

Species: ELEL

Temp range: 5-25°C

DayHr: 12

PI: Martyn

Project: SA Species

Planted: Aug 27 2025 @ 1730

Date 9/10/25

Start Time 13:05pm

Name MH

End Time 14:58 pm

SA Levels/Codes

Control = C

0.5mM =

L (low)

Water = W

1.0mM =

H (high)

1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14	
1	EW	IW	9C	7C	5C	SW	SW	9C	C	awow	9C	cc	%	w	9SC	%	w	9C	C	ow	9C	5C	5C	sw	sw	9C	cc	
1	sw	iw	9/SC	on	sw	5	5	sw	sw	9/SC	on	sw	9C	4C	sw	sw	5C	5C	sw	9SC	sw	9SC	sw	9C	9C	sw	9C	
2	OH	SH	SL	OL	OL	OH	OL	OH	OH	OL																		
2	OH	OH	SL	OL	OL	OH	2L	OH	2L	OL	OL	OH	1H	OL														
3	9	sw	sw	9/SC	9/SC	9	C	aw	9%	9/SC	4w	aw	2C	cc	9	sw	2w	cc	9	sw	9/SC	5C	5C	5C	sw	9/SC	9/SC	
3	on	sw	9/SC	2C	on	sw	5	sw	w	9/SC	gc	sw	9/SC															
4	3H	SL	2L	2L	OL	OL	OL	2H	2H	OL	9%	9	H	9	SL	OH	OL											
4	9/SH	9/SL	9/HL	9/HL	9/HL	9/SH	9/SL																					
5	ON	2W	9/SC	2C	2W	9/SC	9/SC	9	1	9/SC	cc	9	1	9/SC	9/SC	9	1	9/SC	9/SC	9	1	9/SC	9/SC	9/SC	9/SC	9/SC	9/SC	
5	9/SC																											
6	9/SH	9	9/HL																									
6	9/HL																											
7	4H	sw	9/SC	on	sw	9/SC	9/SC	9	C	ac	9C	9/SC																
7	sw	4C	9/SC	2C	sw	9/SC																						
8	OH	SH	OL	OL	OL	OL	OL	9/SH	9	L	OL																	
8	9/HL																											
9	ON	ac	4C	2W	9%	4L	7L	ON	9%	4C	5C	7/5W	7/5C	9/5C														
9	3W	2W	4C	2W	W	3C	C	ON	W	7/4C																		
10	7/4H	12L	9/HL																									
10	OH	3H	4L	C	2H	2L	2L	3H	3H	4L																		
11	4W	1W	2C	sw	b	2W	9/CC	9/4C																				
11	3W	3C	sw	sw	b/4C	3H	4C																					
12	OH	1L	3L	7H	5H	7L	7L	7H	2H	2L																		
12	OH	2H	1L	OL	b/4H	9/4L	OL	7H	OL	7L	OL																	
13	ON	1W	OC	2C	CN	2C	3C	2W	7L	3/4C	2W	ON	OC	C	ON	3W	5C	3C	ON	2W	9/2C	2C	2W	3W	OC	5C	5C	
13	1W	1W	1C	1C	2N	1C	3C	4W	4W	3/4C																		
14	OH	1H	1L	OL	LL	HH	2H	2L	OL	4H	4H	RL	RL	3H														
14	OH	1L	OL	3H	CH	CL	3L	JH	JH	2L	2L	3H	3H	3L	2L	3H	3H	3L										

Codes:

- 0 no radicle or coleoptile emergence
- 1 first instance of radicle emergence (must be used and can only use once)
- 2 radicle 1-5mm long
- 3 radicle 6-10mm
- 4 radicle 10-20mm
- 5 radicle >20mm

- 6 coleoptile emergence (must be used and can only use once)
- 7 coleoptile length 0-10mm
- 8 coleoptile length 10-20mm
- 9 coleoptile >20mm

Notes:

Species: ELEL

Temp range: 5-25oC

DayHr: 12

Date 1/19/28

SA Levels/Codes

Control =

Water =

0.5mM =

1.0mM =

L (low)

H (high)

Start Time

Planted: Aug 27 2025 @ 1730

Project: SA Species

Planted: Aug 27 2025 @ 1730

Codes:

- 0 no radicle or coleoptile emergence
 - 1 first instance of radicle emergence (**must be used and can only use once**)
 - 2 radicle 1-5mm long
 - 3 radicle 6-10mm
 - 4 radicle 10-20mm
 - 5 radicle >20mm

- 6 coleoptile emergence (**must be used and can only use once**)
 - 7 coleoptile length 0-10mm
 - 8 coleoptile length 10-20mm
 - 9 coleoptile >20mm

Species: ELEL

PI: Martyn

Temp range: 5-25°C

Project: SA Species

DayHr: 12

Planted: Aug 27 2025 @ 1730

Date 9/8/25
Name MH

SA Levels/Codes

Control =

C

0.5mM =

L (low)

Water =

W

1.0mM =

H (high)

Start Time 14:45 pmEnd Time 16:53 pm

1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14					
1	OL	OL	OL	OL	OL	%	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL					
1	H	2L	OH	2H	L	H	SL	OL	OH	2H	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL				
2	%C	2C	4W	DW	4	C	3W	3W	2C	OC	2W	OW	3C	95W	9	C	95W	95C														
2	YSC	95W	95W	95W	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C				
3	OL	OL	2H	OL	OL	%	2H	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL				
3	9/4L	8/5H	OL	L	9/4H	9/4L	9/4L	9/4L	H	9/4H	L	9/4L																				
4	YSC	95W	95W	95W	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C				
4	3C	OC	OW	95W	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C			
5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL				
5	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL			
6	9C	2C	ON	2W	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C			
6	3C	3C	3/4W	OC	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C			
7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL			
7	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL			
8	9/4C	95W	95W	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C			
8	2C	95C	95W	95W	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C			
9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL			
9	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL			
10	2C	3C	ON	3C	4C	2W	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C		
10	3C	4W	2W	3C	4C	2W	95W	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	
11	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL			
11	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL			
12	IC	IC	2W	ON	CC	4C	4W	OW	4C	95W	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C		
12	IC	AC	2W	3C	ON	4W	3C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	
13																																
13	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL			
14	OC	OC	ON	IC	2C	ON	4W	3C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	
14	OC	ON	OC	2C	1W	ON	3C	3W	4C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C	95C

Codes:

- 0 no radicle or coleoptile emergence
 1 first instance of radicle emergence (must be used and can only use once)
 2 radicle 1-5mm long
 3 radicle 6-10mm
 4 radicle 10-20mm
 5 radicle >20mm
 6 coleoptile emergence (must be used and can only use once)
 7 coleoptile length 0-10mm
 8 coleoptile length 10-20mm
 9 coleoptile >20mm



Notes:

Species: ELEL

PI: Martyn

Temp range: 5-25oC

Project: SA Species

DayHr: 12

Planted: Aug 27 2025 @ 1730

Date 8/7/25

Start Time 13:48

Name TBM

End Time 15:37

SA Levels/Codes

Control = C

Water = W

0.5mM = 1.0mM = H (high)

	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14
1	0H	7/4	2W	0W	9/5	0H	6/6	9/5	9/3	0H	2W	0W	9/5	0H	9/1-W	9/1-S	1/9-W	1/9-S	9/1-W	0H	0W	9/1-W	9/1-S	1/9-W	1/9-S	2W		
1	0H	2H	9/5	0W	9/4	0H	9/5	8/4	0H	2W	0W	0W	9/5	0W	9/4	2H	7/4-W	7/3-W	9/5-H	0W	0W	9/5	0W	9/5	0W			
2	9/5	0L	2C	0L	9/2	8/4-W	2W	2L	2L	9/5	0L	0L	9/2-L	9/2-L	9/2-L	9/2-L	9/1-C	9/1-L	6/2-C	9/5-C	0L	9/5	9/5-C	9/5-C	9/5-C	9/5-C		
2	2L	9/5	9/5	0L	15	0W	9/5	0L	9/5	0L	9/5	0L	15	9/5	15	9/5	15	9/5	15	9/5	15	9/5	9/5	2L	9/5	9/5	9/5	
3	2H	1H	8/5-W	0W	2H	8/5	9/5	9/5	2H	2W	9/5-W	9/5	0H	4V	0W	0H	9/5-W	2W	9/5-H	0H	0W	9/5-V	2H	7/4	0W	9/5-W		
3	7/4-H	0W	6/4	7/4	2H	0W	15	9/5	8/5	9/5	5/5-W	5/5	0W	9/5-H	9/5-W	0H	9/5-H	2W	0W	9/5-H	4W	15	0W	9/5-H	15			
4	7/4	0L	8/5-C	0L	8/1	7/4	6/5	0L	9/1	8/4	8/5	9/5	9/5	2L	0C	0L	0C	9/1-C	15	0L	9/5	7/3	9/1	0L	9/5-C			
4	7/4	7/4	0C	0L	15	8/5-C	7/3	15	6/2	8/4	9/5	2V	9/5-C	7/5	9/5	9/5	9/5	9/5	9/5	9/5	9/5	2L	0L	9/5	7/4	0C		
5	9/4	4H	0W	2W	6/3	0H	0W	7/4	2H	6/2	8/5	9/5	0H	9/5	7/5	0H	9/5	9/5	0W	0H	0W	2W	9/4	0H	8/4-W	0W		
5	6/4	2H	7/4-W	0W	4H	7/4-W	0W	8/2	9/2	6/4	9/5	9/5-H	0H	9/5-W	6/4	2H	0W	9/5	9/5-H	9/5-W	15	0H	9/5	0W				
6	8/2	2L	7/4-C	2L	7/5	0L	9/4	7/4	8/1	5/5	0C	2L	9/5	9/5-C	9/5-C	0L	9/1-C	0L	9/1-C	9/1-C	9/1-C	9/1-C	0L	9/1-C	9/1-C			
6	6/4	7/4	3C	8/5	8/5	0C	9/5	0	9/5	8/4	8/5	9/5	9/5	6/5-L	7/5	9/5	9/5	9/5	9/5	9/5	9/5	9/5	9/5	9/5	9/5	9/5	0C	
7	0H	9/4	3W	0W	2H	7/5-H	0W	9/2	9/5	8/1-W	7/2	18?	9/5-W	9/5	0H	7/5	2W	9/5	0H	9/5	0W	9/5	0H	7/5	0W	9/5		
7	6/4	3H	0W	2W	7/5	7/4	0W	0H	7/5	15	9/5	0H	7/5	0W	0H	9/5	0W	6/5	2W	15	9/5-H	14	1W					
8	0L	7/4	6/4-C	0V	7/1	C	8/5	7/4	2L	8/5	0L	2L	9/5	9/5-C	9/5-C	0L	9/1-C	0L	9/1-C	9/1-C	9/1-C	9/1-C	2L	7/4	7/4			
8	6/4	2V	2L	6/4	7/5	7/4	14	7/4	9/4	7/4	9/4	0C	8/4	7/4	2C	3C	7/4	9/5	0C	9/1	8/2	0L	15	9/1	9/1	7/5		
9	2H	4H	0W	6/3-H	7/4-H	2W	6/4-W	7/5-H	8/1-W	7/2	18?	9/5-W	9/5	0H	7/4	6/4-W	4W	0H	2H	7/4	0W	9/5-H	7/4	9/5	0H	7/5-W	9/1-W	
9	0H	3H	4W	2W	0H	2H	2W	14	6/4	0H	0W	7/4	7/4	9/5	9/5	0W	9/5	0H	2H	9/5	0H	9/5	0W	9/5	0H	0W		
10	2L	2L	3C	0L	7/4	2C	3C	7/5	4L	7/4	9/4	8/1-L	7/4	9/5	8/0-C	8/0-C	2L	2L	8/4-C	7/4	9/5-L	9/5-L	9/5-L	9/5-L	9/5-L	2C	2C	
10	4L	0L	2C	0L	14	2	7/5	4C	3C	2L	7/4	6/4-C	2L	7/4	6/4-C	2L	0C	0C	9/5	0L	8/5	7/3	0L	8/5	2	9/5		
11	OFF	2W	0W	1P	4H	W	0W	6/4	2H	3W	4W	0H	6/4	7/4	0W	2H	0H	6/4	9/5-W	7/5	0H	9/5	0W	0H	0W	9/5		
11	OFF	2W	3H	1H	0W	4W	9/4	0H	4W	3W	2A	2H	6/4-W	0W	7/2	0H	2W	15	8/4-W	7/5-W	7/5	2H	2W	9/5				
12	0L	2V	0C	3V	0C	3U	7/4	0L	3C	7/2	6/4	2C	7/5	6/5-L	9/5	0L	2L	2L	8/4-L	9/5	2L	0C	2C	0L	9/5-C			
12	0V	0C	2C	3V	0V	3C	0C	2L	2L	3C	6/4-S	7/5	2C	0C	0L	7/5	8/5-C	2L	0V	2C	7/4	9/5-L	9/5-C	8/5	9/5			
13	OFF	0W	1H	8/4	0V	J	2H	3H	0V	3W	4H	0H	2W	0W	7/2	2H	0W	7/4	0H	W	2W	8/4	7/3	1W	8/4-W			
13	OFF	0W	2H	8/4	0V	J	0H	3H	2W	4W	2H	9/3-H	4W	W	4	4H	7/5	2W	0H	7/4	0W	9/4	2H	2W	7/5-W			
14	0L	0C	2L	2L	0L	0C	10	2-L	2B	3C	2L	4L	0C	4C	2L	0L	4C	6/4	2L	7/4	2C	0-L	0C	9/5				
14	0O	0O	0V	0C	2C	DL	2L	2C	3D	4L	2L	4C	9/4	4L	4L	0C	9/5	0L	X	8/4	6/2	2L	0L	6/4-C				

Codes:

0 no radicle or coleoptile emergence

1 first instance of radicle emergence (must be used and can only use once)

2 radicle 1-5mm long

3 radicle 6-10mm

4 radicle 10-20mm

5 radicle >20mm

6 coleoptile emergence (must be used and can only use once)

7 coleoptile length 0-10mm

8 coleoptile length 10-20mm

9 coleoptile >20mm

Notes:

Species: ELEL

Temp range: 5-25oC

DayHr: 12

PI: Martyn

Project: SA Species

Planted: Aug 27 2025 @ 1730

Date 9-6-25

Name TBM

SA Levels/Codes

Control = C

0.5mM =

L (low)

Water = W

1.0mM =

H (high)

Start Time 1354

End Time 1600

	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14				
1	2W	0W	2C	81W	2W	71C	81C	2W	0W	9/5C	0C	9/5W	9C	9/2C	9/5W	9/5C	0W	9/5W	2C	9/5C	9/5W	2W	9/5C	0C								
1	8W	0W	9/4C	81C	0W	81C	0W	2W	9/5C	0W	0W	15	73C	73W	73W	15	0W	9/5C	0W	0W	0C	9/5C										
2	0H	64H	73D	0L	9/5H	0H	0L	81H	73H	0H	2L	12	74H	0H	0L	9/5H	9/2L	9/5H	0H	9/5L	9/5H	0L	9/5L									
2	0H	2W	2L	2L	71H	0H	0L	9/5H	0H	2W	9/5	0L	0H	9/5	9/5C	0L	9/4	2H	15	0L	81H	75	2L	9/5H	9/5L	2L						
3	71W	0W	74C	81C	9/4C	9/4W	9/5C	9/5C	2W	81W	9/5C	74C	4W	0W	2GOC	9/5W	1W	0C	9/5C	0W	9/5C	0W	9/5C	0C								
3	0W	3W	73C	0C	0W	81W	81C	81C	2L	74C	0W	9/5C	81W	9/5W	9/5C	0C	2W	0W	74C	9/5C	0W	9/5C	0C									
4	2H	0H	73L	0L	2H	0L	84H	81H	2H	0L	9H	9/5H	9/5H	9L	81H	0H	0H	0L	9/5H	0H	9/5H	0L	2H	73H	9L	0L						
4	6/4H	6/3L	6/4H	2H	0L	71L	5	73H	6/2	K	9/5H	15	2L	81H	9/5H	74H	9/5H	0H	9/5H	2L	0L	9/5H	15	74H								
5	0W	2W	9/3C	2C	0W	9/4W	74C	9/4C	8/5W	6/4C	0C	9/5W	9/4W	73C	9/5C	0W	9/5C	0W	2W	9/5C	81W	0W	0C	9/5C								
5	8/4W	2C	9/4V	0W	0C	81C	3W	6/2	9/3C	74C	81C	9/5C	81W	9/5W	8/5C	9/5C	0W	8/5C	9/5C	0W	9/5C	0W	9/5C	0C								
6	6/3H	4H	74L	2L	8/5H	0H	6/4L	0L	2H	74L	0H	2L	9L	0H	9/2L	0H	9/4H	0L	0H	0L	9/4H	0H	9/4L	0L								
6	2H	4L	6/4L	0W	3H	74H	6/4	74	8/5	8/5L	81L	81H	81H	2H	81L	9/5H	75	75H	2H	81L	9/5H	0L	15	0H	9/5L							
7	2W	0W	3C	0	1W	6/4C	71C	71W	0W	2C	74C	9/5W	9/3C	9/5C	74C	2W	8/5C	0W	9/5C	9/4C	9/5W	9/5C										
7	0W	2W	2C	3C	0W	0W	14	14	4	15	9/4C	0C	74W	0W	2C	3C	9/5C	0W	0C	8/5C	2W	8/5W	15	9/5C	6/3N	0W	9/5					
8	0H	3H	0L	6/4	2H	6/4H	0	L	6/4	9/4	7/4	0H	2L	9L	0H	9/2H	0L	9/4H	0L	0H	0L	9/4H	0H	2L	74H							
8	4H	2H	3L	2L	6/4	6/3	6/4L	0H	6/4	14	74L	9/5H	0H	74L	81L	0H	74L	81L	0H	74L	9/5H	6/4	0L	9/5H	9/4L							
9	3W	0W	2C	1W	3W	2C	0	1W	9/4C	3W	0W	9/4C	3W	0W	74C	6/4C	6/4W	0W	74C	6/4C	6/3W	9/2W	9/4C	9/5W	9/5C	1L						
9	3W	2W	2C	1C	1W	4W	2C	0	1W	9/4C	4C	2C	8/5W	0W	3C	4C	8/5W	0C	0C	8/5W	0W	74C	6/3C	8W	15	75	9/5C					
10	2H	3H	1L	2L	3H	6/4H	0W	4L	9/5	6/4	4L	8/5H	74L	81L	0H	2H	0L	2L	9/5H	84H	9/5	0H	0H	0L	9/4H							
10	0H	2H	2L	0L	0H	1H	0L	14	4H	0H	74L	6/4C	0H	74L	81L	1L	9/3L	81H	2H	2L	8/5H	6/4H	9/5L	0L	9/5H	0L	14					
11	W	0W	0C	3W	0W	0C	2L	2W	4W	2	C	6/4	1W	2C	6/4C	2W	81W	81C	3C	8W	81C	0C	1C	0W	8/5C	8/1C						
11	1W	0C	1C	0W	2W	2C	3W	2W	2C	4C	4W	0W	2C	0C	W	1S	74C	0C	14	9/5W	2C	2W	8/5W	3C	4C							
12	0H	0K	0L	2L	0H	3H	2L	2H	6/4L	0L	0H	6/4	74	81L	2A	0H	1+6/4	7/2L	74L	6/3H	6/4L	2L	0H	0L	0L							
12	0H	0L	2L	0H	1+	1H	0L	1	L	0H	1+	4	9/3	6/4H	0H	0L	(5	75H	2H	1L	0L	6/2H	2A	73L	84L							
13	0W	0C	1C	0W	0C	0W	0C	2W	2C	2C	2W	0W	0C	3C	0W	0C	3C	4C	0W	2W	71C	2C	0W	4W	0C	8/4C						
13	0C	0C	0C	1C	1W	2W	2C	3W	2W	2C	8/4C	9/5W	2W	0C	9/3C	9/4W	0W	14	6/2C	2W	8/4W	3C										
14	0H	0L	0L	1H	0H	1L	0L	2H	2L	3H	0H	0L	3L	6/1	2H	2W	0D	0H	2L	3L	0H	2L	3L	0H	0L	0L	0L	0L	0L			
14	0H	0L	2H	0H	0L	0H	2H	0L	2L	2H	3L	2L	2L	4H	3L	3L	3L	0H	2L	X	9/4T	2H	1L	0L	0L	0L	0L	0L	0L	0L		

Codes:

- 0 no radicle or coleoptile emergence
- 1 first instance of radicle emergence (must be used and can only use once)
- 2 radicle 1-5mm long
- 3 radicle 6-10mm
- 4 radicle 10-20mm
- 5 radicle >20mm

- 6 coleoptile emergence (must be used and can only use once)
- 7 coleoptile length 0-10mm
- 8 coleoptile length 10-20mm
- 9 coleoptile >20mm

Notes:

8/8/5
4/4 9/4

Species: ELEL

PI: Martyn

Temp range: 5-25oC

Project: SA Species

DayHr: 12

Planted: Aug 27 2025 @ 1730

Date 9/5/25

SA Levels/Codes

Name MH

Control = C

0.5mM =

L (low)

Water = W

1.0mM =

H (high)

Start Time 12:07 pm

End Time 14:33 pm

	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14	
1	2C	8C	3L	OL	3C	5C	OL	4L	9	OC	2L	OL	2C	2C	OL	9C	5L	2L	2C	9L	3C	OC	OL	5L	SL	SL			
1	8C	9C	2L	1L	8C	3C	OL	4L	8C	9C	5L	OL	8C	3C	5L	OL	5L	5L	OL	9SC	5L	5C	5L	OL	5L	SL	OL		
2	2W	OW	OH	2H	5W	1W	4H	OH	2W	ON	3H	OH	9SW	3H	OH	9SW	9SH	OW	9SW	5H	OH	5W	5H	2H	5W	2H	5H	2H	
2	5W	ON	OH	2H	1W	OW	3H	OH	ON	2W	OH	2H	OW	OH	4H	7W	2H	2H	2H	2H	ON	8H	2H	OW	9SH	2H	5H	2H	
3	4C	EC	3L	OL	3C	5C	OL	4L	9C	3C	OL	5L	2C	OC	85L	OC	OL	9C	2C	5L	OL	9SC	9L	a	5L	OL			
3	5C	OC	2L	3L	4C	OL	3L	AC	2C	2L	4L	9C	5L	2L	2C	OC	5L	5C	2L	OL	OC	5L	5L	OL	5L	5L	OL		
4	4W	OW	2H	OH	5W	2H	2W	5W	4H	2H	4W	CW	5H	5W	ON	OH	OH	OW	5W	5H	OH	OW	9K	2H	5W	2H			
4	CW	2W	3H	ON	5W	3H	2H	8W	7W	3H	5H	ON	ON	5H	5W	4H	5H	5W	5H	2W	ON	5H	5H	CW	W	9SH	2H		
5	2C	5L	2L	9%	3C	3L	OL	3C	3L	OL	3L	5C	5C	OL	9SC	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL		
5	2L	2L	3L	OC	5C	4L	3C	5C	2L	5L	5C	5C	5L	5L	5C	5L	5L	5C	5C	5L	5L	5C	5L	5L	5L	5L	5L		
6	OW	2W	3H	ON	3W	4H	OH	5W	5W	2H	8W	4W	OH	5W	ON	OH	5H	ON	2W	OH	5W	5W	9S	5H	OH	5W	9S	5H	
6	3W	2H	3W	ON	OH	3A	2W	5W	3H	2H	9SW	5H	2H	4W	7W	4H	8H	2H	9SW	9SH	5H	9W	CW	H	9SH	5H	9W		
7	9C	OL	3L	3L	9C	OL	2C	9%	4L	3L	5C	5C	5L	5L	5C	5L	5L	9SC	5L	5L	5C	5L	5L	5L	5L	5L	5L		
7	2C	2L	3L	13	4L	3C	OC	5L	9%	2C	2C	5L	2L	OL	PC	5L	5L	5C	5L	5L	5C	5L	5L	5L	5L	5L	5L	5L	
8	2W	OW	OH	2H	5C	2H	3H	5W	5W	3H	5H	5W	8W	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	5H	
8	CW	2W	3H	2H	ON	4H	2H	3H	NOH	4H	5W	OW	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	
9	1C	OL	1L	1C	2C	OL	3L	3C	4L	3L	4C	4C	5L	5L	5C	5L	5L	3L	5L	5L	5C	5L	5L	5L	5L	5L	5L	5L	
9	2C	OC	2L	OL	1C	2C	OL	3L	4C	2C	5L	3L	3C	4C	OL	3L	OC	2L	2L	5C	5L	5L	5C	5L	5L	5L	5L	5L	
10	OW	2H	OW	2W	2H	3H	3W	5W	3H	5H	5W	8W	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	
10	2W	OH	2H	OW	2W	OH	ON	3W	4H	OH	5W	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	5H	5W	5H	
11	OL	OL	1L	OC	1C	2L	1L	1C	2C	3L	CC	2C	3C	5C	6L	4L	5C	2C	3L	5L	5L	5C	5L	5L	5L	5L	5L	5L	
11	OL	OL	2C	1C	2L	OL	2C	OL	2C	OC	6L	4L	3L	5L	5L	5C	5L	5L	5C	5L	5L	5C	5L	5L	5L	5L	5L	5L	
12	ON	ON	2W	ON	OH	2H	1W	2W	2H	2H	4W	OW	OH	3H	2W	5W	2H	OH	5W	5W	5H	2H	5W	5H	5W	5H	5W	5H	
12	ON	ON	2W	2W	1W	2H	1W	2W	1W	2H	OH	3W	ON	OH	3W	5H	5W	3W	5H	5W	5H	2H	2W	5W	5H	2H	2W	5H	
13	OC	OL	OC	OL	2L	2C	1C	2L	OL	2C	2C	2C	2L	2L	2C	2C	2L	2L	2C	2C	2L	2L	2C	2C	2L	2L	2C	2L	
13	OC	OL	OC	OL	2L	2C	1C	2L	OL	2L	2C	3C	2L	2L	2C	3L	2L	3C	2C	OL	X	2C	OL	OL	OL	OL	OL	OL	OL
14	OW	OH	ON	ON	OH	ON	2W	1H	2H	2W	ON	2H	OH	ON	3W	3H	3W	3H	3W	3H	3W	3H	3W	3H	3W	3H	3W	3H	3W
14	OW	OH	ON	ON	OH	CM	QW	OH	2H	2W	1W	2H	2H	3W	2W	3H	2H	3W	3H	2H	3W	3H	2H	3W	3H	2H	3W	3H	2H

Codes:

0 no radicle or coleoptile emergence

1 first instance of radicle emergence (must be used and can only use once)

2 radicle 1-5mm long

3 radicle 6-10mm

4 radicle 10-20mm

5 radicle >20mm

6 coleoptile emergence (must be used and can only use once)

7 coleoptile length 0-10mm

8 coleoptile length 10-20mm

9 coleoptile >20mm

Notes:

Species: ELEL

Temp range: 5-25oC

DayHr: 12

Date 9/4/28

Name TEM

PI: Martyn

Project: SA Species

Planted: Aug 27 2025 @ 1730

	SA Levels/Codes														Start Time	13:02																	
	Control = C		0.5mM = L (low)		0.5mM = H (high)		Water = W		End Time		16:02																						
	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14					
1	9/3	OL	OH	2H	OL	9/3	6/4	OH	2L	OL	9/3	OL	O	L	6/2	OH	9/1	2L	9/5	H	9/1	L	9/5	H	9/6	7/6	H						
1	2L	OL	OH	1H	OL	7H	9/2	OH	9/2	OL	8L	OL	2H	9/2	OL	OH	7/4	H	15	OL	7/4	2H	9/5	6/4	9/5	9/5	9/5	9/5	9/5				
2	2L	C	W	OW	2C	9/3	C	6/4	W	9/3	C	OC	2W	9/3	C	2L	9/2	8/4	W	9/1	C	9/1	W	2C	9/5	0V	9/5	0C	9/5	2W			
2	2C	6/3	C	6/4	W	9/3	C	9/2	W	9/3	C	OW	2W	9/4	C	OL	2W	9/4	C	OL	7/4	7H	9/5	C	O	W	9/5	0C	9/5	0W			
3	9/2	L	OL	2H	OH	2H	OL	9/4	2L	9/4	OL	9/4	H	2L	7/4	2L	9/5	H	6/4	OL	9/5	H	OL	9/4	OL	2H	9/2	H					
3	2L	2H	3H	2H	OL	9/3	2L	9/4	6/4	2L	9/4	8/4	2L	7H	H	6/2	L	9/5	6/4	9/1	it	2L	0	4	OH	9/3	9/5	7/6	9/5	H			
4	3C	b/3	C	b/4	W	W	3C	9/3	C	b/3	W	8/4	2C	3C	2W	b/3	W	4W	0W	2C	OC	OC	9/4	9/5	8/4	W	9/3	0W	9/4	9/5	W		
4	a/2	DC	bw	2W	9/3	C	9/4	G	OW	b/3	W	3C	b/3	6/4	9/4	W	O	W	7/4	C	9/5	O	9/2	W	9/5	b/3	9/4	9/5	2W	0W	0C	9/5	0W
5	9/4	L	2L	2H	3L	OL	6/4	H	3C	OC	2H	1H	2L	5L	O	H	OL	OL	0H	OH	9/5	OL	9/4	H	OH	9/5	OL	9/4	H	OH			
5	2L	2L	2H	3L	OL	3H	2C	3C	b/4	7/4	9/2	6/4	2L	b/4	1H	2L	6/3	2L	9/4	H	0L	8/4	5	3/4	5	7/5	0H	9/5	8/4	H			
6	2C	0W	1W	3C	0W	2W	9/4	9/3	2L	9/4	W	6/4	3W	9/4	C	2C	8/5	3W	9/4	C	9/5	9/2	0W	8/4	C	0C	9/5	9/4	9/5	0W			
6	1C	2C	2W	2W	DC	9/4	C	2W	9/4	W	9/4	1H	2W	9/4	C	6/4	W	9/4	W	7/4	C	9/5	0W	2C	b/3	9/4	W	9/4	DC	9/5	0W		
7	OL	3L	0H	1H	OL	1H	3H	4L	3L	3H	O	L	OL	0H	6/2	3L	6H	0H	7/4	6L	9/5	H	2L	9/4	H	0H	9/5	OL	9/4	H	OH		
7	2L	3H	2H	4L	3L	3H	2H	3V	2L	0H	3H	b/4	2L	8/4	H	0H	6/2	9/4	2L	OL	8/4	5	3/4	5	7/5	0H	9/5	8/4	H				
8	1C	2L	2W	2W	3L	0W	2C	3C	4W	6/4	W	3C	b/4	9/2	W	8/5	3L	9/4	W	9/5	3L	0W	9/4	W	9/5	C	3W	8/4	W				
8	1C	2L	0W	2W	3L	0W	2C	3C	3W	0W	OC	9/4	W	7/4	W	0W	6/4	9/4	2W	b/4	9/3	9/5	2W	0W	0C	9/5	0W	9/5	W				
9	OL	1H	2H	OL	3L	2H	3H	4L	3L	4H	3L	1H	b/4	2L	6/4	OL	9/4	6L	9/5	H	6/4	H	OL	8/4	0H	0H	9/5	OL	9/4	H	OH		
9	1L	0L	0H	1H	0L	3L	0H	9/4	3L	4H	0H	0L	0L	3L	3H	9/4	2L	2L	6/4	2H	9/5	L	6/4	H	2L	9/5	2L	9/5	H	9/5	H		
10	0C	0W	0W	0C	2C	0W	2W	3C	0W	4W	4C	3L	3W	2W	3C	4C	3W	0W	6/4	C	IN	6/4	V	9/5	2C	b/4	9/5	W					
10	1C	0C	1W	1W	0C	2C	0W	2W	4C	2C	0W	3W	2L	4C	7H	1W	DC	6/4	W	3C	9/4	W	0J	9/5	C	0W	9/5	W					
11	OL	1L	0L	0H	2L	3L	OL	2H	2L	2H	4L	OL	0H	3L	4L	2H	0H	9L	2L	3H	2H	2L	OL	0H	0H	0H	0H	0H	0H				
11	OL	OL	0H	0H	OL	OL	0H	9/4	3L	4H	0H	0L	3L	3H	0H	OL	6/4	H	2L	9/5	2L	2H	OL	8/4	8/4	H	0H	9/5	8/4	H			
12	OL	0W	0C	2W	0W	0C	IC	ON	2W	1C	2C	4W	0W	4C	2C	2W	4W	0C	3W	9/4	W	6/4	C	2C	0	W							
12	OL	0W	1C	2C	0W	1W	IC	2C	W	0W	1C	OC	3W	0W	3C	4C	0W	9/4	W	2C	b/3	3W	2C	2W	b/4	W							
13																																	
13	OL	0L	0H	1H	0L	1H	0L	0H	2L	2L	1H	0L	1H	2L	3L	2L	2H	3H	1H	0L	X	0H	OL	9/4	2H	2L	OL	2H	1H				
14	DC	5W	DC	5W	DC	5W	DC	5W	2C	3C	2W	0W	2C	2C	3V	2W	3L	2C	3W	2W	2C	3W	0W	DC	9/3	C	0W	3W					
14	DC	5W	DC	5W	DC	5W	DC	5W	2C	3C	2W	0W	2C	2C	3V	2W	3L	2C	3W	2W	2C	3W	0W	DC	9/3	C	0W	3W					

Codes:

- 0 no radicle or coleoptile emergence
 1 first instance of radicle emergence (**must be used and can only use once**)
 2 radicle 1-5mm long
 3 radicle 6-10mm
 4 radicle 10-20mm
 5 radicle >20mm

- 6 coleoptile emergence (**must be used and can only use once**)
 7 coleoptile length 0-10mm
 8 coleoptile length 10-20mm
 9 coleoptile >20mm

Notes:

dead

Species: ELEL

PI: Martyn

Temp range: 5-25°C

Project: SA Species

DayHr: 12

Planted: Aug 27 2025 @ 1730

Date 9/3/25Start Time 13:20pmName MHEnd Time 15:40 pm

SA Levels/Codes

Control = C

0.5mM =

L (low)

Water = W

1.0mM =

H (high)

	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14			
1	OH	OH	OW	OH	OH	2W	CW	2H	OH	8W	CW	1H	OH	SW	LW	7/4	1H	7/4	W	OH	OH	OW	W	3/2	H	2H	SW	2W			
1	OH	2W	CW	1H	OH	W	OH	W	OH	2H	OW	2W	OH	10/2H	OH	7/4	1H	7/4	W	3H	4H	OW	W	3H	4H	2W	CW				
2	2L	OL	2C	OL	2L	2C	OL	OL	2C	OC	OL	OL	2C	2C	2C	2C	2L	2C	2C	2L	2C	2L	2C	2C	2L	2C	2C	2C			
2	2L	OL	2C	2L	2C	2L	2C	2L	2C	2C	2L	2C	2L	2C	2C	2C	2L	2C	2C	2L	2C	2L	2C	2C	2L	2C	2C	2C			
3	2H	OH	2W	CW	2H	2A	2W	3W	2H	1W	3W	2H	2H	3W	CW	OH	OH	7/4	W	W	W	W	W	W	W	W	W	W	W		
3	2H	1H	2W	2W	2A	2W	3W	2W	3H	2W	2W	9/3H	W	OH	2H	2W	2W	OH	7/4	2W	2W	W	W	W	W	W	W	W	W		
4	2C	2C	OL	2L	2C	OL	9/3H	1C	2C	2C	2L	2C	2C	2C	2C	2C	OL	CC	9/3L	OL	2C	2C	2C	2L	2C	2C	2C	2C	2C		
4	2L	2C	OC	2L	2C	2C	1L	5L	2C	5L	2L	6/2C	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2C	2C	2L	2C	2C			
5	OH	2H	OW	CW	3H	OH	CW	2W	2H	OH	2W	3W	OH	9/3V	SW	OH	7/4	1H	1W	6/2H	OH	7/4	W	W	W	W	W	W	W	W	
5	1H	1W	W	OH	2H	1W	CW	2H	1H	9/3H	W	3W	2H	3H	OH	OW	2W	2W	9/3H	7/3H	6/4W	W	W	W	W	W	W	W	W		
6	2L	1C	2L	2L	2C	3L	2L	CC	2L	9/3L	2C	2C	OL	9/3C	9/3C	9/3C	2L	2C	2C	2L	2C	2C	2C	2C	2C	2C	2C	2C			
6	IL	2L	OC	IC	2L	2C	9/3C	2L	2L	2L	2C	2C	3L	2C	3C	2L	9/3C	9/3L	2C	2L	2C	2L	2C	2C	2C	2C	2C	2C	2C		
7	OH	1W	OW	OH	2H	OW	8H	3W	OH	10/3V	9/3W	1H	OH	2W	2W	7/4	1H	9/4H	9/4W	OH	9/4H	9/4W	W	W	W	W	W	W	W	W	
7	8H	OW	2W	W	1H	1H	OH	1H	8W	6/2H	OH	1W	9/3W	OH	1W	9/3W	OH	7/4	2W	2W	7/4	7/3H	2W	OW	W	W	W	W	W	W	
8	OL	2L	OC	IC	OL	2C	3L	2L	2L	2L	2C	2C	OL	AC	3C	2L	2L	3L	2C	3L	2C	2L	3L	2C	9/3C	9/3C	9/3C	9/3C	9/3C		
8	IL	2L	CC	2C	2L	1C	2C	2L	1L	2C	CC	3L	2L	2C	2C	2L	3L	2C	3C	2L	2C	3C	2L	2C	9/3C	9/3C	9/3C	9/3C	9/3C		
9	OH	1H	OW	1H	2H	OW	W	2H	CW	2W	3H	2H	2H	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W		
9	OH	OW	OH	OW	2W	2H	2H	OW	1W	2H	3H	9/3W	OW	3H	2H	OW	3W	3H	2H	3W	OW	6/2H	OH	OW	9/3W	9/3W	9/3W	9/3W	9/3W		
10	OL	OC	OL	2L	OC	2C	1L	2C	2L	3L	2L	2C	OL	2L	2L	2C	OL	2L	2C	3L	9/4C	3C	3C	OL	9/4C	3C	3C	2C	2C		
10	OL	OC	OL	2L	OC	2C	2L	1L	3C	2L	OL	2L	2C	1L	2L	2C	OL	2L	2C	1L	2L	2C	OL	9/4L	3C	3C	2C	2C			
11	OH	OW	OH	1H	1W	2H	CW	1W	3H	2H	2H	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W		
11	OH	OH	OH	OW	1H	1H	OW	OW	1W	2H	3H	9/3W	OW	3H	2H	OW	3W	3H	2H	2W	2W	2W	2W	2W	2W	2W	2W	2W	2W		
12	OL	OC	OL	OC	2L	OC	2L	OC	2L	9/3C	2L	2C	2L	2C	2C	2C	2L	2C	2C	2L	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	
12	OL	OC	OL	OC	2L	OC	2L	IL	OC	2L	2L	2C	OL	2L	2C	2C	OL	2L	2C	2C	OL	2C	2L	2C	2C	2C	2C	2C	2C	2C	2C
13	OH	ON	OH	CW	OH	1H	OW	2W	2H	OH	2W	OW	2H	2H	2W	2W	2W	2W	2W	2W	2W	2W	2W								
13	OH	ON	OH	CW	OH	2H	OW	ON	OH	2H	2W	CW	W	OH	2H	2W	2W	2W	2W	2W	2W	2W	2W	2W							
14	OL	OC	OL	OC	OL	OC	OL	OC	OL	OC	OC	2C	1L	2C	2L	2C	2C	OL	2C	2L	2C	OL	2C	2C	OL	2C	2C	OL	2C	2C	
14	OL	OC	OL	OC	OL	OC	OL	OC	OL	OC	OC	2C	1L	2C	2L	2C	2C	OL	2C	2L	2C	OL	2C	2C	OL	2C	2C	OL	2C	2C	

Codes:

0 no radicle or coleoptile emergence

6 coleoptile emergence (must be used and can only use once)

1 first instance of radicle emergence (must be used and can only use once)

7 coleoptile length 0-10mm

2 radicle 1-5mm long

8 coleoptile length 10-20mm

3 radicle 6-10mm

9 coleoptile >20mm

4 radicle 10-20mm

Notes:

Species: ELEL

Temp range: 5-25oC

DayHr: 12

PI: Martyn

Project: SA Species

Planted: Aug 27 2025 @ 1730

Date 9/2/25Name M4

SA Levels/Codes

Control = C

0.5mM =

L (low)

Water = W

1.0mM =

H (high)

Start Time 13:45 pmEnd Time 15:15 pm

	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14		
1	OW	ON	2C	2W	ON	QC	2W	ON	OC	2C	2W	ON	6W	3W	3C	2C	ON	5W	2C	3C	2C	2W	2W	4C	OC	OC				
1	2W	ON	QC	2W	ON	QC	2W	ON	2W	3C	2C	ON	2C	3W	3C	2C	ON	2C	3C	2C	2W	ON	2C	3C	2C	3C	2C			
2	CH	2H	IL	OL	IH	OH	IL	OL	2L	1H	O-	O-	6/3	H	3L	2L	7/3	H	3L	2L	6/3	H	3L	2L	6/3	H	3L	2L		
2	CH	OH	2L	CL	OH	O-	2L	CH	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L		
3	2W	W	2C	W	2W	2W	2W	2W	2W	2C	2C	2W	2W	2C	2C	2C	2C	2W	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C		
3	ON	2W	2C	OC	ON	W	2W	2W	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	
4	2H	OH	2L	OL	1H	2H	OL	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	
4	2H	OH	2L	2L	2H	1H	CL	IL	2H	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	
5	2W	ON			ON	2W	2C		1C	OC	3W	2W	2C	2W	3C	2C	2W	2W	2C	2C	2W	2W	2C	2C	2C	2C	2C	2C	2C	
5	ON	OC	ON	OC	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C									
6	OH	2H	2L	2H	OH	2L	2L	2H	OH	2L	OH		OH	7/3	H	OL	OH	CH	OL	6/4	H	2L	2L	2L	2L	2L	2L	2L	2L	2L
6	OH	OL	2L	CH	1H	IL	2L	1H	2H	2L	IL	2H	2L	2L	2L	2L	2H	OH	2L	3H	3H	6/4	OL	2L	2L	2L	2L	2L		
7	ON	OC			2C	1C	2W	2C	1C	2W	2C	2C	2W	2C	2C	2C	2W	2C	2C	2C	2C	2W	2C	2C	2C	2C	2C	2C	2C	
7	ON	2W	OC	2C	ON	OC	2C	1W	2W	1C	OC	1W	2C	1C	3W	2C	2C	2C	2W	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	
8	CH	OL	2L	CH	1H	IL	2L	1H	2H	2L	IL	2H	2L	2L	2L	2L	2H	OH	2L	3H	3H	6/4	OL	2L	2L	2L	2L	2L		
8	2H	1H	OL	2L	1H	CH	2L	OH	IL	OL	2H	OH	2L	2L	2L	2L	2H	OH	2L	3H	4H	2L	OL	5/4	2H	2L	2L	2L		
9	ON	OC	ON	OC	ON	OC	1C	2W	2C	2W	1C	2C	2W	2C	2C	2C	2W	2C	2C	2C	2W	3C	3C	2W	4W	2C				
9	ON	OC	ON	OC	2W	OC	2C	1C	ON	2C	1C	2W	2C	2C	2C	2C	2W	2C	2C	2C	2W	2C	1C	2W	2C	2C	2C	2C	2C	
10	OH	OL	OH	2H	OL	2L	1H	1H	OL	2H	1H	2L	2L	2L	2L	2L	2H	2H	OL	2L	2L	2L	2L	2L	2L	2L	2L	2L		
10	OH	OL	OH	2H	OL	2L	2L	2A	1H	2H	OL	2H	1H	2L	2L	2L	2H	1H	OL	2L	2L	2H	2L	2L	2L	2L	2L	2L	2L	
11	ON	OC	ON	OC	ON	OC	2W	ON	OC	2W	2W	1C	2C	2W	2C	2C	2W	2C	2C	2C	2W	2C	2C	2C	2C	2C	2C	2C	2C	
11	ON	OC	ON	OC	ON	OC	1C	2C	ON	OC	2C	2W	3W	OC	2C	2C	2C	2W	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	
12	ON	OL	ON	OL	2H	2L	CL		2L	1L	2H	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	
12	ON	OL	ON	OL	2H	2L	CL	OL	2L	OL	2H	CH	2L	2L	2L	2L	2H	OL	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	2L	
13	ON	OC	ON	OC	ON	OC	2W	2W	OC	2W	ON	OC	2C	2W	2C	2C	2W	2C	2C	2C	2W	2C	1C	2W	2C	2C	2C	2C	2C	
13	ON	OC	ON	OC	ON	OC	1C	CC	1W	ON	2C	1C	2C	1C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	2C	
14	OH	OL	OH	OL	OH	CH	2H	OL	1H	OL	OL	1H	2H	OL	1H	2H	OL	OL	CH	OT	2L	1L	2H	OT	OL	OL	OL	OL	OL	
14	OH	OL	OH	OL	OH	CH	2H	OL	OL	2H	OL	2H	OL	2H	OL	2H	OL	OL	CH	OT	2L	1L	2H	OT	OL	OL	OL	OL	OL	

Codes:

0 no radicle or coleoptile emergence

1 first instance of radicle emergence (must be used and can only use once)

2 radicle 1-5mm long

3 radicle 6-10mm

4 radicle 10-20mm

5 radicle >20mm

6 coleoptile emergence (must be used and can only use once)

7 coleoptile length 0-10mm

8 coleoptile length 10-20mm

9 coleoptile >20mm

Notes:

Species: ELEL
Temp range: 5-25oC

PI: Martyn

DayHr: 12

Project: SA Species

Planted: Aug 27 2025 @ 1730

Date 8/14/25
Name TOM

SA Levels/Codes

Control = C
Water = W

0.5mM = L (low)
1.0mM = H (high)

Start Time 1402
End Time 0538

	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14										
1	1C	OL	2C	02	22	2C	1C	1	L	2C	1C	OL	2C	02	93	2L	C	84	63L	63C	0C	OL	2L															
1	2C	1C	1L	DL	2C		02	1L	2C	92	2L	OL	2C	02	93	3L	OL	94	74L	3L	93L	0C	2C	64L	2L													
2	0W	0H	2H	2W	0W	0+	2W	0W	0H	7W	2W	0+	3W	2W	2H	0W	2W	82H	0H	2W	1W	2H																
2	1W	0W	0H	0W	0W	0+	0W	2W	0H	1K	0W	0H	2H	7W	2W	2H	0W	2H	62H	0W	3H	1H																
3	2C	2L	0L	2C	0L	2L	0C	1C	0L	2L	1C	0C	1L	2L	0L	2C	0L	63C	2C	2L	0L	2C	2L	0L														
3	10	0C	2L	1L	2C	1C	0	L	2C	0L	2L	2C	1L	2L	2C	0L	2L	3L	2C	0L	0L	0C	2L															
4	1W	2W	1H	0H	0W	2W	0H	2H	0W	2W	2	H	2W	0W	2H	0H	0W	2W	3H	0H	0W	2W	2H	1H														
4	0W	2W	1H	0H	0W	1W	2H	0H	2W	2	H	0W	1H	2H	2W	63W	2H	2W	0W	2H	3H	0W	63W	3H	74H													
5	0C	1L	2L	1C	2C	2L	0L	0C	1	L	1C	2L	3C	2C	0L	2C	0L	0L	64S	3L	0L	0C	64S	3L	0L													
5	0L	1L	0C	2C	0L	1L	1C	2C	2L	0L	1C	2C	1L	2L	2C	2L	3L	0L	0C	2L	64L																	
6	0W	0W	0H	1H	0W	1H	0H	1	W	1H	0H	3W	2W	0+	2W	0W	0H	2A	0W	1W	0H	3W	0W	2H	0H													
6	0W	0H	0H	0W	0H	0W	0H	2H	1H	2W	1	H	0W	2W	2H	0H	2W	2H	3H	2W	0W	63H	0H	0H														
7	0C	0C	0L	1L	1C	0C	0L	1C	0C	1L	0L	1C	2C	0L	2C	1L	2C	2L	3L	2L	3L	2L	3L															
7	0C	1C	0L	1L	0C	1C	1	L	0C	0	L	2C	0C	2L	0C	2C	2L	2C	3C	2L	0L	2C	3L	2L														
8	0W	0H			0W	0H	2W	0H	1H	1H	0H	2W	0H	2W	0H	2W	0W	3H	0H	0W	2W	2H	3W	0H														
8	0W	1W	1H	0H	0W	0H	0H	0W	2W	0H	0W	2H	0H	3W	0W	0H	2W	0H	2W	2H	4H	2W	0W	3H	2H													
9	0C	0L	0C	0L	0W	1L	0C	1C	0L	0C	1C	1L	0L	1C	0L	1L	2C	2L	3L	2L	3L	2L	3L															
9	0C	0L	0C	0L	0W	1L	0C	1C	0L	0C	1C	0L	0C	0L	0C	1L	2C	0C	2L	63L	2C	0L	3L															
10	0W	0H	0	W	0H	1H	0W	2W	0H	2H	1	H	2W	1W	2H	0H	2W	0H	1W	0H	2W	2H	3W	0H	0H													
10	0W	1W	1H	0H	0W	1H	0H	2W	0H	0W	0H	2H	1	H	2W	0H	2W	0H	1W	0H	2W	2H	3H	2W	0H	2H	0H											
11	0C	0L	0C	0L	0C	0L	0C	0L	0W	1L	0L	0C	1L	0L	1C	0L	1L	0C	1L	2L	2C	2L	0L															
11	0C	0L	0C	0L	0C	0L	0C	0L	0W	1L	0L	0C	1L	0L	1C	0L	1L	0C	1C	0L	2C	1C	2L															
12	0W	0H	0	W	0H	1H	0W	0H	1H	N	0W	0H	1H	0W	0H	1H	0W	2W	1H	0H	0W	2W	2H	0H	0H													
12	0W	0H	0	W	0H	1H	0W	0H	1H	0W	0H	0H	0W	0H	0H	0W	0H	0W	1H	0H	0W	0H	2W	0H	0H													
13	0C	0L	1C	0L	1C	0L	1L	0C	1L	0L	0L	0C	2C	0L	0L																							
13	0C	0L	0C	2C	1L	0L	2C	0C	0L	0L	0C	1C	0L	0L																								
14	0W	0H	0	W	0H	1H	0W	0H	1H	0W	0H	0H	0W	0H	0H	0W	0H	0W	1H	0H	0W	0H	2W	0H	0H													
14	0W	0H	0	W	0H	1H	0W	0H	1H	0W	0H	0H	0W	0H	0H	0W	0H	0W	1H	0H	0W	0H	0H	0H	0W	1W	2H	0H	0H									

Codes:

- 0 no radicle or coleoptile emergence
- 1 first instance of radicle emergence (**must be used and can only use once**)
- 2 radicle 1-5mm long
- 3 radicle 6-10mm
- 4 radicle 10-20mm
- 5 radicle >20mm

- 6 coleoptile emergence (**must be used and can only use once**)
- 7 coleoptile length 0-10mm
- 8 coleoptile length 10-20mm
- 9 coleoptile >20mm

Notes:

(2) 10
01 01

10
10

Species: ELEL

PI: Martyn

Temp range: 5-25°C

Project: SA Species

DayHr: 12

Planted: Aug 27 2025 @ 1730

Date 8/31/25scan

SA Levels/Codes

Name MAT

Control = C

0.5mM =

L (low)

Water = W

1.0mM =

H (high)

Start Time 13:50 pmEnd Time 15:10 pm

1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14				
1	OL	OH	H	CL	L	OL	OH	OL	OL	OH	2L	OL	OL	OH	2L	OL															
1	OL	OH	OH	CL	OH	2L	CL	OH	2L	OH	2H	OL	OL	OH	2H	OL															
2	OC			1C	2C	an	an	an	an	an	2C	CC	3W	an	2C	an															
2	CC	CC	OW	2C	SW	CH	2C	an	1W	2C	2C	an	2C	2C	3W	2C	3C	ON	CE	2C	an										
3	OL			OL	2L	OH	1H	OL	1L	2H	1H	OL	1L	1H	2H	OL															
3	OL																														
4	OC	OW	1C	OW	1W	OC	OW	an	CC	2W	CN	OC	2C	2W	OW	2C	OW	2C	OW	2C	OW	2C	AC	IC	OW	2C	AC	IC	OW		
4	CC	CC	an	1C	CC	ON	1C	IC	1W	1C	2C	CH	ON	1C	CC	2W	2C	IC	SW	1C	SW	1C	SW	CC	CM	2W	CC	CM	2W	CC	
5	CL	2L		2L	OL	OH	OL	OL	OL	OH	2L	2L		OL	OL	OH	2L	OL													
5	OL	OH	OL	OL	OL	IL	OL	OL	OL	CH	OL																				
6	OC	OW	OC	1C	OC	OW	OC	OC	2W	1C	2C	2C	2W	1C	2C	1W	1C	2C	1W	1C	2C										
6	OC	OW	OC	2C	OC	OH	2W	CC	2C	2C	2W	1C	2C	1W	1C	2C	1W	1C	2C												
7	OL	OH	OL																												
7	OL	OH	OL																												
8	OC	OW	OC	OW	OC	1W	2W	CC	2C	2W	1C	2C	2C	2W	1C	2C	1W	1C	2C	1W	1C	2C									
8	OC	OW	OC	OW	OC	1W	2W	CC	2C	2W	1C	2C	2C	2W	1C	2C	1W	1C	2C	1W	1C	2C									
9	OL	OH	OL	OH	OL	OL	OL	OL	OL	OL	2H	OH	OL																		
9	OL	OH	OL	OH	OL																										
10	OC	ON	OC	ON	OC	ON	ON	1W	1W	OC	2W	OW	OC	2W	OW	OC	2W	OW	2C												
10	OC	ON	OC	ON	OC	ON	ON	1W	1W	OC	1W	OW	OC	1W	OW	OC	1W	2C													
11	OL	OH	OL	OH	OL																										
11	OL	OH	OL	OH	OL																										
12	CC	ON	OC	ON	OC	OW	CC	ON	OC																						
12	CC	ON	OC	ON	OC	OW	CC	ON	OC																						
13	OL	OH	OL	OH	OL																										
13	OL	OH	OL	OH	OL																										
14	OC	ON	OC																												
14	OC	ON	OC																												

Codes:

- 0 no radicle or coleoptile emergence
- 1 first instance of radicle emergence (**must be used and can only use once**)
- 2 radicle 1-5mm long
- 3 radicle 6-10mm
- 4 radicle 10-20mm
- 5 radicle >20mm
- 6 coleoptile emergence (**must be used and can only use once**)
- 7 coleoptile length 0-10mm
- 8 coleoptile length 10-20mm
- 9 coleoptile >20mm

Notes:

Species: ELEL

Temp range: 5-25oC

DayHr: 12

PI: Martyn

Project: SA Species

Planted: Aug 27 2025 @ 1730

Date 8/30/25

Name TEM

SA Levels/Codes

Control =

C

0.5mM =

L (low)

Water =

W

1.0mM =

H (high)

Start Time 1605

End Time 1706

	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14					
1	OH	IH			OH	IH	OW	IH	OW	IH	IW	OW	IH	IW	OW	IH	IH	IW	OW	IH	IW	OW	IH	IW	OW	IH	IW						
1	OH	OW	OH		OH	OW	OW	OW	OH	OW	OW	OW	IH	IW	OW	IH	IH	IW	OW	IH	OW	IH	OW	IH	OW	IH	IW						
2	OL	OC	OL	OL	OL	IC	IC	OL	IC	OC	O	L	IC	OC	I	L	I	C	2L	I	L	I	C	OL	IC	OC							
2	IC	OC	OL	I	C	I	L	OL	I	C	I	L	OL	I	C	I	L	OL	IC	OL	I	L	I	C	I	2L	OC	I	C				
3	OH	OW			OH	OW	IH	IH	OW	IH	IW	OW	IH	IW	OW	IH	IH	IW	OW	IH	IH	IW	OW	IH	IH	OW	IW						
3	OW	IW	OH	OW			IH	IH	OW	IH	IW	OW	IH	IW	OW	IH	IH	IW	OW	IH	IH	IW	OW	IH	IH	IW	IW						
4	I	H	OL	I	L	OC	I	C	OL	I	L	OC	I	C	OL	I	C	I	C	I	2L	OL	I	C	I	C	OL	I	C	OC			
4	I	L	OR	I	C	OC	O	V	I	C	OC	O	V	I	L	OC	I	C	I	L	DC	I	2L	OL	I	C	I	C	I	2L	OC	I	C
5	OH	OW	OH	OW	OH	OW	IH	IH	OW	IH	IW	OW	IH	IW	OW	IH	IH	IW	OW	IH	IH	IW	OW	IH	IH	OW	IW						
5	OH	IH	OH	OW	IH	IH	OW	IH	IW	IH	IW	OW	IH	IW	OW	IH	IH	IW	OW	IH	IH	IW	OW	IH	IH	IW	IW						
6	OL	OC	I	H	OL	OC	I	C	OL	OC	I	L	OC	I	C	OL	I	C	I	C	I	2L	OL	I	C	I	C	I	2L	OC	I	C	
6	OL	O	V	I	C	I	C	OL	I	C	I	C	OL	I	C	I	C	I	C	I	OL	I	C	I	C	I	OL	I	C	I	C		
7	OH	OW	OH	OW	OH	OW	IW	IW	IW	IH	IH	IW	IW																				
7	OH	OW	OH	OW	OH	OW	IW	IW	IW	IH	IH	IW	IW																				
8	OV	OC	OL	OC	OL	OC	I	C	OL	OC	I	2L	OL	I	C	I	C	I	C	I	I	OL	I	C	I	C	I	I	LC	I	C		
8	OV	OC	OL	OC	OL	OC	I	C	OL	OC	I	2L	OL	I	C	I	C	I	C	I	I	OL	I	C	I	C	I	I	OL	O	I	C	
9	OH	OW	OH	OW	OH	OW	IH	IH	IW	IW	IW	IH	IW	IW	IH	IH	IW	IW															
9	OH	OW	OH	OW	OH	OW	IH	IH	IW	IW	IW	IH	IW	IW	IH	IH	IW	IW															
10	OV	OC	OL	OC	OL	OC	I	C	OL	OC	I	C	OL	I	C	I	C	I	C	I	I	OL	I	C	I	C	I	I	OL	O	I	C	
10	OV	OC	OL	OC	OL	OC	I	C	OL	OC	I	C	OL	I	C	I	C	I	C	I	I	OL	I	C	I	C	I	I	OL	O	I	C	
11	OH	OW	OH	OW	OH	OW	IH	IH	OW	OW	OW	IH	IH	OW	IW	IH	OW	IW															
11	OH	OW	OH	OW	OH	OW	IH	IH	OW	OW	OW	IH	IH	OW	IW	IH	OW	IW															
12	OL	OC	OL	OC	OL	OC	I	C	OL	OC	I	C	OL	I	C	I	C	I	C	I	I	OL	I	C	I	C	I	I	OL	I	C	I	C
12	OL	OC	OL	OC	OL	OC	I	C	OL	OC	I	C	OL	I	C	I	C	I	C	I	I	OL	I	C	I	C	I	I	OL	I	C	I	C
13	OH	OW	OH	OW	OH	OW	IH	IH	OW	OW	OW	IH	IH	OW	IW	IH	OW	IW															
13	OH	OW	OH	OW	OH	OW	IH	IH	OW	OW	OW	IH	IH	OW	IW	IH	OW	IW															
14	OL	OC	OL	OC	OL	OC	I	C	OL	OC	I	C	OL	I	C	I	C	I	C	I	I	OL	I	C	I	C	I	I	OL	I	C	I	C
14	OL	OC	OL	OC	OL	OC	I	C	OL	OC	I	C	OL	I	C	I	C	I	C	I	I	OL	I	C	I	C	I	I	OL	I	C	I	C

Codes:

- 0 no radicle or coleoptile emergence
 1 first instance of radicle emergence (**must be used and can only use once**)
 2 radicle 1-5mm long
 3 radicle 6-10mm
 4 radicle 10-20mm
 5 radicle >20mm

- 6 coleoptile emergence (**must be used and can only use once**)
 7 coleoptile length 0-10mm
 8 coleoptile length 10-20mm
 9 coleoptile >20mm

Notes:

not
in
sheet

Species: ELEL
Temp range: 5-25°C
DayHr: 12

PI: Martyn
Project: SA Species
Planted: Aug 27 2025 @ 1730

Date 8/29/25
Name MH

SA Levels/Codes

Control = C 0.5mM = L (low)
Water = W 1.0mM = H (high)

Start Time 12:32 pm
End Time 13:23 pm

1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14	
1	OW	OC	ON	OC	ON	OC	ON	OC	ON	OC	OW	OW	OC	OW	OC	OW	OC	ON	OC									
1	W	OW	OC	ON	OC	ON	OC	ON	OC	ON	OW	OC	OW	OC	ON	OC	ON	OC	ON	OC	IC	OC	ON	OC	ON	OC	ON	OC
2	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL																		
2	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL																		
3	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC										
3	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC										
4	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL																		
4	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL																		
5	OW	OC	ON	OC	ON	OC	ON	OC	ON	OC	OW	OC	OW	OC	ON	OC	OW	OC	ON	OC								
5	OW	OC	ON	OC	ON	OC	ON	OC	ON	OC	OW	OC	OW	OC	ON	OC	OW	OC	ON	OC								
6	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL										
6	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL										
7	OW	OW	OC	ON	OC	ON	OC	ON	OC	ON	OC	IC?	OC	ON	OC	OW	OC	ON	OC									
7	OW	OW	OC	ON	OC	ON	OC	ON	OC	ON	OC	OC	ON	OC	ON	OC	OW	OC	ON	OC								
8	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL										
8	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL										
9	OW	OC	ON	OC	ON	OC	ON	OC	OW	OC	ON	OC																
9	OW	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC								
10	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL										
10	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL										
11	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC										
11	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC										
12	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL										
12	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL										
13	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC										
13	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC	ON	OC										
14	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL										
14	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL	OH	OL										

Codes:

- 0 no radicle or coleoptile emergence
- 1 first instance of radicle emergence (**must be used and can only use once**)
- 2 radicle 1-5mm long
- 3 radicle 6-10mm
- 4 radicle 10-20mm
- 5 radicle >20mm
- 6 coleoptile emergence (**must be used and can only use once**)
- 7 coleoptile length 0-10mm
- 8 coleoptile length 10-20mm
- 9 coleoptile >20mm

Notes:

fibers have sprouted

Species: ELEL

Temp range: 5-25°C

DayHr: 12

Date 8/28/25
Name MH

PI: Martyn

Project: SA Species

Planted: Aug 27 2025 @ 1730

SA Levels/Codes

Control = C 0.5mM = L (low)
Water = W 1.0mM = H (high)Start Time 13:00pm
End Time 14:02 pm

1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14
1	OC	OL																									
2	ON	OH	AN	OH	ON	OH	CW	OH	ON																		
3	OC	OL																									
4	ON	OH	OW	OH	ON																						
5	OC	OL																									
6	ON	OH	OW	OH	ON																						
7	OC	OL																									
8	ON	OH	ON	OH	ON	OH	CW	OH	ON																		
9	OC	OL																									
10	CW	OH	ON																								
11	OC	OL																									
12	ON	OH	OW	OH	ON	OH	OW	OH	ON																		
13	OC	OL																									
14	OW	OH	OW	OH	OW	OH	CW	OH	ON																		

Codes:

- 0 no radicle or coleoptile emergence
- 1 first instance of radicle emergence (**must be used and can only use once**)
- 2 radicle 1-5mm long
- 3 radicle 6-10mm
- 4 radicle 10-20mm
- 5 radicle >20mm
- 6 coleoptile emergence (**must be used and can only use once**)
- 7 coleoptile length 0-10mm
- 8 coleoptile length 10-20mm
- 9 coleoptile >20mm

Notes: