

ROMEO[®] – An efficient and competitive solution against crop diseases.

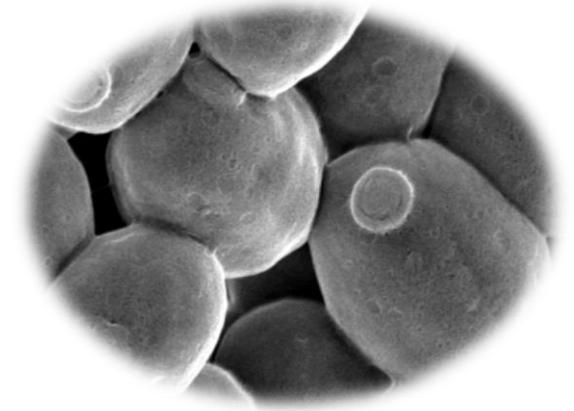
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ABIM 2013



1. Agro-Levures et Dérivés

- ⦿ An independent French company,
- ⦿ Which specialises in yeasts for plants (“Ag’yeasts”).
- ⦿ We develop, register, and commercialise,
- ⦿ Innovative Plant Protection Products and Biostimulants.



2. Our Business Model

- ⦿ We focus on R&D, IPs, registration and marketing.
- ⦿ Industrial production : by a partner leader in yeast production
 - High quality, steady and cost effective production.
- ⦿ International distribution : by firms, and national distributors.



ROMEIO[®] – Profile



- ⊙ **Composition** : Inert selected fraction of *S.cerevisiae* strain LAS117
- ⊙ **Mode of action** : Systemic Resistance Inducer

- ⊙ **Patented worldwide**
- ⊙ **Registration in progress** : Full EU data package
- ⊙ **Risk evaluation**
 - No residues
 - Non-target organisms & environment friendly
 - Organic farming compatible

- ⊙ **Formulation** : WP
- ⊙ **Shelf life** : 3 years, no constraint

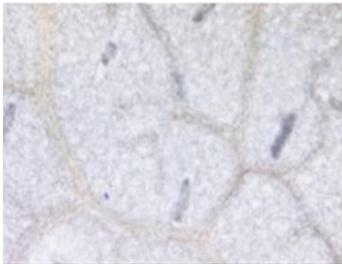
ROMEEO[®] – Mode of action (1/2)



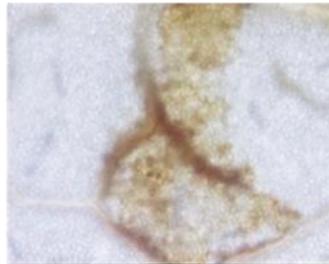
⊙ ROMEEO[®] significantly induces the production of :

- H₂O₂ (oxydative metabolism)
- Phenolic compounds (stilbens)

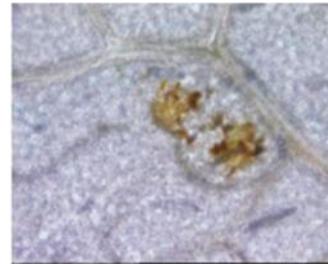
UTC



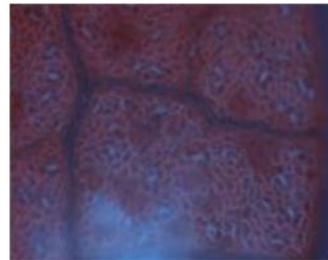
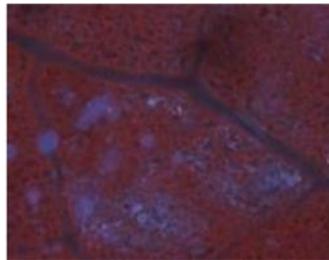
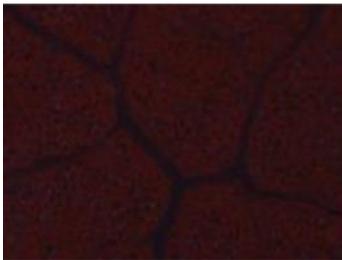
Standard



ROMEEO



Observation of brown precipitate
*4 days after ROMEEO application –
3 days after contamination by P.viticola*



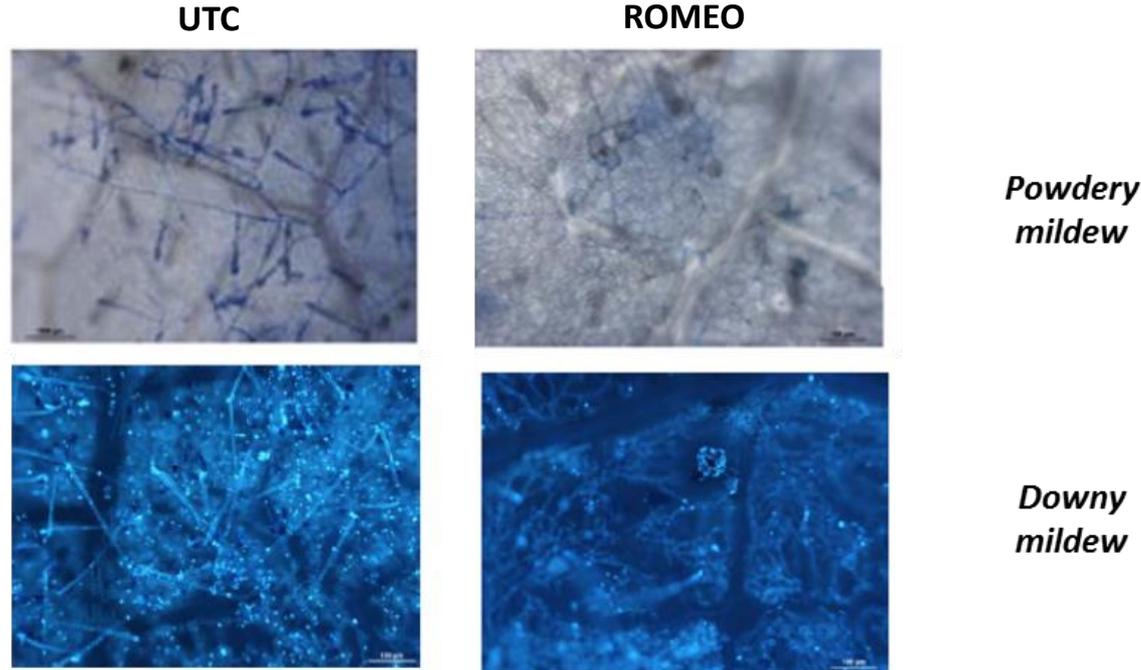
Observation by fluorescence
*7 days after ROMEEO application –
Not inoculated leaves.*

Source : INRA Dijon

ROMEEO[®] – Mode of action (2/2)



- ⊙ ROMEEO[®] significantly reduces the mycelial growth and the sporulation of fungi : here *E.necator* and *P. viticola*.



Source : INRA Dijon

ROMEIO[®] - RESULTS

- ⊙ **Several hundred trials**
 - > 10 countries (EU and others)
 - > 10 crops

Examples

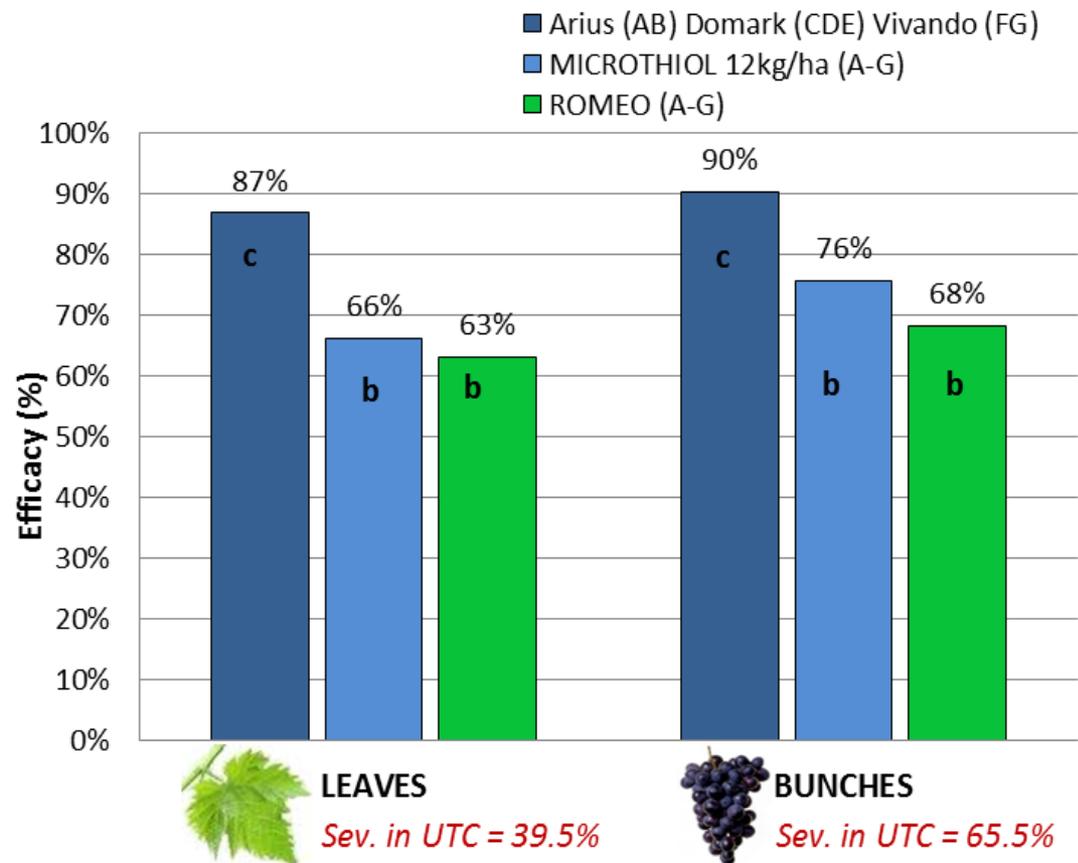
VINE – Powdery mildew

ROMEIO – ALONE

- GEP field trial, 2012, Bari - Italy.
- Variety : Nero di troia.
- 7 applications, every week, preventive.
- Comparison with sulfur & chemical program (quinoxyfen / tetraconazol / metrafenone).

Efficacy of ROMEIO against Vine PM

GEP field trial , Italy, 2012



VINE – Powdery mildew

ROMEIO – IN PROGRAM

- GEP field trial, 2011, Rodilhan - France.
- Variety : Carignan.
- 6 applications, every 14 days, preventive.
- Program with tebuconazol reference.

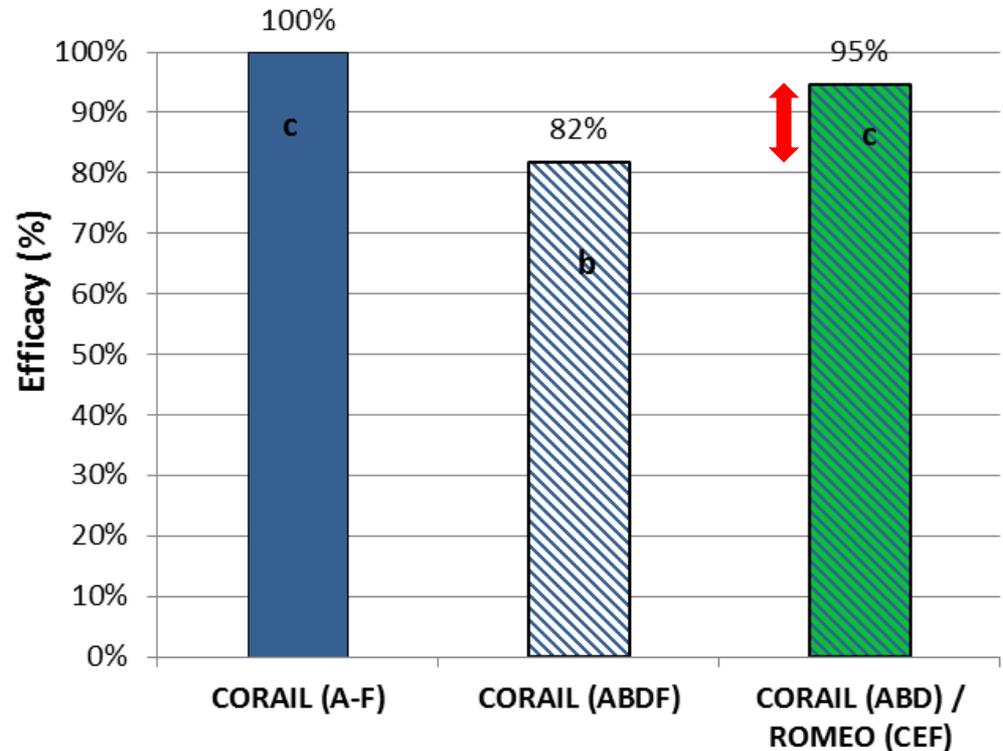


Efficacy of ROMEIO against Vine PM

GEP field trial (IFV), France, 2011

On BUNCHES (4 DAF) :

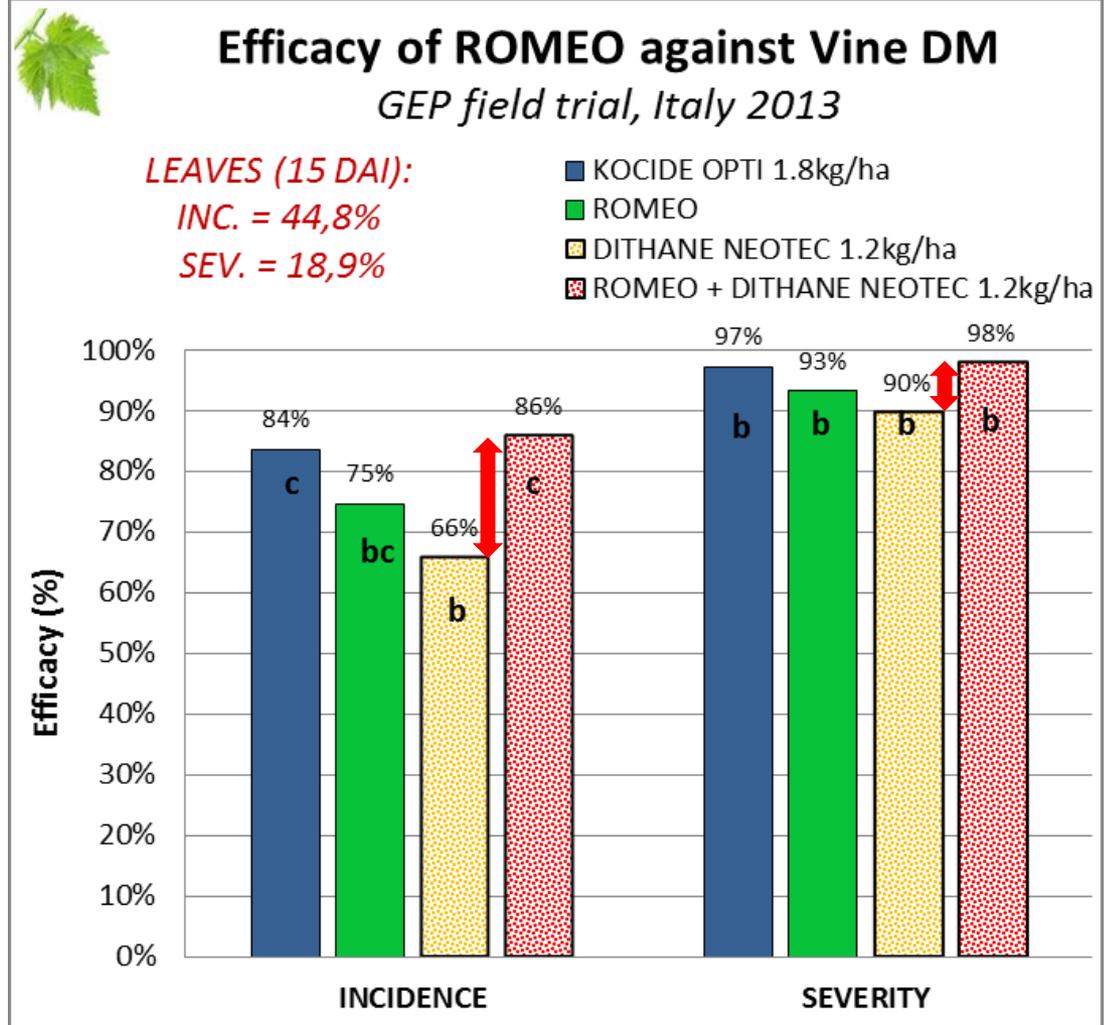
Severity in UTC = 72.4% (inc. = 100%)



VINE – Downy mildew

ROMEIO – ALONE & MIXTURE WITH MANCOZEB

- GEP field trial, 2013, Trento – Italy.
- Variety : Chardonnay.
- 9 applications, every week, preventive.
- Mixture with reduced dose of mancozeb
- Comparison with Copper reference



VINE – Downy mildew

ROMEO – IN A COPPER PROGRAM

- GEP field trial, 2013, Montespertoli – Italy
- Variety : Colorino

- 9 applications, every 7-10 days, preventive
- Integration in a copper program.



UTC

INC = 75,5%
SEV = 57,6%



Copper
(6kg Cu/ha)

37%
eff.



ROMEO +
Copper
(5,3kg Cu/ha)

55%
eff.



BUNCHES



INC = 70,3%
SEV = 24,1%



52%
eff.



67%
eff.

VINE – Grey Mould

ROMEIO – GREY MOULD

- GEP field trial, 2013, Treviso - Italy.
- Variety : Pinot grigio.
- 4 applications at classical stages.
- Comparison with references :
Cyprodinyl + fludioxonil and
Bacillus subtilis str QST 713.

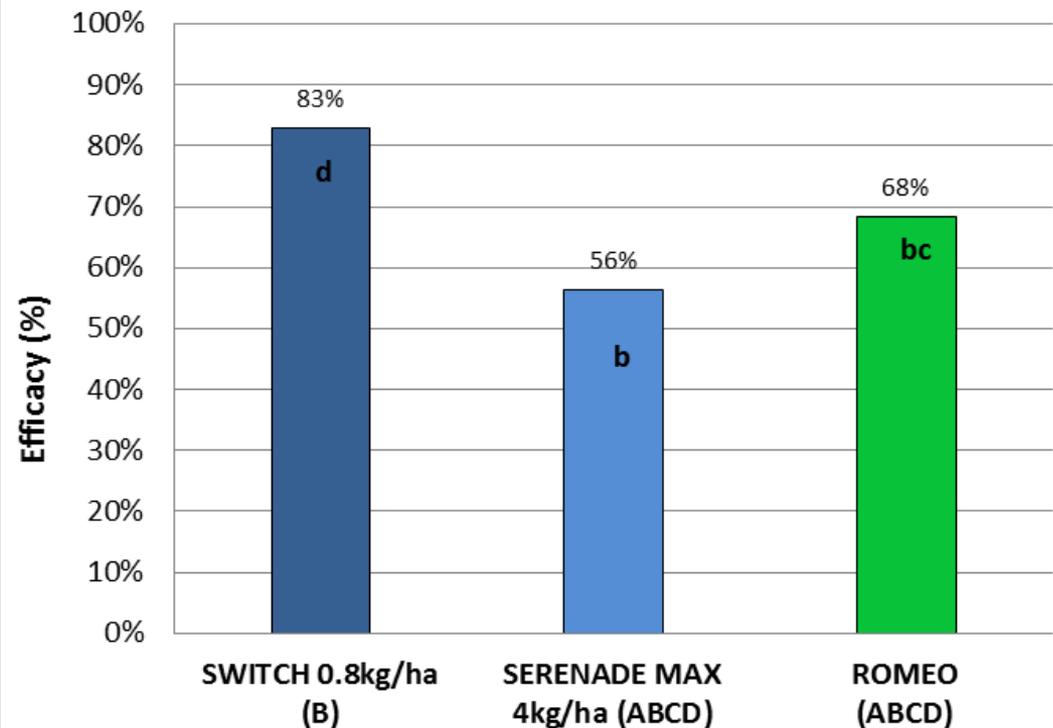


Efficacy of ROMEIO against Vine *botrytis*

GEP field trial, Italy 2013

BUNCHES (15 DAD) :

Severity in UTC = 31.6% (Inc.=48.8%)



TOMATO – Late blight

ROMEIO – LATE BLIGHT

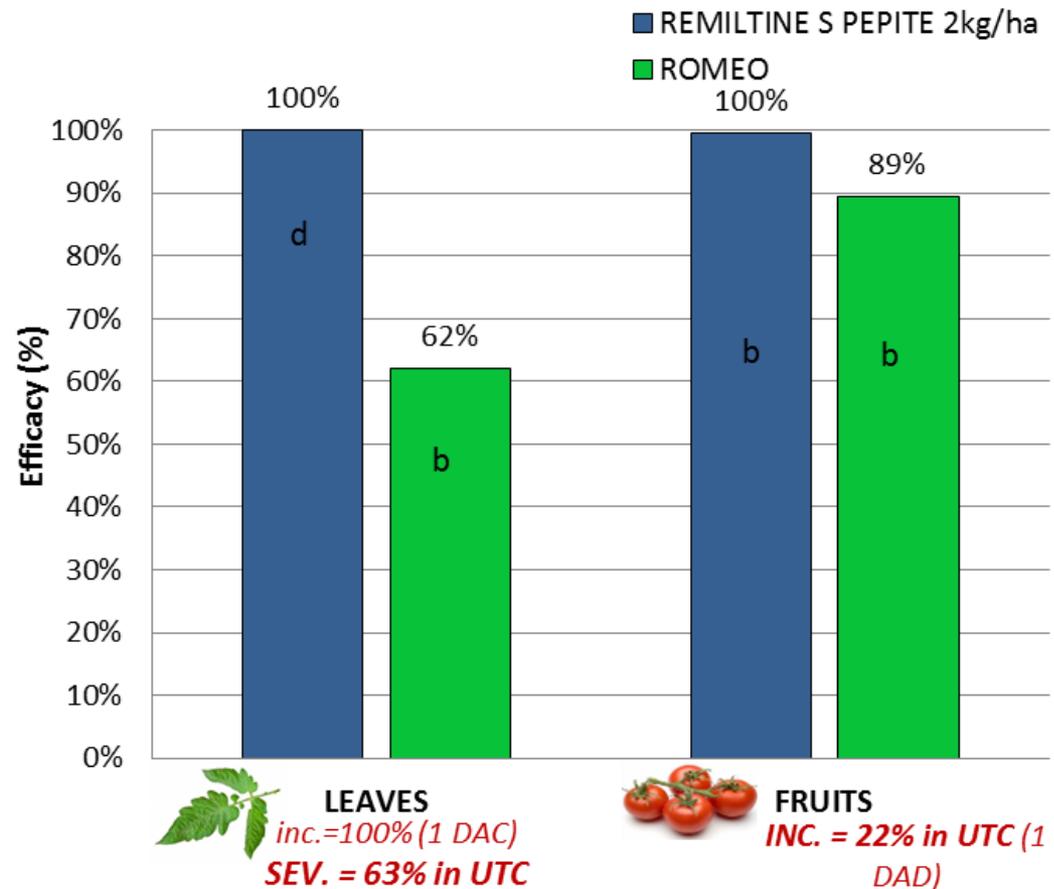
- GEP greenhouse trial, 2009, France.
- Variety : Alexia.
- 4 applications , every 7 days, preventive.
- Artificial contamination (2 DAA).
- Comparison with cymoxanil + mancozeb reference.



UTC

Efficacy of ROMEIO against Tomato Late Blight

GEP trial, GH, France 2009



TOMATO – *Botrytis cinerea*

ROMEIO – BOTRYTIS

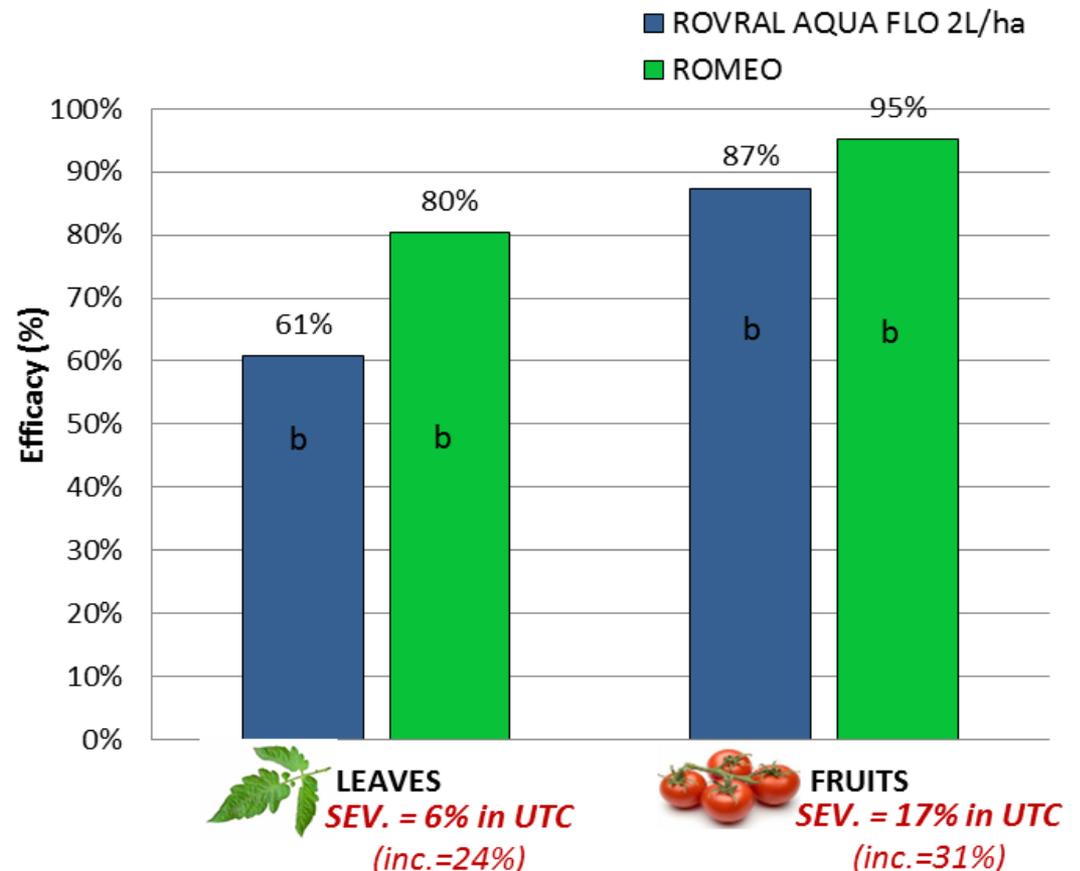
- GEP greenhouse trial, 2012, Spain.
- Variety : Anairis.
- 5 applications, every 14 days, preventive.
- Natural contamination.
- Comparison with iprodione reference.



UTC

Efficacy of ROMEIO against Tomato *botrytis*

GEP trial, GH, Spain 2012 (13 DAD)



LETTUCE – *Bremia lactuca*



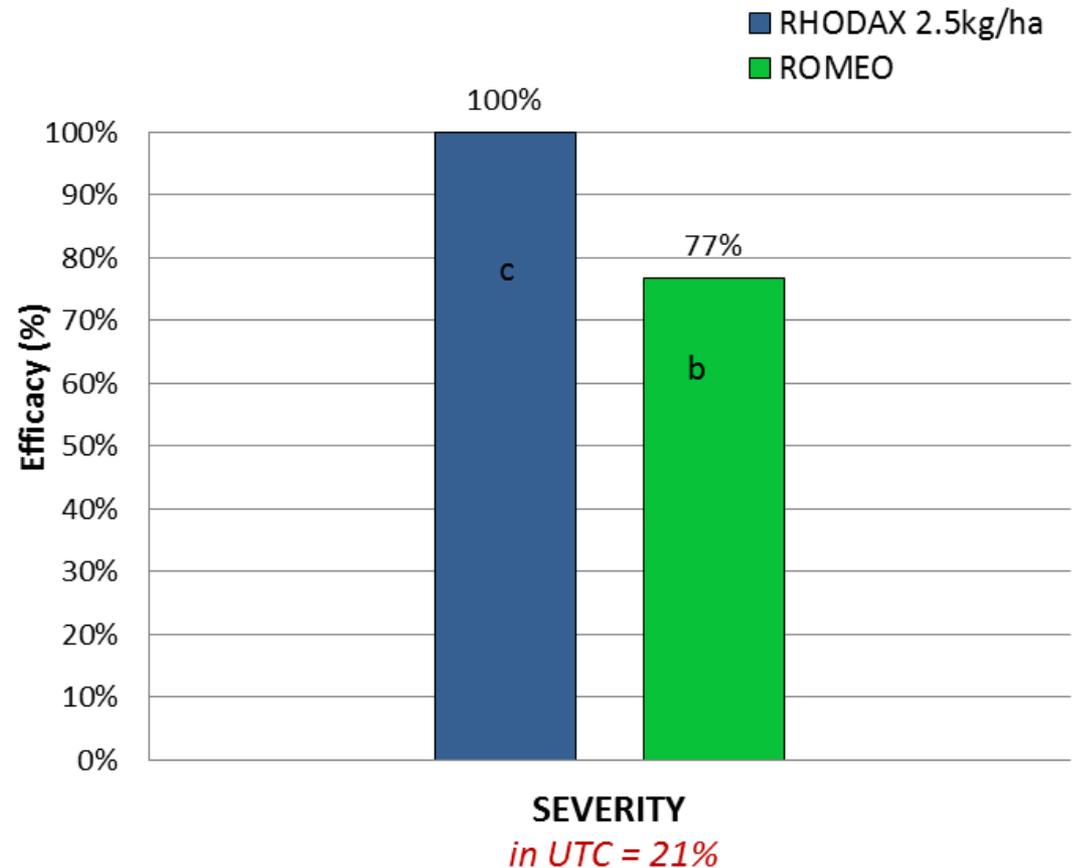
ROMEIO – BREMIA

- GEP greenhouse trial, 2011, France.
- Variety : Cocktail.
- 4 applications , every 7-10 days, preventive.
- Artificial contamination (2 DAB).
- Comparison with fosetyl-AI + mancozeb reference



Efficacy of ROMEIO against Lettuce *bremia*

GEP trial, GH, France 2011 (7 DAC)



CUCURBITS – Powdery mildew



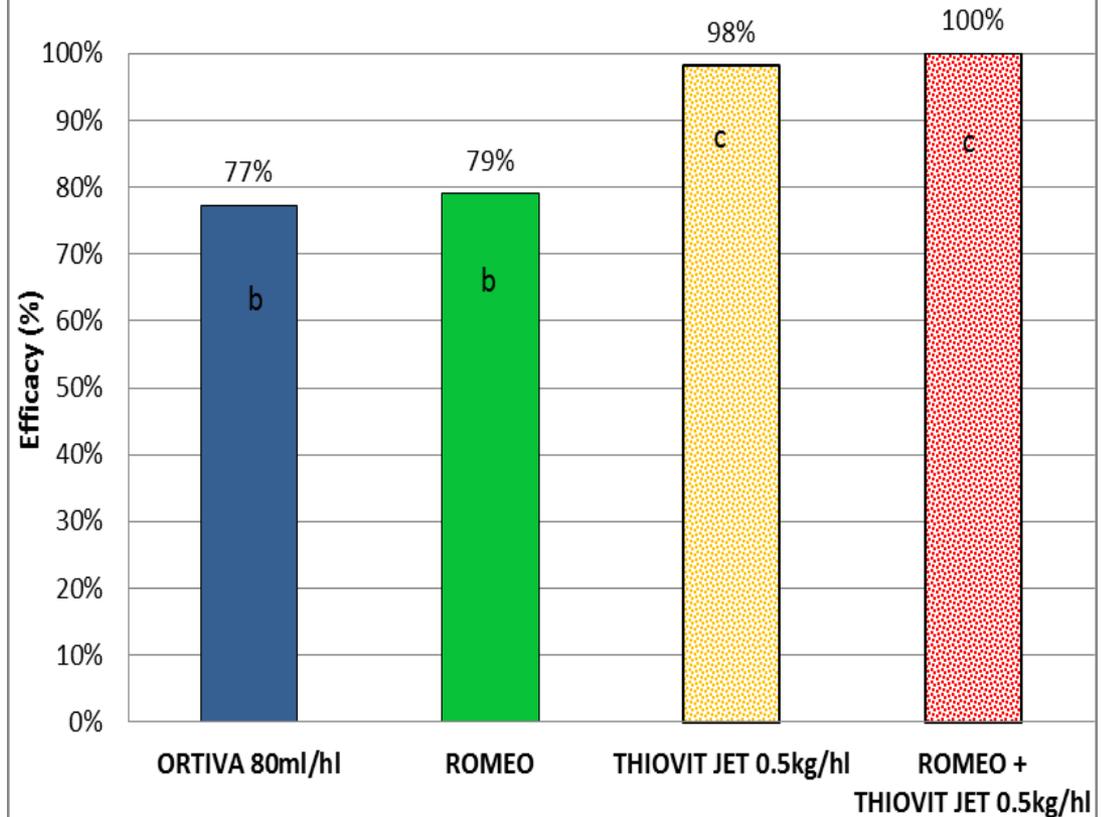
ROMEIO – ALONE & MIXTURE WITH SULFUR

- GEP trial, 2012, Italy.
- Variety : Marketmore.
- 6 applications, preventive, every 7 days.
- Natural contamination.
Comparison with azoxystrobin & sulfur references.

Efficacy of ROMEIO against cucumber PM

(GEP greenhouse trial, 2012, Italy)

Total infection on leaves in UTC = 40,5% (11 DAF)



WHEAT – *Septoria tritici*



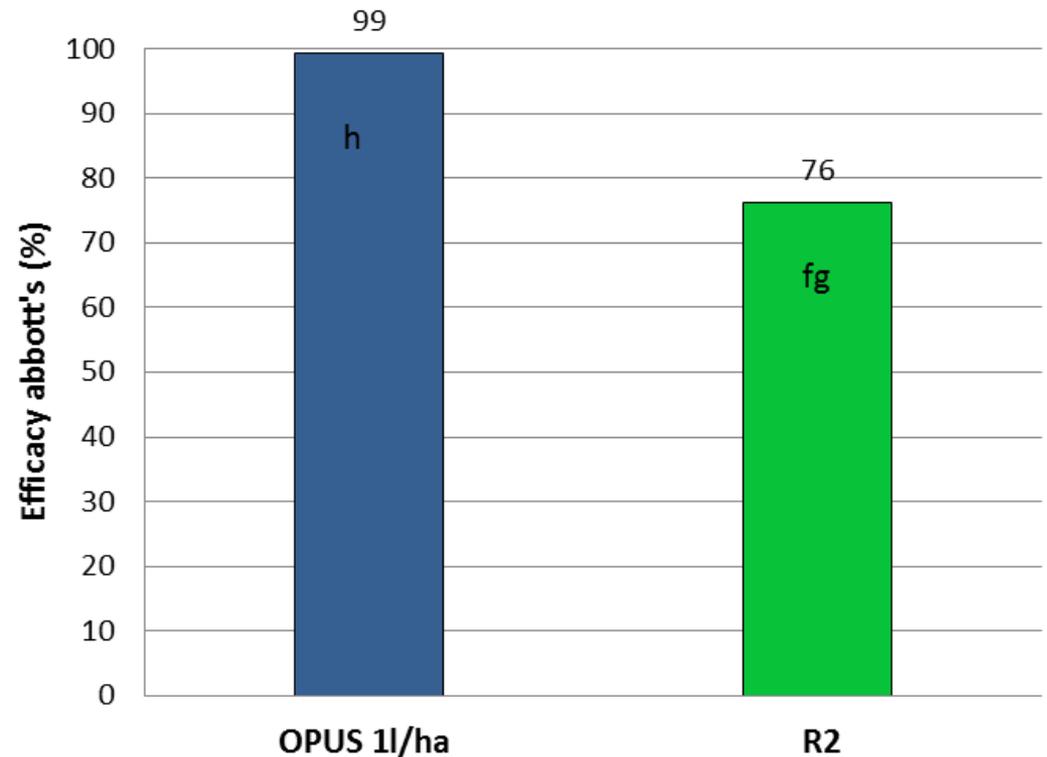
R2 – SEPTORIA

- Indoor trial on potted plants, 2011, France.
- Variety : Scorpion.
- 1 application at 4 leaves stage.
- Artificial contamination 2 days after application.
- Comparison with epoxiconazol reference.

Efficacy of R2 against Wheat *septoria*

Indoor trial, France 2011

SEVERITY in UTC = 62.2%



ROMEIO[®] – Targets



- ◎ Broad spectrum of action against fungal diseases.
Presented examples :

GRAPEVINE TABLE GRAPE	Powdery mildew
	Downy mildew
	Grey mould
CUCURBITS	Powdery mildew
TOMATO	Late blight
	<i>Botrytis cinerea</i>
LETTUCE	Downy mildew

- ◎ Many other uses in development (others diseases, others crops : arable crops, fruit trees, etc...)



ROMEIO[®] – BENEFITS



In a nutshell :

⊙ROMEIO[®] proves a great potential :

- Good efficacy
- Programs matching the standard
- Flexible positioning
- Broad spectrum of action

⊙ROMEIO[®] allows chemical inputs and residues to be significantly reduced.



See you soon,

Thank you !

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