



BASF
Top and Soft Fruit
Products: properties and
mode of action.



BASF
The Chemical Company



Pyraclostrobin and boscalid increase the positives as well as reducing the negatives

‘Yield is dependent on control of the factors that balance the production of assimilates’

Negative factors

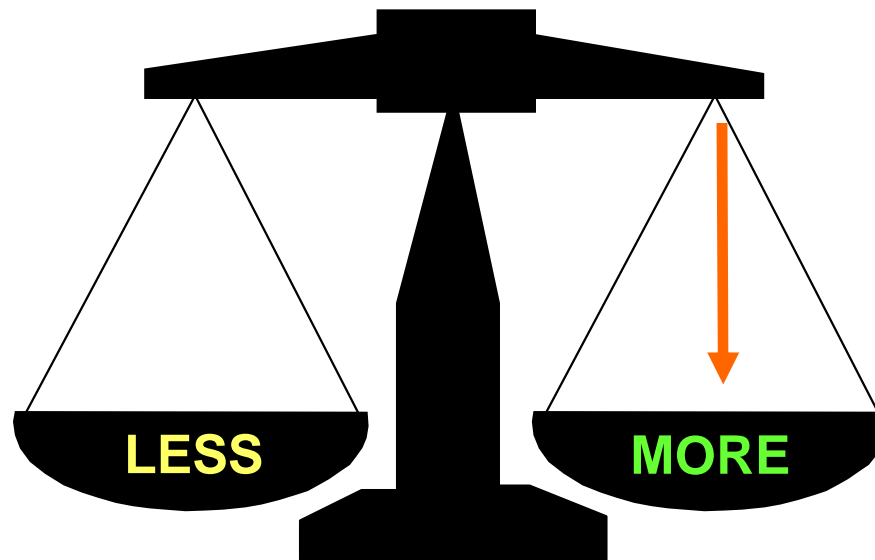
eg:

Disease

Drought

Stress

Lack of N



Positive factors

eg:

Healthy leaves

Shock tolerance

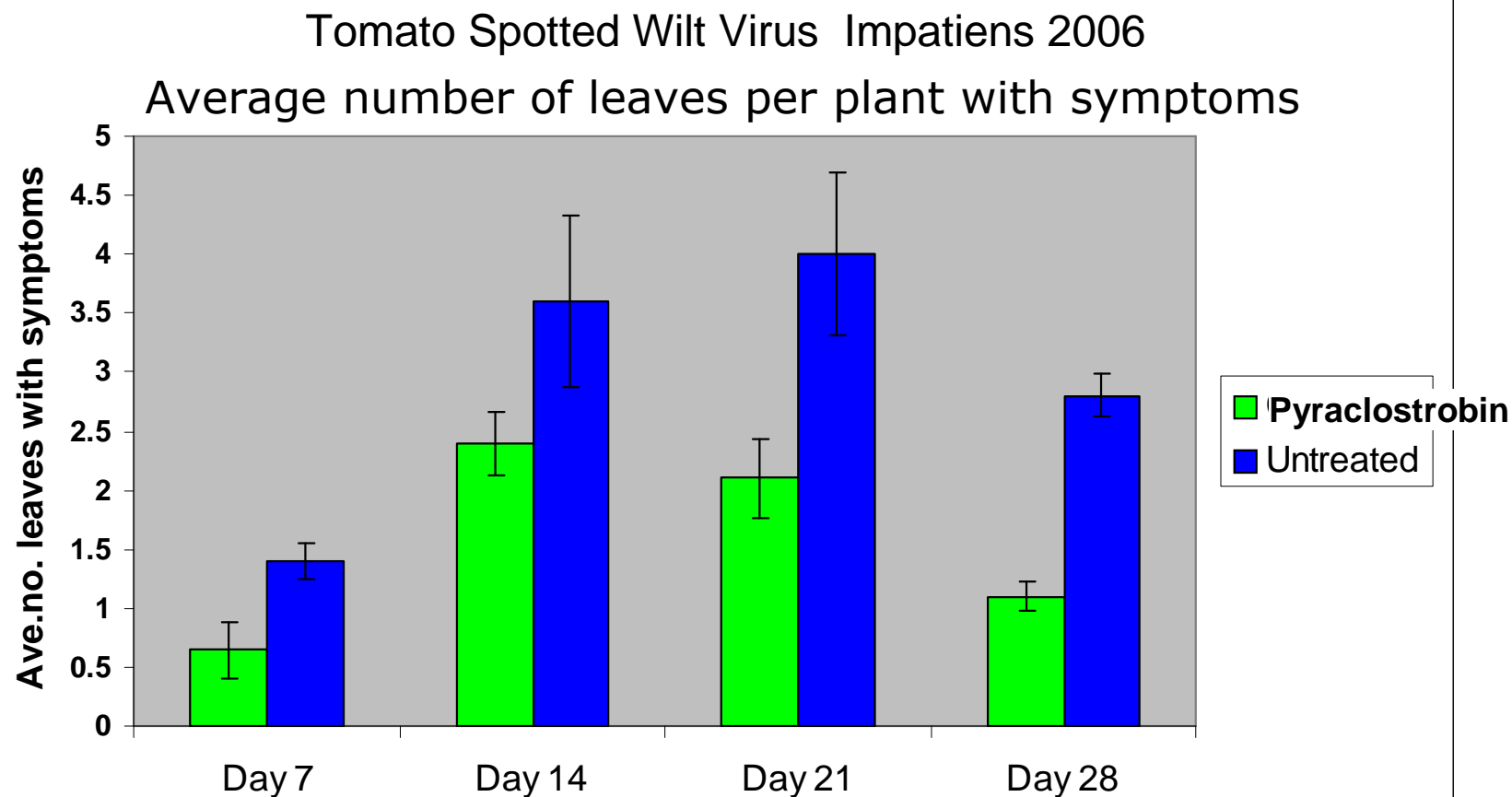
Adequate N, H₂O

Immune system

Assimilate Balance

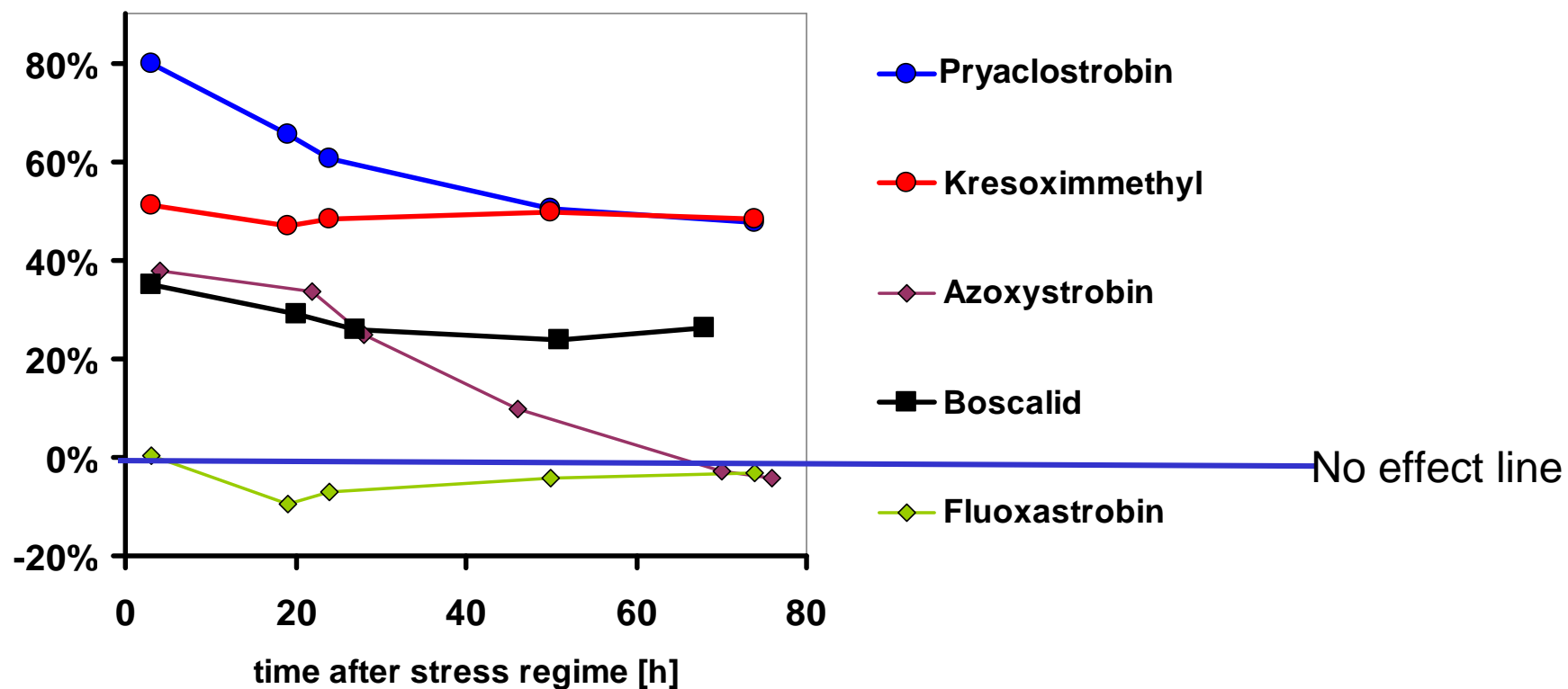
Pyraclostrobin affects ALL of these factors
Boscalid relieves environmental stress

Treatment with pyraclostrobin 7 days prior to inoculation significantly reduced the incidence of TSWV in Impatiens



Stress-reducing effects of fungicides

Inhibition of ethylene production



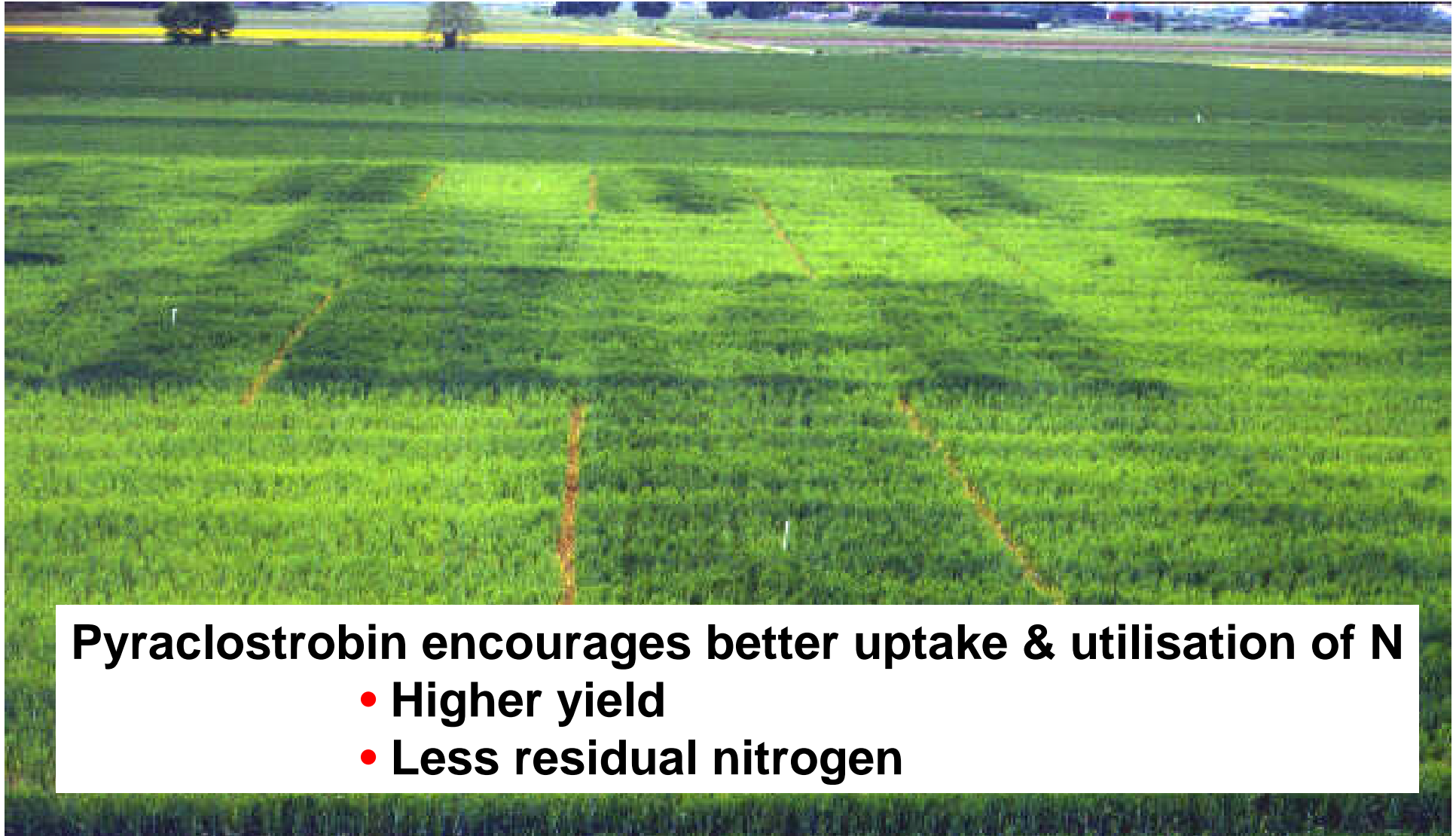
Effective and long lasting disease control



➔ Healthier, firmer fruit. Longer shelf life

Pyraclostrobin: enhanced N utilisation.

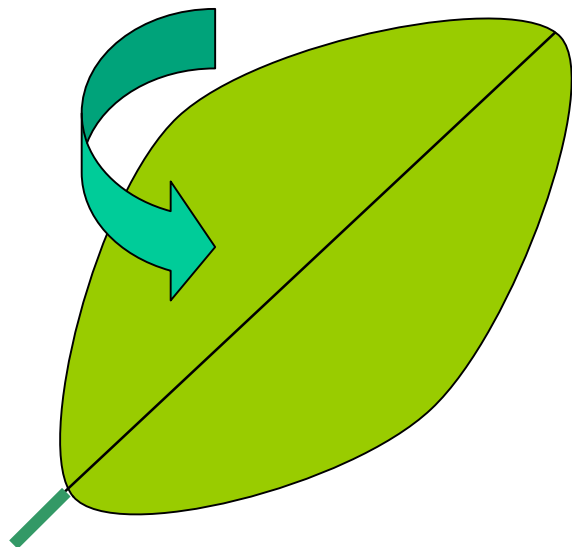
Source ADAS



Pyraclostrobin encourages better uptake & utilisation of N

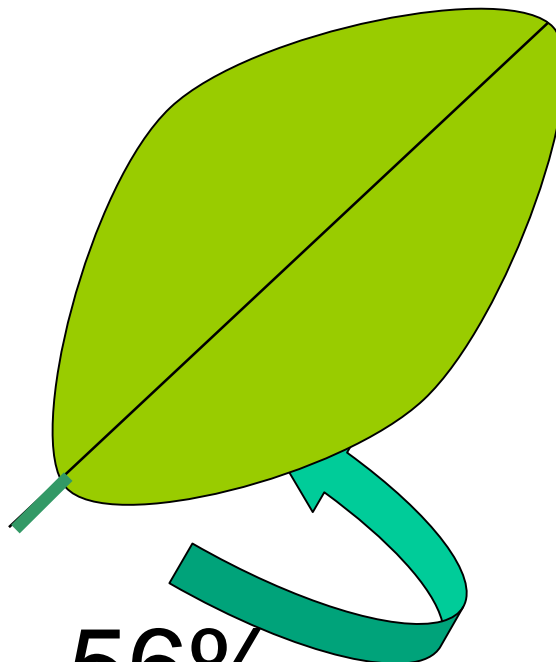
- Higher yield
- Less residual nitrogen

Translaminar activity of pyrimethanil



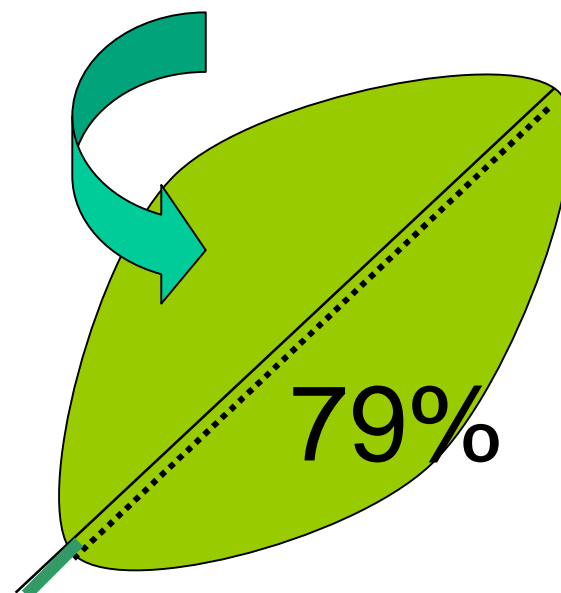
88%

Control on
underside
when applied
to **top** side



56%

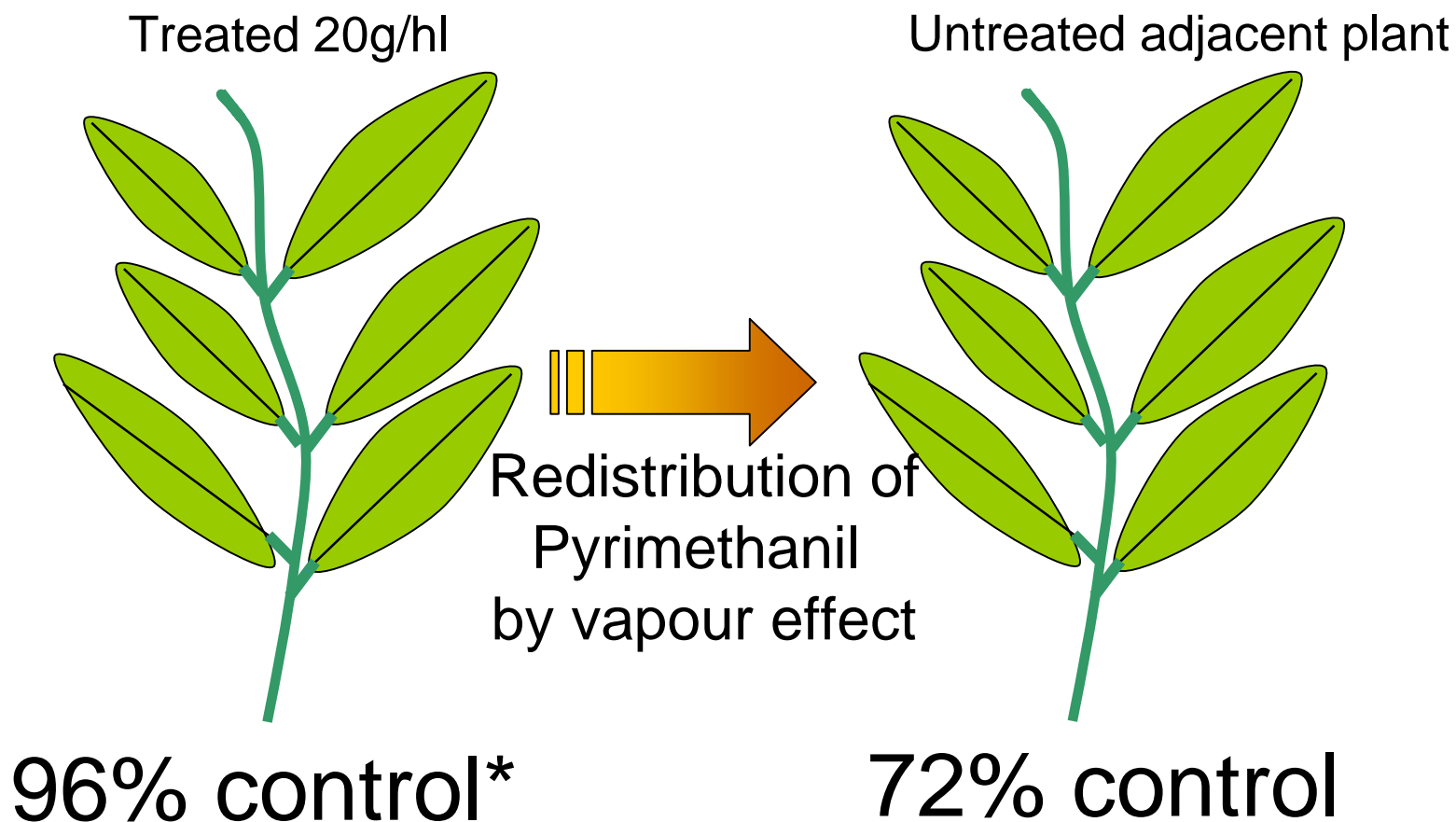
Control on
topside when
applied to
under side



79%

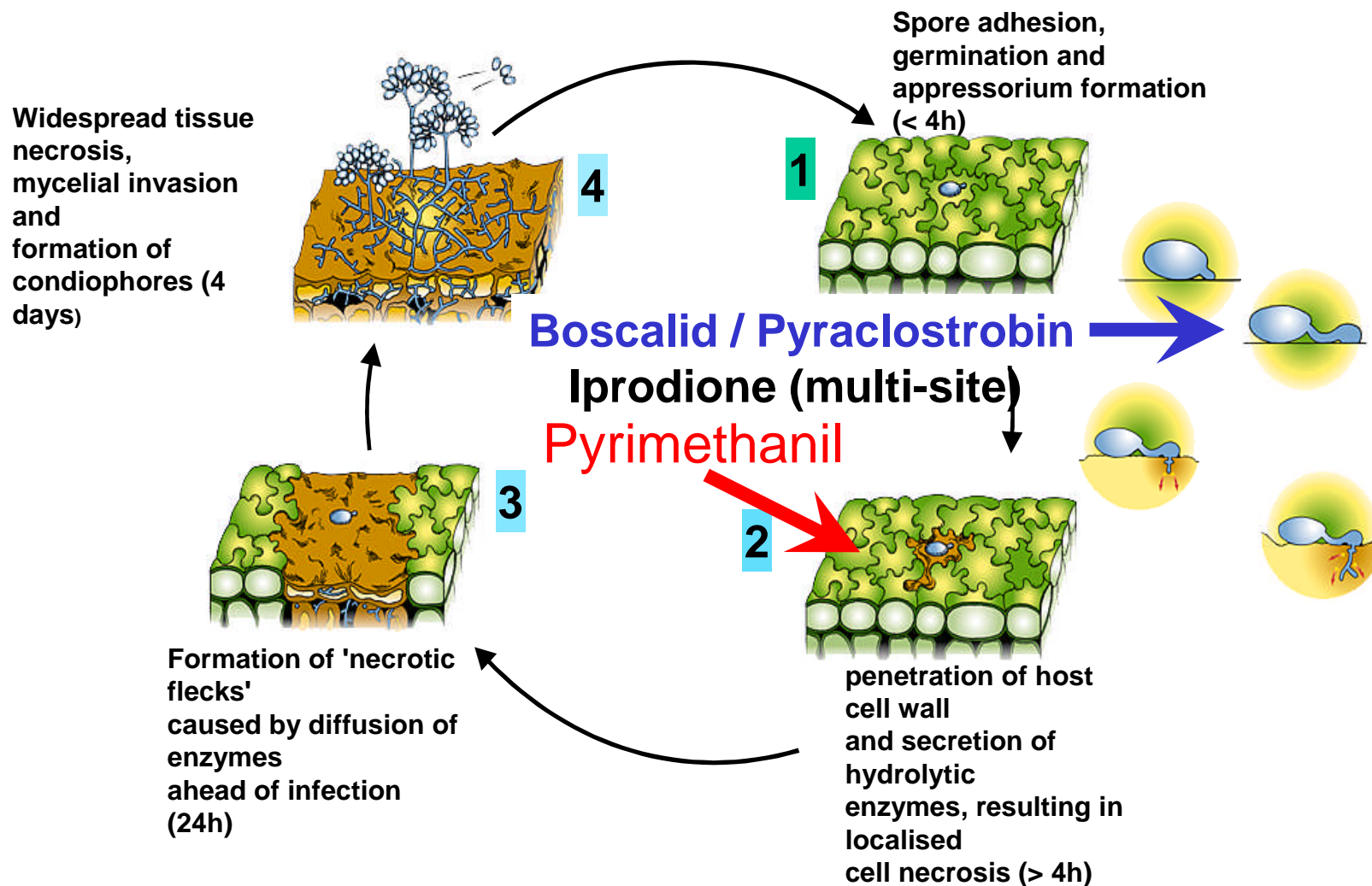
Control on
right handside
when applied
to **opposite**
side of leaf

Vapour effect of pyrimethanil on adjacent untreated plants

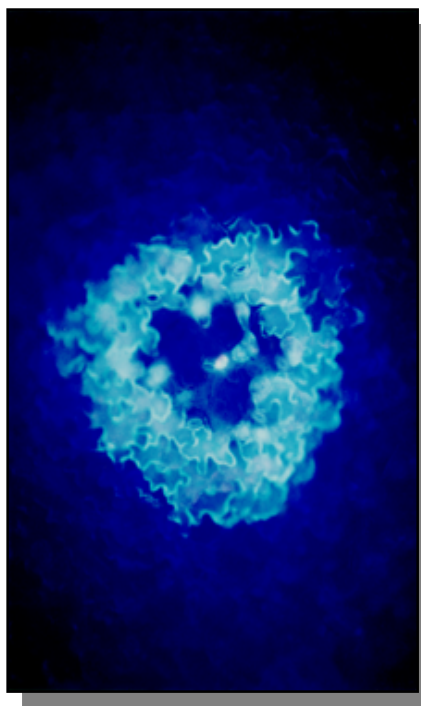
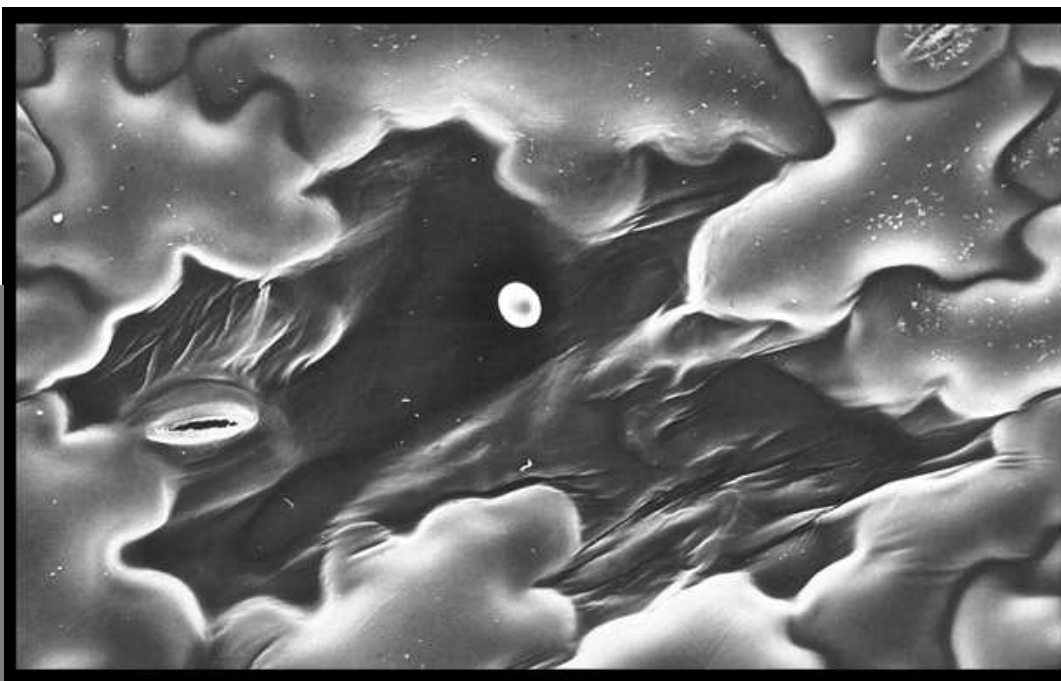


Glasshouse trial, Untreated control 30% Botrytis in infected leaves

Key stages in the natural infection process of *Botrytis* spp. Where the fungicides work

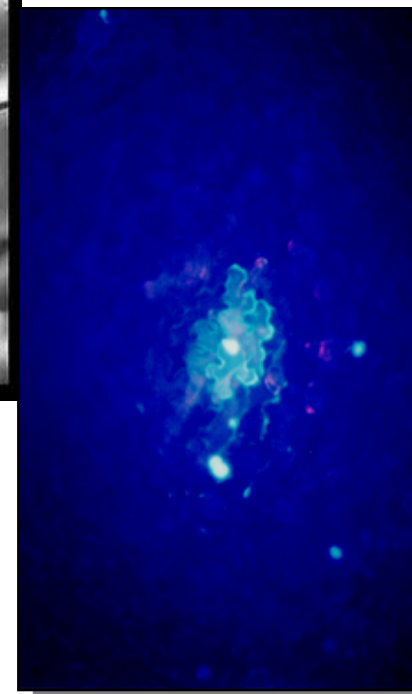


Botrytis kills host plant cells by secreting hydrolytic enzymes



Untreated *Botrytis fabae* spore (centre) kills many host cells.

Pyrimethanil inhibits enzyme secretion and stops fungus from killing plant cells

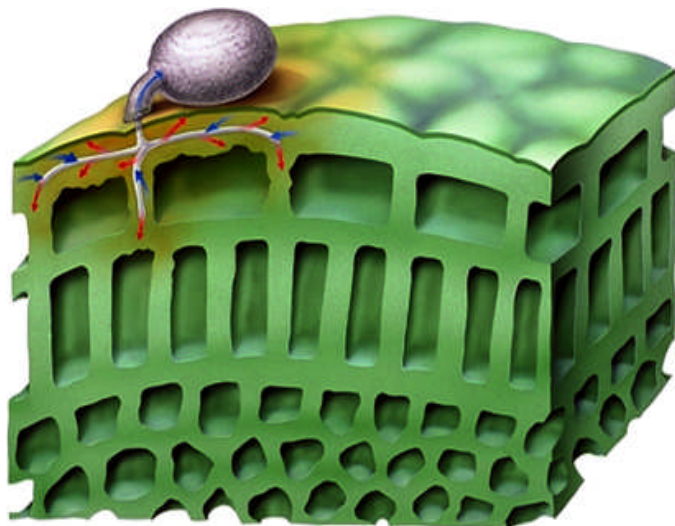


Pyrimethanil treated host cell death is prevented.

How Scala works

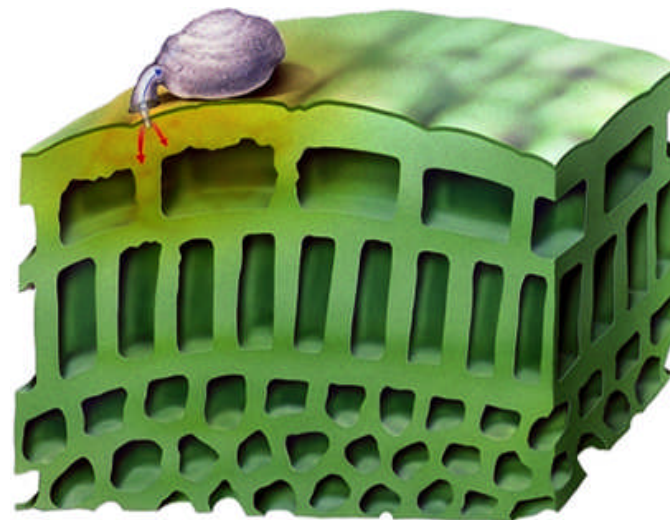
Botrytis spore on plant tissue

**Fungal enzymes (red)
digest host cells.
Nutrient (blue) uptake
into mycelium**



untreated

**Scala inhibits enzyme
secretion into fungus
No nutrient uptake by
fungus**

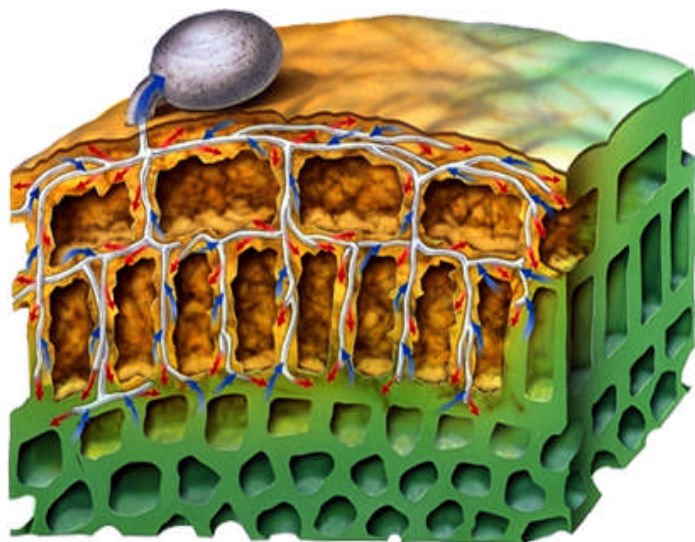


Scala treated

How Scala works

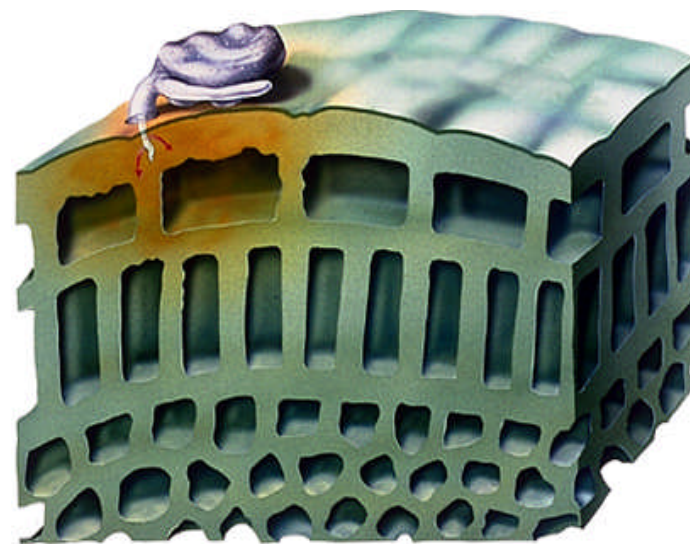
Botrytis spore on plant tissue

**Fungal enzymes (red)
destroy host cells.
Nutrient (blue) uptake
into mycellium.**



untreated

**Scala inhibits
enzyme secretion.**

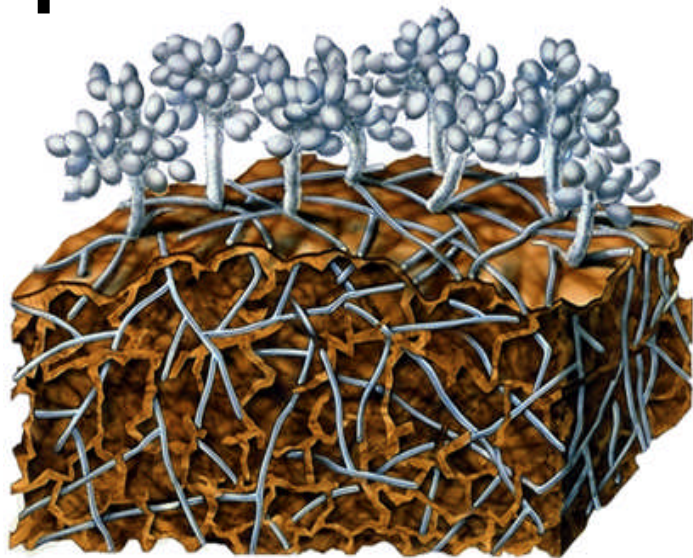


Scala treated

How Scala works

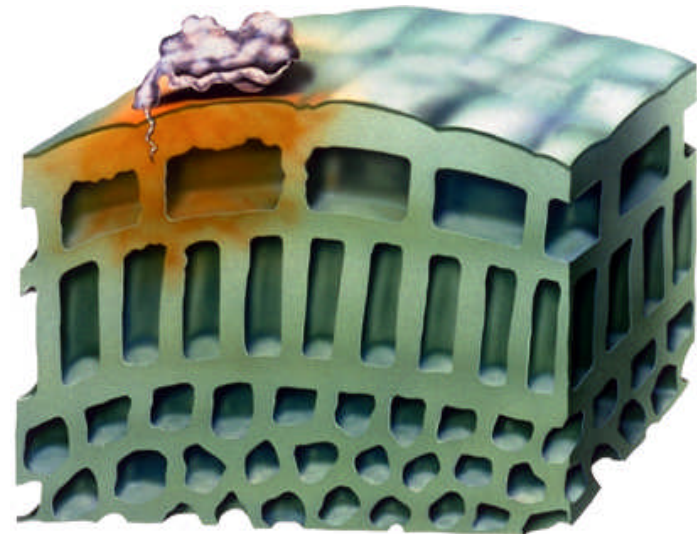
Botrytis spore on plant tissue

Fungus destroys plant cells and produces millions of spores.



untreated

Scala destroys fungus.



Scala treated

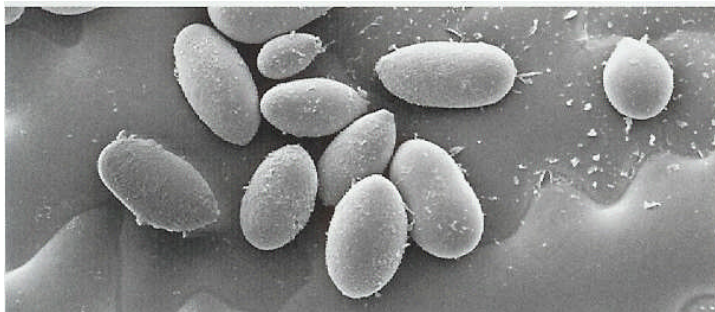


Signum

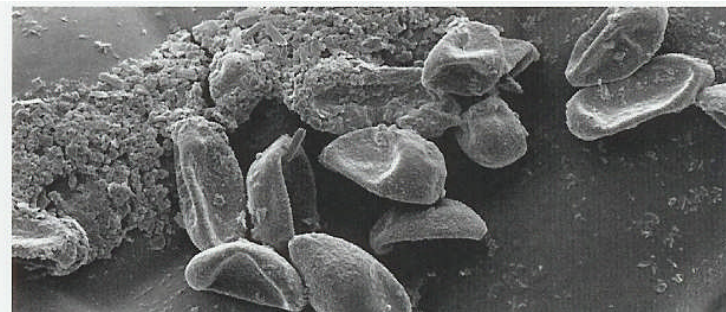
Preventative Action



- Signum works as a preventative treatment against fungal disease.
- When applied at the beginning of the fungal life cycle, disease development is prevented by the inhibition of spore germination or growth of the germination tube.

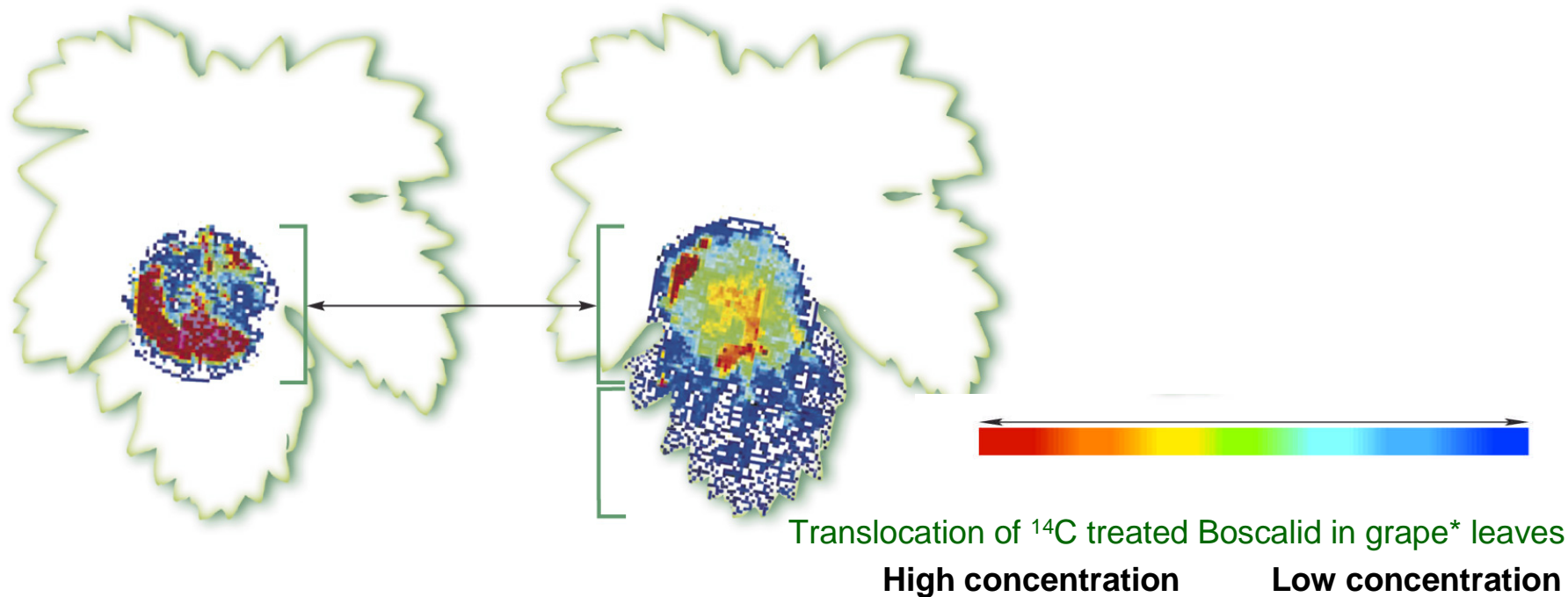


Untreated conidia of *Botrytis cinerea* on the leaf surface



Collapsed conidia of *Botrytis cinerea* after treatment with Boscalid on the leaf surface

Boscalid - Activity

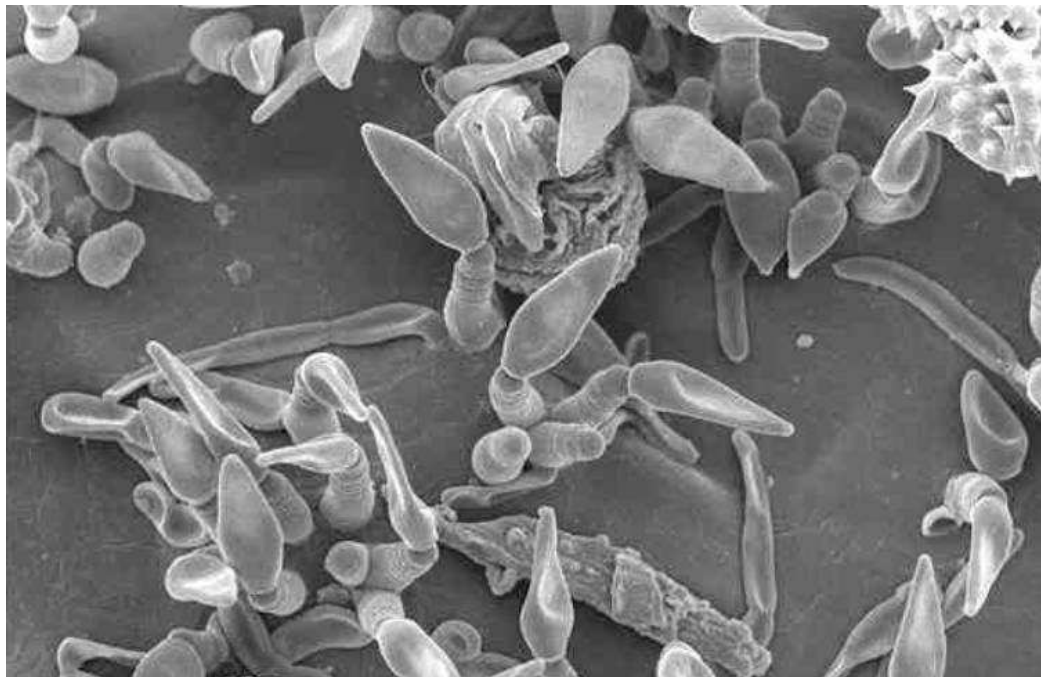


Protectant activity

Locally systemic with acropetal movement

Translaminar activity

Venturia inaequalis (Apple scab) – spore formation



Untreated 5 weeks after
infection



No sporulation at 28 days
after pyraclostrobin
treatment

Agricultural Products

 **BASF**
The Chemical Company

Crown Rot *Phytophthora cactorum*

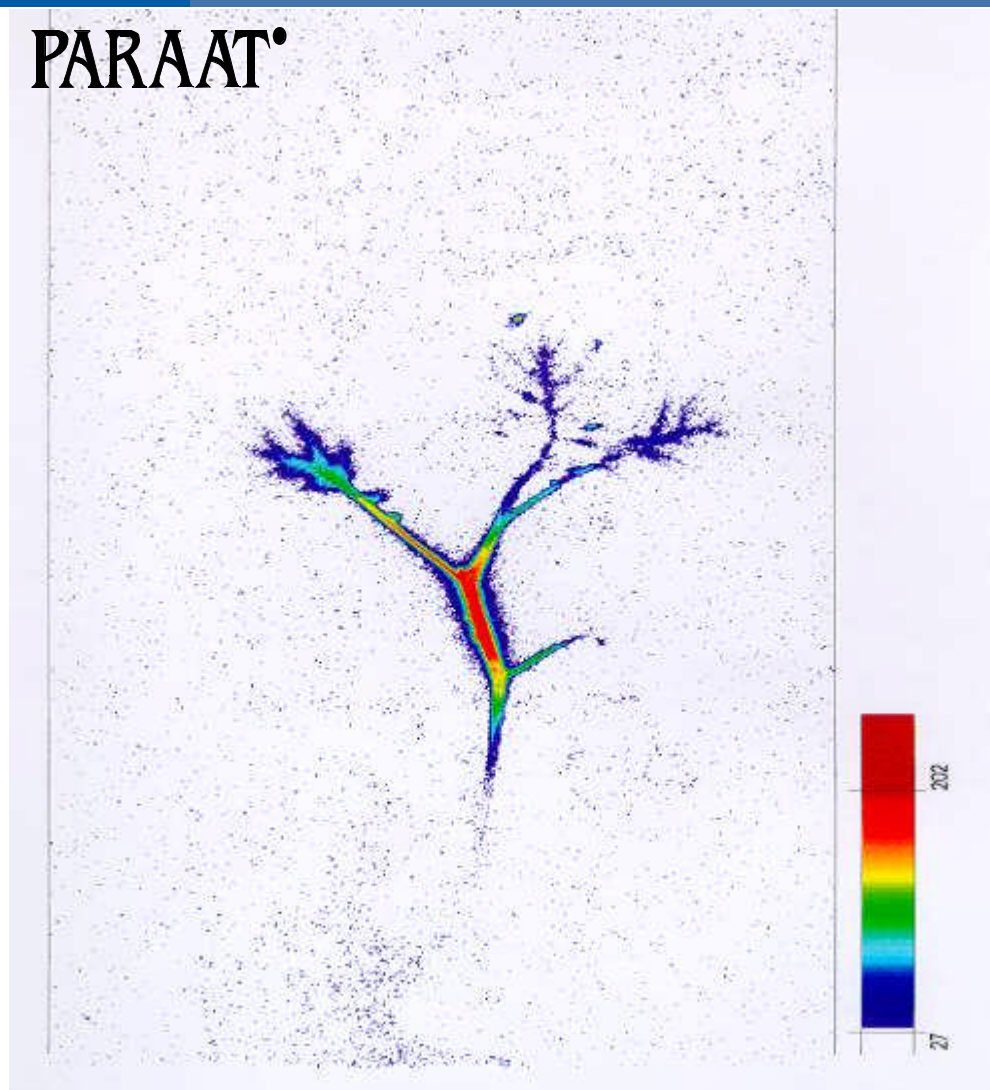
PARAAT®



Properties of dimethomorph

Locally systemic activity

PARAAT[®]

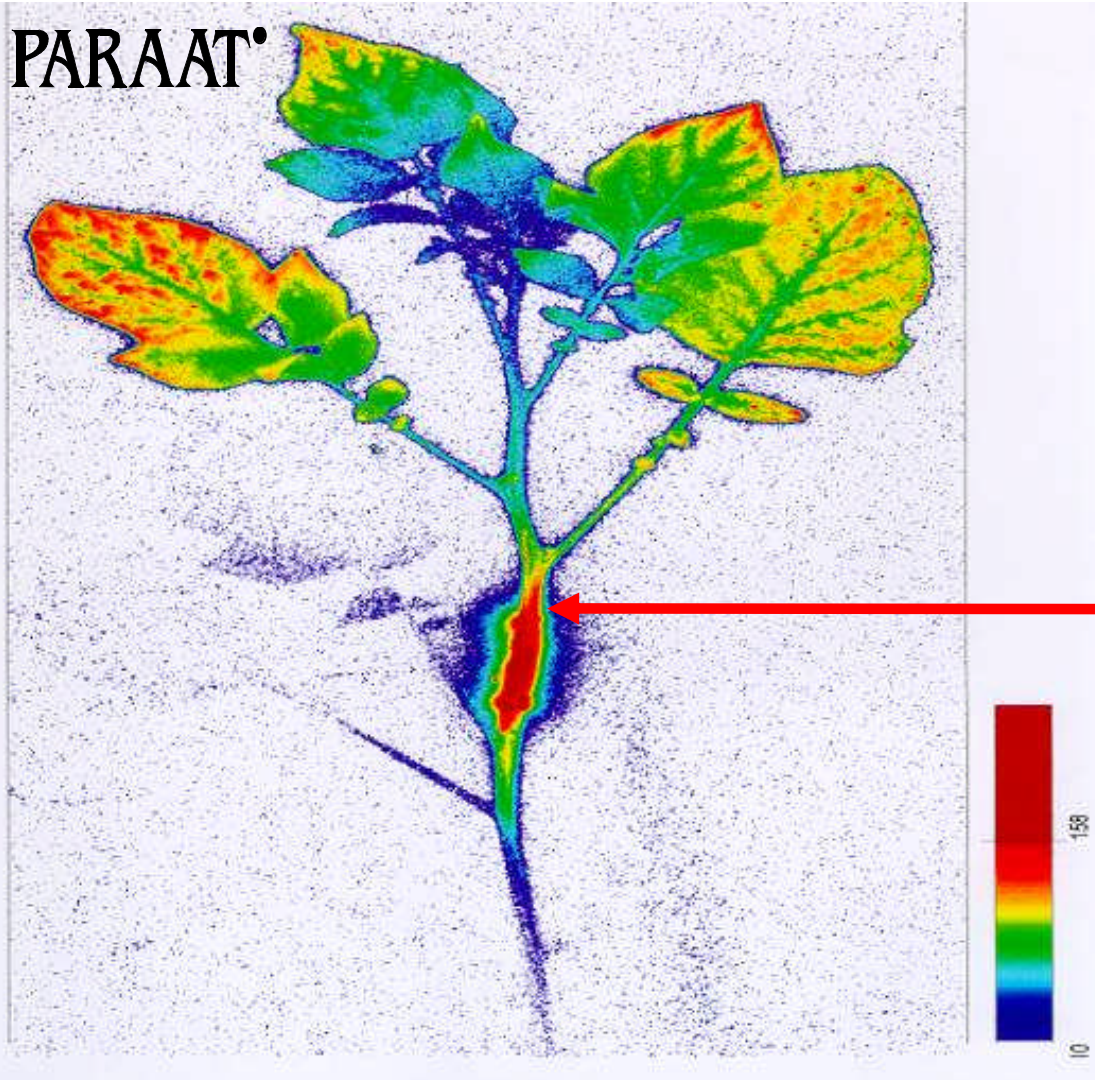


C_{14} dimethomorph
distribution 1.5 hours after
application onto the stem of
a potato plant.

Properties of dimethomorph

Locally systemic activity

PARAAT[®]



C₁₄ dimethomorph distribution 5 days after application onto the stem of a potato plant.

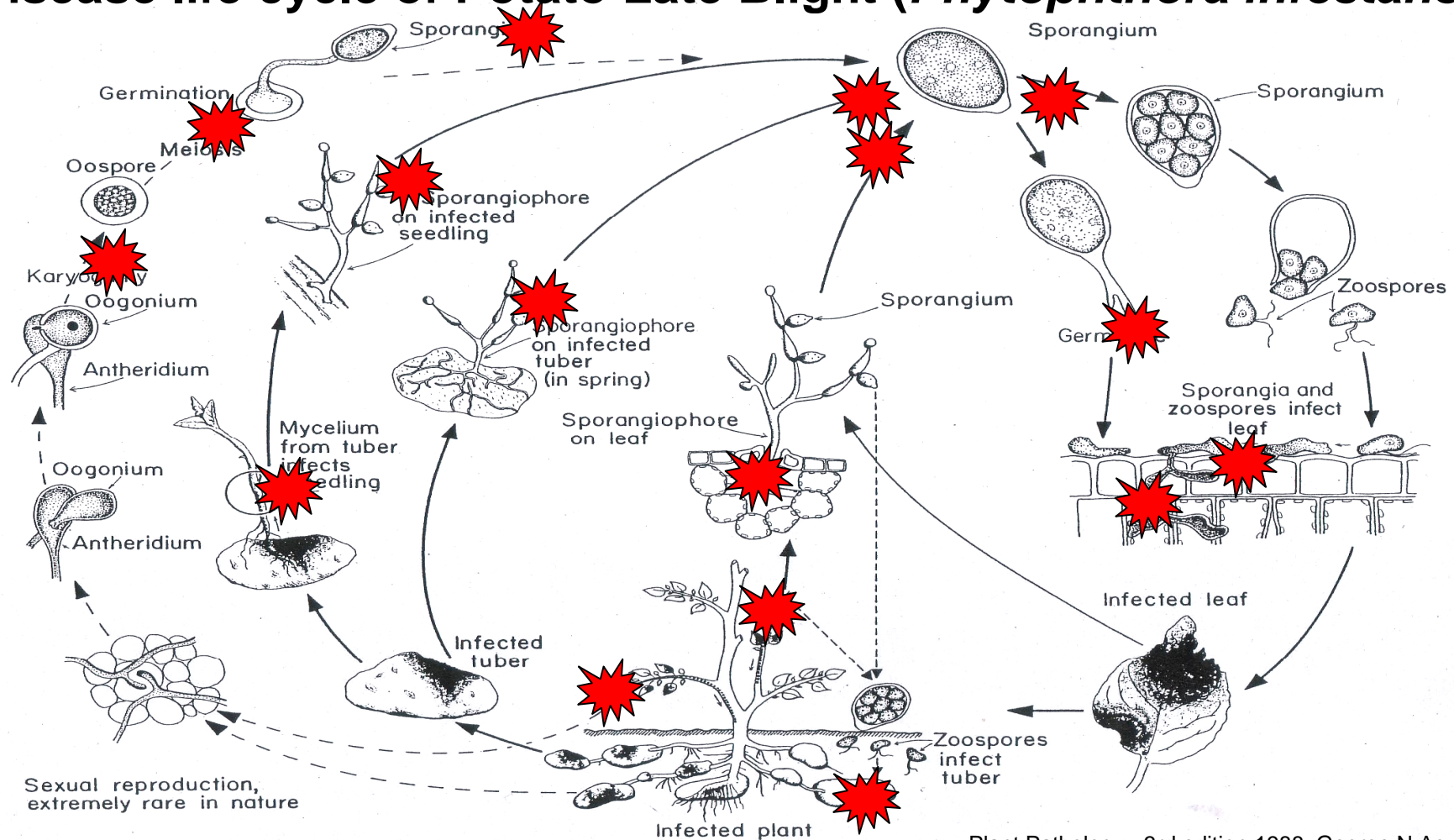
Point of application

Contact surface retention, translaminar movement and transpiration stream movement into new growth

Properties of dimethomorph mode of activity

PARAAT[®]

Disease life cycle of Potato Late Blight (*Phytophthora infestans*)



Dimethomorph Best Advice for crown rot control production / waiting beds

- Apply immediately after planting
- Overhead spraying is the most effective method
- To maximise root uptake
 - Use high water volumes
 - **Irrigate after application – most important**
 - **Or organise rain!**
- Use dimethomorph preventatively
- Dose: 3 kg of product/ha per application

BASF Crop Protection in soft fruit

PARAAT®

Masai®

STOMP®
AQUA

Stroby® WG

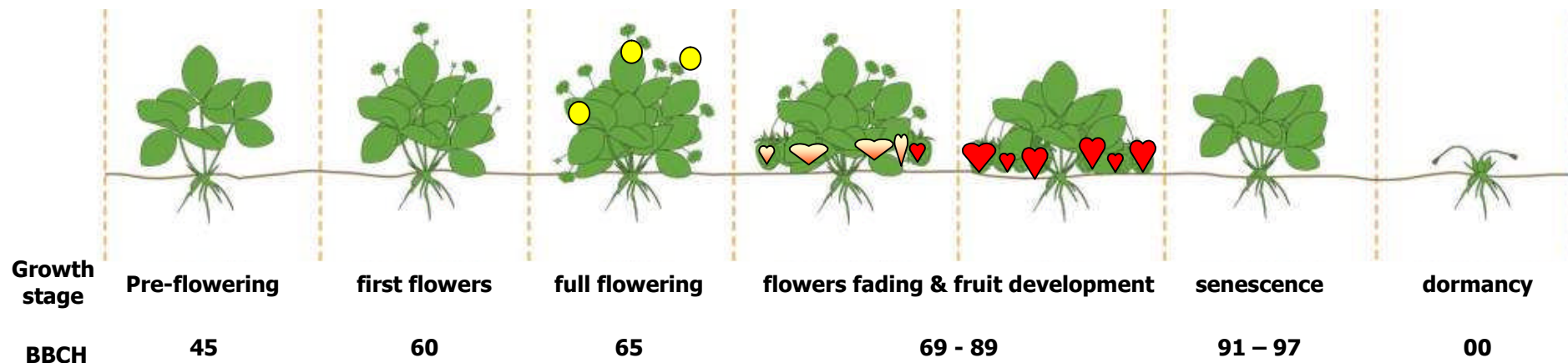
Revral™
WG

• Signum®

SCALA

• Signum®

SCALA



Effective and long lasting disease control



- ➔ Increased marketable yield
- ➔ Healthier, firmer fruit. Longer shelf life