

Figure S1: Glyphosate UHPLC–MS/M chromatograph.

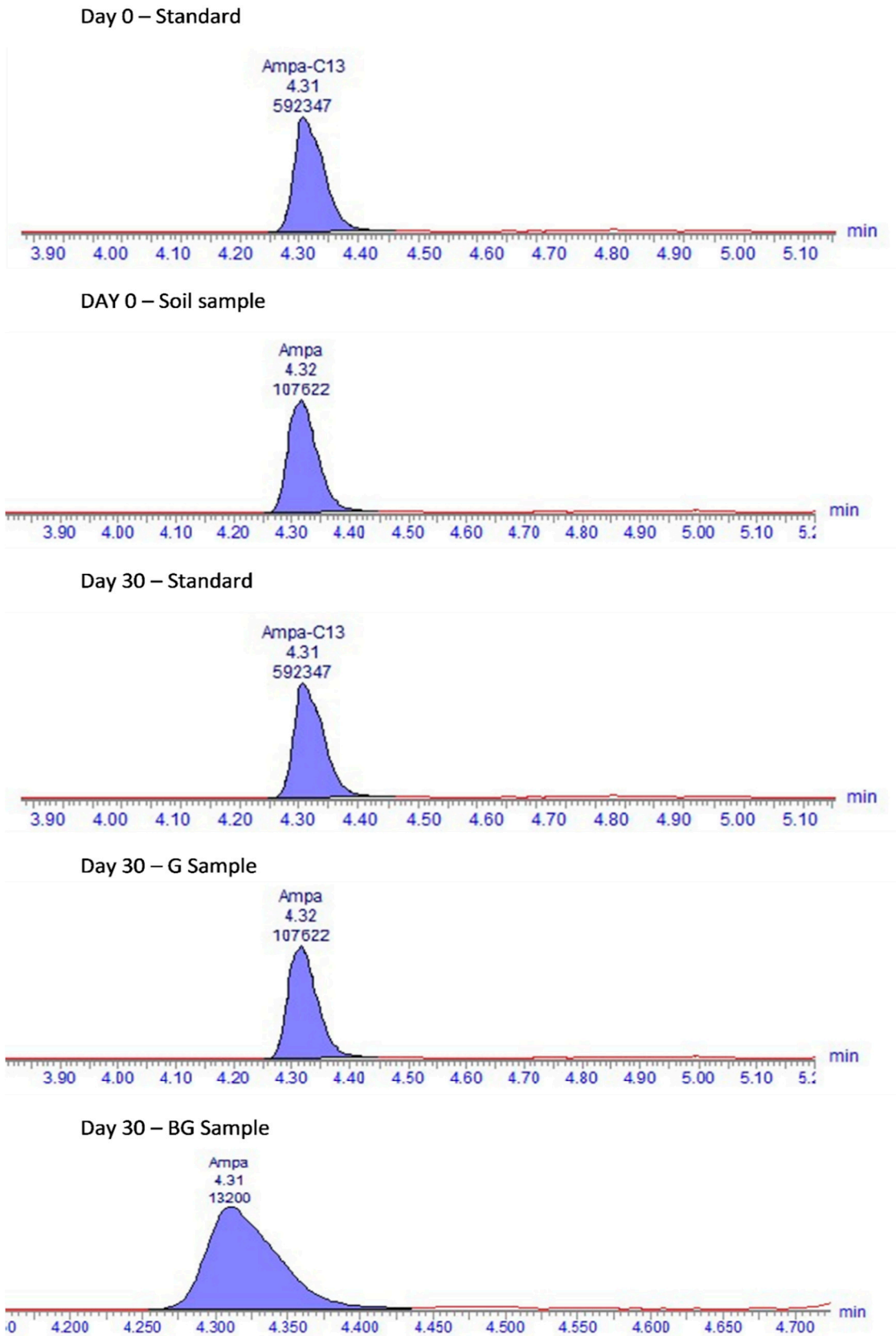


Figure S2: AMPA UHPLC-MS/M chromatograph.

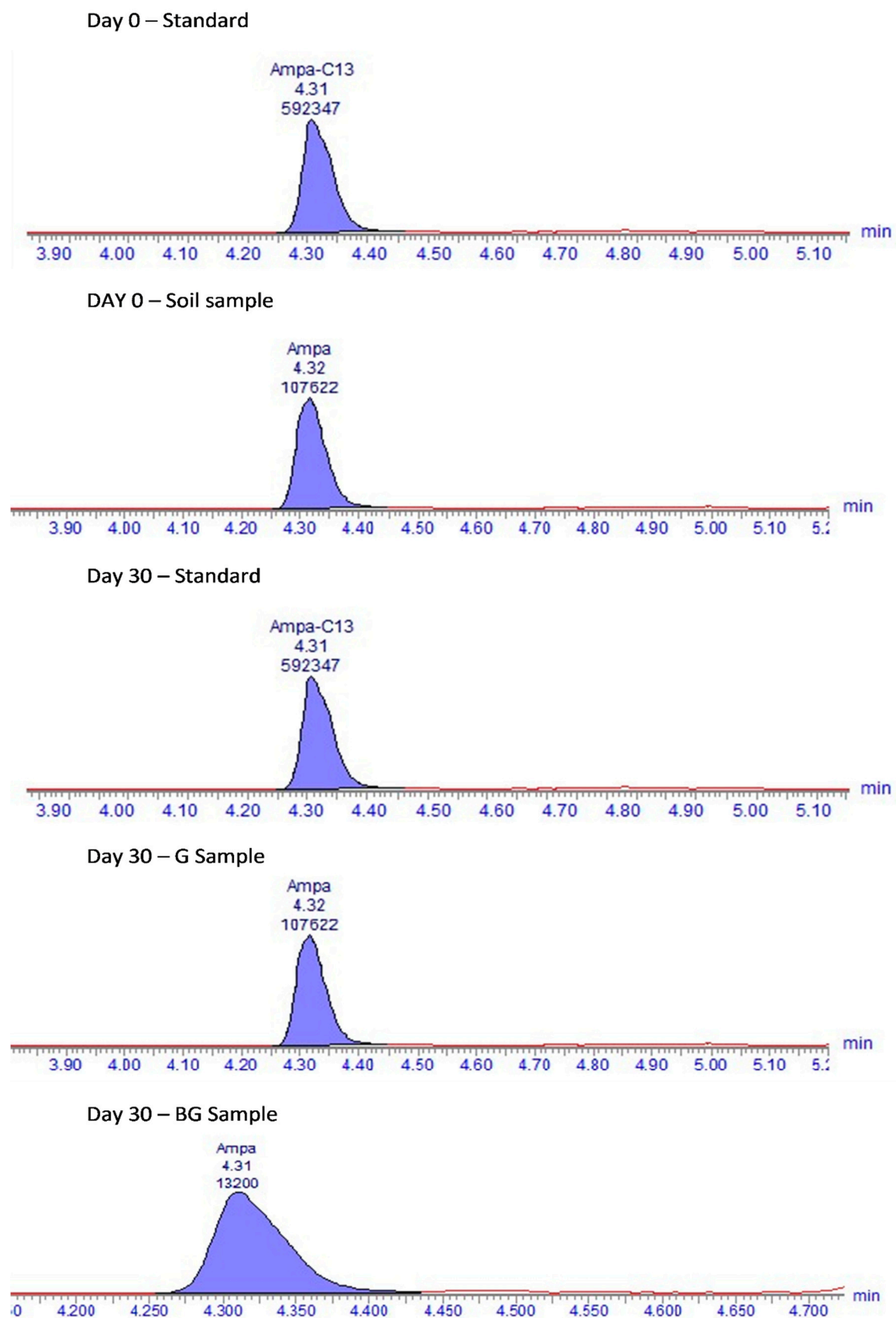
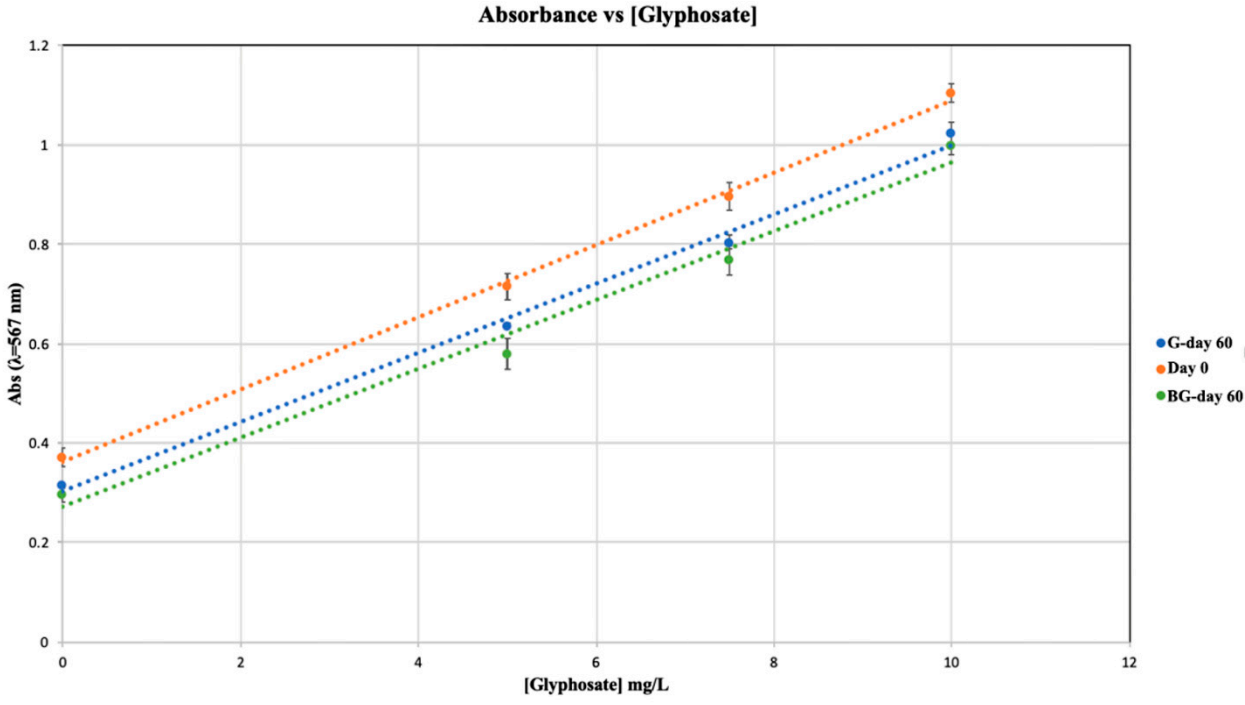


Figure S3: Glyphosate concentration linear regression model



**Table S1.** Statistical analysis of Soil Nitrate Concentration by day

<b>Shapiro Test</b>		
<b>Day</b>	<b>Treatment</b>	<b>p-value</b>
20	B	0.900
	BG	0.856
	C	0.463
	G	0.672
40	B	0.593
	BG	0.878
	C	0.672
	G	0.747
60	B	0.780
	BG	0.948
	C	0.856
	G	0.765
<b>Bartlett Test</b>		
<b>Day</b>	<b>p-value</b>	
20	0.738	
40	0.815	
60	0.700	
<b>ANOVA Statistics</b>		
<b>Day</b>	<b>F</b>	<b>p-value</b>
20	10.12	0.004
40	72.75	<0.001
60	22.3	<0.001

**Table S2.** *Post Hoc* analysis of soil nitrate concentration

<b>Tukey HSD</b>		
<b><i>Day</i></b>	<b><i>Treatment Comparison</i></b>	<b><i>p-value</i></b>
20	BG-B	0.066
	C-B	0.015
	GB	0.003
	C-BG	0.726
	G-BG	0.189
	G-C	0.643
40	BG-B	<0.001
	C-B	<0.001
	GB	<0.001
	C-BG	0.084
	G-BG	<0.001
	G-C	0.018
60	BG-B	0.023
	C-B	0.002
	G-B	<0.001
	C-BG	0.247
	G-BG	0.016
	G-C	0.265

**Table S3.** Statistical analysis of soil ammonium concentration by day

<b>Shapiro Test</b>		
<b>Day</b>	<b>Treatment</b>	<b>p-value</b>
20	B	<0.001
	BG	0.701
	C	0.363
	G	1.000
40	B	0.363
	BG	0.363
	C	0.253
	G	0.382
60	B	0.510
	BG	0.637
	C	<0.001
	G	0.646
<b>Bartlett Test</b>		
<b>Day</b>	<b>p-value</b>	
20	0.786	
40	0.659	
60	0.544	
<b>ANOVA Statistics</b>		
<b>Day</b>	<b>F</b>	<b>p-value</b>
20	10.39	0.004
40	37.72	<0.001
60	15.82	0.001

**Table S4.** *Post Hoc* analysis of soil ammonium concentration

<b>Tukey HSD</b>		
<b><i>Day</i></b>	<b><i>Treatment Comparison</i></b>	<b><i>p-value</i></b>
20	BG-B	0.126
	C-B	0.003
	GB	0.525
	C-BG	0.084
	G-BG	0.682
	G-C	0.017
40	BG-B	0.011
	C-B	<0.001
	GB	0.007
	C-BG	0.001
	G-BG	0.986
	G-C	0.002
60	BG-B	0.923
	C-B	0.001
	GB	0.195
	C-BG	0.002
	G-BG	0.426
	G-C	0.016

**Table S5.** Glyphosate determination by the ninhydrin reaction

Glyphosate Concentration					
Sample G		Sample BG		Sample Day 0	
Replicate 1 (mg/kg)	1.280	Replicate 1 (mg/kg)	1.254	Replicate 1 (mg/kg)	1.428
Replicate 2 (mg/kg)	1.391	Replicate 2 (mg/kg)	1.107	Replicate 2 (mg/kg)	1.403
Replicate 3 (mg/kg)	1.251	Replicate 3 (mg/kg)	1.165	Replicate 3 (mg/kg)	1.664
Statistical Parameters		Statistical Parameters		Statistical Parameters	
$\bar{x}$ (mg/kg)	1.307	$\bar{x}$ (mg/kg)	1.175	$\bar{x}$ (mg/kg)	1.498
SD (mg/kg)	0.074	SD (mg/kg)	0.074	SD (mg/kg)	0.144

**Table S6.** Statistical analysis of relative follicular area by treatment

<b>Kruskal-Wallis rank Sum Test</b>	
<b><i>Chi-squared</i></b>	<b><i>p-value</i></b>
35.292	<0.001
<b><i>Post-Hoc</i> Dunn Test</b>	
<b>Treatment Comparisson</b>	<b><i>p-value</i></b>
B-BG	<0.001
B-C	<0.001
B-G	<0.001
BG-C	0.021
BG-G	0.398
C-G	0.137