



5



5

Mating disruption



*European
grapevine moth*



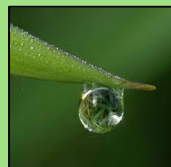
Preventative effect - 3
*The preventive effect
is repeated for each period*

Tox



0

Res



0

Eco



0

Ben



0



Crop cycle :  - 1 & 2





4



5

Trichogramma



*European
grapevine moth*



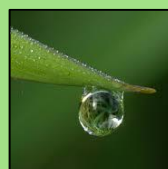
Preventative effect - 3

Tox



0

Res



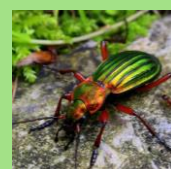
0

Eco



0

Ben



-2



Crop cycle : 2 to 4





3



2

Microorganisms

B.bassiana



Mites



Usable only



Curative effect

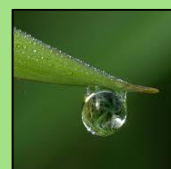
- 2

Tox



0

Res



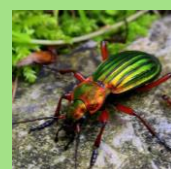
0

Eco



0

Ben



0



Crop cycle : 2 to 5





1




2

Microorganisms

Bacillus amyloliquefaciens



 *Downy mildew*
Powdery mildew
Gray mould



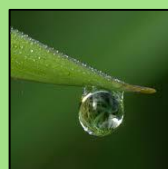
Preventative effect -2

Tox



0

Res



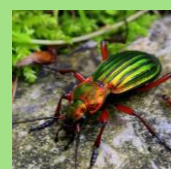
0

Eco



0

Ben



0



Crop cycle : 3 - 4





Biocontrol insecticide

Bacillus thuringiensis



European
grapevine moth



Maximum 2
treatments/year.



Curative effect

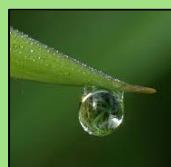
- 4

Tox



0

Res



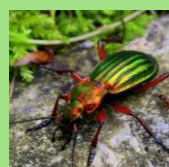
0

Eco



+ 2

Ben



0



Crop cycle : 2 to 5





Sulphur

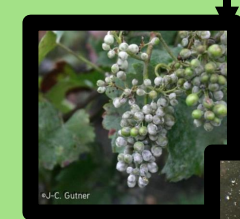


*Powdery mildew
Mites*

Usable except



Cost and Time x2 when



Preventative effect - 2



Curative effect -1

Tox



+1

Res



0

Eco



+2

Ben



+2



Crop cycle : 1 to 5



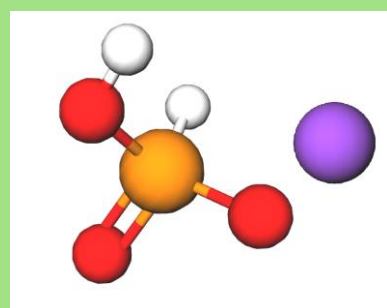


2



2

Phosphonates



Downy mildew



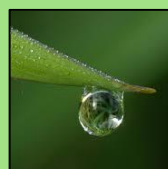
Preventative effect -2
with copper -3

Tox



0

Res



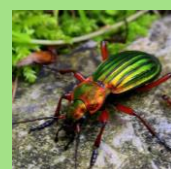
+2

Eco



0

Ben



0



Crop cycle : 3 - 4



EUCLID

Europe China Lever for IPM Demonstration



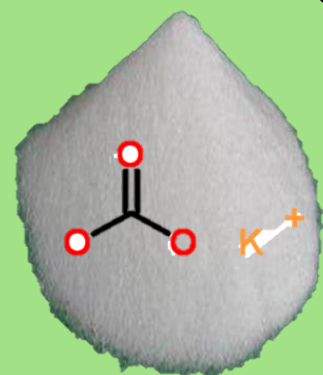


3



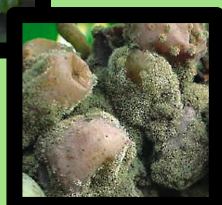
2

Potassium hydrogen carbonate



*Powdery mildew
Gray mould*

Usable except



Preventative effect - 2



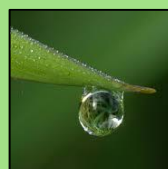
*Curative effect -1
Only in association with
sulphur*

Tox



0

Res



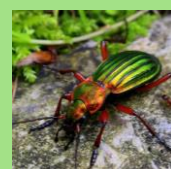
0

Eco



0

Ben



0



Crop cycle : 1 to 5





3



2

Essential oil

Sweet orange



Downy mildew
Powdery mildew

Mites

Vine leafhopper

Usable only



Curative effect

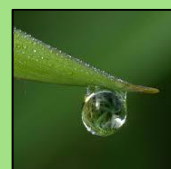
-3

Tox



+2

Res



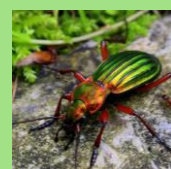
0

Eco



+2

Ben



+2



Crop cycle : 1 to 4





Paraffin oil



Mites



Preventative effect

Prevents primary installation

Tox



+2

Res



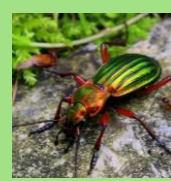
0

Eco



0

Ben



0



Crop cycle :

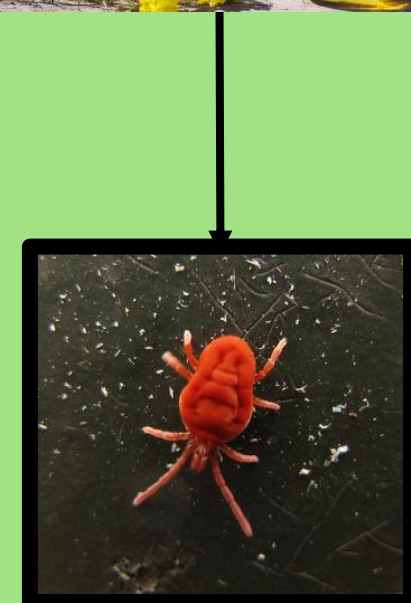




Rape oil



Mites



Preventative effect

Prevents primary installation

Tox



0

Res



0

Eco



0

Ben



0



Crop cycle :





3



2

Vegetal oils

Clove, Geranium, Thyme



Gray mould



Usable only



Curative effect

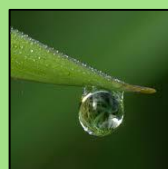
-2

Tox



+2

Res



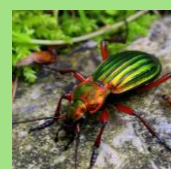
0

Eco



+1

Ben



+1



Crop cycle : 4 - 5





3



2

Elicitors

Defense stimulators



Powdery mildew
Downy mildew



Usable only



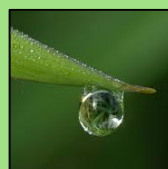
Preventative effect -2

Tox



0

Res



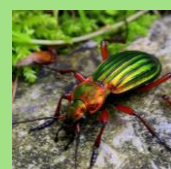
0

Eco



0

Ben



0



Crop cycle : 1 to 4





1



2

Basic substances

Saccharose - Fructose



Downy mildew



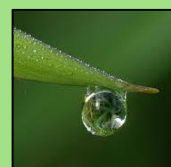
Preventative effect -1

Tox



0

Res



0

Eco



0

Ben



0



Crop cycle : 1 to 3



EUCLID

Europe China Lever for IPM Demonstration





1



2

Basic substances

Cow milk - Lactoserum



Powdery mildew



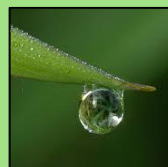
Preventative effect -1

Tox



0

Res



0

Eco



0

Ben



0



Crop cycle : 1 to 3





1

Per pest



2

Basic substances

Chitosan – Mg hydroxyd



Powdery mildew

Downy mildew

Gray mould

Black rot



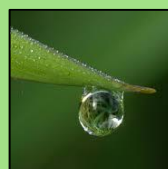
Preventative effect -1

Tox



0

Res



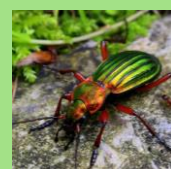
0

Eco



0

Ben



0



Crop cycle : 1 to 4





1



2

Basic substances

Urtica



Mites



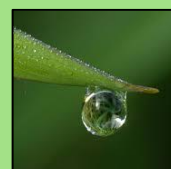
Preventative effect -1

Tox



0

Res



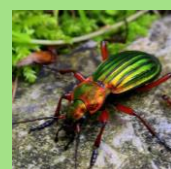
0

Eco



0

Ben



0



Crop cycle : 3 - 4



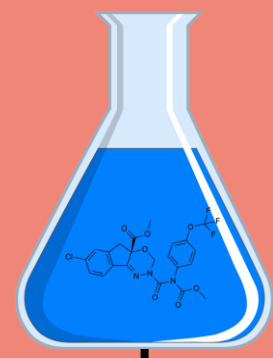
EUCLID

Europe China Lever for IPM Demonstration



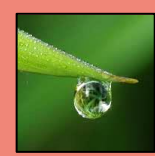


Copper



*Downy mildew
Black-rot*

Cost and Time x2 when



x2 in period 4 or 5



Preventative effect - 2



Curative effect -1

Tox



+2

Res



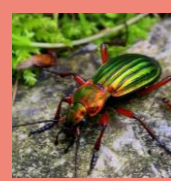
+ 2

Eco



+ 3

Ben



+2



Crop cycle : 1 to 5





2



2

Fungicide anti-Botrytis



Gray mould

Maximum 2 treatments/year



x2 in periods 4 and 5



Curative effect

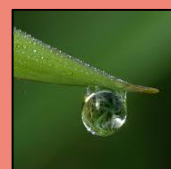
- 4

Tox



+ 3

Res



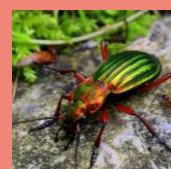
+ 4 

Eco



+ 2

Ben



+ 2



Crop cycle : 3 to 5





2 (+1*)



2

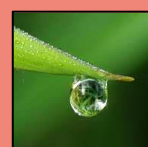
Polyvalent fungicide



Downy mildew
Powdery mildew
Black-rot



*for three pathogens
Maximum 2 treatments/year



x2 in period 4 and 5



Preventative effect - 1



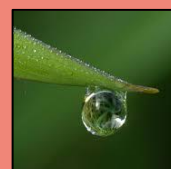
Curative effect - 4

Tox



+ 2

Res



+ 2

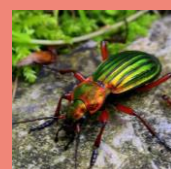


Eco



+ 2

Ben



+ 2



Crop cycle : 1 to 5



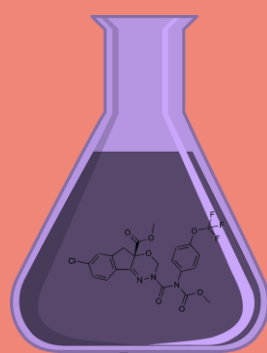


2



2

Acaricides



Mites



Maximum 2 treatments/year



Curative effect

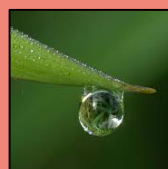
- 4

Tox



+ 4

Res



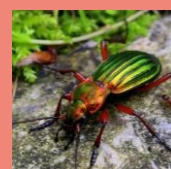
0

Eco



+ 4

Ben



+ 4



Crop cycle : 2 to 5



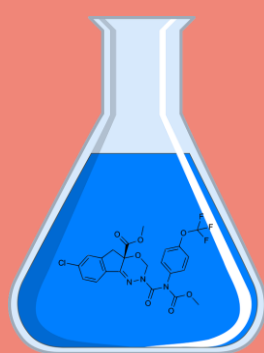


2



2

Growth regulator insecticide (ex Tebufenozide)



***European
grapevine moth***



Maximum 2 treatments/year



Preventative effect - 3



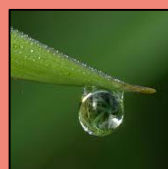
Curative effect - 1

Tox



0

Res



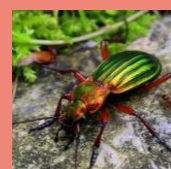
0

Eco



+ 2

Ben



0

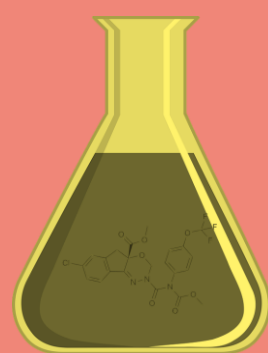


Crop cycle : 2 to 5





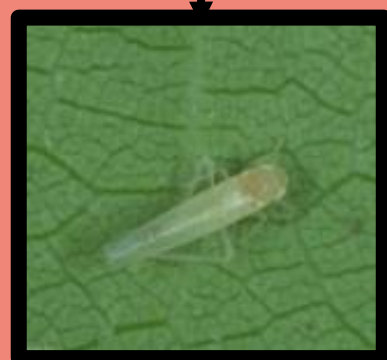
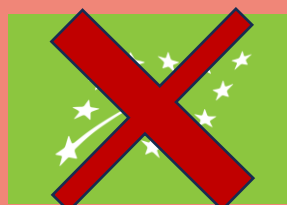
Neurotoxic insecticide *Pyrethroids*



European
grapevine moth
Vine leafhopper



Maximum 2 treatments/year
Cost and Time x2 when



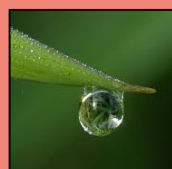
Curative effect - 4

Tox



+ 4

Res



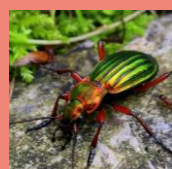
0

Eco



+ 4

Ben



+ 4



Crop cycle : 2 to 5





3

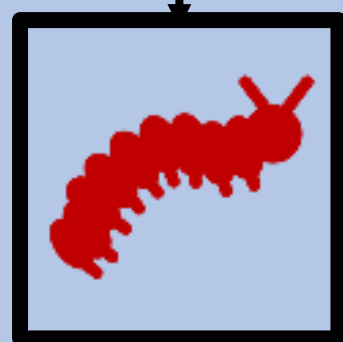


3

Ecological management



*European
grapevine moth
Mites
Vine leafhopper*



Preventative effect - 2



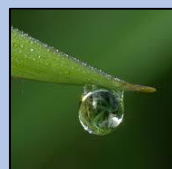
Curative effect - 1

Tox



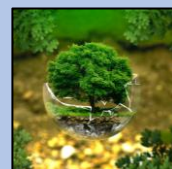
0

Res



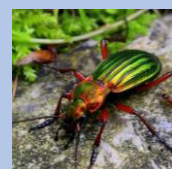
0

Eco



-1

Ben



- 2



Crop cycle :  - 1 - 2





+1

For each product



+1

Spraying Decision Support System

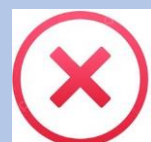


Mites

European grapevine moth

Downy mildew

Powdery mildew



Play with pesticide or
biocontrol product to
reduce impacts

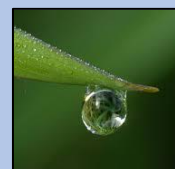


Tox



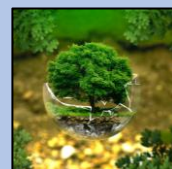
-1

Res



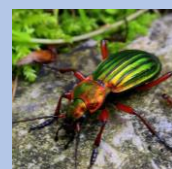
-1

Eco



-1

Ben



-1



Crop cycle : 1 to 5





+2

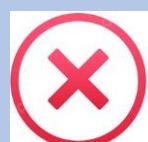


+1

Low drift sprayer



All



*Play with pesticide or
biocontrol product to
reduce impacts*

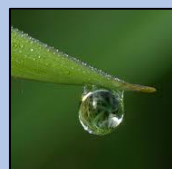


Tox



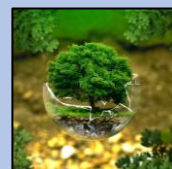
-1

Res



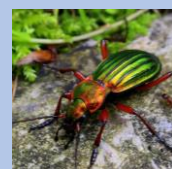
-1

Eco



-1

Ben



-1



Crop cycle : 1-5





3



5

Green pruning



*Downy mildew
Powdery mildew
Gray mould
Black rot*



*Maximum 2 reductions
or pruning / year
Not 2 periods in a row*



Preventative effect -2



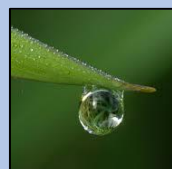
Curative effect -1

Tox



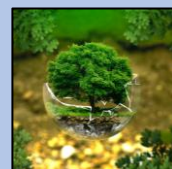
0

Res



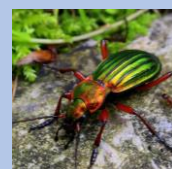
0

Eco



0

Ben



0



Crop cycle : 3 to 5





Reducing Vigour of the vine



Mites
Powdery mildew
Gray mould



*Maximum 2 reductions
or pruning / year*
Not 2 periods in a row



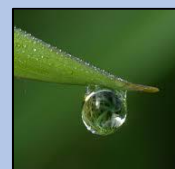
Preventative effect -2

Tox



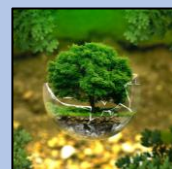
0

Res



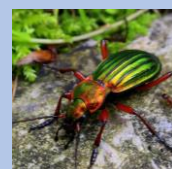
0

Eco



0

Ben



0



Crop cycle : 1 to 4





2



1

Decision Support System (DSS)



*Mites
European grapevine moth
Downy mildew
Powdery mildew*



*Give the possibility to play
“Preventive measures”
next turn after drawing
a weather card*



Crop cycle : 1 to 4



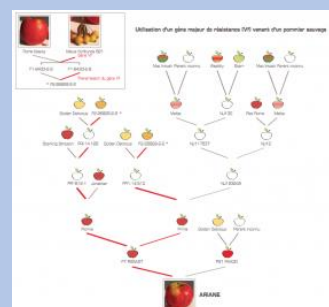


5



0

Resistant variety

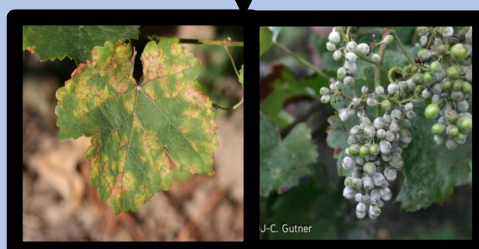


**Powdery &
Downy mildews**



Preventative effect

- At each period – 3
- You have to combine with other solutions twice during the season to keep the efficacy > if not - 2

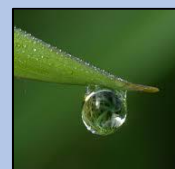


Tox



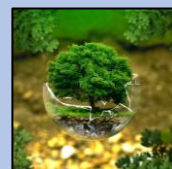
0

Res



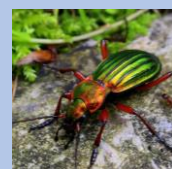
0

Eco



0

Ben



0



Crop cycle :



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3



2

Eco-Grazing



*European
grapevine moth*



Preventative effect -2



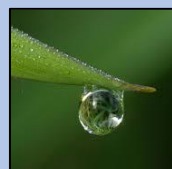
Curative effect -1

Tox



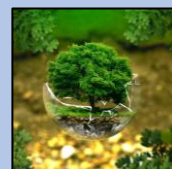
0

Res



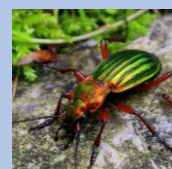
0

Eco



0

Ben



0



Crop cycle : 1 to 3



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3

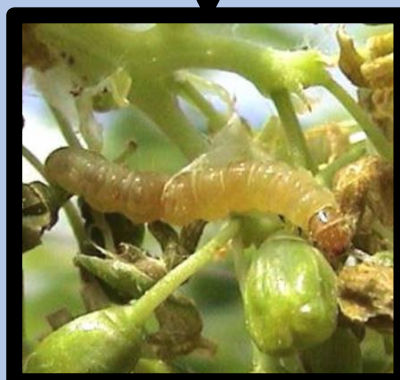


3

AEI > birds & chiropterans



European grapevine moth



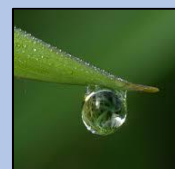
Preventative effect -2

Tox



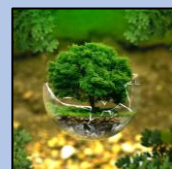
0

Res



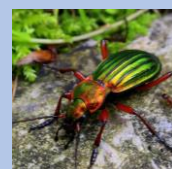
0

Eco



-1

Ben



-1



Crop cycle :



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+1



Adjuvant



All



*Play with biocontrol product to
be applicable by dry weather*



Crop cycle : 1 to 5





+2



0

Biostimulant



All



Preventative effect



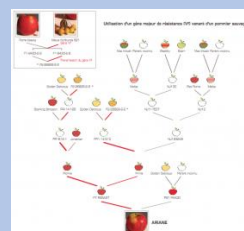
Alone if risk ≤ 1 and pressure is in the light yellow zone

-1



Can increase the efficiency of microorganisms or natural substances

+1



maintains the durability of the variety resistance over time



Crop cycle : 1 to 4

1 solution

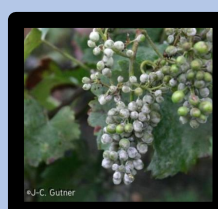




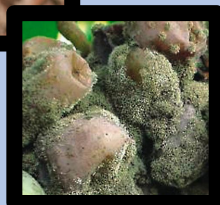
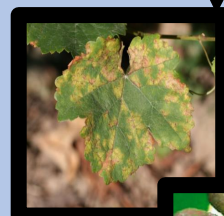
Viti tunnel



Downy mildew
Gray mould



Powdery mildew
+1 at each period



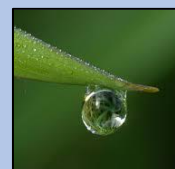
Preventative effect -2
At each period

Tox



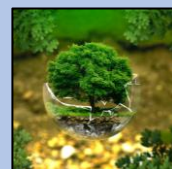
0

Res



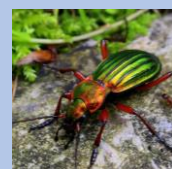
0

Eco



0

Ben



0



Crop cycle : 1 to 4





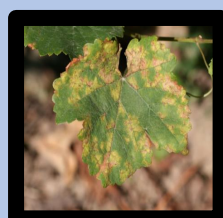
UV-C



*Powdery mildew
Downy mildew*



Preventative effect -4



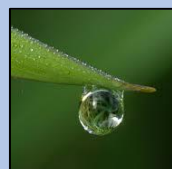
*With copper for
Downy mildew*

Tox



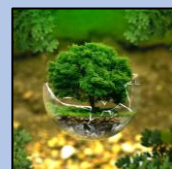
0

Res



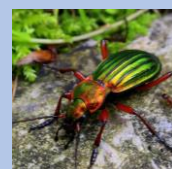
0

Eco



0

Ben



0



Crop cycle : 1 to 4





2

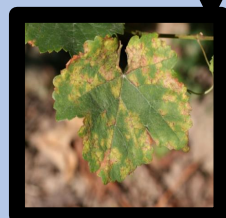


3

Leaf pick-up



Downy mildew
Black rot



Preventative effect

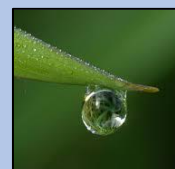
*Prevents primary
installation*

Tox



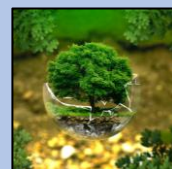
0

Res



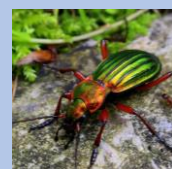
0

Eco



0

Ben



0



Crop cycle :



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2



1

Augmentarium



*European
grapevine moth*



Preventative effect

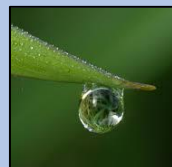
*Prevents primary
installation*

Tox



0

Res



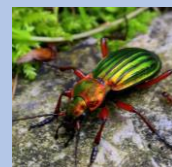
0

Eco



0

Ben



+1



Crop cycle :  1 to 4



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1



2

Rock powder

Kaolin



Vine leafhopper



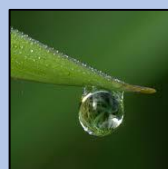
Preventative effect -2

Tox



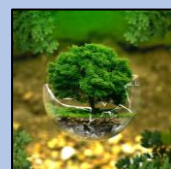
+1

Res



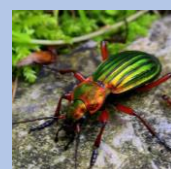
0

Eco



0

Ben



0



Crop cycle : 3 - 4



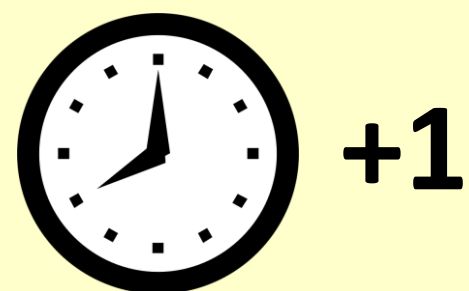
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FWF ***(Farm Work Firm)***



*The additional unit of time
must be spent during the period*

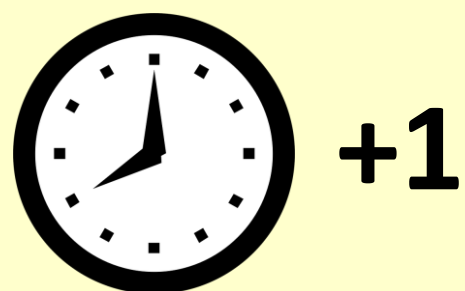


Crop cycle :  1 to 5





Associated treatments



*You win 1 time unit when you
spray with 2 biocontrol or 2
chemicals products*

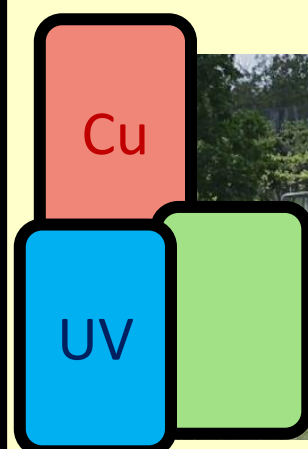


Crop cycle : 1 to 5





Biocontrol product or UV + 1/2 dose of copper

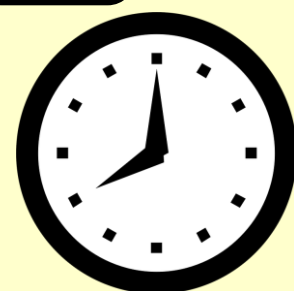


Downy mildew



Preventative effect

+1 Copper efficacy is low



+1

*You win 1 time unit when you
spray these associations*

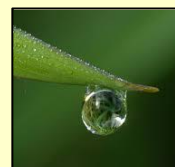
And you reduce impact of copper

Tox



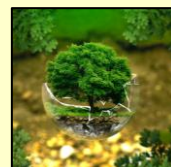
-1

Res



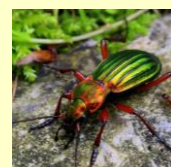
-1

Eco



-1

Ben



-1



Periods : 1 to 5

