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**Responses of the Russian wheat aphid (*Diuraphis noxia*) and bird cherry oat aphid (*Rhopalosiphum padi*) to insecticide seed treatments in wheat**

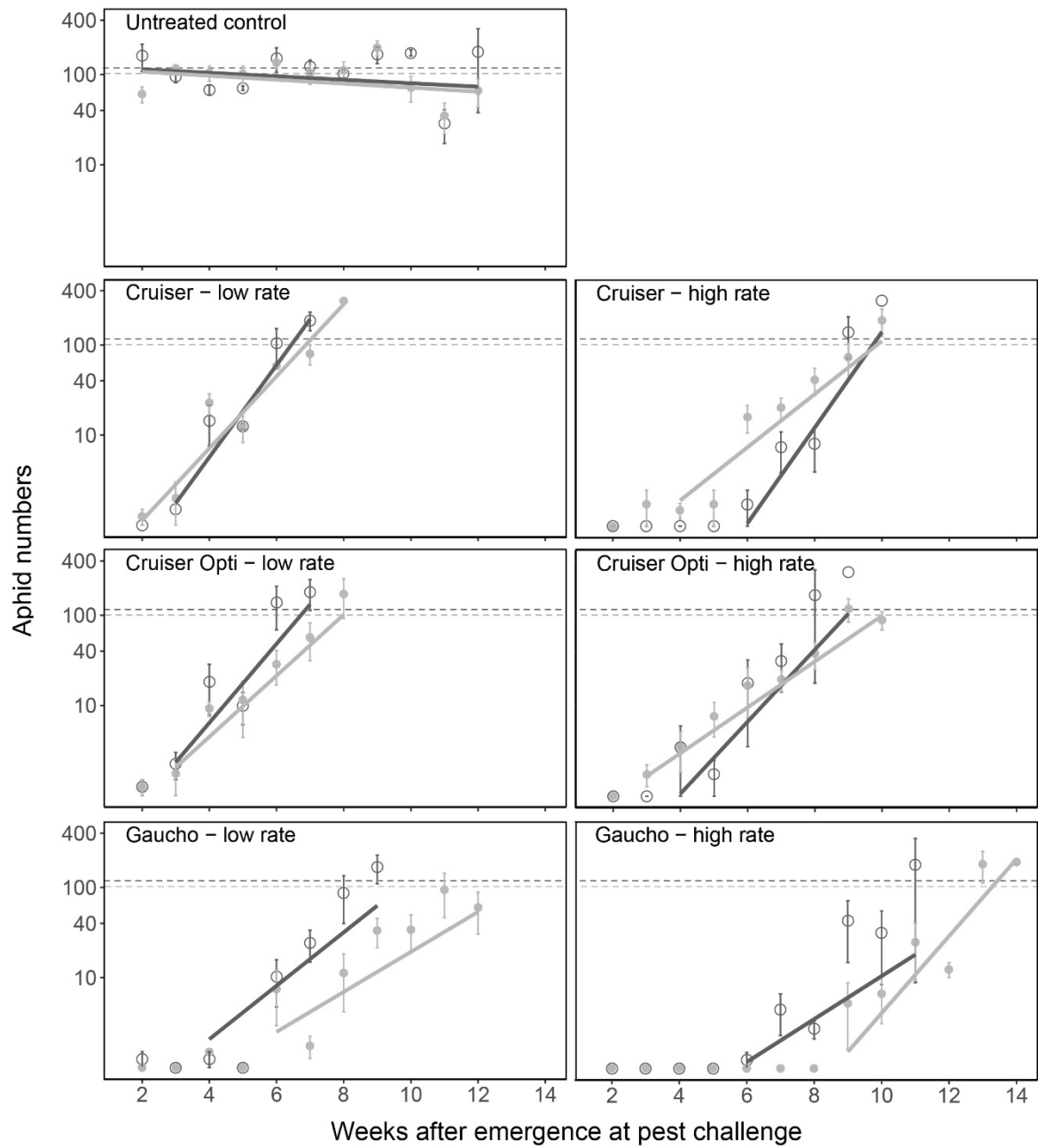
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## Supplementary figure



**Supplementary Figure 1. Plots showing mixed effects linear regression models (allowing for random effects for variable climatic conditions) for *D. noxia* (pale grey solid lines) and *R. padi* (dark grey solid lines). Counts are plotted against the week at which wheat was challenged (i.e. when aphids were introduced to tubs). Error bars represent standard error of the means. The average number of aphids in untreated controls across all weeks are shown for *D. noxia* (pale grey dashed line) and *R. padi* (dark grey dashed line).**

## Supplementary tables

**Supplementary Table 1. Zadok's growth scale of wheat plants at each week after emergence.**

<b>Week after emergence (WAE)</b>	<b>Zadok's growth scale</b>	<b>Description</b>
2	Z12	2 leaves emerged
3	Z13	3 leaves emerged
4	Z14	4 leaves emerged
5	Z15	5 leaves emerged
6	Z16	6 leaves emerged
7	Z22	Main stem + 2 tillers
8	Z31	Stem elongation
9	Z41	Flag leaf sheath extending
10	Z55	Half ear emerged
11	Z59	Ear emergence complete
12	Z59	Ear emergence complete
13	Z61	Beginning of anthesis/flowering
14	Z65	Anthesis half-way

**Supplementary Table 2. Average number of *D. noxia* for each week after wheat emergence (+\_standard error). Blank cells indicate time after the loss of efficacy, at which point aphid counts were ceased. Counts are displayed against the week at which wheat was challenged (i.e. when aphids were introduced to tubs). n = 4 in all cases.**

Treatment	Weeks after emergence												
	2	3	4	5	6	7	8	9	10	11	12	13	14
Untreated control	60±12	116±11	104±20	101±22	134±17	104±27	111±25	198±37	71±23	34±13	65±23		
Cruiser – low	0.2±0.2	1±1	22±6	11±4	58±3	79±20	308±21						
Cruiser – high	0	0.8±0.8	0.5±0.3	0.8±0.8	15±6	20±6	41±14	73±32	190±64				
Cruiser Opti - low	0.2±0.2	0.8±0.8	8±2	11±7	28±12	56±26	173±81						
Cruiser Opti – high	0	0.8±0.5	3±2	7±3	16±10	19±5	37±13	119±35	90±21				
Gaucho - low	0	0	0.5±0.5	0	7±5	0.8±0.5	10±7	33±12	33±1	94±49	59±29		
Gaucho - high	0	0	0	0	0	0	0	4±3	6±4	24±16	12±2	181±70	191±22

**Supplementary Table 3. Average number of *R. padi* for each week after wheat emergence (+\_standard error). Blank cells indicate time after the loss of efficacy, at which point aphid counts were ceased. Counts are displayed against the week at which wheat was challenged (i.e. when aphids were introduced to tubs). n = 4 in all cases.**

Treatment	Weeks after emergence												
	2	3	4	5	6	7	8	9	10	11	12	13	14
Untreated control	162±54	95±15	67±9	70±4	151±46	123±21	103±11	166±35	174±13	28±12	180±142		
Cruiser - low	0	0.5±0.5	14±7	12±1	104±46	186±44							
Cruiser - high	0	0	0	0	0.8±0.8	7±3	7±4	140±69	316±149				
Cruiser Opti - low	0.2±0.2	1±0.8	17±10	9±4	139±71	181±69							
Cruiser Opti - high	0	0	3±3	0.8±0.8	17±14	31±17	170±15	308±99					
Gaucho - low	0.2±0.2	0	0.2±0.2	0	9±5	23±9	87±48	169±59					
Gaucho - high	0	0	0	0	0.2±0.2	4±2	2±1	42±28	31±23	179±170			