

Fungicide Screening for Control of Downy Mildew and Stemphylium on Basil

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Basil Field Test

OMRI Fungicides for Downy Mildew Control

- Actinovate (*Streptomyces lydicus*) OMRI
- Camelot O (Copper octanoate) OMIR
- Double Nickel (*Bacillus amyloliquefaciens*) OMRI
- Revus (Mandipropamid)



301

401





Disease Rating (% infected)



0 = 0%



2 = 11-35%



3 = 33-65%



4 = 66-90%

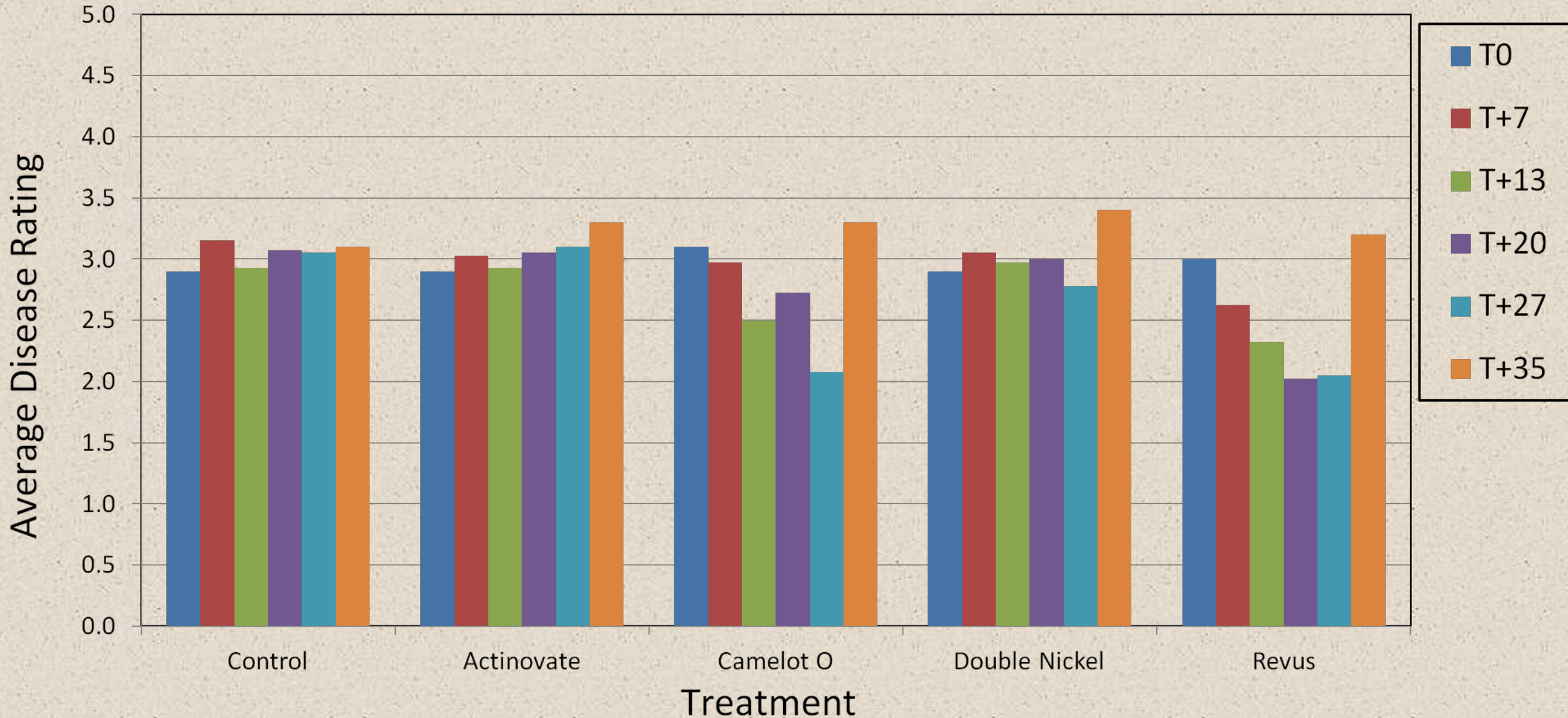


Spray and Data Collection Schedule

Spray Schedule	T0	T+8	T+14	T+21	T+27	T+34
	1/21/2016	1/29/2016	2/4/2016	2/11/2016	2/17/2016	2/24/2016
Actinovate	X	X	X	X		
Camelot O	X	X	X	X		
Double Nickel	X	X	X	X		
Revus	X		X			
Data Collection	T0	T+7	T+13	T+20	T+27	T+34
	1/21/2016	1/28/2016	2/3/2016	2/10/2016	2/17/2016	2/24/2016



Basil DM Fungicide Efficacy Field Test 2016



Disease Rating (% infected)

0 = 0%, 1 = 1-10%, 2 = 11-35%, 3 = 36-65%, 4 = 66-90%, 5 = 91-100%

Untreated
Control
T+20





Actinovate
T+20

Actinovate
T+20





Camelot O
T+20

Double Nickel T+20





Revus

T+20



Revus
T+20



Revus
T+20

Farmers Practice



Fungicides for Downy Mildew Control

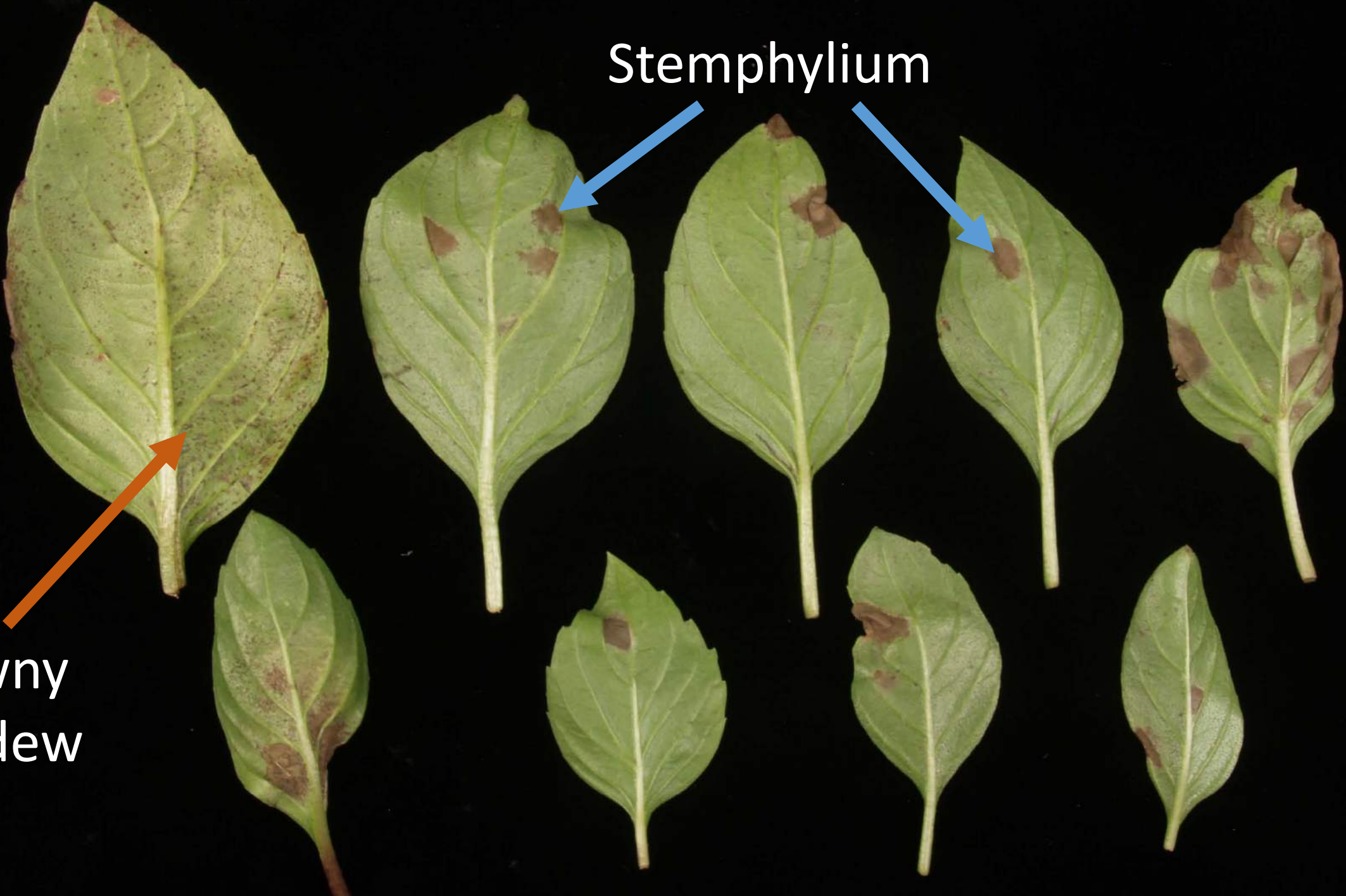
- Actinovate (*Streptomyces lydicus*) OMRI
- Camelot O (Copper octanoate) OMIR
- Double Nickel (*Bacillus amyloliquefaciens*) OMRI
- Revus (Mandipropamid)
- OMRI not very effective in stand alone testing
- In a rotation, should extend the benefits of effective fungicides

Fungicides for *Stemphylium* Control

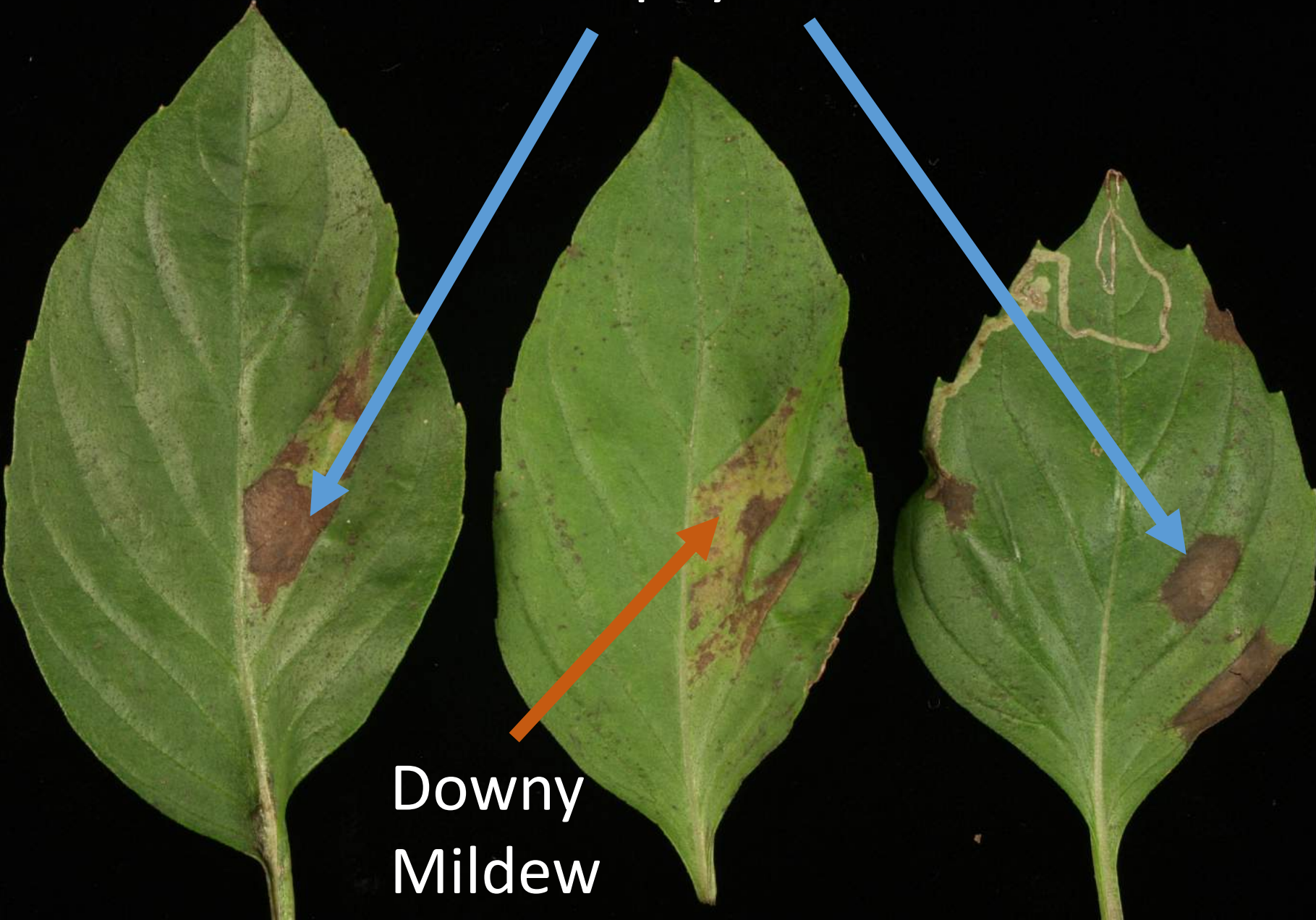
- Actinovate (*Streptomyces lydicus*) OMRI
- Camelot O (Copper octanoate) OMIR
- Double Nickel (*Bacillus amyloliquefaciens*) OMRI
- Revus (Mandipropamid)

Stemphylium

Downy
Mildew

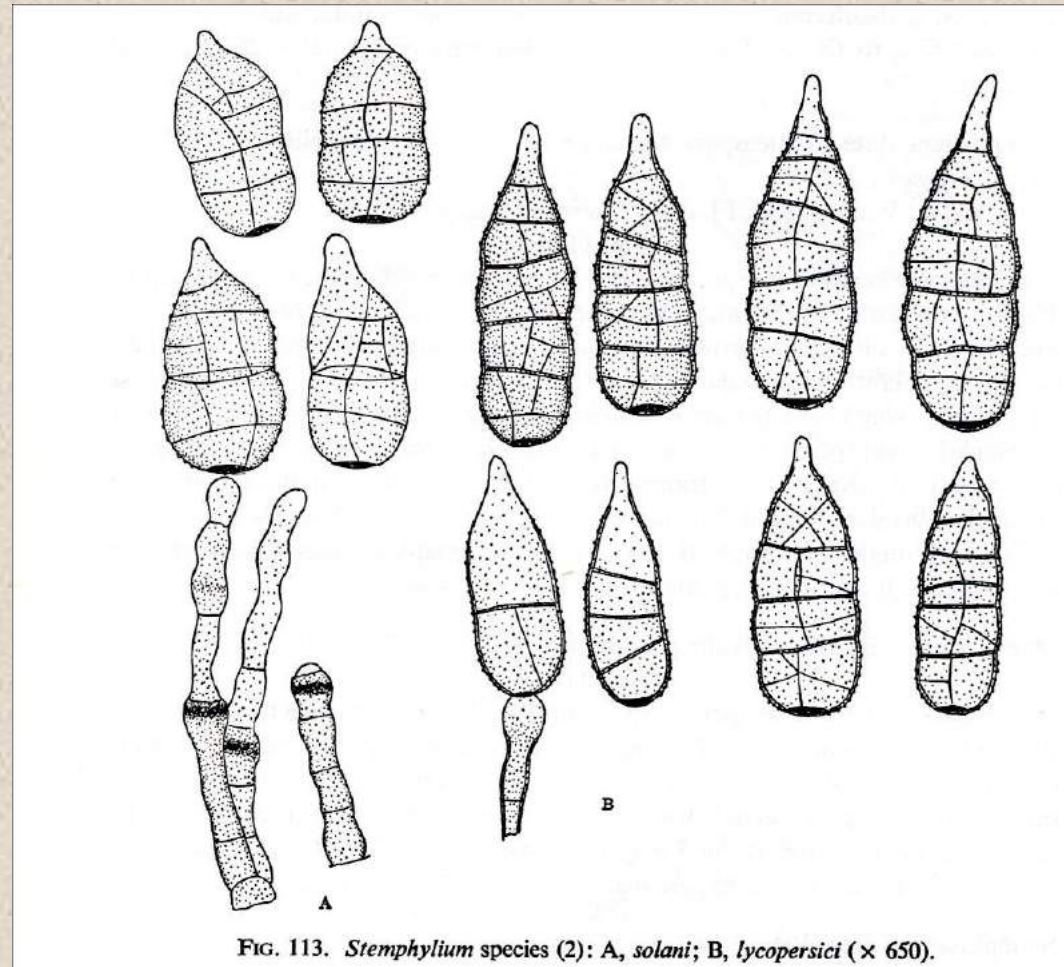


Stemphylium



Downy
Mildew

- To obtain sporulation, we placed the cultures in the dark and by the next morning there were many spores that we identified as *Stemphylium*.



Stemphylium lycopersici

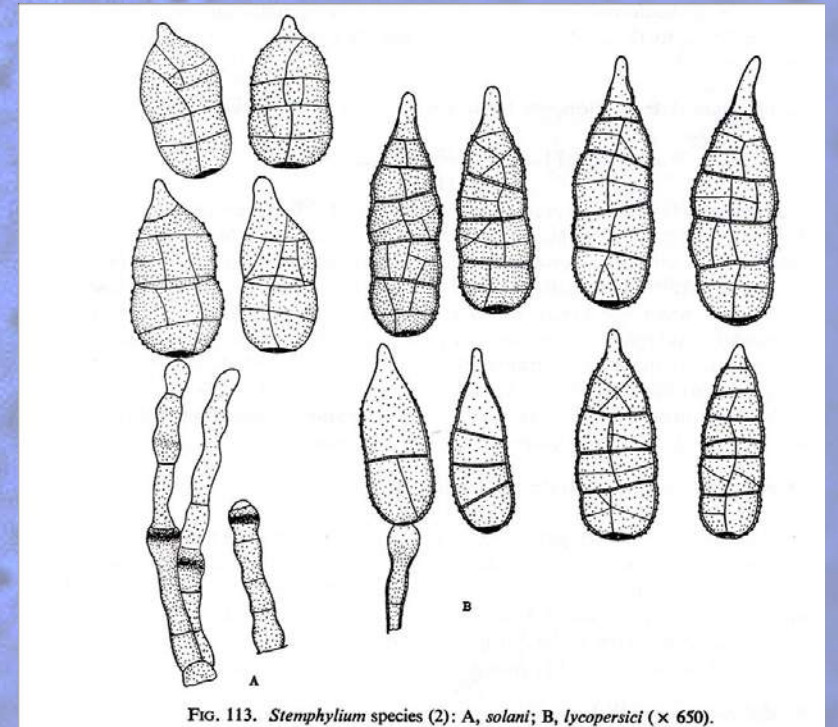
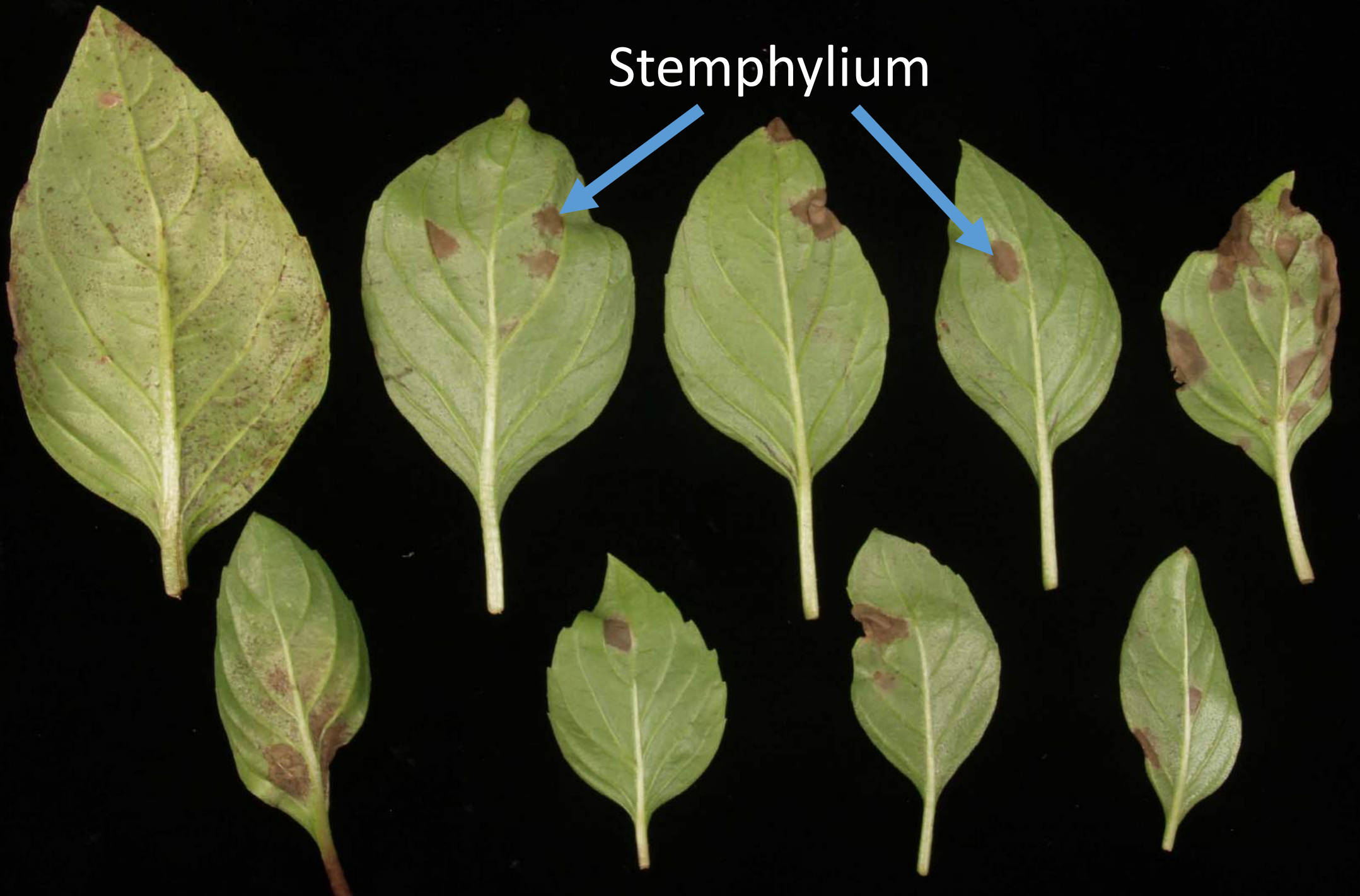


FIG. 113. *Stemphylium* species (2): A, *solani*; B, *lycopersici* ($\times 650$).

Stemphylium





2 weeks after inoculation

INOCULATED
CONTROL



3 days in
Refrigerator

INOCULATED

CONTROL



Fungicides for *Stemphylium* Control

- Actinovate (*Streptomyces lydicus*) OMRI
- Camelot O (Copper octanoate) OMIR
- Double Nickel (*Bacillus amyloliquefaciens*) OMRI
- Revus (Mandipropamid)
- None of the tested products gave good control
- Repeat trial
- Test more fungicides

Basil Greenhouse Test

Fungicides for Downy Mildew Control

- Actinovate (*Streptomyces lydicus*) OMRI
- Camelot O (Copper octanoate) OMIR
- Double Nickel (*Bacillus amyloliquefaciens*) OMRI
- Revus (Mandipropamid)

Compound	1-26-16	2-2-16	2-9-16	2-16-16
Actinovate	Actinovate	Inoculate w/DM	Read	Read
Camelot	Camelot	Inoculate w/DM	Read	Read
Revus	Revus	Inoculate w/DM	Read	Read
Double Nickle	Double Nickle	Inoculate w/DM	Read	Read
Inoc. Control	Water	Inoculate w/DM	Read	Read
H₂O Control	Water	Water	Read	Read



7 Days Post Inoculation



Actinovate



Camelot O



Double Nickel



Revus



Inoc Control



Control Water

14 Days Post Inoculation



Actinovate



Camelot O



Double Nickel



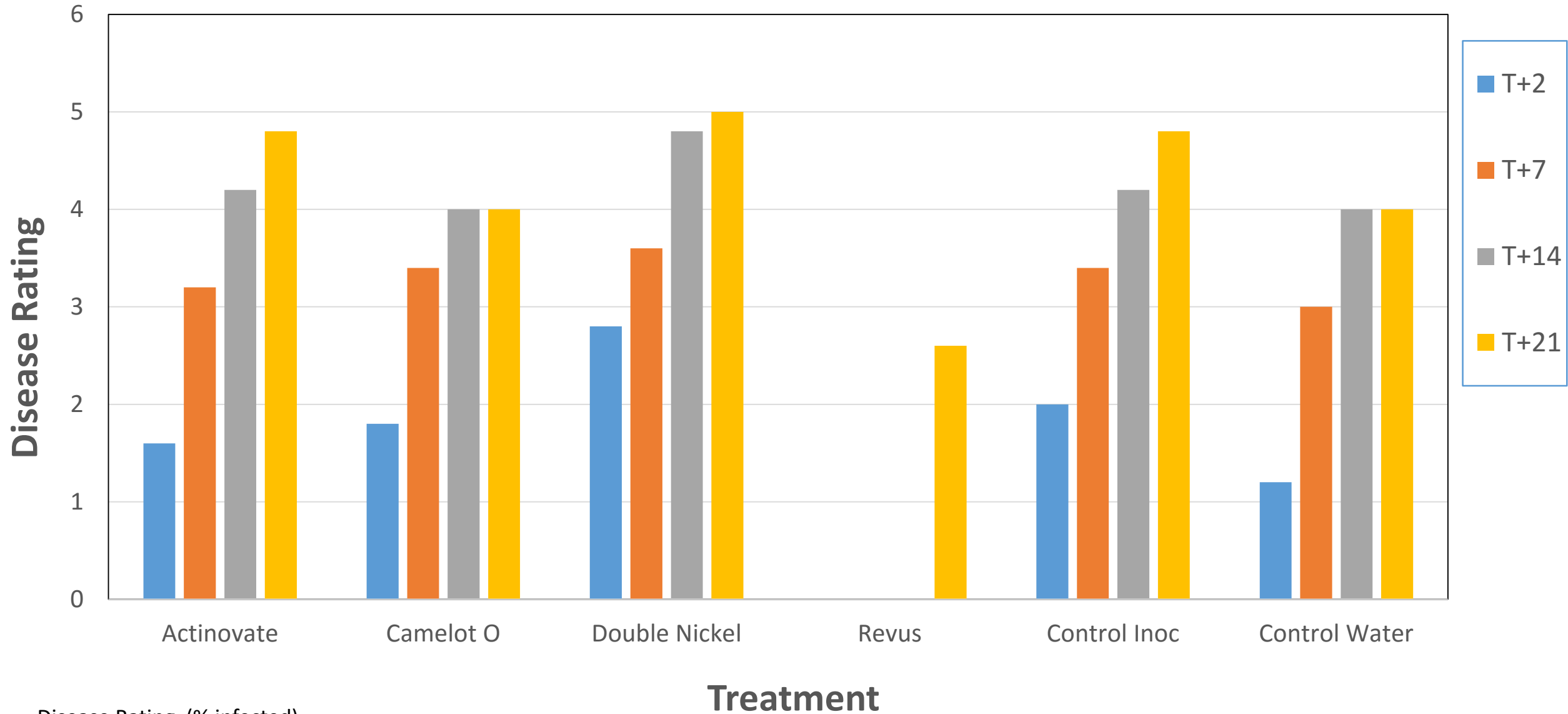
Revus



Inoc Control

Control Water

Basil Fungicide Efficacy Greenhouse Test#3



Disease Rating (% infected)

0 = 0%, 1 = 1-10%, 2 = 11-35%, 3 = 36-65%, 4 = 66-90%, 5 = 91-100%