Supporting information

Supplementary Table 1. ANOVA results of the effect of the insecticides, days after spray, size of larvae, and interactions

2014					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	39	2457.045833	63.001175	4.20	<.0001
Error	200	3002.916667	15.014583		
Corrected Total	239	5459.962500			
R-Square	Coeff Var	Root MSE	LV Mean		
0.450011	75.79199	3.874866	5.112500		
Source	DF	Type I SS	Mean Square	F Value	Pr > F
TREAT [1]	9	1313.5875	145.954167	9.72	<.0001
DAS	2	62.400000	31.200000	2.08	0.1279
SL	1	670.004167	670.004167	44.62	<.0001
TREAT*DAS	18	184.600000	10.255556	0.68	0.8258
TREAT*SL	9	226.454167	25.161574	1.68	0.0968

2015					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	35	1131.939815	32.341138	18.41	<.0001
Error	180	316.166667	1.756481		
Corrected Total	215	1448.106481			
R-Square	Coeff Var	Root MSE	LV Mean		
0.781669	39.37686	1.325323	3.365741		
Source	DF	Type I SS	Mean Square	F Value	Pr > F
TREAT [1]	8	269.898148	33.737269	19.21	<.0001
DAS	2	116.287037	58.143519	33.1	<.0001
SL	1	603.337933	603.337963	343.49	<.0001
TREAT*DAS	16	71.796296	4.487269	2.55	0.0014
TREAT*SL	8	70.6203704	8.8275463	5.03	<.0001

2016					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	52	2421.930147	46.575580	13.61	<.0001
Error	491	1680.062500	3.421716		
Corrected Total	543	4101.992647			
R-Square	Coeff Var	Root MSE	LV Mean		
0,590428	52.90666	1.849788	3.496324		
Source	DF	Type I SS	Mean Square	F Value	Pr > F
TREAT [1]	8	590.539522	73.817440	21.57	<.0001
DAS	3	533.786765	177.928922	52.00	<.0001
SL	1	786.242647	786.242647	229.78	<.0001
NS	1	34.548828	34.548828	10.1	0.0016

TREAT*DAS	24	282.3538603	11.7647442	3.44	<.0001
TREAT*SL	8	174.6792279	21.8349035	6.38	<.0002
TREAT*NS	7	19.7792969	2.8256138	0.83	0.5661

[1] TREAT: Treatment; DAS: days after spray; SL: size of larvae; NS: number of sprays.

Supplementary Table 1.1 Analyzes of ANOVA using type I SS (Sums of Squares) on SAS's PROC GLM procedure, in the experiment I 2014.

Experiment I 2014 - small larvae					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	1109.891667	100.899242	21.72	<.0001
Error	108	501.700000	4.645370		
Corrected Total	119	1611.591667			
R-Square	Coeff Var	Root MSE	LV Mean		
0.688693	62.62408	2.155312	3.441667		
Source	DF	Type I SS	Mean Square	F Value	Pr > F
TREAT [1]	9	305.6750000	33.9638889	7.31	<.0001
DAS	2	804.2166667	402.1083333	86.56	<.0001
Experiment I 2014 - large larvae					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	11	2210.583333	200.962121	22.43	<.0001
Error	108	967.783333	8.960957		
Corrected Total	119	3178.366667			
R-Square	Coeff Var	Root MSE	LV Mean		
0.695509	44.13001	2.993486	6.783333		
Source	DF	Type I SS	Mean Square	F Value	Pr > F
TREAT	9	1234.366667	137.151852	15.31	<.0001
DAS	2	976.216667	488.108333	54.47	<.0001

Supplementary Table 1.2 Analyzes of ANOVA using type I SS (Sums of Squares) on SAS's PROC GLM procedure, in the experiment II 2015.

Experiment II 2015 - small larvae					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	10	128.3333333	12.8333333	9.25	<.0001
Error	97	134.5833333	1.3874570		
Corrected Total	107	262.9166667			
R-Square	Coeff Var	Root MSE	LV Mean		
0.488114	69.51563	1.177904	1.694444		
Source	DF	Type I SS	Mean Square	F Value	Pr > F
TREAT [1]	8	72.33333333	9.04166667	6.52	<.0001
DAS	2	56.00000	28.0000000	20.18	<.0001
Experiment II 2015 - large larvae					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	10	330.7592593	33.0759259	12.78	<.0001
Error	97	251.0925926	2.5885834		

Corrected Total	107	581.8518519			
R-Square	Coeff Var	Root MSE	LV Mean		
0.568460	31.94155	1.608908	5.037037		
Source	DF	Type I SS	Mean Square	F Value	Pr > F
TREAT	8	268.1851852	33.5231481	12.95	<.0001
DAS	2	62.5740741	31.2870370	12.09	<.0001

Supplementary Table 1.3 Analyzes of ANOVA using type I SS (Sums of Squares) on SAS's PROC GLM procedure, in the experiment III 2016.

Experiment III 2016 - small larvae					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	10	172.7222222	17.2722222	11.01	<.0001
Error	97	152.1944444	1.5690149		
Corrected Total	107	324.9166667			
R-Square	Coeff Var	Root MSE	LV Mean		
0.531589	58.56327	1.252603	2.138889		
Source	DF	Type I SS	Mean Square	F Value	Pr > F
TREAT [1]	8	44.5000000	5.5625000	3.55	0.0012
DAS	2	128.2222222	64.1111111	40.86	<.0001
Experiment III 2016 - large larvae					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	10	559.8888889	55.9888889	20.39	<.0001
Error	97	266.3611111	2.7459908		
Corrected Total	107	826.2500000			
R-Square	Coeff Var	Root MSE	LV Mean		
0.677626	27.24005	1.657103	6.083333		
Source	DF	Type I SS	Mean Square	F Value	Pr > F
TREAT	8	413.0000000	51.6250000	18.80	<.0001
DAS	2	146.8888889	73.4444444	26.75	<.0001

Supplementary Table 1.4 Analyzes of ANOVA using type I SS (Sums of Squares) on SAS's PROC GLM procedure, in the experiment IV 2016 / number of sprays.

Experiment IV 2016 / number of sprays - small larvae					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	80.1250000	10.0156250	4.26	0.0002
Error	119	279.8750000	2.3518908		
Corrected Total	127	360.000000			
R-Square	Coeff Var	Root MSE	LV Mean		
0.222569	81.79134	1.533588	1.875000		
Source	DF	Type I SS	Mean Square	F Value	Pr > F
TREAT [1]	7	78.12500000	11.16071429	4.75	<.0001
NS	1	2.00000000	2.00000000	0.85	0.3583
Experiment IV 2016 / number of sprays - large larvae					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F

Model	8	320.1250000	40.0156250	11.91	<.0001
Error	119	399.7500000	3.3592437		
Corrected Total	127	719.8750000			
R-Square	Coeff Var	Root MSE	LV Mean		
0.444695	60.46430	1.832824	3.031250		
Source	DF	Type I SS	Mean Square	F Value	Pr > F
TREAT	7	254.0000000	36.2857143	10.80	<.0001
NS	1	66.1250000	66.1250000	19.68	<.0001

Supplementary Table 1.5 Analyzes of ANOVA using type I SS (Sums of Squares) on SAS's PROC GLM procedure, in the experiment IV 2016 / number of sprays.

Experiment IV 2016 / number of sprays - defoliation injury					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	9	8178.652778	908.739198	80.37	<.0001
Error	62	701.000000	11.306452		
Corrected Total	71	8879.652778			
R-Square	Coeff Var	Root MSE	LV Mean		
0.921055	21.79122	3.362507	15.43056		
Source	DF	Type I SS	Mean Square	F Value	Pr > F
TREAT [1]	8	7743.527778	967.940972	85.61	<.0001
NS	1	435.125000	435.125000	38.48	<.0001

[1] TREAT: Treatment; DAS: days after spray; NS: number of sprays.

Supplementary Table 2.1 Matrix of probabilities comparing between treatments from SAS's PROC GLM procedure, in the experiment I in 2014 (values of Pr ≤ 0.05 are considered significant according to Tukey's test).

Experiment I 2014 - Least Squares Means for effect TRAT Pr > |t| for H0: LSMean(i)=LSMean(j) Dependent Variable: small larvae of *C. includens*

i/j	UNT	CHT	FLU	IND	CLF	SPD	CLZ + MEL	MET	LAC + CHT	CLP
UNT		<.0001	0.0031	<.0001	<.0001	<.0001	0.0071	0.1103	0.2209	0.0002
CHT	<.0001		0.2209	0.3959	0.2209	0.1877	0.1326	0.0092	0.0031	0.6368
FLU	0.0031	0.2209		0.0396	0.0154	0.0119	0.7769	0.1583	0.0747	0.4503
IND	<.0001	0.3959	0.0396		0.7056	0.6368	0.0197	0.0007	0.0002	0.1877
CLF	<.0001	0.2209	0.0154	0.7056		0.9247	0.0071	0.0002	<.0001	0.0911
SPD	<.0001	0.1877	0.0119	0.6368	0.9247		0.0054	0.0001	<.0001	0.0747
CLZ + MEL	0.0071	0.1326	0.7769	0.0197	0.0071	0.0054		0.2583	0.1326	0.2998
MET	0.1103	0.0092	0.1583	0.0007	0.0002	0.0001	0.2583		0.7056	0.0316
LAC + CHT	0.2209	0.0031	0.0747	0.0002	<.0001	<.0001	0.1326	0.7056		0.0119
CLP	0.0002	0.6368	0.4503	0.1877	0.0911	0.0747	0.2998	0.0316	0.0119	

Experiment I 2014 - Least Squares Means for effect TRAT Pr > |t| for H0: LSMean(i)=LSMean(j) Dependent Variable: large larvae of *C. includens*

i/j	UNT	CHT	FLU	IND	CLF	SPD	CLZ + MEL	MET	LAC + CHT	CLP
UNT		0.0022	0.1046	<.0001	<.0001	<.0001	0.0001	0.3087	0.7856	<.0001
CHT	0.0022		0.1365	<.0001	0.0001	0.1046	0.3773	0.0368	0.0009	0.0791
FLU	0.1046	0.1365		<.0001	<.0001	0.0022	0.0187	0.5407	0.0589	0.0014
IND	<.0001	<.0001	<.0001		0.6832	0.0074	0.0007	<.0001	<.0001	0.0109
CLF	<.0001	0.0001	<.0001	0.6832		0.0223	0.0027	<.0001	<.0001	0.0313
SPD	<.0001	0.1046	0.0022	0.0074	0.0223		0.4548	0.0003	<.0001	0.8918
CLZ + MEL	0.0001	0.3773	0.0187	0.0007	0.0027	0.4548		0.0033	<.0001	0.3773
MET	0.3087	0.0368	0.5407	<.0001	<.0001	0.0003	0.0033		0.1979	0.0002
LAC + CHT	0.7856	0.0009	0.0589	<.0001	<.0001	<.0001	<.0001	0.1979		<.0001
CLP	<.0001	0.0791	0.0014	0.0109	0.0313	0.8918	0.3773	0.0002	<.0001	

Supplementary Table 2.2 Matrix of probabilities comparing between treatments from SAS's PROC GLM procedure, in the experiment II in 2015 (values of Pr ≤ 0.05 are considered significant according to Tukey's test).

Experiment II 2015 - Least Squares Means for effect TRAT Pr > |t| for H0: LSMean(i)=LSMean(j) Dependent Variable: small larvae of *C. includens*									
i/j	**UNT**	**LAC + CHT + DAF**	**MET**	**SPI**	**CLZ + ACF**	**CLF**	**IND**	**DIF + CLP**	**FLU + TIO**
UNT		0.0002	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	0.0008
LAC + CHT + DAF	0.0002		0.3884	0.0265	0.4899	0.0596	0.1688	0.2281	0.7297
MET	<.0001	0.3884		0.1688	0.8628	0.3010	0.6043	0.7297	0.2281
SPI	<.0001	0.0265	0.1688		0.1221	0.7297	0.3884	0.3010	0.0108
CLZ + ACF	<.0001	0.4899	0.8628	0.1221		0.2281	0.4899	0.6043	0.3010
CLF	<.0001	0.0596	0.3010	0.7297	0.2281		0.6043	0.4899	0.0265
IND	<.0001	0.1688	0.6043	0.3884	0.4899	0.6043		0.8628	0.0863
DIF + CLP	<.0001	0.2281	0.7297	0.3010	0.6043	0.4899	0.8628		0.1221
FLU + TIO	0.0008	0.7297	0.2281	0.0108	0.3010	0.0265	0.0863	0.1221	
Experiment II 2015 - Least Squares Means for effect TRAT Pr > |t| for H0: LSMean(i)=LSMean(j) Dependent Variable: large larvae of *C. includens*									
i/j	**UNT**	**LAC + CHT + DAF**	**MET**	**SPI**	**CLZ + ACF**	**CLF**	**IND**	**DIF + CLP**	**FLU + TIO**
UNT		0.3126	<.0001	<.0001	0.0788	<.0001	<.0001	0.0178	0.0335
LAC + CHT + DAF	0.3126		<.0001	0.0014	0.4484	<.0001	<.0001	0.1660	0.2563
MET	<.0001	<.0001		0.2563	0.0004	0.0128	0.8002	0.0030	0.0014
SPI	<.0001	0.0014	0.2563		0.0128	0.0004	0.3767	0.0600	0.0335
CLZ + ACF	0.0788	0.4484	0.0004	0.0128		<.0001	0.0009	0.5273	0.7043
CLF	<.0001	<.0001	0.0128	0.0004	<.0001		0.0063	<.0001	<.0001
IND	<.0001	<.0001	0.8002	0.3767	0.0009	0.0063		0.0063	0.0030
DIF + CLP	0.0178	0.1660	0.0030	0.0600	0.5273	<.0001	0.0063		0.8002
FLU + TIO	0.0335	0.2563	0.0014	0.0335	0.7043	<.0001	0.0030	0.8002	

Supplementary Table 2.3 Matrix of probabilities comparing between treatments from SAS's PROC GLM procedure, in the experiment III in 2016 (values of Pr ≤ 0.05 are considered significant according to Tukey's test).

Experiment III 2016 - Least Squares Means for effect TRAT Pr > |t| for H0: LSMean(i)=LSMean(j) Dependent Variable: small larvae of *C. includens*									
i/j	**UNT**	**LAC + CHT + DAF**	**MET**	**SPI**	**CLZ + ACF**	**CLF**	**IND**	**DIF + CLP**	**FLU + TIO**
UNT		0.1954	0.3306	0.0163	0.1064	0.0042	0.0002	0.0026	0.7452
LAC + CHT + DAF	0.1954		0.7452	0.2568	0.7452	0.1064	0.0106	0.0762	0.3306
MET	0.3306	0.7452		0.1457	0.5160	0.0534	0.0042	0.0367	0.5160
SPI	0.0163	0.2568	0.1457		0.4172	0.6260	0.1457	0.5160	0.0367
CLZ + ACF	0.1064	0.7452	0.5160	0.4172		0.1954	0.0247	0.1457	0.1954
CLF	0.0042	0.1064	0.0534	0.6260	0.1954		0.3306	0.8709	0.0106
IND	0.0002	0.0106	0.0042	0.1457	0.0247	0.3306		0.4172	0.0005
DIF + CLP	0.0026	0.0762	0.0367	0.5160	0.1457	0.8709	0.4172		0.0067
FLU + TIO	0.7452	0.3306	0.5160	0.0367	0.1954	0.0106	0.0005	0.0067	
Experiment III 2016 - Least Squares Means for effect TRAT Pr > |t| for H0: LSMean(i)=LSMean(j) Dependent Variable: large larvae of *C. includens*									
i/j	**UNT**	**LAC + CHT + DAF**	**MET**	**SPI**	**CLZ + ACF**	**CLF**	**IND**	**DIF + CLP**	**FLU + TIO**
UNT		0.1786	0.9022	0.2703	0.6233	<.0001	<.0001	0.0056	0.0878
LAC + CHT + DAF	0.1786		0.2210	0.0155	0.0677	<.0001	<.0001	<.0001	0.0027
MET	0.9022	0.2210		0.2210	0.5394	<.0001	<.0001	0.0039	0.0677
SPI	0.2703	0.0155	0.2210		0.5394	<.0001	<.0001	0.0878	0.5394
CLZ + ACF	0.6233	0.0677	0.5394	0.5394		<.0001	<.0001	0.0213	0.2210
CLF	<.0001	<.0001	<.0001	<.0001	<.0001		0.9022	<.0001	<.0001
IND	<.0001	<.0001	<.0001	<.0001	<.0001	0.9022		<.0001	<.0001
DIF + CLP	0.0056	<.0001	0.0039	0.0878	0.0213	<.0001	<.0001		0.2703
FLU + TIO	0.0878	0.0027	0.0677	0.5394	0.2210	<.0001	<.0001	0.2703	

Supplementary Table 2.4 Matrix of probabilities comparing between treatments from SAS's PROC GLM procedure, in the experiment IV in 2016 / number of sprays (values of Pr ≤ 0.05 are considered significant according to Tukey's test).

Experiment IV / 2016 - Least Squares Means for effect TRAT Pr > |t| for H0: LSMean(i)=LSMean(j) Dependent Variable: small larvae of *C. includens*								
i/j	**LAC + CHT + DAF**	**MET**	**SPI**	**CLZ + ACF**	**CLF**	**IND**	**DIF + CLP**	**FLU + TIO**
LAC + CHT + DAF		0.2513	0.0023	0.1366	<.0001	0.0091	0.0005	0.0170
MET	0.2513		0.0524	0.7301	0.0002	0.1366	0.0170	0.2073
SPI	0.0023	0.0524		0.1092	0.0676	0.6456	0.6456	0.4905
CLZ + ACF	0.1366	0.7301	0.1092		0.0008	0.2513	0.0402	0.3583
CLF	<.0001	0.0002	0.0676	0.0008		0.0229	0.1692	0.0125
IND	0.0091	0.1366	0.6456	0.2513	0.0229		0.3583	0.8181
DIF + CLP	0.0005	0.0170	0.6456	0.0402	0.1692	0.3583		0.2513
FLU + TIO	0.0170	0.2073	0.4905	0.3583	0.0125	0.8181	0.2513	
Experiment IV / 2016 - Least Squares Means for effect TRAT Pr > |t| for H0: LSMean(i)=LSMean(j) Dependent Variable: large larvae of *C. includens*								
i/j	**LAC + CHT + DAF**	**MET**	**SPI**	**CLZ + ACF**	**CLF**	**IND**	**DIF + CLP**	**FLU + TIO**
LAC + CHT + DAF		0.0223	0.0025	0.0007	<.0001	<.0001	<.0001	<.0001
MET	0.0223		0.4419	0.2494	<.0001	0.0060	0.0004	0.0284
SPI	0.0025	0.4419		0.7003	<.0001	0.0451	0.0045	0.1506
CLZ + ACF	0.0007	0.2494	0.7003		<.0001	0.1037	0.0135	0.2909
CLF	<.0001	<.0001	<.0001	<.0001		0.0174	0.1254	0.0034
IND	<.0001	0.0060	0.0451	0.1037	0.0174		0.3871	0.5639
DIF + CLP	<.0001	0.0004	0.0045	0.0135	0.1254	0.3871		0.1506
FLU + TIO	<.0001	0.0284	0.1506	0.2909	0.0034	0.5639	0.1506	

Supplementary Table 2.5 Matrix of probabilities comparing between treatments from SAS's PROC GLM procedure, in the experiment IV in 2016 / number of sprays (values of Pr ≤ 0.05 are considered significant according to Tukey's test).

Experiment IV / 2016 - Least Squares Means for effect TRAT Pr > |t| for H0: LSMean(i)=LSMean(j) Dependent Variable: defoliation injury									
i/j	**UNT**	**LAC + CHT + DAF**	**MET**	**SPI**	**CLZ + ACF**	**CLF**	**IND**	**DIF + CLP**	**FLU + TIO**
UNT		<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
LAC + CHT + DAF	<.0001		0.9410	0.8823	<.0001	<.0001	<.0001	0.6571	0.4600
MET	<.0001	0.9410		0.8242	<.0001	<.0001	<.0001	0.7113	0.4166
SPI	<.0001	0.8823	0.8242		<.0001	<.0001	<.0001	0.5541	0.5541
CLZ + ACF	<.0001	<.0001	<.0001	<.0001		0.0095	0.1857	<.0001	<.0001
CLF	<.0001	<.0001	<.0001	<.0001	0.0095		0.0002	<.0001	<.0001
IND	<.0001	<.0001	<.0001	<.0001	0.1857	0.0002		<.0001	0.0007
DIF + CLP	<.0001	0.6571	0.7113	0.5541	<.0001	<.0001	<.0001		0.2387
FLU + TIO	<.0001	0.4600	0.4166	0.5541	<.0001	<.0001	0.0007	0.2387	

Supplementary Table 3 Location, spraying dates on soybean stages and larval density for each experiment

Experiment/year	**Location**	**Spraying dates**	**SGS**[†]	**Larvae per m^2**		**Total**
				Small[‡]	Large	
I / 2014	29° 42' 57.32" S 53° 33' 49.55" W	10 Feb 2014	R5.1	13.00	4.50	17.50
II / 2015	29° 43' 19.04" S 53° 33' 32.69" W	21 Feb 2015	R3	5.00	8.00	13.00
III / 2016	29° 43' 51.64" S 53° 32' 57.14" W	03 Feb 2016	R5.3	4.00	7.00	12.00
IV[§] / 2016	29° 43' 52.64" S	03 Feb 2016 (1x)	R5.3	4.00	7.50	11.50

	53° 32' 56.76" W	10 Feb 2016 (2x)	R5.5	3.25	10.75	14.00

† Soybean growth stages (FEHR and CAVINESS, 1977)
‡ Small: < 1.5 cm; large: > 1.5 cm
§ (1x) first spray; (2x) second spray at seven days of interval

Supplementary Table 4 Insecticides applied to control *C. includens* in soybean from 2014 to 2016

a. I / 2014	**Code**	**Trade names**	**g a.i. ha^{-1}**
1. Untreated control	UNT	-	-
2. Chlorantraniliprole	CHT	Premio 200 SC	10.0
3. Flubendiamide	FLU	Belt 480 SC	33.6
4. Indoxacarb	IND	Avatar 150 CE	60.0
5. Chlorfenapyr	CLF	Pirate 240 SC	240.0
6. Spinosad	SPD	Tracer 480 SC	33.6
7. Chlorfluazuron + methomyl	CLZ + MEL	Atabron 50 CE + Lannate 215 SL	25.0 + 215.0
8. Methoxyfenozide	MET	Intrepid 240 SC	96.0
9. λ-cyhalothrin + chlorantraniliprole	LAC + CHT	Ampligo 50+100 SC	3.7 + 7.5
10. Chlorpyrifos	CLP	Lorsban 480 EC	480.0
b. II / 2015	**Code**	**Trade names**	**g a.i. ha^{-1}**
1. Untreated control	UNT	-	-
2. λ-cyhalothrin + chlorantraniliprole + diafenthiuron	LAC + CHT + DAF	Ampligo 50+100 SC + Polo 500 SC	6.0+12.0 + 75.0
3. Methoxyfenozide	MET	Intrepid 240 SC	120.0
4. Spinetoram	SPI	Exalt 120 SC	12.0

5. Chlorfluazuron + acephate	CLZ + ACF	Atabron 50 CE + Orthene 750 PS	25.0 + 750.0	
6. Chlorfenapyr	CLF	Pirate 240 SC	240.0	
7. Indoxacarb	IND	Avatar 150 CE	60.0	
8. Diflubenzuron + chlorpyrifos	DIF + CLP	Dimax 480 SC + Klorpan 480 EC	72.0 + 720.0	
9. Flubendiamide + thiodicarb	FLU + TIO	Belt 480 SC + Larvin 800 WG	38.4 + 200.0	
c. III / 2016	**Code**	**Trade names**	**g a.i. ha^{-1}**	
1. Untreated control	UNT	-	-	
2. λ-cyhalothrin + chlorantraniliprole + diafenthiuron	LAC + CHT + DAF	Ampligo 50+100 SC + Polo 500 SC	6.0+12.0 + 75.0	
3. Methoxyfenozide	MET	Intrepid 240 SC	120.0	
4. Spinetoram	SPI	Exalt 120 SC	12.0	
5. Chlorfluazuron + acephate	CLZ + ACF	Atabron 50 CE + Orthene 750 PS	25.0 + 750.0	
6. Chlorfenapyr	CLF	Pirate 240 SC	240.0	
7. Indoxacarb	IND	Avatar 150 CE	60.0	
8. Diflubenzuron + chlorpyrifos	DIF + CLP	Dimax 480 SC + Klorpan 480 EC	72.0 + 720.0	
9. Flubendiamide + thiodicarb	FLU + TIO	Belt 480 SC + Larvin 800 WG	38.4 + 200.0	
d. IV / 2016	**Code**	**Trade names**	**g a.i. ha^{-1}**	**Time†**
1. Untreated control	UNT	-	-	-
2. λ-cyhalothrin + chlorantraniliprole + diafenthiuron	LAC + CHT + DAF	Ampligo 50+100 SC + Polo 500 SC	6.0+12.0 + 75.0	1x

	LAC + CHT + DAF	Ampligo 50+100 SC + Polo 500 SC	6.0+12.0 + 75.0	2x
3. Methoxyfenozide	MET	Intrepid 240 SC	120.0	1x
	MET	Intrepid 240 SC	120.0	2x
4. Spinetoram	SPI	Exalt 120 SC	12.0	1x
	SPI	Exalt 120 SC	12.0	2x
5. Chlorfluazuron + acephate	CLZ + ACF	Atabron 50 CE + Orthene 750 PS	25.0 + 750.0	1x
	CLZ + ACF	Atabron 50 CE + Orthene 750 PS	25.0 + 750.0	2x
6. Chlorfenapyr	CLF	Pirate 240 SC	240.0	1x
	CLF	Pirate 240 SC	240.0	2x
7. Indoxacarb	IND	Avatar 150 CE	60.0	1x
	IND	Avatar 150 CE	60.0	2x
8. Diflubenzuron + chlorpyrifos	DIF + CLP	Dimax 480 SC + Klorpan 480 EC	72.0 + 720.0	1x
	DIF + CLP	Dimax 480 SC + Klorpan 480 EC	72.0 + 720.0	2x
9. Flubendiamide + thiodicarb	FLU + TIO	Belt 480 SC + Larvin 800 WG	38.4 + 200.0	1x
	FLU + TIO	Belt 480 SC + Larvin 800 WG	38.4 + 200.0	2x

[†] (1x) first spray; (2x) second spray after seven days from the first