



2

2.1

“ 5 ”

2.2

250

7

10 d 20 d 30 d 40 d 50 d

60 d 70 d

5

5

3

5 d

1

2.3

10 d

10 d

[7]

POD

SOD

NBT

CAT

MDA

[8]

70 d

2.4

DPS7.05

Microsoft Excel 2003

3

3.1

1

10 d 56.08%

20 d

47.85%

30 d

44.17%

24.44%

1

Table 1 Change of soil moisture on water stress

Stress time /d	10	20	30	40	50	60	70
Soil moisture /%	56.08	47.85	44.17	40.57	40.00	33.35	24.44

3.2

3.2.1 水分胁迫下的叶片相对电导率变化

[9]

1

10 d

33.325%

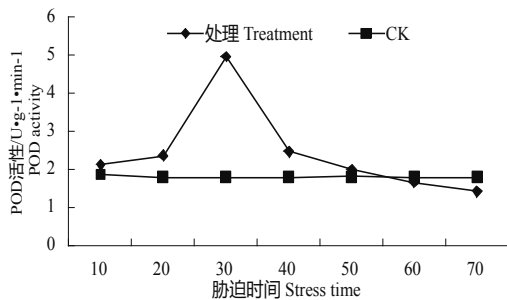
20 d

33.365%

70 d

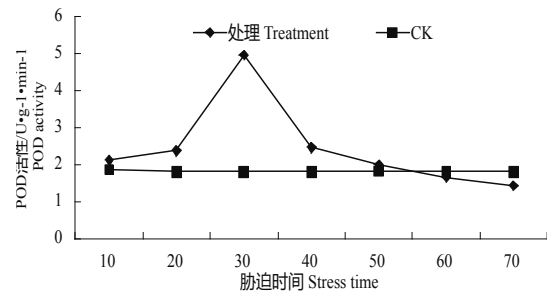
56.357%

32.695%~34.001%



1

Fig.1 Change of relative leaf conduction rate on water stress



2

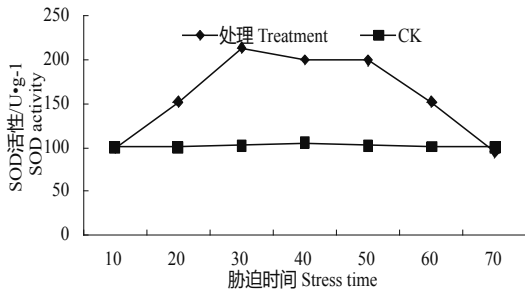
Fig.2 Change of POD activity in water stress

3.2.2 水分胁迫下的 POD 活性变化

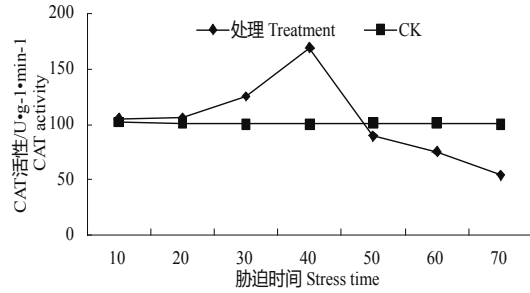
POD		[10]	
POD	2	10 d	POD
2.111 U·g <sup>-1</sup> ·min <sup>-1</sup>	20 d	2.365 U·g <sup>-1</sup> ·min <sup>-1</sup>	30 d
U·g <sup>-1</sup> ·min <sup>-1</sup>	POD	2.456 U·g <sup>-1</sup> ·min <sup>-1</sup>	60 d 70 d
U·g <sup>-1</sup> ·min <sup>-1</sup>	1.423 U·g <sup>-1</sup> ·min <sup>-1</sup>	POD	1.8 U·g <sup>-1</sup> ·min <sup>-1</sup>

3.2.3 水分胁迫下的 SOD 活性变化

SOD		[9]	
SOD	70 d	SOD	SOD
100.321 U·g <sup>-1</sup>	105.32 U·g <sup>-1</sup>	0.09%	20 d
100.414 U·g <sup>-1</sup>	51.87%	214.32 U·g <sup>-1</sup>	40 d 50 d
200.354 U·g <sup>-1</sup>	199.654 U·g <sup>-1</sup>	152.365 U·g <sup>-1</sup>	95.324 U·g <sup>-1</sup>
70 d			



3 SOD  
Fig.3 Change of SOD activity in water stress



4 CAT  
Fig.4 Change of CAT activity in water stress

3.2.4 水分胁迫下的 CAT 活性变化

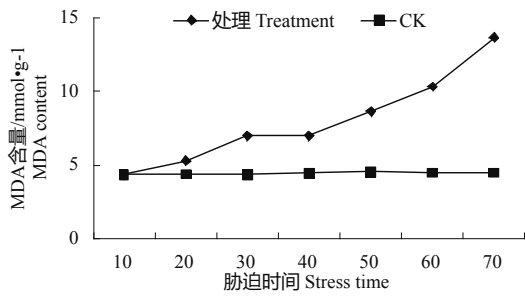
SOD		[9]	
SOD	70 d	CAT	CAT
102.321 U·g <sup>-1</sup> ·min <sup>-1</sup>	10 d	105.32 U·g <sup>-1</sup> ·min <sup>-1</sup>	20
106.214 U·g <sup>-1</sup> ·min <sup>-1</sup>	30 d 40 d	125.365 U·g <sup>-1</sup> ·min <sup>-1</sup>	
169.331 U·g <sup>-1</sup> ·min <sup>-1</sup>	40 d	89.354 U·g <sup>-1</sup> ·min <sup>-1</sup>	
	60 70 d	75.254 U·g <sup>-1</sup> ·min <sup>-1</sup>	54.211 U·g <sup>-1</sup> ·min <sup>-1</sup>

3.2.5 水分胁迫下的 MDA 含量变化

MDA		[9]	
MDA	5	MDA	MDA
4.374 mmol·g <sup>-1</sup>	70 d	13.654 mmol·g <sup>-1</sup>	
4.365 mmol·g <sup>-1</sup> ~4.562 mmol·g <sup>-1</sup>	10 d	0.21%	
5.321 mmol·g <sup>-1</sup>	30 40 d	6.987 mmol·g <sup>-1</sup>	7.001 mmol·g <sup>-1</sup>
	50 d 60 d 70 d	8.656 mmol·g <sup>-1</sup>	10.325 mmol·g <sup>-1</sup>
89.74%		129.44%	203.56%

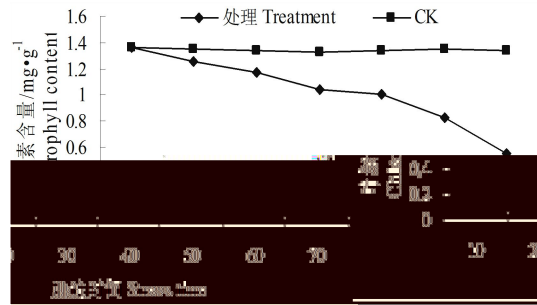
3.2.6 水分胁迫下的叶绿素含量变化

MDA		[9]	
MDA	6	MDA	MDA
1.325 mg·g <sup>-1</sup> ~1.362 mg·g <sup>-1</sup>	10 d	1.361	
1.165 mg·g <sup>-1</sup>	70 d	0.552 mg·g <sup>-1</sup>	
		1.254 mg·g <sup>-1</sup>	30 d



5 MDA

Fig.5 Change of MDA content in water stress

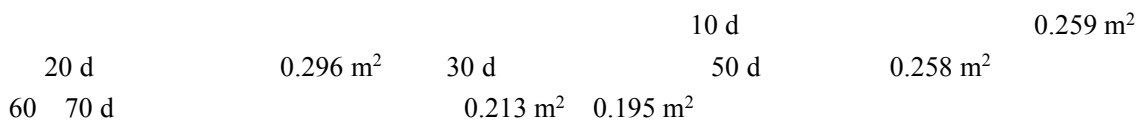


6

Fig.6 Change of chlorophyll content in water stress

3.2.7 水分胁迫下的根系活力变化

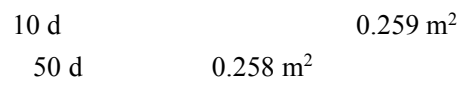
[9]



7

Fig.7 Change of root activity in water stress

7

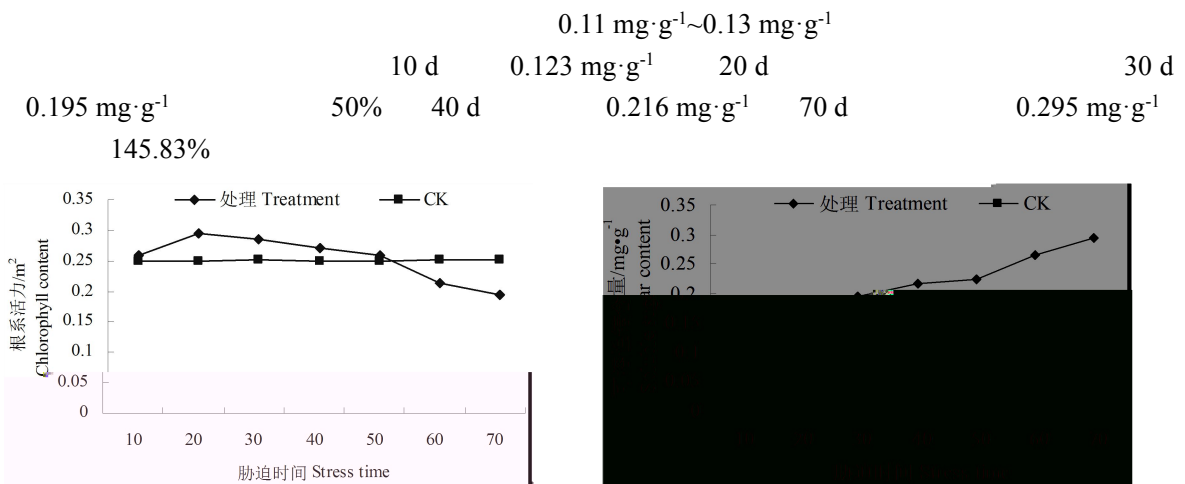


8

Fig.8 Change of soluble sugar content in water stress

3.2.8 水分胁迫下的可溶性糖含量变化

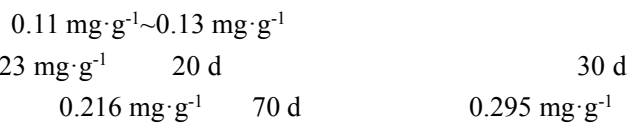
[9]



7

Fig.7 Change of root activity in water stress

8



8

Fig.8 Change of soluble sugar content in water stress

3

3.1

[11-13]

3.2

POD SOD CAT  
[4,14]

POD SOD CAT

3.3

MDA

MDA [15]  
 MDA [16] 10 d  
 MDA  
 MDA

3.4

[17,18]

3.5

[19]

[20]

MDA

“ 5 ”

40d

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