Section IV Biological & Cultural Controls

COMPARISON OF 4 VARIETIES OF SPRING WHEAT FOR RESISTANCE TO RUSSIAN WHEAT APHID AND HESSIAN FLY D. E. Bragg Department of Entomology Weakington State University

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Four varieties of spring wheat: Alpowa, Centennial, ID488, and Wakanz, were seeded in a randomized complete block design on the USDA-ARS Western Regional Plant Materials Introduction Center at Central Ferry, Washington. Four replicates of 15 x 354 ft were used per variety, with evaluations of heads/ 10 plants, tillers/ 10 plants, % Hessian fly (HF) infested tillers. % Russian wheat aphid (RWA) infested tillers, and % RWA attacked by the parasitoid *Diaeretiella rapae* (M'Tosh) (DR) at 65-DAE. Harvest data was collected by cutting 12 ft strips from each replicate, weighing the grain, and calculating yield per acre in bushels and test weight per bushel. The variety Wakanz was significantly different from the others in HF resistance with no HF infested tillers. ID488 showed some HF resistance, while Alpowa and Centennial were equal in susceptibility to HF. Wakanz was significantly more susceptible to RWA infestation compared to the other varieties. Alpowa and Centennial in RWA susceptibility, with ID488 demonstrating RWA resistance. DR did not parasitize the RWA on ID488, possibly due to low populations. Alpowa yielded than Centennial and ID488 due to lodging produced by HF. Wakanz was significantly lower in yield than the other varieties due to RWA damage.

		Wreat at 65-DAE (Feeks scale 10.						
Variety				Heads/ t 10 plants	Tillers/ 10 plants	Hessian		
	Bu/Ac	Tw/Bu	%Prot			fly%	%RWA %	D. rapae
Alpowa	20.7b	54.7b	14.5b	61.0a	82.0a	17.07c	73.17b	80.0b
Centennial	34.4a	57.2a	14.4b	58.5a	73.8ab	15.07c	83.52bc	80.0b
ID488	36.2a	57.9a	13.7b	55.3ab	64.0b	7.81b	4.68a	0.0 a
Wakanz	16.9c	50.9a	16.1b	48.0b	63.5b	0.0 a	100.0c	83.0b
	175 - 25A							

Means followed by same letter and not significantly different. LSD 0.05; ANOVA.

Vield registere in humbels and feat wellshipse nucleol. The veries Wakam was signific to different from the others in HT revisiting with no HT infected filters. D486 showed to HT resignate while A nows and Centendul vere sound in successful in the white of the was significantly more susceptible to P VA infectation compared to the other with the Algored and Generated were sumfit in RWA susceptibility, with HD485 dominanting RWA restance. DR dua not plantation the RWA on HD485 not not try sources and the trian the result of the RWA on HD485 dominanting sources was uponed to not plantation the RWA on HD485 not not try was not substantial were readed then Carrennial and HD485 dominanting sources was uponted to be carrennial and HD485 dominantly of the Was not was uponted that tower in your data the office variance due to RWA to datage