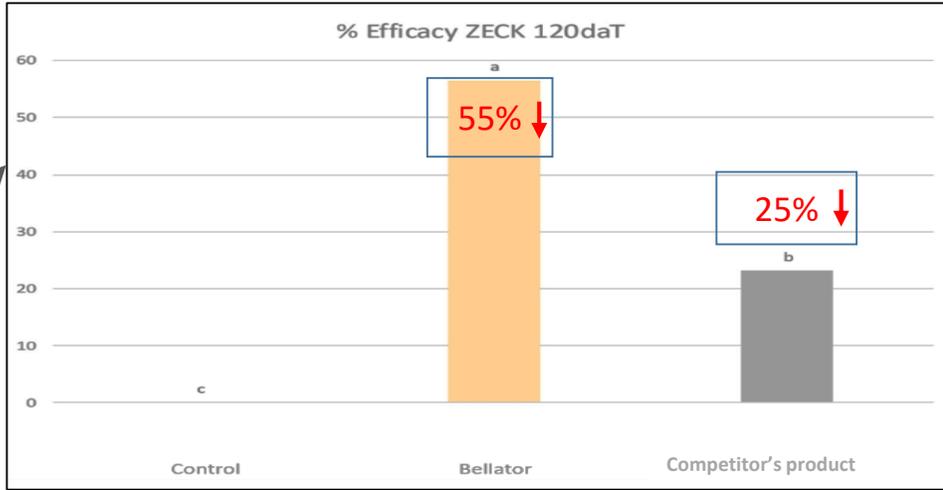
**Egg Masses per Root vs Strains**



**Final Nematode Population Density vs Strains**



# Bioefficacy Evaluation: Pot Trial in Spain/ Tomato (*Solanum lycopersicum*)



# IPL and AFEPPASA Collaboration







IPL<sup>®</sup>  
Biologicals

Follow Us

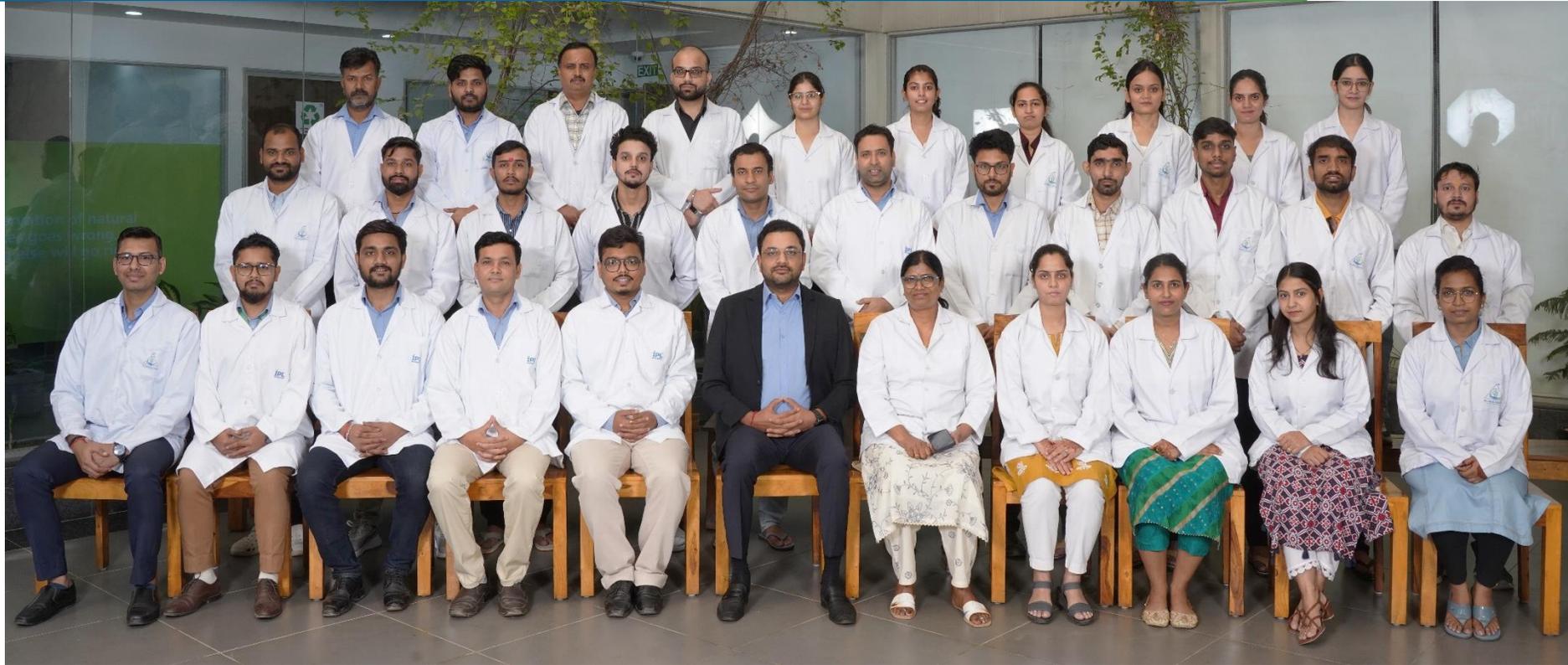


#IPLBiologicals

[www.iplbiologicals.com](http://www.iplbiologicals.com)



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*"Great thing in buisness are never done by one person, they're done by a Team of People"*

*- Steve Jobs*

**Thank You**



BERNARD BLUM  
AWARD 2025

# Best Product of the Year

SILVER

# Best Product of the Year

SILVER

**OUTREACH**<sup>TM</sup> SC  
NEMATICIDE

**VALENT** BIOSCIENCES®



BERNARD BLUM  
AWARD 2025

**Best Product of the Year**

**GOLD**

# Best Product of the Year

**GOLD**

Axpera



The logo consists of two overlapping, curved shapes. The top shape is a light blue arc, and the bottom shape is a light green arc. They overlap in the center, creating a white space.

amoéba

**Amoéba is a company founded in 2010,**



# AXPERA

**A new class of biofungicide based on a  
amoebic cell lysate**

**Jean-François DOUCET,  
CEO**

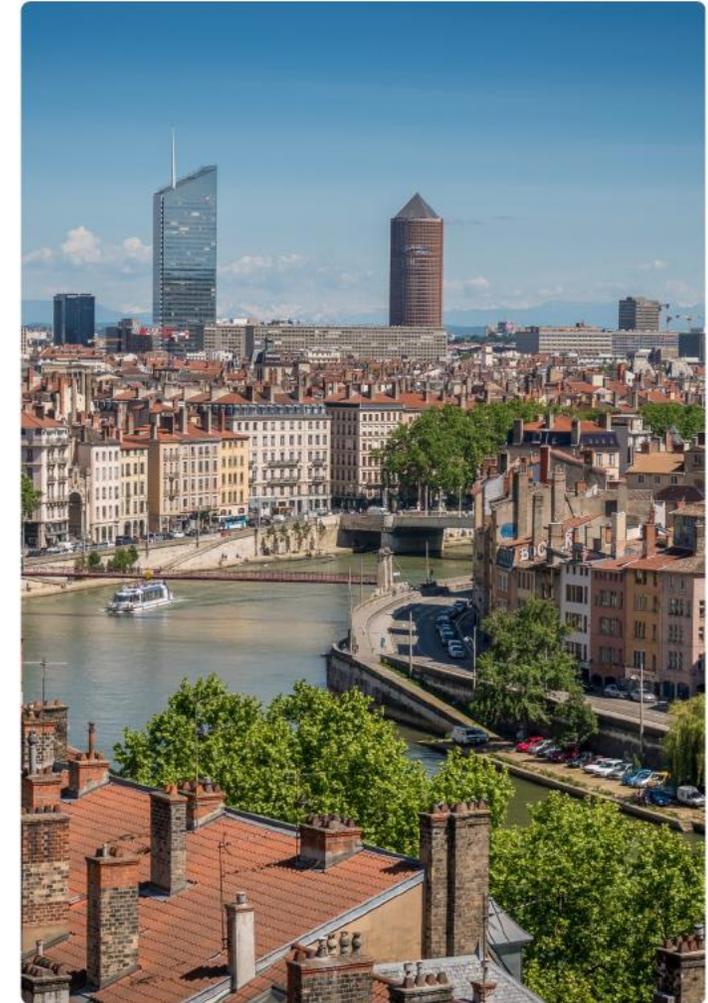
# AMOÉBA AT A GLANCE



Created in 2010, Amoéba is a French greentech specializing in the development of **natural microbiological solutions** based on the patented use of amoebas.

## Some figures

- 2** Business focus: biocontrol and cosmetics
- 1** Product under development : bioferlizer
- 1** Development platform
- 39** Patents
- 1rst** Production unit in Chassieu (France)
- 23** Employees



# A TOTALLY INNOVATIVE AND SAFE PRODUCT



## Willaertia magna C2c Maky

- An environmental non-pathogenic amoeba
- Isolated from the thermal waters of Aix-Les-Bains (France)



## A biological active substance

- Willaertia magna cells are grown in bioreactors then mechanically lysed. The lysate is the active substance.



## Various formulations

- **AXPERA® – SC (215 g/L)**
- Other formulations under development

# AXPERA

# A WIDE SPECTRUM OF ACTIVITY



## Demonstrated efficacy across a wide range of crops and pathogens



### GRAPES AND VEGETABLES

Downy and Powdery mildew



### BANANA

Black Sigatoka (*Mycosphaerella fijiensis*)



### TOMATO / POTATO

Late Blight (*Phytophthora infestans*)



### SOYBEAN

Asian rust (*Phakopsora pachyrhizi*)



### CEREALS

Wheat : Yellow rust / Septoria



### TURF

Fusarium patch (*Microdochium nivale*)

## Numerous field trials since 2019

**440**  
own trials

**240**  
partner-led

**19**  
countries across  
**4 continents**

# REGULATORY PATHWAY NEARING COMPLETION



**2016 / 2017** - Proof of concept under laboratory conditions

**2019** – Launch of regulatory studies + first field trials

**Mid 2020** – Submission of AS dossier (EU) + Product dossier (USA)



- ✓ Mid 2022 – Federal **approval of a first product (pure AS)**
- ✓ 2024 – submission of product dossier
  - ✓ **Expected early 2026 :**  
**Product approval**



- ✓ Mid 2022 – Draft Assessment Report from (RMS Austria)
- ✓ June 2025 – **approval of the Active Substance**
  - ✓ **Expected end 2025 / early 2026 :**  
**Product marketing authorization**

**A long and expensive procedure, extremely challenging for small stand-alone companies, especially in Europe**

# MAIN PRODUCT STRENGTHS

# AXPERA



- **Contact & preventive** product – **foliar application**
- **A dual mode of action** : **Anti-germinative effect & Plant defense elicitor**
- **Compatible** with copper, sulfur-based products and conventional fungicides
- **Storage condition**: Ambient temperature (15-25°C)
- **Uses** : field, tunnel and greenhouses

- ✓ **A wide spectrum of activity** for a biocontrol product : on both downy and powdery mildew and other fungal diseases.
- ✓ **Safe** for humans, animals, beneficial insects and the environment. No maximum residue level.
- ✓ **Built for copper-reduction pressure**: a plug-in copper-sparing partner that preserves control and compliance.
- ✓ **A new tool** to fight diseases in program or in mixture and to **manage resistance risks**.

# THE PRODUCT WILL SOON BE IN THE FIELDS



- In partnership with **KOPPERT**, the product will be marketed in Europe and the USA for grapes and vegetables.
- **Other crops/territories are being explored** : cereals, industrial crops, orchards, potatoes...

## We are opening a new class of biological actives

The Bernard Blum Award is a recognition of Amoéba's R&D excellence, and it supports our ambition to build a more sustainable agriculture with our partners.



Amoéba



amoeba-nature.com



amoeba@actus.fr

# Thank you!

**IBMA**  
International Biocontrol  
Manufacturers Association AISBL L1 SEP

Square de Meeûs 35  
1000 Brussels  
Belgium  
[www.ibma-global.org](http://www.ibma-global.org)



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