

Section V
Cereal Crop Pests

APHID CONTROL IN WINTER WHEAT IN HIGHER INTERMEDIATE RAINFALL
SE WASHINGTON

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A higher rainfall soft white winter wheat trial was established at the Dye Farm near Pomeroy, Washington with 3 rates of Gaucho 480 (Imidacloprid) applied as seed treatments (0.5, 0.75, and 1.0 oz ai cwt), and an untreated check. Plot design was randomized complete block with 4 replicates of 30 x 600 ft per treatment. The experiment was designed to measure 1) the impact of aphids on winter wheat yield; and 2) the efficacy of Imidacloprid as an aphicide in winter wheat. Treatments were evaluated by aphid counts per tiller on 30, 50, and 65-days after emergence (DAE). Harvest data was collected from 24 ft strips per replicate. Mean grain yields and test weights were calculated per acre from weigh wagon samples. Russian wheat aphids (RWA) were present in the check at 10% infested tillers at 15 and 30-DAE, and 30% at 65-DAE. No RWA were found in the Imidacloprid treatments through 65-DAE. Based on aphid numbers alone, Imidacloprid provides good RWA control compared to the untreated check. However, no significant difference in mean yields occurred between treatments.

<u>Mean yields of winter wheat</u>				
<u>Treatment/formulation</u>	<u>Rate oz ai cwt</u>	<u>Bu/Ac</u>	<u>Tw/Bu</u>	<u>Increase over check</u>
Check	-----	116.6a	61.3a	-----
Gaucho 480	0.5	116.4a	61.0a	-----
Gaucho 480	0.75	118.3a	61.5a	1.6
Gaucho 480	1.0	118.5a	61.5a	1.9

Means followed by same letter are not significantly different ($p = 0.05$;LSD).

<u>Mean % RWA infested tillers</u>				
<u>Treatment/formulation</u>	<u>Rate oz ai cwt</u>	<u>30-DAE</u>	<u>50-DAE</u>	<u>65-DAE</u>
Check	-----	10a	10a	30a
Gaucho 480	0.5 oz ai	0b	0b	0b
Gaucho 480	0.75 oz ai	0b	0b	0b
Gaucho 480	1.0 oz ai	0b	0b	0b

Means followed by same letter are not significantly different ($p = 0.05$;LSD).