

SMALL GRAIN UPDATES

VARIETY RELEASES

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USG 3120 is a medium maturing soft red winter wheat with white chaffed and medium in height. It was derived from the cross, GA 901146 / GA 9006 // AGS 2000. Its maturity is two days earlier than AGS 2000. GA 991209-6E33 has good resistance to current biotypes of Hessian fly in Georgia, including biotype L, and is moderately resistant to races of leaf rust and stripe rust. It is also moderately susceptible to soil-borne mosaic virus and susceptible to powdery mildew. USG 3120 has good milling and baking quality.

Wheat releases by private companies for production in Georgia include ARCADIA and PIO 26R20.

DISEASES

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Powdery mildew was almost nonexistent this year due to rainfall and cold temperatures. Mildew prefers cool temperatures and damp conditions. Mildew was observed at very low levels at Tifton, but not at Griffin or Plains.

Stripe rust (*Puccinia striiformis*) was observed at Griffin where plots were artificially inoculated. Stripe rust was found at very low levels late in the season at Plains. No widespread epidemics were observed in the state. Samples were sent to Washington state to confirm the race of rust involved.

Barley Yellow Dwarf Virus was observed at high levels across the state. State wheat trials at Tifton, Plains, and Griffin had the highest disease pressure in years, with highest disease levels observed at Plains. Aphids must have continued to be active during the colder temperatures of late winter. The decreased wheat acreage seemed to have an aphid concentration effect on the wheat plots at all locations.

Stagonospora leaf and glume blotch were at moderate levels across the state again due to the moist early spring conditions observed.

Leaf rust was observed very late in the season but did not pose a serious risk to the crop.

The cold and wet conditions of the season should have led to above normal soilborne wheat mosaic virus (SB) and wheat spindle streak mosaic virus (SS) infections. Some soilborne was observed at Griffin. The cold and excessive water may have been too much for the fungal vector (*Polymyxa graminis*) to infect the wheat roots.

The extreme weather of the fall and late winter played a significant role in limiting mildew infections. The two- to three-week period of dry weather in early to mid spring helped to limit stripe rust and leaf rust infections. Additionally, the reduced wheat acreage in the state limited field-to-field movement of foliar disease and further prevented the development of large scale disease epidemics.

INSECTS

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The variety tests were sampled for Hessian fly, *Mayetiola destructor*, in late April, 2010 at Southwest Branch Research and Education Center near Plains, the Bledsoe Research farm near Griffin and at the Lang Farm near Tifton, GA. Results are shown in the next table. Five lines (SL 1001 – SL 1004 and Bilancia) listed at the bottom of the table are hard red wheat types and were only evaluated at Tifton.

Hessian fly infestations were low at all locations, making definitive ratings difficult. Several wheat varieties showed good levels of Hessian fly resistance including AGS 2026, AGS 2035, AGS 2060, Jamestown, Pioneer brands 26R31 and 26R61, USG 3592, SS8308 (fair), SS8641, Vigoro Oglethorpe, and a number of experimental lines. Varieties with good resistance in southern Georgia may not be resistant in northern Georgia because of the presence of biotype L in northern Georgia. The only currently available varieties with biotype L resistance are AGS 2010, AGS 2026, and Oglethorpe. Rye and oats also are good Hessian-fly-resistant alternatives to wheat for forage production because rye is highly resistant and oats are immune to the insect.

Cold wet conditions in the fall of 2009 prevented most planting of wheat. These conditions also delayed what fields were planted; consequently damaging infestations of Hessian fly were largely avoided. Despite cold conditions during the winter, aphid infestations occurred in numerous fields. Aphids cause direct injury to wheat and also transmit barley yellow dwarf virus (BYDV). BYDV infection was variable but was damaging in some fields throughout most of the state. Although the level of expression of symptoms varies between varieties, no varieties are truly resistant to or tolerant of BYDV infection. Systemic insecticide seed treatments and properly timed foliar applications of insecticides can reduce aphid numbers and minimize BYD incidence.

Consult your local county extension agent and 2009 Georgia Pest Management Handbook for a list of recommended insecticides and for management practices for these and other insect pests of small grains.

**Hessian fly infestation* in wheat entries in the 2009-2010
Georgia State Small Grain Variety Test,
Plains, Griffin and Tifton, GA.**

Entry name	Plains		Griffin		Tifton	
	% Infested	No./stem	% Infested	No./stem	% Infested	No./stem
GA991336-6E9	30	0.30	0	0	0	0
GA01134-8A6	30	0.50	25	0.25	-	-
USG 3555	25	0.40	10	0.35	25	0.40
LA01029D-139-3-C	25	0.35	35	0.70	0	0
JGL Exp. 72562	20	0.25	0	0	75	2.20
Roberts	15	0.35	0	0	-	-
Panola	15	0.15	0	0	0	0
DynaGro-Baldwin	15	0.15	5	0.10	0	0
SS8404	15	0.40	5	0.05	5	0.05
GA001170-7E26	15	0.10	10	0.10	0	0
Pioneer 26R20	15	0.25	5	0.05	0	0
JGL Exp. 60172	15	0.15	15	0.30	20	0.35
AGS CL7	15	0.40	0	0	5	0.05
USG 3251	15	0.15	0	0	20	0.25
NC05-19896	15	0.15	0	0	15	0.20
Trical 2700 (triticale)	10	0.20	0	0	-	-
NCPT01-1433	10	0.10	0	0	-	-
USG 3592	10	0.10	10	0.25	0	0
USG 3295	10	0.10	5	0.05	25	0.45
NK-Coker 9700	10	0.25	0	0	5	0.05
Jamestown	10	0.10	0	0	0	0
Progeny 117	10	0.20	0	0	30	0.45
Merl	10	0.20	0	0	25	0.40
TV8589	10	0.20	0	0	5	0.10
GA011174-8A9	10	0.10	0	0	5	0.20
GA011124-8LE28	10	0.10	0	0	-	-
JGL Exp. 51585	10	0.15	5	0.10	25	0.25
LA01139D-86-6-2	10	0.35	0	0	0	0
GA02343-9LE5	10	0.15	0	0	15	0.15
GA03564-9EE42	10	0.10	0	0	-	-
TVX8581	10	0.10	10	0.20	5	0.05
USG 3452	10	0.10	0	0	30	0.35
USG 3438	5	0.15	0	0	60	1.25
Magnolia	5	0.15	10	0.15	-	-
LA01110D-150	5	0.10	10	0.10	5	0.05
USG 3770	5	0.05	25	0.35	5	0.10
Progeny 166	5	0.05	5	0.05	15	0.20
Progeny 185	5	0.05	0	0	20	0.30
GA031238-7E34	5	0.05	0	0	10	0.10
GA011493-8E18	5	0.05	0	0	10	0.20
GA021338-9EE11	5	0.15	0	0	-	-
GA021338-9E4	5	0.05	5	0.05	0	0
SS8308	5	0.05	0	0	0	0
USG 3665	0	0	10	0.10	0	0
NF96210	0	0	10	0.15	-	-

**Hessian fly infestation* in wheat entries in the 2009-2010
Georgia State Small Grain Variety Test,
Plains, Griffin and Tifton, GA (Continued)**

Entry name	Plains		Griffin		Tifton	
	% Infested	No./stem	% Infested	No./stem	% Infested	No./stem
SS520	0	0	5	0.10	5	0.05
GA00067-8E35	0	0	5	0.05	10	0.15
Pioneer 26R31	0	0	5	0.10	0	0
USG 3120	0	0	5	0.10	0	0
Oglethorpe	0	0	5	0.05	0	0
GA00219-8E45	0	0	5	0.05	-	-
GA021773-9EE21	0	0	5	0.05	-	-
Progeny 125	0	0	0	0	20	0.40
NK-Coker 9553	0	0	0	0	10	0.15
LA841	0	0	0	0	5	0.05
Pioneer 26R61	0	0	0	0	5	0.05
DH-100	0	0	0	0	-	-
Fleming	0	0	0	0	0	0
USG 3592	0	0	0	0	0	0
SS8641	0	0	0	0	0	0
AGS 2026	0	0	0	0	0	0
AGS 2060	0	0	0	0	0	0
AGS 2035	0	0	0	0	0	0
TVX8861	0	0	0	0	0	0
TV8558	0	0	0	0	0	0
LA01110D-84-1-C	0	0	0	0	0	0
GA001138-8E36	0	0	0	0	0	0
GA011027-8LE24	0	0	0	0	0	0
Arcadia (D05*6441)	0	0	0	0	0	0
LA0110D-84-2-C	0	0	0	0	0	0
GA021338-9E15	0	0	0	0	0	0
GA021245-9E16	0	0	0	0	0	0
GA001142-9E23	0	0	0	0	0	0
GA021087-9LE33	0	0	0	0	0	0
GA011446-9LE35	0	0	0	0	0	0
LA821	0	0	0	0	0	0
SL 1001	-	-	-	-	0	0
SL 1002	-	-	-	-	0	0
SL 1003	-	-	-	-	5	0.10
SL 1004	-	-	-	-	0	0
Bilancia	-	-	-	-	10	0.15

*Results from single non-replicated block.