

Hessian Fly Variety Test, Fairhope, AL 2012-2013

Kathy Flanders, Brenda Ortiz, Kathy Glass, and Malcomb Pegues

July 1, 2013

Plots were planted at Gulf Coast REC on 7 Nov 2012 following 0.4" rain on November 5. Individual plots were 5 ft X 22 ft, and replicated 4 times (RCBD). On 23 Jan 2013, wheat plants were dug from 4-5 locations per plot (the equivalent of 18 inches of row per plot). Each tiller was examined to see if it was infested with Hessian fly. Hessian fly pressure was relatively low on a per area basis but there were statistical differences between varieties. Plots were resampled for Hessian fly on March 22. At this time, Hessian fly pressure was quite high on a per area basis, with mean density as high as 27 per row-ft. Plots were harvested on May 28, 2013. The varieties with the most field resistance to Hessian flies were the Pioneer variety 26R41, Terral TV 8861, Terral TV 8848, and USG 3120. The varieties USG 3555, Pioneer 26R87, Terral 8525, Progeny 870, and Croplan 8925 were the most susceptible varieties on 22 March, and also had the lowest yields. Highest yielding varieties were Pioneer 26R41, Terral TV 8861, and AGS 2035.

Variety	Hessian fly infested tillers (%)		Hessian flies* per tiller		Hessian Flies* per row-ft		Yield /A (13.5% 60 lb/bu)	Test weight lb./bu
	23-Jan	22-Mar	23-Jan	22-Mar	23-Jan	22-Mar		
Pioneer 26R41	0.0 d	0 d	0.00 b	0.00 d	0 d	0 f	110 a	59.3 a
Terral TV 8861	0.7 cd	3 c	0.01 b	0.04 cd	0 cd	1 ef	104 ab	59.2 a
AGS 2035	14.1 a	14 ab	0.18 a	0.39 ab	5 ab	9 bc	99 abc	59.5 a
usg 3120	5.7 bcd	3 c	0.08 ab	0.05 cd	2 a-d	1 e	97 bc	59.9 a
Croplan 8302	0.0 d	10 b	0.00 b	0.25 bcd	0 d	7 cd	89 cd	59.6 a
Terral TV 8848	1.5 cd	3 c	0.02 b	0.05 cd	1 cd	2 de	85 d	58.2 a
usg3555	2.0 cd	17 ab	0.02 b	0.51 ab	1 bcd	22 ab	84 d	59.7 a
Pioneer 26R87	10.9 ab	21 a	0.17 a	0.59 a	6 a	27 a	84 d	59.7 a
Terral 8525	4.1 cd	15 ab	0.08 ab	0.32 abc	3 abc	12 abc	73 e	59.1 a
Progeny 870	6.6 bc	15 ab	0.08 ab	0.32 abc	3 abcd	17 abc	69 e	58.8 a
Croplan 8925	4.3 cd	15 ab	0.05 b	0.47 ab	2 bcd	28 a	48 f	50.3 b
F _{10,30}	4.3	9.88	2.81	4.56	2.6	3.51	23.4	16.3
Pr > F	0.0009	<0.0001	0.0100	0.0006	0.0200	0.0037	<0.0001	<0.0001

Means within a column followed by the same letter are not significantly different, alpha=0.05, Tukey's LSD. Percent infested tillers from 22 March were transformed before analysis using an arcsin(square root) transformation. Hessian flies per row-ft were transformed using log(x+1) before analysis.

*Larvae or puparia

Hessian Fly Variety Test, Prattville, AL 2012-2013

Kathy Flanders, Brenda Ortiz, Kathy Glass, and Don Moore

July 2, 2013

Plots were planted at Prattville Agricultural Research Unit on 8 November 2012 following 0.35" rain on 6 November. Plots were 5 ft X 22 ft, and replicated 4 times (RCBD). On 8 May 2013, wheat plants were dug from 4 locations per plot (the equivalent of 24 inches of row per plot). Each tiller was examined to see if it was infested with Hessian fly. Hessian fly pressure was moderate on a per area basis and there were statistical differences between varieties. Plots were harvested on 3 June, 2013. The varieties with the most field resistance to Hessian flies were the Pioneer variety 26R41, Terral TV 8861, Terral TV 8848, and USG 3120. The varieties USG 3251, Pioneer 26R53, Progeny 870, and Croplan 8925 were the most susceptible varieties. Highest yielding varieties were USG 3120, Terral 8848, Pioneer 26R41, Terral TV 8861, and Pioneer 26R53.

Variety	Hessian fly infested tillers (%)	Hessian flies* per tiller	Hessian Flies* per row-ft	Yield /A (13.5% 60 lb/bu)	Test weight lb./bu
USG 3120	0.1 d	0.01 c	0.2 cd	83 a	62.0 ab
Terral TV 8848 30 d**	1.6 cd	0.02 c	0.6 cd	80 ab	57.3 cd
Terral TV 8848 60 d**	0.6 d	0.01 c	0.4 cd	79 ab	56.9 cd
Terral TV 8848	0.1 d	0.01 c	0.2 cd	79 abc	56.2 d
Pioneer 26R41	0.0 d	0.00 c	0.0 d	78 abc	57.8 bcd
Terral TV 8861	0.5 d	0.01 c	0.4 cd	78 abc	58.7 bcd
Pioneer 26R53	10.2 abc	0.34 a	9.6 a	76 abc	58.8 bcd
AGS 2035	0.1 d	0.01 c	0.1 cd	75 bc	60.2 ab
Pioneer 26R87	2.3 cd	0.14 abc	2.2 bc	75 bc	61.6 ab
USG 3251	10.2 abc	0.32 ab	5.9 ab	72 cd	57.3 cd
Croplan 8302	3.1 bcd	0.07 bc	1.1 cd	68 d	58.3 bcd
Progeny 870	13.3 ab	0.39 a	6.6 ab	60 e	56.8 cd
Croplan 8925	15.5 a	0.28 ab	9.7 a	58 e	53.3 e
F _{12,36}	4.2	2.9	6.0	10.7	7.1
Pr > F	0.0004	0.0063	<0.0001	<0.0001	<0.0001

Means within a column followed by the same letter are not significantly different, alpha=0.05, Tukey's LSD. Percent infested tillers from 22 March were transformed before analysis using an arcsin(square root) transformation. Hessian flies per row-ft were transformed using log(x+1). *Larvae or puparia. **In these treatments Terral TV 8848 was treated with an experimental insecticide for aphid control at 30 and 60 days after planting. Aphid pressure was very low so these treatments did not differ from the untreated Terral TV 8848.