

Section IV.
Cereal Crop Pests

WINTER WHEAT APHID STUDIES 2000

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A fall seeded wheat trial was established 10 miles south of Hooper, WA on cooperator land. Two seeding dates were used: an early seeding on 9-13-99, and a late seeding on 9-29-99. Farmer owned deep furrow drill was used for seeding 60 lbs. Madsen wheat per acre in a RCBD of 4 treatments x 4 replicates for the early seeding, and 3 treatments x 4 replicates for the late seeding. An untreated check was used in each trial, with a Warrior CST™ (Lambda-Cyhalothrin) foliar spray applied to the early seeding on 11-10-99 after the appearance of both Bird cherry- oat aphid and Russian wheat aphid on 11-5-99. Foliar application was made by a McGregor Company 4-wheel boom sprayer at 20 gpa/20psi provided by Darren Fleming*, Manager of the Lacrosse office. Seed treatments in both trials were Gaucho 480 (Imidacloprid) at 1.5 oz ai cwt, and Adage (Thiomethoxam) at 0.87 oz ai cwt.

Evaluation of the aphid populations in both trials and visual symptoms of BYDV were made 147-DAE after early seeding, on 2-9-00, after spring weather began.

While no BYDV symptoms were noted, aphids were active all through the winter with significant differences compared to the check in the late treatment due to toxic effects by the BCOA present and apparent aphid control.

Compensation for stress resulted in NS yield differences in the early seeding, although the Warrior™ treatment did provide slightly more yield than the seed treatments and check. Ca. 10 bushels over the check were produced by the Gaucho and Adage seed treatments in the late seeding over the UT check. Later seeding definitely improved yields over the early seeding trial.

See tables for actual numbers analyzed by ANOVA, LSD t Test $p = 0.05$.

52-DAE Aphid Counts Early/Late Seeding Trials

Treatment	RWA%	BCOA%
Check early	12	5
Check late	12	5
Adage early	0	0
Adage late	0	0
Gaucho early	0	0
Gaucho late	0	0
Warrior PrCt	13	5

Aphid Counts 147-DAE Early Trial = LSD t Test

	Treatment	RWA%	BCOA%
Gaucho late	0.00a	1.00a	
Gaucho early	0.33a	1.00a	
Warrior foliar	1.00b	1.00a	
Adage late	1.00b	1.00a	
Adage early	1.00b	1.33ab	
Check late	8.67c	3.00b	
Check early	10.00d	3.00b	

Yields at Early Seeding Trial = NSD LSD t Test

Treatment	Bu/AC
Check early	100.3
Adage early	100.9
Gaucho early	101.7
Warrior foliar	105.9

Yields at late Seeding Trial = LSD t Test

Treatment	Bu/AC
Adage late	115.1a
Gaucho late	113.0ab
Check late	104.7b