

The logo for 'amoéba' features a stylized, circular shape composed of overlapping blue and green segments, resembling a drop or a leaf. The word 'amoéba' is written in a white, lowercase, sans-serif font, positioned below the circular graphic and centered horizontally.

amoéba

AXPERA

**A new biofungicide based on a lysate of the
non-pathogenic amoeba**

***Williaertia magna* C2c Maky**

Annabelle GILGEN- Technical development manager biocontrol

20 October 2025





One amoeba : *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 biofungicidal active substance.
- Approved as a low-risk active substance
- Non hazardous for human health and the environment

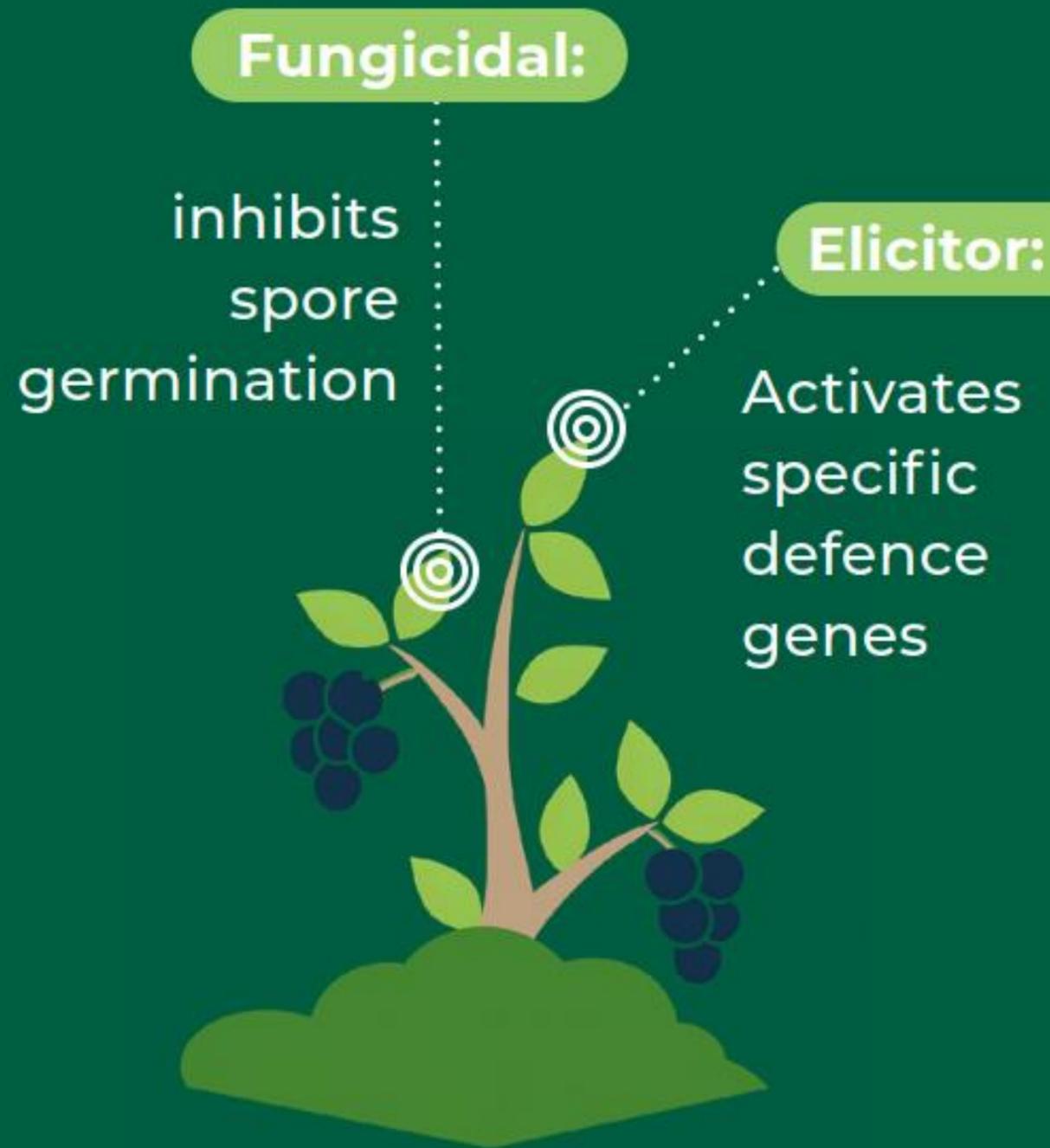
Various formulations

- AXPERA[®] – SC 215 g/l

AXPERA

- Other formulations under development : AXP20 180G/L SC

Axpera, a unique biofungicide with a dual mode of action:



A wide spectrum of activity

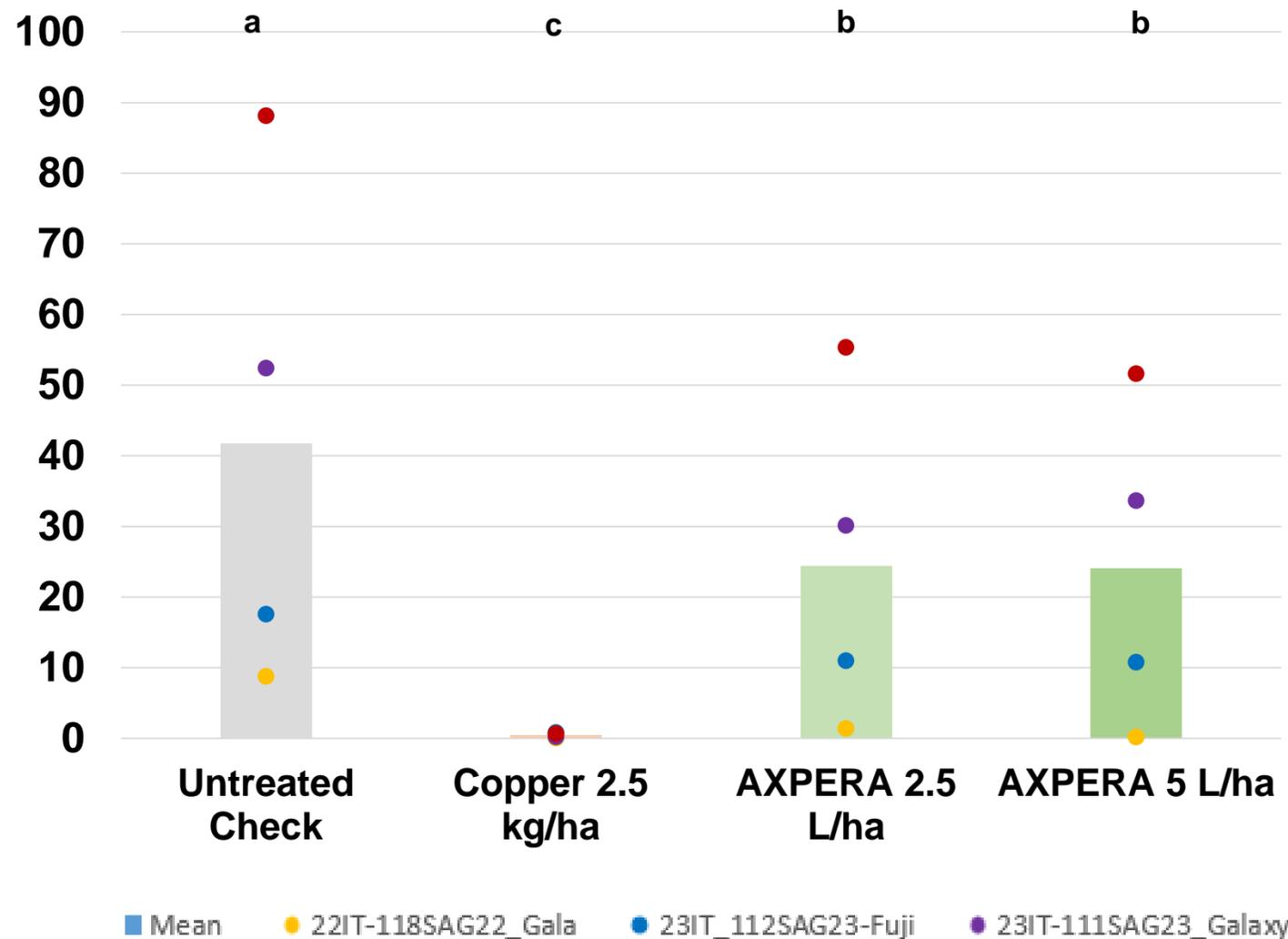
- Grapevine (*Plasmopara viticola* and *Erysiphe necator*),
- Tomato downy mildew (*Phytophthora infestans*),
- Tomato powdery mildews (*Oidium neolycopersici* and *Leveillula Taurica*),
- Cucurbitaceous powdery mildew (*Golovinomyces cichoracearum*),
- Cucurbitaceous downy mildew (*Pseudoperonospora cubensis*),
- Lettuce downy mildew (*Bremia lactucae*),
- Banana black Sigatoka (*Mycosphaerella fijiensis*).
- Asian rust (*Phakopsora pachyrhizi*)

What's next ??

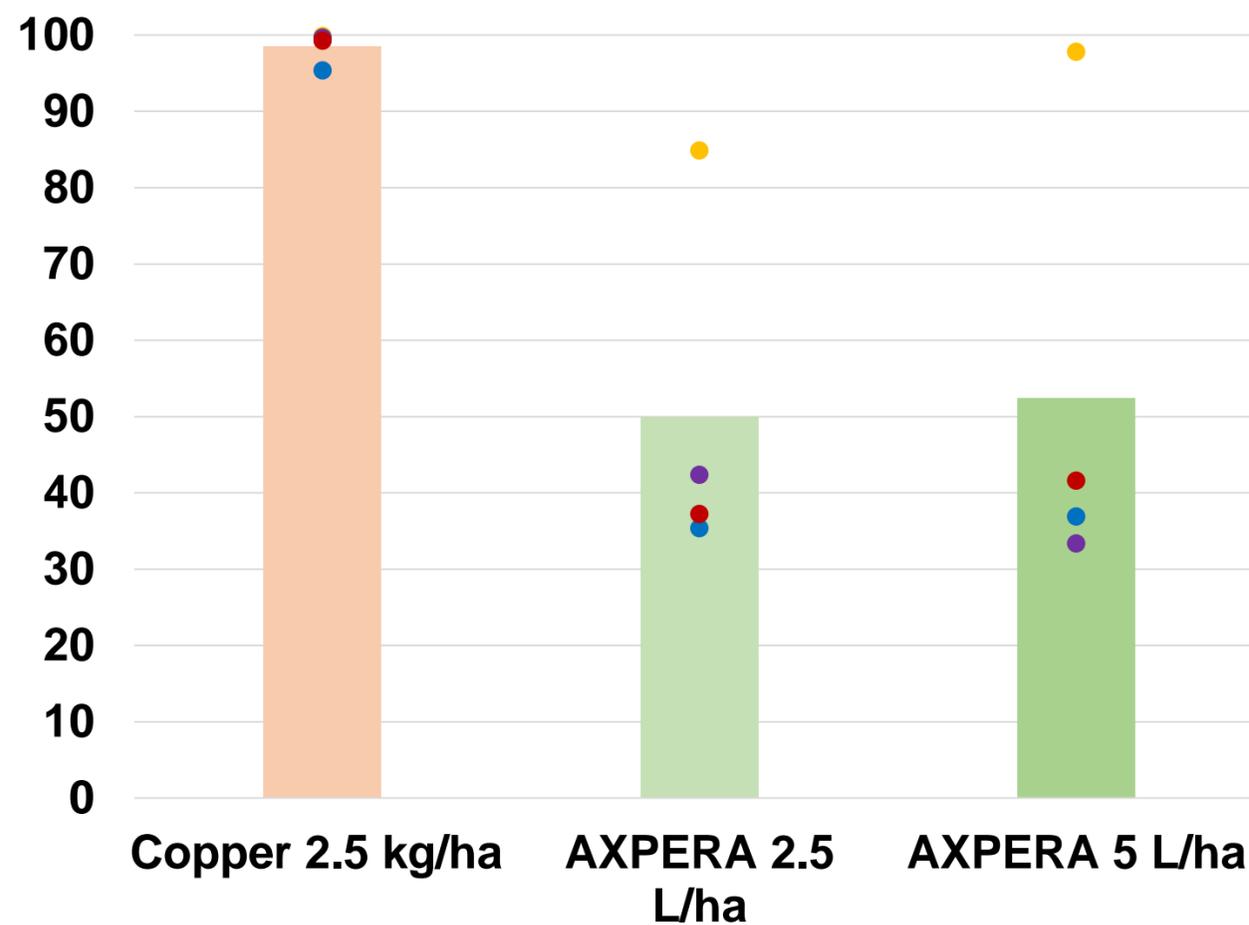
EFFICACY ON *Venturia inaequalis* on APPLE in field trial conditions

- **AXPERA tested alone at 2.5L/ha and 5L/ha** in comparison with biological standards based on **copper products at 2.5kg/ha**
- 12 to 15 applications every 7 days in foliar application.
- **4 Trials from 2022 to 2024, Locations :**
- 2022 (22IT-118SAG22) Italy, **Variety:** Gala
- 2023 (23IT-112SAG23) Italy, **Variety:** Fuji and (23IT-111SAG23) Italy, **Variety:** Galaxy
- 2024 (24IT-AMOTAV02) Italy, **Variety:** Golden
- Last assessment on 200 leaves per plot: Data results available only on leaves – no fruit results available

% SEVERITY on Leaves



% EFFICACY on Leaves



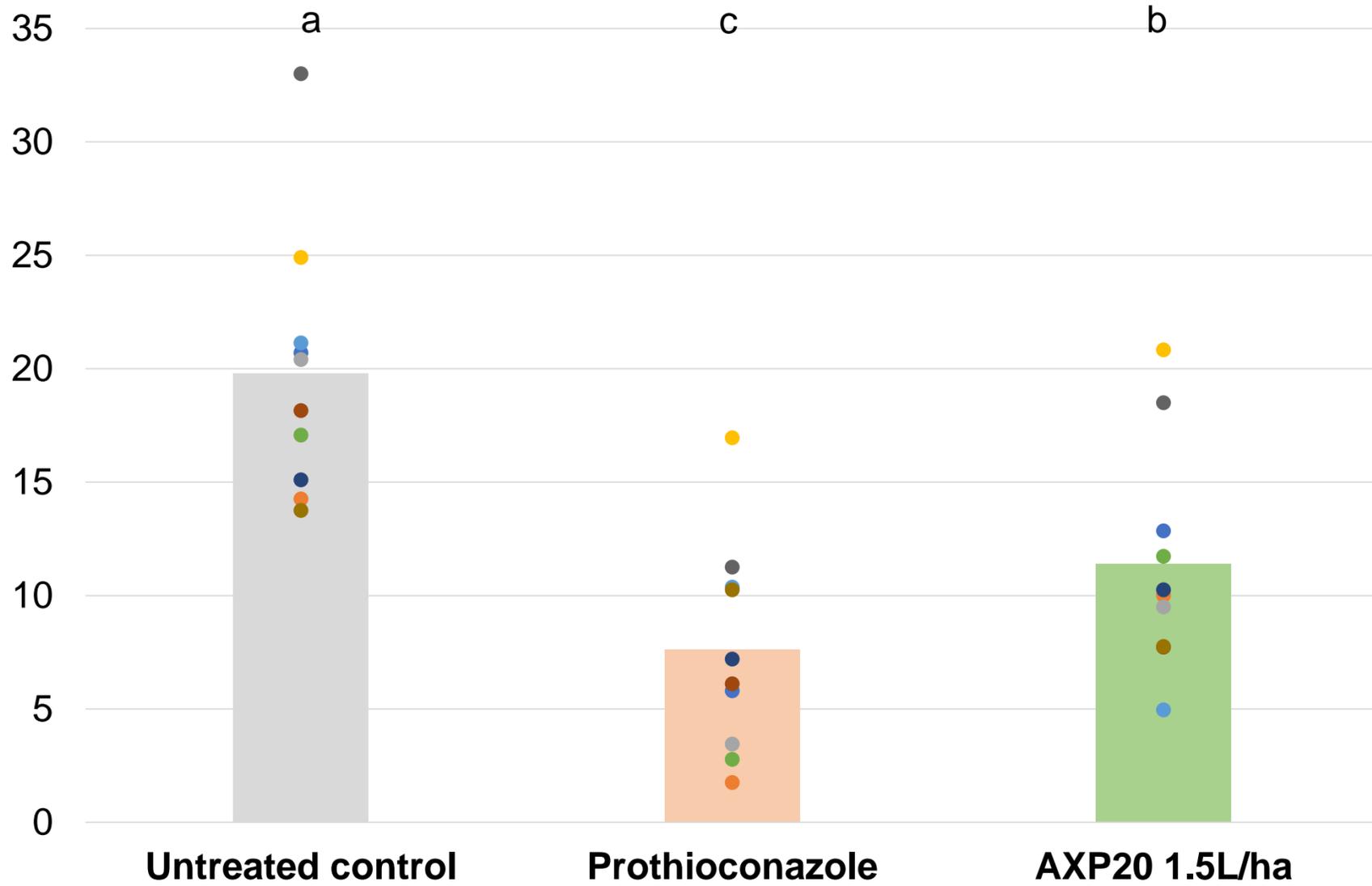
50% efficacy for AXPERA

EFFICACY ON *Zymoseptoria tritici* on Winter Wheat in field trial conditions

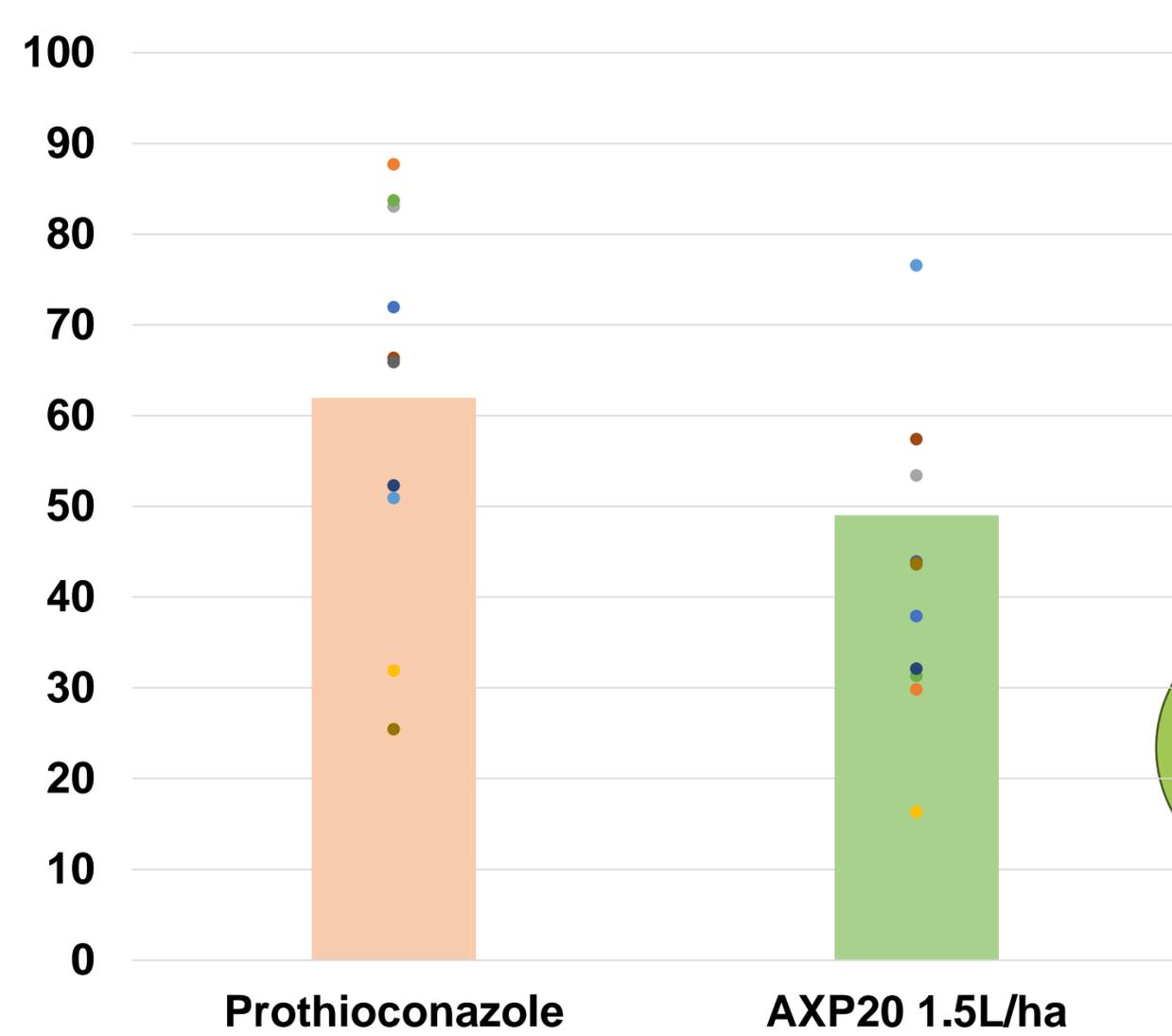


- **AXP20 180G/L SC tested alone at 1.5L/ha** in comparison with chemical standards based on **prothioconazole at 0.8L/ha**
- 2 applications with T1 at crop stage BBCH31-32 and T2 at crop stage BBCH39-45 max
- **10 trials from 2021 to 2024**
- Assessment on 25 leaves per plot: Last assessments around 30 days after T2.

% SEVERITY on Flag leaf



% EFFICACY on Flag leaf

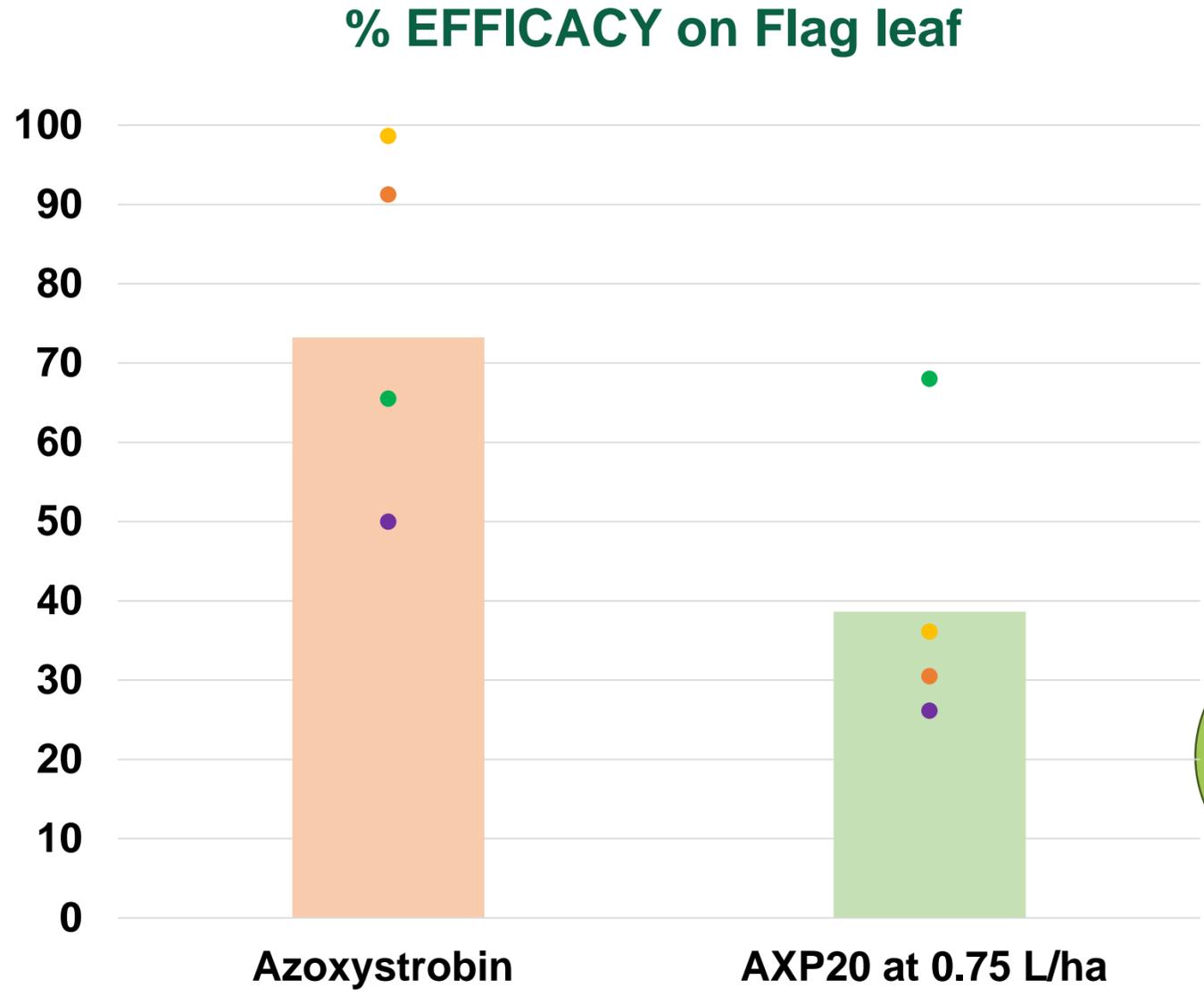
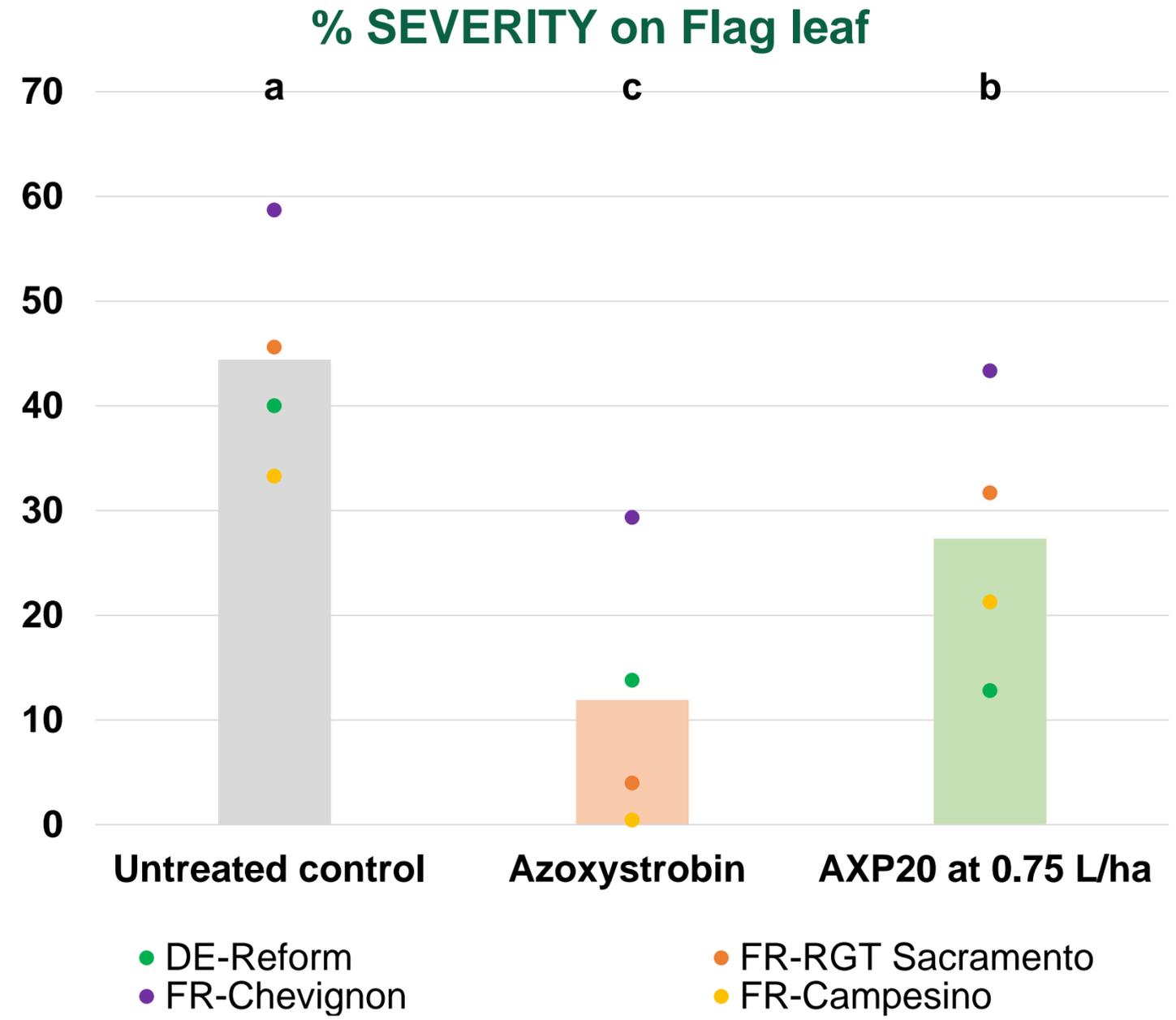


50% efficacy for AXP20

- mean
- FR-Chevignon
- IT-Akamar
- DE-Ponticus
- IT-Cesare
- DE-Cubus
- FR-Nemo
- FR-RGT Volupto
- DE-Boregar
- IT-Cesare
- IT-Axum

EFFICACY ON *Puccinia striiformis* on Winter Wheat in field trial conditions

- **AXP20 tested alone at 0.75 L/ha** in comparison with chemical standards based on **Azoxystrobin at 1L/ha**
- 2 applications with T1 at crop stage BBCH31-32 and T2 at crop stage BBCH39-45 max
- **4 GEP trial in 4 repetitions, Locations** France and Germany.
- Assessment on 25 leaves per plot: Last assessments around 30-45 days after T2



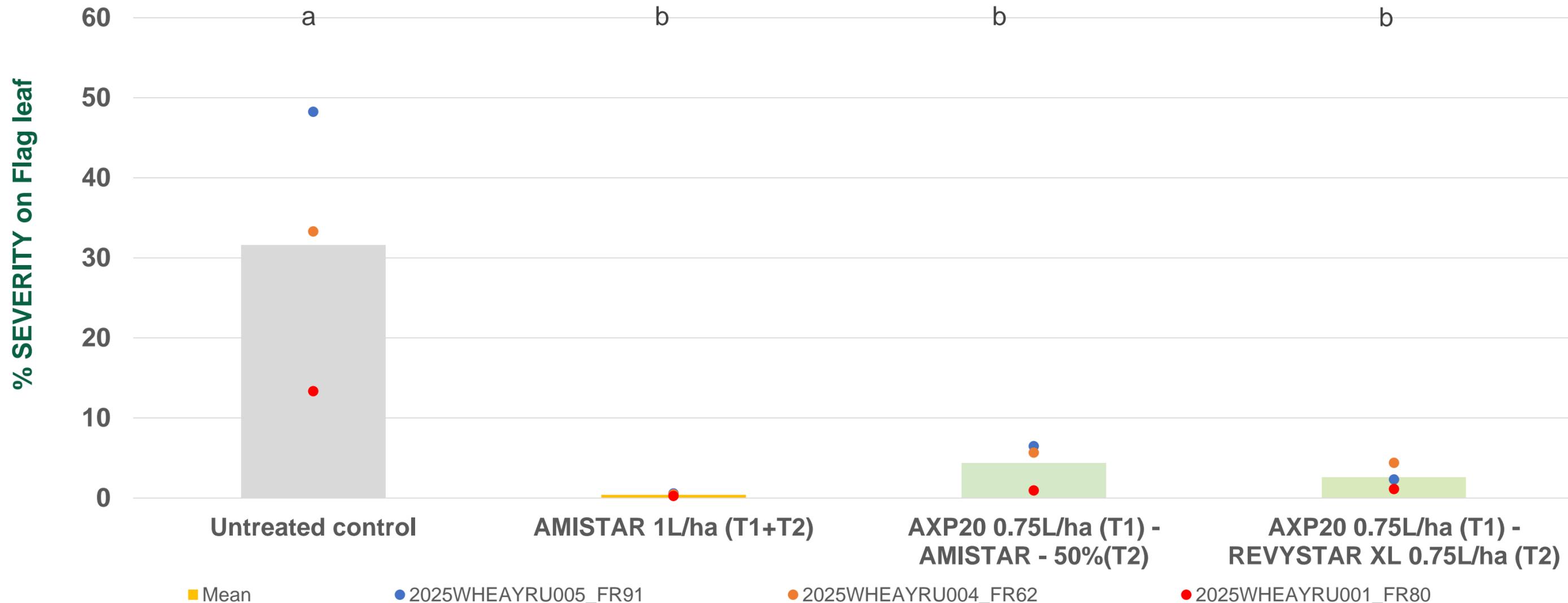
40% efficacy for AXP20

Conclusion

AXP20 180G/L SC is the only biofungicide effective against two major wheat diseases:

- ✓ Yellow Rust (*Puccinia striiformis*)
- ✓ Septoria (*Zymoseptoria tritici*)

AXP20 unique bio fungicide to T1 positioning on wheat - **Example of 3 trial 2025 in France against Yellow rust**



AXPERA use in Project Consortium SAGROPIA



SUSTAINABLE AGRICULTURE THROUGH NOVEL PESTICIDES USING AN INTEGRATED APPROACH (2024 – 2028)

- ❖ 10 partners from 5 EU Countries (Austria, Germany, France, Switzerland, Portugal) and USA.
- ❖ SAGROPIA aims to introduce **thirteen biological and low-risk pesticides**, which shall replace "candidates for substitution" and active substances that are currently in use.
- ❖ Specifically targeting **potato** and **sugar beet crops**.
- ❖ Through a multi-actor approach along with farm trials, develop a comprehensive **grower's guide on best practices**, on sustainable IMP strategies.



Demonstrated EFFICACY

A wide spectrum of activity



GRAPES AND VEGETABLES

Downy and Powdery mildews



BANANA

Black Sigatoka (*Mycosphaerella fijiensis*)



APPLE

Scab (*Venturia inaequalis*)



SOYBEAN

Asian rust (*Phakopsora pachyrhizi*)



CEREALS

Wheat : Yellow rust / Septoria



TURF

Fusarium patch (*Microdochium nivale*)



Potato

Late Blight (*Phytophthora infestans*)



Sugarbeet

Leaf spot on beet (*Cercospora beticola*)

TAKE-HOME MESSAGE

AXPERA

Registration in the
USA in October 16, 2025

Registration in the EU
countries
expected end-2025



- **Contact & preventive product – Foliar application**
- **Dual mode of action:** Biofungicide & Elicitor
- **Formulation** : Suspension concentrate (SC at 215 g/L)
- **Storage condition:** Ambient temperature (15-25°C)
- **Application uses** : Field, Tunnel and Greenhouses
- **Compatibility** with copper, sulfur-based products and chemical products



A wide spectrum of activity for a biocontrol product.
On both downy and powdery mildew and other fungal diseases.



No hazard for human health, animal health and the environment.
No maximum residue level.



Safe for beneficial insects.



A new tool to fight diseases in sustainable program and to manage resistance risks. Ongoing resistance management tests on downy mildew grape and septoria wheat.

Thank you for your attention



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