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SmartGrains – The Small Grains Fact Sheet

2015 Wheat Variety Performance & Recommendations

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These recommendations are based on variety tests conducted in North Carolina in 2013-14 and 2014-15. Yield, test weight, and heading date are evaluated at every location. Pest resistance information is updated whenever possible or when the pest pressure makes it feasible to evaluate resistance. These rankings are not always the same as those reported in the OVT, because 1) additional variety tests may be used in addition to the OVT, and 2) some locations used in the OVT may be excluded.

Plant At Least Three Varieties: Always try to select at least three varieties to plant. This minimizes the risk of selecting a variety that may lack resistance to a particular pest or may flower at a time when weather conditions are not optimal. The "Above-Average Yielding" varieties are good first choices. However, even the "Average Yielding Varieties" are likely to produce acceptable yields. To help with disease management, make sure you note which varieties you plant in each field.

Avoid Spring Freeze Damage: Spring freeze damage is often a problem in North Carolina and result in unacceptable loss in yield potential. Early-heading varieties are the most likely to be damaged by spring freeze. To reduce the risk of yield loss due to freeze damage, plant no more than one early-heading variety and at least one late-heading variety. Late-heading varieties are best when planted early and should be the first varieties planted. Early-heading varieties should be planted on the late side of the optimum planting period, and should be the last varieties planted.

Reduce the Risk of Head Scab: In some parts of North Carolina, head scab was a significant disease problem in 2015 resulting in yield losses, low test weight, and rejection of grain at the buying station due to high vomitoxin (DON) levels. This disease is one of the major problems that small grain growers must try to avoid. The best way to minimize risk is to plant varieties rated "MR" to head scab (Table 1). If weather conditions in the spring favor scab, fungicides may be recommended at flowering. However, even if selected, timed and applied correctly, fungicides are not 100% effective. They can only reduce scab damage, not eliminate it. Therefore, planting varieties rated "MR" to scab is the first and most important step in managing this threat. See www.smallgrains.ncsu.edu/head-scab.html for more information.

Maximize Yield By Managing Powdery Mildew or Leaf Rust: Research at NCSU has shown that when powdery mildew or rust develops, the combination of varieties rated "R" or "MR" for these diseases **and** a fungicide application most often leads to the highest yield. These diseases are less common in the Piedmont region, but in other parts of the state, selecting varieties with resistance to powdery mildew and rust is always a good idea. See www.smallgrains.ncsu.edu/video-library.html for more information about these diseases.

Are Soil Virus Diseases Important? In years with wet, cool weather and in fields with a history of soil viral diseases, yields can be reduced by 14% or more when a variety rated "S" for soil-borne mosaic or spindle-streak virus is used compared to one rated "MR." Once a field has a history of soil virus problems, it is important to plant varieties rated "MR" or "R" for that particular virus. There are no fungicides or other treatments that can be used to treat soil viruses. Therefore, when you have a soil virus, variety selection is your only defense against yield loss.

More Information on Variety Selection or Disease Management: Check the *Small Grain Production Guide*, the small grain production website (www.smallgrains.ncsu.edu), or call your local county extension office. Further information about variety characteristics such as plant height or local variety performance can be found at www.ncovt.com.

Table 1. 2014 and 2015 Wheat Variety Performance

Wheat Variety	Test Weight	Heading Date	Pest Resistance To									
			Powdery Mildew	Leaf Rust	Head Scab	Hessian Fly Biotype-L	SNB	Soilborne Mosaic Virus	Spindle Streak Virus	Barley Yellow Dwarf Virus	Stripe Rust	Tan Spot
Above Average Yield												
AgMX 415	+	MED	MS	MR	MR	FAIR	MR	MS	MR			MR
AgMX 446	+	LATE	MS		S	EXCELLENT	S	S				
DG 9552	+	LATE	MS		MS		MS	MS				
DG Shirley	-	LATE	R	MR	S	POOR	MR	MR	MR	MR		
DG 9223	-	MED	MS	S	MS	POOR	MR	MS	MR			S
Harvey's AP 1871E	ave	LATE	MR		MS		S	MS				
P 26R10	+	LATE	MS	MS	MS	EXCELLENT	MR	MR	R	MS		MR
P 26R20	+	LATE	MR	MR	S	GOOD	MR	R	MR	S		MR
P 26R53	ave	MED	MS	MS	MS	FAIR	S	MS	MR	MS		MS
S Harvest 4400	+	LATE	MS		MS		S	MS				
SS 8360	ave	LATE	MS		MS	EXCELLENT	MS	S				
SY Harrison	-	MED	S	S	MR	GOOD	MR	MS	MR	MR		MR
USG 3895	+	MED	S		MS		MR	MS				
USG 3251	ave	LATE	MS	MS	S	FAIR	MR	MR	MR			MR
USG 3201	+	MED	MS	MR	MS	FAIR	MS	MR	MR	MR		MS
USG 3523	ave	LATE	MS	S	MR	GOOD	MR	MR	MR			MR
USG 3404	-	LATE	MS	MS	MR	EXCELLENT	MR	MS	R			MR
Above Average Yield But Less Consistent												
AgMX 413	-	MED	MS	MS	MS	POOR	S	MS	MR			MR
AgMX 444	-	LATE	MS	R	MR	POOR	MR	MS	R			MR
Fthstone VA-258	-	MED	MR	R	S	POOR	MR	MR	MR	S		S
S Harvest 4300	+	LATE	MS		MR		MR	MS				
SS 8340	+	MED	MS	MS	MR	POOR	MR	MR	MR	MS		MS
USG 3993	+	MED	MR	MR	MR	FAIR	MR	MR	MR			MR
USG 3120	+	EARLY	R	R	S	GOOD	S	MS	S	MR		S
Average Yielding												
AgMX434	-	MED	MS	S	MS	GOOD	S	MS	MR			MR
DG9522	ave	LATE	MR		MR		MS	MR				
Fthstone 73	-	LATE	MR		MR	GOOD	MR	MS				
Lgrain LCS NEWS	-	MED	MR		MR		MR	S				
Prog P 870	-	MED	MR	MS	S	POOR	MS	MR	MR	MR		MR
Prog P 357	-	LATE	S	S	MS	FAIR	MR	R	R	MR		MR
SS 8500	+	LATE	MS	MR	S	FAUR	MR	MS	MR	MR		S
SY 9978	-	MED	R	MS	S	EXCELLENT	MR	S	MR	MR		MS
SY Oakes	+	MED	S	MS	MR	POOR	MR	S	MS	MS		MS
USG 3833	-	LATE	S	S	MS	GOOD	MR	MR				
USG 3756	-	MED	MS		MR		MR	MS				
USG 3612	+	MED	MS		MS	FAIR	MR	MR				
Below Average Yielding												
AgMX 427	-	MED	MR	S	MS	POOR	MR	MR	MS			MS
AGSouth AGS 2027	+	EARLY	MR	R	MS	GOOD	S	MS				MS
Armor Havoc	-	MED	MR		MR		MS	MS				
DG Savoy	-	EARLY	MR		MS	GOOD	S	MS				
Harvey's AP 1882E	-	LATE	MR		MR		MR	R				
Lgrain LCS 2347	ave	LATE	MS		MR		MR	MS				
Lgrain LCS 2214	ave	MED	MR		S		S	MS				
NC Yadkin	+	LATE	R	MR	MR	POOR	MR	MR	R	MS	MS	S
P 25R32	ave	LATE	MR	MS	MR	GOOD	MR	MR	R	MS		MR
Prog P 117	-	MED	S	S	MS	POOR	S	S	MS	MS		S
Prog P 410	-	LATE	MS		MR		MR	MS				
S Harvest 555	+	MED	MR		S		MS	MS				
S Harvest 3200	+	MED	R		MR		MR	MS				
SS 8404	+	MED	MR	R	S	FAIR	MS	S	MS	MR	S	MS
SS 520	+	EARLY	MR		S		S	S				
SY Cypress	ave	EARLY	MR		MS		S	MS				

1. Listed alphabetically within groups: AgSouth = AgSouth Genetics; AgMX = AgriMAXX; DG = Dyna-Gro; Fthstone = Featherstone; Lgrain = Limagrain; P = Pioneer; Prog = Progeny; S Harvest = Southern Harvest; SS = Southern States; SY = Syngenta; USG = UniSouth Genetics.
2. For test weight "+", "ave", and "-" stand for above average, average, and below average, respectively.
3. SNB stands for Stagonospora nodorum blotch. S, MS, MR, and R stand for Susceptible, Moderately Susceptible, Moderately Resistant, and Resistant.