

PREMISE, connecting epidemiology and residue requirements of supermarkets

Applied for scab control in apples

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Outline

- Making IPM profitable
- Public debate on MRLs
- Configuration of PREMISE
- Operating/driving PREMISE
- Epidemiologic dashboard
- Economic dashboard
- Access to supermarkets
- Reflection

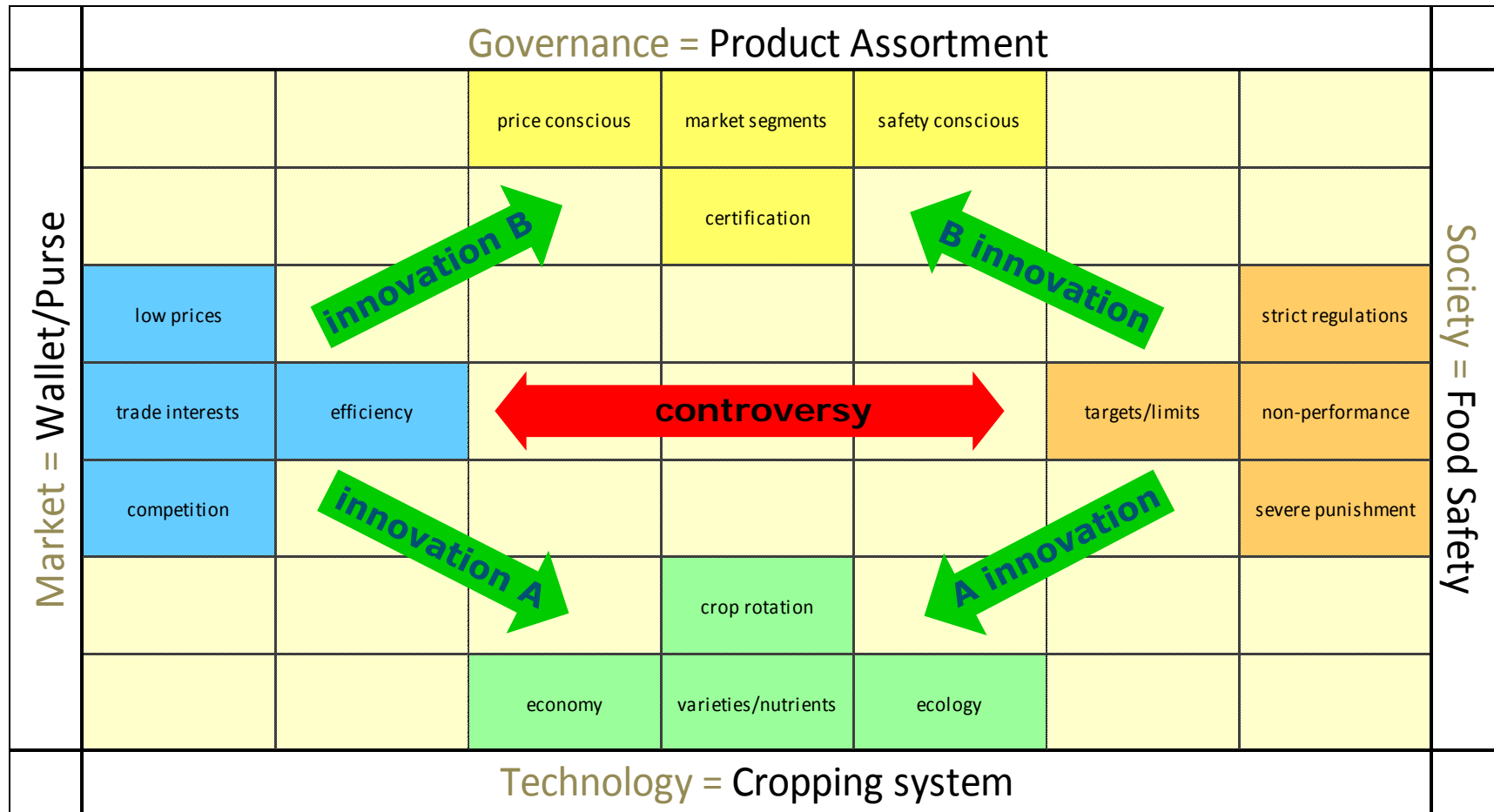


Making IPM profitable

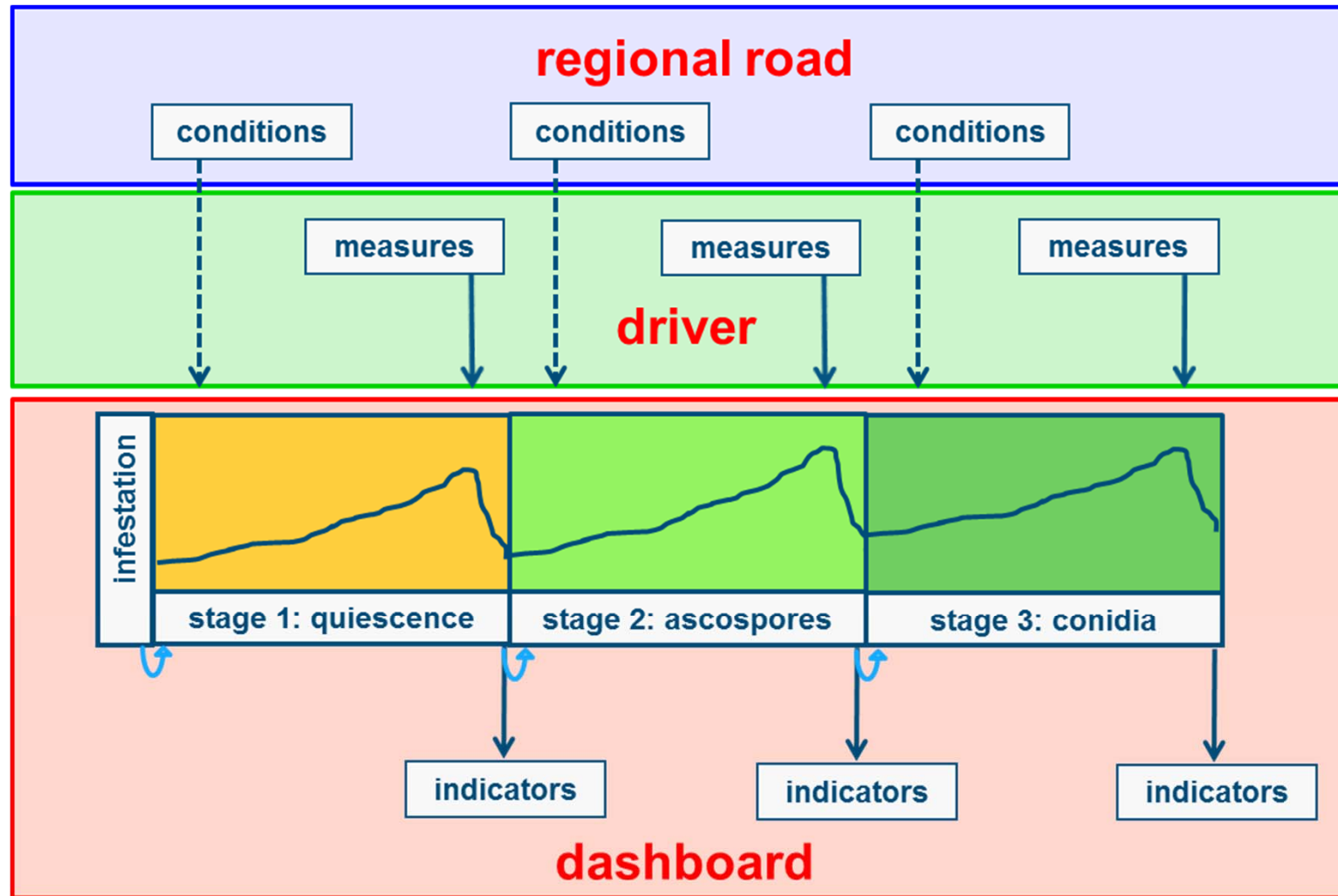
- Experience from ENDURE:
- IPM is more expensive than current
 - Control agents, labour, etc.
- Consumers should accept 'IPM quality'
- Kind of deadlock
- How do we escape?
- **PREMISE is applied for ex-ante assessments in PURE**



Public debate on MRLs



Configuration of PREMISE



Operating/driving PREMISE



STEP 1 : Select cultivars

PREMISE Pest Risk Evaluation Model by Integrating Stage Effects

Save as current	Get current <<<
Save as improved	Get improved
Save advanced	Get advanced

CURRENT practice

>> Case: scab (*Venturia inaequalis*) in apples <<

CONDITIONS

Stage 1: Quiescence

# leaf litter wetness days winter	30-40	-0.3%
soil activity (%org.matter topsoil)	1-2%	-0.0%
# sprays after harvest in last season	1	-0.2%
PAD from last season	high (1001-10000)	-0.4%

Stage 2: Ascospores

# moderate/severe inf. periods cultivars (for susceptibility)	12-15	1.6%
planting density	already selected	0.9%
grower skills (see info)	2500 - 3000	0.9%
	Retiring grower	-0.1%

Stage 3: Conidia

# moderate/severe inf. periods cultivars (for susceptibility)	8-11	1.2%
planting density	see Stage 2	0.9%
grower skills (see info)	see Stage 2	0.9%
	see Stage 2	-0.1%

MEASURES

Leaf shredding

#Urea	1
#Vinasse	0

Fungicides [all stages!]

Fungicides: see button above
#Overhead sprinkl. FALSE

Fungicides: see button above
#Antagonist FALSE

Leaf removal

#Antagonist	
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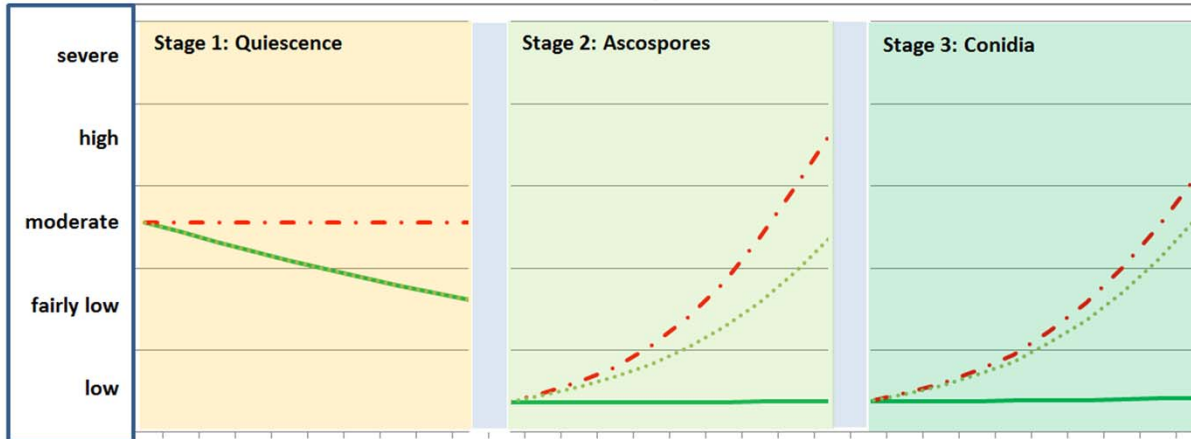
Fungicides: see button above

#Overhead sprinkl. FALSE

#Antagonist FALSE

Epidemiologic dashboard

Current situation



Improved situation



Legends

- Effect (conditions & measures)
- - - Reference (worst case)
- ... Conditions only

Economic dashboard

Efficiency (returns per 100 Euro costs)

improved 100

advanced 94

Quality 1

improved 100

advanced 100

Stars

improved *

advanced **

Labour costs control

improved 88

advanced 60

Other control costs

improved 115

advanced 313

Grading costs

improved 100

advanced 100

Improved situation

very good	
good	
fairly good	
slightly good	14%
no effect	57%
slightly bad	29%
fairly bad	
bad	
very bad	

Advanced situation

very good	
good	
fairly good	
slightly good	
no effect	
slightly bad	
fairly bad	
bad	57%
very bad	43%

Access to supermarkets

- Report of trade company to grower:
- The residue analysis meets the requirements of:
 - Albert Heijn No
 - Aldi DU No
 - Aldi NL No
 - Edeka Yes
 - Jumbo No
 - Lidl No
- More times 'Yes' = more chance on price premium

Reflection

- Supermarkets are increasing residue requirements
 - number of compounds (4 – 5)
 - fractions of legal MRLs (66 – 50 – 33%)
- IPM provides opportunities to decrease residues
 - lower spray frequencies
 - use of antagonists
- IPM provides access to higher markets segments
- IPM provides a chance for price premiums

Thanks for your attention

Questions welcome!

We are eager to test and improve PREMISE through cooperation with researchers and advisers.

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