

North Central Research Extension Center-Minot
Soybean Aphid Control

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Crop and Variety: Soybean ‘AGO 0501’

Insecticides: Baythroid, Leverage 360, and Endigo

Fungicides: Quadris

Planting: June 6

Plot size: 4.5 ft. by 16 ft.

Design: 4 replicates, randomized complete block

Application Timing: July 28 at bloom initiation (R1)- Leverage 360, August 15 at early pod (R3)- all treatments

Application Method: Hand boom with flat fan nozzles, 10 gallons/acre

Aphid sampling: Number of aphids on 10 plants per plot (250 aphids/plant = threshold)

Harvest: October 6

Results: Soybean aphid populations were relatively low during the study and never reached the economic threshold of 250 aphids per plant. Leverage 360 applied at the initiation of bloom (R1) did not significantly reduce the number of soybean aphids at 2 d or 20 d after the treatment (Table 1). However, at the early pod (R3) timing, Leverage 360, Baythroid XL, and the Endigo treatments significantly reduced the number of soybean aphids by more than 95%. Yields were not significantly different among treatments.

Table 1.

Treatment	Rate/acre	Timing	Soybean aphids/10 plants			Yield (bu/acre)
			30-Jul	17-Aug	3-Sep	
Leverage 360 3SC ^a	2.8 fl oz	R1	86.3a	90.8a	0.0a	30.1a
Baythroid XL 1EC ^b	2.4 fl oz	R3		4.3b	0.0a	29.2a
Endigo ZC	4.0 fl oz	R3		3.3b	1.0 a	33.2a
Endigo ZC ^c	4.0 fl oz	R3		4.5b	0.8a	35.1a
Leverage 360 3SC ^a	2.8 fl oz	R3		8.0b	2.3a	30.7a
Untreated Check			136.8a	187.0a	0.5a	32.9a

Means within the same column followed by the same letter are not significantly different, Tukey's HSD (P = 0.05). Data was transformed log(x+1) prior to analysis when treatment variances were not homogeneous, untransformed means shown.

^a Leverage 360 was applied with a 1% by volume solution of Agri-dex crop oil.

^b Baythroid XL was applied with a 0.5% by volume solution of the non-ionic surfactant, Preference.

^c The fungicide, azoxystrobin (Quadris), was tank mixed with this treatment at a rate of 6.0 fl oz/acre.