

Supplementary Table S1. Net photosynthetic rate - *A*, stomatal conductance - *gs*, transpiration rate - *E* and maximal quantum yield of PSII photochemistry - *Fv/Fm* of two *M. esculenta* Crantz varieties (Campinas and Sergipana) after application of chemical molecules.

Treatments	Varieties									
	Campinas					Sergipana				
	Photosynthetic rate (<i>A</i>) [$\mu\text{mol (CO}_2\text{) m}^{-2}\text{ s}^{-1}$]					Photosynthetic rate (<i>A</i>) [$\mu\text{mol (CO}_2\text{) m}^{-2}\text{ s}^{-1}$]				
	0	24	48	72	168	0	24	48	72	168
Positive Control	13.41 a B	14.70 a AB	15.53 a A	15.38 a A	14.87 a AB	9.51 a A	9.85 a A	11.37 ab A	11.60 a A	12.13 ab A
Negative Control	12.81 a A	12.24 b A	13.12 bcd A	13.64 ab A	13.55 ab A	9.95 a A	9.60 a A	10.44 b A	10.81 ab A	11.32 ab A
Fomesafen	12.04 a BC	10.74 bc C	14.60 ab A	12.21 b BC	13.85 abc AB	8.99 a B	9.82 a B	15.84 a A	9.97 ab B	10.89 ab B
Fenoxaprop-p-ethyl	12.35 a AB	10.45 bc C	13.85 abc A	8.45 c D	11.55 cd BC	11.36 a AB	11.26 a AB	14.78 ab A	6.22 b C	9.29 b BC
Fluazifop-p-butyl	12.43 a A	9.53 c C	11.52 d AB	3.12 d D	9.65 d BC	11.41 a AB	10.20 a AB	10.98 b AB	7.08 ab B	14.01 a A
Clethodim	12.04 a AB	10.63 bc B	12.54 cd A	6.63 c C	12.38 bc AB	9.36 a AB	10.71 a AB	13.82 ab A	7.74 ab B	9.74 ab AB
	Stomatal conductance (<i>gs</i>) [$\text{mmol m}^{-2}\text{ s}^{-1}$]					Stomatal conductance (<i>gs</i>) [$\text{mmol m}^{-2}\text{ s}^{-1}$]				
	0	24	48	72	168	0	24	48	72	168
Positive Control	0.13 a A	0.15 a A	0.16 b A	0.17 a A	0.18 a A	0.12 a A	0.14 a A	0.15 b A	0.17 a A	0.19 a A
Negative Control	0.11 a C	0.11 a BC	0.14 b ABC	0.16 a AB	0.17 a A	0.11 a A	0.12 a A	0.13 b A	0.15 ab A	0.17 ab A
Fomesafen	0.13 a A	0.05 c B	0.15 b A	0.16 a A	0.16 a A	0.11 a B	0.08 a B	0.19 b A	0.13 ab AB	0.11 b B
Fenoxaprop-p-ethyl	0.13 a CD	0.11 ab D	0.23 a A	0.19 a AB	0.17 a BC	0.17 a AB	0.11 a BC	0.18 b A	0.09 b C	0.11 b BC
Fluazifop-p-butyl	0.12 a C	0.06 bc D	0.23 a A	0.16 a BC	0.19 a AB	0.16 a BC	0.11 a C	0.26 a A	0.20 a AB	0.17 ab BC
Clethodim	0.12 a BC	0.10 ab C	0.23 a A	0.16 a B	0.15 a BC	0.12 a B	0.12 a B	0.20 ab A	0.16 a AB	0.12 ab B
	Transpiration rates (<i>E</i>) [$\text{mmol (H}_2\text{O) m}^{-2}\text{ s}^{-1}$]					Transpiration rates (<i>E</i>) [$\text{mmol (H}_2\text{O) m}^{-2}\text{ s}^{-1}$]				
	0	24	48	72	168	0	24	48	72	168
Positive Control	2.57 a A	2.61 ab A	2.98 b A	3.36 a A	3.19 a A	2.18 a A	2.15 a A	2.29 b A	2.55 ab A	2.49 a A
Negative Control	2.94 a A	2.77 a A	3.08 b A	3.48 a A	3.25 a A	2.09 a A	1.98 a A	2.23 b A	2.51 ab A	2.60 a A
Fomesafen	2.73 a A	1.43 c B	3.46 b A	3.05 a A	3.11 a A	2.08 a B	2.02 a B	4.14 a A	2.62 ab B	2.34 a B
Fenoxaprop-p-ethyl	3.30 a BC	2.71 ab C	4.81 a A	3.44 a BC	3.66 a B	3.00 a AB	2.90 a AB	4.08 a A	1.75 b B	2.45 a B
Fluazifop-p-butyl	2.71 a A	1.75 bc B	3.56 b A	3.58 a A	3.25 a A	3.47 a B	2.87 a B	5.21 a A	3.82 a AB	3.54 a B
Clethodim	3.22 a B	2.87 a B	4.93 a A	2.76 a B	2.91 a B	2.56 a B	3.07 a AB	4.38 a A	3.13 ab AB	2.66 a B
	Maximal quantum yield of PSII photochemistry (<i>Fv/Fm</i>)					Maximal quantum yield of PSII photochemistry (<i>Fv/Fm</i>)				
	0	24	48	72	168	0	24	48	72	168
Positive Control	0.83 a A	0.84 a A	0.84 a A	0.83 a A	0.84 a A	0.81 a A	0.82 abc A	0.82 a A	0.83 ab A	0.84 a A
Negative Control	0.83 a A	0.83 a A	0.83 ab A	0.83 a A	0.83 ab A	0.80 a A	0.81 c A	0.81 a A	0.82 b A	0.82 ab A
Fomesafen	0.82 a AB	0.84 a A	0.84 a AB	0.83 a AB	0.81 b B	0.79 a A	0.72 d C	0.74 b BC	0.77 c AB	0.77 c AB

Fenoxaprop-p-ethyl	0.81 a A	0.83 a A	0.80 b AB	0.82 a A	0.78 c B	0.80 a A	0.81 bc A	0.79 a A	0.79 bc A	0.77 bc A
Fluazifop-p-butyl	0.81 a A	0.83 a A	0.82 ab A	0.82 a A	0.84 ab A	0.82 a B	0.87 a AB	0.82 a B	0.88 a A	0.85 a AB
Clethodim	0.81 a A	0.82 a A	0.82 ab A	0.83 a A	0.83 ab A	0.80 a B	0.85 ab A	0.82 a AB	0.82 b AB	0.84 a AB

Means followed by the same letter, lowercase in the column and uppercase in the row, do not differ from each other by Tukey's test at 5% probability.

Supplementary Table S2. Relative frequency (Rf), relative density (Rd), relative dominance (RDo) and importance value index (IVI) of weed species in the culture of *M. esculenta* Crantz.

Campinas					Sergipana				
Species	Rf	Rd	RDo	IVI	Species	Rf	Rd	RDo	IVI
Positive Control									
---	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00
Negative Control									
<i>Richardia brasiliensis</i>	25.00	24.14	59.16	36.09	<i>Richardia brasiliensis</i>	20.00	26.67	53.67	33.45
<i>Mollugo verticillata</i>	25.00	31.03	37.02	31.02	<i>Mollugo verticillata</i>	20.00	30.00	38.12	29.37
<i>Cyperus esculentus</i>	16.67	24.14	1.32	14.04	<i>Cyperus esculentus</i>	13.33	13.33	4.74	10.47
Other species	33.33	20.69	2.49	18.84	Other species	46.67	30.00	3.46	26.71
Fomesafen (250 g a.i. ha⁻¹)									
<i>Cyperus esculentus</i>	17.65	21.87	68.56	36.02	<i>Cyperus esculentus</i>	15.00	20.00	67.87	34.29
<i>Mollugo verticillata</i>	17.65	25.00	10.48	17.71	<i>Mollugo verticillata</i>	15.00	22.50	1.69	13.06
<i>Eleusine indica</i>	17.65	18.75	3.28	13.22	<i>Eleusine indica</i>	15.00	15.00	6.75	12.25
Other species	47.06	34.37	17.68	33.04	Other species	55.00	42.50	23.67	40.39
Fenoxaprop-p-ethyl (100 g a.i. ha⁻¹)									
<i>Mollugo verticillata</i>	20.00	42.10	27.47	29.86	<i>Cyperus esculentus</i>	15.38	16.13	46.81	26.11
<i>Cyperus esculentus</i>	20.00	26.31	28.79	25.04	<i>Mollugo verticillata</i>	23.08	38.71	5.11	22.23
<i>Richardia brasiliensis</i>	13.33	10.53	22.95	15.61	<i>Richardia brasiliensis</i>	15.38	16.13	29.49	20.33
Other species	46.67	21.05	20.77	29.50	Other species	46.15	29.03	18.59	31.26
Fluazifop-p-butyl (187.5 g a.i. ha⁻¹)									
<i>Cyperus esculentus</i>	12.50	19.56	71.47	34.51	<i>Mollugo verticillata</i>	23.08	45.71	22.27	30.55
<i>Mollugo verticillata</i>	12.50	30.43	12.52	18.48	<i>Cyperus esculentus</i>	15.38	20.00	29.83	21.74
<i>Richardia brasiliensis</i>	12.50	8.69	2.44	7.88	<i>Sida cordifolia</i>	7.69	8.57	28.55	14.94
Other species	62.50	41.30	13.57	39.12	Other species	53.85	25.71	19.34	32.97
Clethodim (108 g a.i. ha⁻¹)									
<i>Cyperus esculentus</i>	15.00	36.17	68.22	39.79	<i>Mollugo verticillata</i>	15.79	37.04	35.52	29.45
<i>Mollugo verticillata</i>	15.00	21.28	5.44	13.90	<i>Cyperus esculentus</i>	15.79	16.67	58.53	30.33
<i>Eleusine indica</i>	15.00	12.76	2.93	10.23	<i>Sida cordifolia</i>	15.79	18.52	1.51	11.94
Other species	55.00	29.79	23.41	36.06	Other species	52.63	27.78	4.43	28.28