

WHEAT VARIETY NEWS FOR 2017



2016/ 2017 USG Wheat Varieties from Renwood Farms

At Renwood Farms, we strive to produce disease-free seed and protect it with advanced seed treatments to ensure your success in every bag, on every acre, each and every year.

Summary of 2016: There were two major weather events that influenced Mid-Atlantic wheat performance in 2016: the very warm March which led to the April 6th freeze.

Warm March: In 2016, there were 486 GDU (growing degree units or heat units) generated in March in Central VA. The average is 302 GDU so while we need a warm March for the last tillers to develop, the 2016 March was 60% warmer than “normal” pushing the wheat ahead of schedule.

April 6th Freeze: On April 6th, wheat that was planted on Oct. 15th, was at 1732 GDU which basically put us close to boot/heading. Some temperatures reached 22F but all dipped below 28F. Damage to wheat at boot/heading occurs when temps dip below 30F for two hours or more. Even November-planted wheat was damaged with these low temps. Freeze damage causes death of the primary tiller which is responsible for 60% of the yield. Freeze damaged wheat produces uneven ripening and short plants with small heads.

As unfortunate as the freeze was in 2016, it probably helps to remember that this was the first serious wheat freeze since 2007. Spring freeze is always a concern but variety selection with a focus on heading dates relieves some of this pressure.

Fall Guide to High-Yield Wheat

- Plant disease-free USG seed from Renwood Farms: In Virginia Tech 3-year wheat trials, USG has four of the top eight varieties for yield. No seed company has selected for better disease resistance and/or scab tolerance.
- Apply **Vizor 5Z™** seed treatment

- Select varieties with different heading dates to avoid spring freeze
- Select varieties with tolerance to scab and a solid disease resistance package: **USG now has scab resistant wheat varieties**
- Burndown no-till fields at least three weeks prior to planting

Varieties Available Listed in Order of Planting

- **USG 3316 (NEW):** Full beard with true resistance to scab: highly resistant to leaf and head septoria, moderately resistant to soil-borne viruses (heavier soils). Excellent tillering for geese-damage control
- **USG 3833:** Very vigorous tillering wheat with outstanding stripe rust resistance. Moderate tolerance to scab with very good test weight and superior resistance to soil-borne virus makes this a good choice for heavier soils. Smooth head.
- **USG 3197 (NEW):** A stout wheat variety with consistent yields and good test weight. Strong resistance to scab and highly resistant to leaf and head septoria.
- **USG 3404:** Powerful wheat with high yields, very good test weight and an outstanding disease package. Top yield in 2014 and 2015 VA Tech wheat variety trials.
- **USG 3895 (NEW):** Introduced to compliment USG 3404; selected for lighter peanut, cotton and tobacco soils due to deep rooting: Above average resistance to head septoria plus leaf and stripe rust.
- **USG 3523:** First late planting/early-heading wheat released in a long time. Superb disease package with outstanding yields. Top overall yields in VA Tech state wheat trials with 3404.

WHEAT FALL 2016

Wheat Varieties



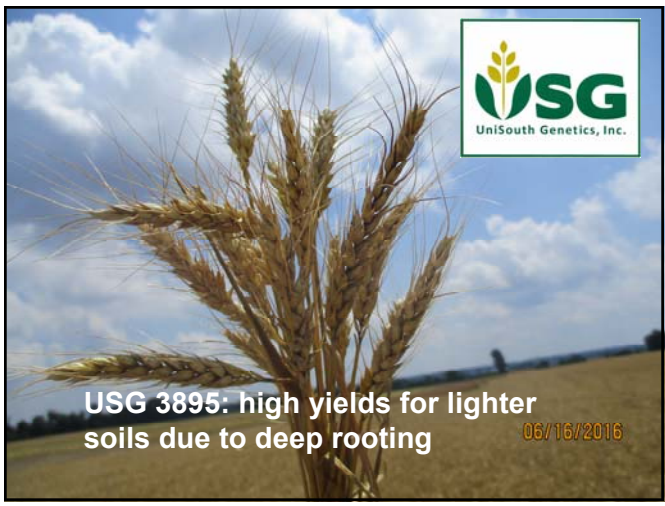
USG 3316: strong scab resistance: very high yields with impressive disease package



USG 3404: very high yields with outstanding disease package



USG 3523: for later planting, high yields and great disease package 06/16/2015



USG 3895: high yields for lighter soils due to deep rooting 06/16/2016

Group 1 earliest planting	Group 2 & 3 middle planting	Group 4 last planting
USG 3316 (new) USG 3833 USG 3197 (new)	USG 3404 USG 3895 (new)	USG 3523

Planting the right variety in the right planting window is critical to limit spring freeze damage. The table at left shows which variety is recommended for the different planting windows. Planting a Group 4 variety too early enhances chances for spring freeze damage as they grow all winter long regardless of day-length.

WHEAT FALL 2016

Vizor™ Seed Treatments for the Mid-Atlantic and Southeast

Vizor™ seed treatments are designed to stop the diseases associated with both warm and cool soil temperatures. Seed treatments other than **Vizor™** are usually added to protect in cold soils only.

In addition to stopping diseases early, **Vizor™** offers extended protection. **Vizor™** provides 200 days of protection compared to only 35 days for other seed treatments.

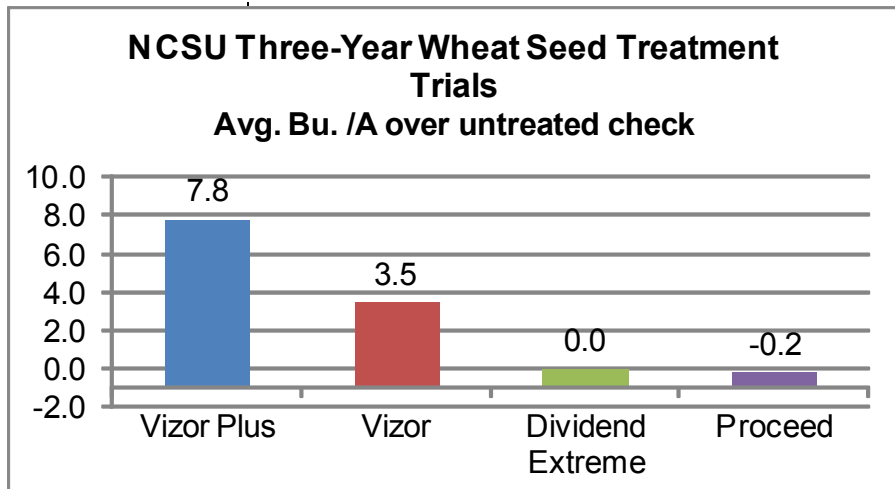
The graph above shows NCSU wheat seed treatment plots over a three-year period. This research showed that the **Vizor™** wheat seed treatments were the only treatment that increased yields every year.

Renwood Farms can include **zinc** on seed. Zinc is needed as a plant nutrient but also stimulates soil microbes to release more nutrients to the plant. **Adding zinc to seed has increased plant manganese levels** in field conditions.

Zinc seed treatments can prevent sharp eyespot fungal infections where litter has been used. In 2013, adding **zinc to the seed increased yields by 16 bu. /acre** in Renwood Farms seed production. Seed zinc has increased wheat yields by 12 bu. /acre or more in Mississippi, North Carolina and Virginia fields.

Growers use seed insecticides to prevent aphid (transmits Barley Yellow Dwarf Virus), Hessian fly and soil insect damage. Some seed treatments use the lowest rates allowed by the labels which lowers performance.

Vizor Plus™ and **Vizor 5Z™** provides Gaucho 600 at 1.4 ozs. /100 lbs. to provide protection from aphids, Hessian fly and soil insects all fall. Adding a seed insecticide at the proper rate added 4.3 bu. /acre in NCSU trials. Seed treatments from some companies contain lower rates of insecticides and will not protect wheat seedlings all fall long.



Vizor™	Unique multiple fungicide treatment with higher rates for longer, stronger protection
Vizor Plus™	Vizor with insect control for aphids and Hessian fly
Vizor ZN™	Vizor with zinc
Vizor 5Z™	Vizor Plus with zinc



Vizor™ seed treatments are the most effective way to protect against root rots and insect pests. **Vizor 5Z™** adds a critical nutrient package to not only protect but also feed plants to deliver higher yields.

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Fall 2016 Wheat Variety Characteristics (listed in order of planting)

Variety	Maturity	Height	Head Type	Test Weight	Mildew	Glume Blotch	Scab Tolerance	Soil Virus
USG 3316 (new)	ME	M	A	2	4	2	2	3
USG 3833	M	M	S	3	4	3	4	2
USG 3197 (new)	ME	M	A	3	3	2	2	5
USG 3404	M	M	A	2	2	2	2	3
USG 3895 (new)	M	M-S	A	2	NR	2	NR	3
USG 3523	ME	M	A	2	2	2	3	3

Maturity: E = early harvest, M = medium harvest, L = late harvest

Height: S = short, M = medium, T = tall

Head Type: A = awned (full beard), AL = awnletted (tip beard), S = smooth (no beard)

Test Weight: 1 = best, 9 = worst

Mildew, Glume Blotch, Scab, Virus: 1 = best resistance 9 = least

