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Any product referred to in this document must be used strictly as directed, and in accordance with all label or permit instructions. Always consult the label prior to use.

Aphid Management in Cereals

Trial ID: AM0904

Location:

Moree

Trial Year: 2009

Investigator:

Anthony Mitchell

Objective:	To evaluate the impact and control of aphids in barley		
Planting Date:	1/06/2009		
Fungicide Seed Treatment:	triadimenol at 22.5 g ai/100 kg seed on all treatments		
Foliar Application Timing:	T1	T2	T3
Application Date:	29/07/2007 (58 DAP)	11/08/2009 (71 DAP/ 13 DAT1)	6/09/2009 (97 DAP/ 39 DAT1/ 26 DAT2)
Stage at Application:	First sign of aphids above ground	Aphids ~ 10-15/tiller	
Nozzles and Application Volume:	AIXR110015, 60 L/ha		
Keywords:	Aphid, barley		

Table 1 Crop Results

Trt No.	Variety	Seed Treatment Insecticide/ 100 kg Seed	Foliar Insecticide /ha	Foliar Application Timing	Emergence 21/06/2009 20 DAP Plants/m ²	Yield 29/10/2009 150 DAP t/ha
1	Grout	-	-	-	79	4.19jk
2	Grout	imidacloprid 72 g ai	-	-	78	4.60defgh
3	Grout	imidacloprid 144 g ai	-	-	84	4.64cdefg
4	Grout	-	Pirimor 150 g ai	T1	73	4.35ijk
5	Grout	-	Pirimor 150 g ai	T2	84	4.41hij
6	Grout	-	Pirimor 150 g ai	T3	76	4.13k
7	Grout	imidacloprid 72 g ai	Pirimor 150 g ai	T3	80	4.51efghi
8	Fitzroy	-	-	-	75	4.44ghi
9	Fitzroy	imidacloprid 72 g ai	-	-	77	4.74bcd
10	Fitzroy	imidacloprid 144 g ai	-	-	81	4.85abc
11	Fitzroy	-	Pirimor 150 g ai	T1	72	4.65cdefg
12	Fitzroy	-	Pirimor 150 g ai	T2	76	4.69cdef
13	Fitzroy	-	Pirimor 150 g ai	T3	81	4.48fghi
14	Fitzroy	imidacloprid 72 g ai	Pirimor 150 g ai	T3	84	4.95ab
P=					0.39	0.0000
LSD=					nsd	0.22

Yield cv = 3.4% nsd = No significant difference DAP = Days after Planting

Treatment means followed by the same letter are not significantly different at P = 0.05

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Table 2 Aphid Control (to 70 DAP)

Trt No.	Variety	Seed Treatment Insecticide/ 100 kg Seed	Foliar Insecticide /ha	Foliar Application Timing	27/07/2009 56 DAP Aphids /Tiller	4/08/2009 64 DAP Aphids /Tiller	10/08/2009	
							70 DAP	12DAA1
							Oat Aphid /Tiller	Corn Aphid /Tiller
1	Grout	-	-	-	8.5 a	14.3 b	14.2a	4.1b
2	Grout	imidacloprid 72 g ai	-	-	0.9 b	1.6 cd	1.8b	0.0c
3	Grout	imidacloprid 144 g ai	-	-	0.7 b	1.1 cd	1.0b	0.0c
4	Grout	-	Pirimor 150 g ai	T1		1.8 cd	2.8b	0.2c
5	Grout	-	Pirimor 150 g ai	T2				
6	Grout	-	Pirimor 150 g ai	T3				
7	Grout	imidacloprid 72 g ai	Pirimor 150 g ai	T3				
8	Fitzroy	-	-	-	7.6 a	16.2 a	11.8a	11.5a
9	Fitzroy	imidacloprid 72 g ai	-	-	0.8 b	2.3 c	3.3b	0.6c
10	Fitzroy	imidacloprid 144 g ai	-	-	0.7 b	0.6 d	1.5b	0.0c
11	Fitzroy	-	Pirimor 150 g ai	T1		1.9 cd	4.1b	0.9c
12	Fitzroy	-	Pirimor 150 g ai	T2				
13	Fitzroy	-	Pirimor 150 g ai	T3				
14	Fitzroy	imidacloprid 72 g ai	Pirimor 150 g ai	T3				
P=					0.001	0.0000	0.0000	0.0000
LSD=					3.5	1.5	4.7	2.3

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Table 3 Aphid Control (77 DAP)

Trt No	Variety	Seed Treatment Insecticide/ 100 kg Seed	Foliar Insecticide /ha	Foliar Application Timing	17/08/2009 77 DAP 19 DAA1/ 6 DAA2		
					Oat Aphid /Tiller	Corn Aphid /Tiller	Rose-Grain Aphid /Tiller
1	Grout	-	-	-	5.0a	3.5ab	0.40a
2	Grout	imidacloprid 72 g ai	-	-	1.3bcd	0.1cde	0.10ab
3	Grout	imidacloprid 144 g ai	-	-	1.2bcd	0de	0.00b
4	Grout	-	Pirimor 150 g ai	T1	3.3ab	1bcd	0.00b
5	Grout	-	Pirimor 150 g ai	T2	0.7d	0de	0.00b
6	Grout	-	Pirimor 150 g ai	T3			
7	Grout	imidacloprid 72 g ai	Pirimor 150 g ai	T3			
8	Fitzroy	-	-	-	2.6abc	4.8a	0.00b
9	Fitzroy	imidacloprid 72 g ai	-	-	2.6abc	0.3cde	0.10b
10	Fitzroy	imidacloprid 144 g ai	-	-	0.8cd	0e	0.00b
11	Fitzroy	-	Pirimor 150 g ai	T1	1.6bcd	1.2bc	0.00b
12	Fitzroy	-	Pirimor 150 g ai	T2	0.8cd	0.7cde	0.00b
13	Fitzroy	-	Pirimor 150 g ai	T3			
14	Fitzroy	imidacloprid 72 g ai	Pirimor 150 g ai	T3			
P= LSD=					0.0000 Arcsin detransf	0.0000 Arcsin detransf	0.015 Arcsin detransf

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Table 4 Aphid Control (84 DAP)

Trt No.	Variety	Seed Treatment Insecticide/ 100 kg Seed	Foliar Insecticide /ha	Foliar Application Timing	24/08/2009 84 DAP 26 DAA1/ 13 DAA2		
					Oat Aphid /Tiller	Corn Aphid /Tiller	Rose-Grain Aphid /Tiller
1	Grout	-	-	-	2.0ab	3.8b	2.3a
2	Grout	imidacloprid 72 g ai	-	-	2.3a	0.1cd	1.9ab
3	Grout	imidacloprid 144 g ai	-	-	0.9cd	0.0d	1.2ab
4	Grout	-	Pirimor 150 g ai	T1	1.7abc	0.2cd	0.8abc
5	Grout	-	Pirimor 150 g ai	T2	0.4de	0.1cd	0.0c
6	Grout	-	Pirimor 150 g ai	T3			
7	Grout	imidacloprid 72 g ai	Pirimor 150 g ai	T3			
8	Fitzroy	-	-	-	1.3bc	11.3a	1.7ab
9	Fitzroy	imidacloprid 72 g ai	-	-	2.1ab	2.0bc	2.3ab
10	Fitzroy	imidacloprid 144 g ai	-	-	1.0c	0.0d	1.7ab
11	Fitzroy	-	Pirimor 150 g ai	T1	1.0cd	4.1b	1.6ab
12	Fitzroy	-	Pirimor 150 g ai	T2	0.3e	0.0d	1.2ab
13	Fitzroy	-	Pirimor 150 g ai	T3			
14	Fitzroy	imidacloprid 72 g ai	Pirimor 150 g ai	T3			
P= LSD=					0.0000 Arcsin detransf	0.0000 Arcsin detransf	0.05 Arcsin detransf

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Table 5 Aphid Control (92 DAP)

Trt No.	Variety	Seed Treatment Insecticide/ 100 kg Seed	Foliar Insecticide /ha	Foliar Application Timing	1/09/2009 92 DAP 34 DAA1/ 21 DAA2		
					Oat Aphid /Tiller	Corn Aphid /Tiller	Rose-Grain Aphid /Tiller
1	Grout	-	-	-	1.1	0.1	6.6abc
2	Grout	imidacloprid 72 g ai	-	-	0.5	0.3	6.2abccd
3	Grout	imidacloprid 144 g ai	-	-	0.2	0.1	4.6bcde
4	Grout	-	Pirimor 150 g ai	T1	0.2	0	2.9def
5	Grout	-	Pirimor 150 g ai	T2	0.2	0	1.5f
6	Grout	-	Pirimor 150 g ai	T3			
7	Grout	imidacloprid 72 g ai	Pirimor 150 g ai	T3			
8	Fitzroy	-	-	-	0.8	0.4	7.5ab
9	Fitzroy	imidacloprid 72 g ai	-	-	0	0	9.1a
10	Fitzroy	imidacloprid 144 g ai	-	-	0.3	0.2	7ab
11	Fitzroy	-	Pirimor 150 g ai	T1	0.5	0.4	4.6bcde
12	Fitzroy	-	Pirimor 150 g ai	T2	0	0	2.9def
13	Fitzroy	-	Pirimor 150 g ai	T3			
14	Fitzroy	imidacloprid 72 g ai	Pirimor 150 g ai	T3			
P= LSD=					0.234 Arcsin detransf	0.124 Arcsin detransf	0.001 Arcsin detransf

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Table 6 Aphid Control (100-105 DAP)

Trt No.	Variety	Seed Treatment Insecticide / 100 kg Seed	Foliar Insecticide /ha	Foliar Application Timing	9/09/2009 100 DAP 42 DAA1/ 29 DAA2/ 3 DAA3 Rose-Grain Aphid /Tiller	14/09/2009 105 DAP 47 DAA1/ 34 DAA2/ 8 DAA3 Rose-Grain Aphid /Tiller
1	Grout	-	-	-	17.3ab	6.9cd
2	Grout	imidacloprid 72 g ai	-	-	12.9ab	11.1abc
3	Grout	imidacloprid 144 g ai	-	-	11.6ab	7.6bcd
4	Grout	-	Pirimor 150 g ai	T1	11ab	3.4def
5	Grout	-	Pirimor 150 g ai	T2	2.7cd	1.1efg
6	Grout	-	Pirimor 150 g ai	T3	0e	0g
7	Grout	imidacloprid 72 g ai	Pirimor 150 g ai	T3	0.1de	0.1g
8	Fitzroy	-	-	-	19.7a	14.9abc
9	Fitzroy	imidacloprid 72 g ai	-	-	21a	20.1a
10	Fitzroy	imidacloprid 144 g ai	-	-	11.2ab	16ab
11	Fitzroy	-	Pirimor 150 g ai	T1	13.4ab	13.3abc
12	Fitzroy	-	Pirimor 150 g ai	T2	7.7bc	3.4de
13	Fitzroy	-	Pirimor 150 g ai	T3	0.2de	0.3fg
14	Fitzroy	imidacloprid 72 g ai	Pirimor 150 g ai	T3	0.3de	0.2g
P= LSD=					0.0000 Arcsin detransf	0.0000 Arcsin detransf