



CEREAL Newsletter

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Early Planting Considerations

Hopefully, you are cleaning up equipment after a successful harvest! Now, with the excellent moisture conditions and the cool night time temperatures, it looks like we will be seeding shortly in many areas.

Early seeding likely faces two challenges this fall. One is aphids and the second is fall infections of stripe rust. On the topic of aphids, if you are seeding early, prior to October 15th, an insecticidal seed treatment is your best management tool to prevent aphids transmitting Barley Yellow Dwarf Virus (BYDV). Last fall, we saw a migration of aphids to early seeded wheat, especially in areas adjacent to irrigated fields of corn. Fall infections of BYDV can seriously impact yields. Typically, delaying seeding until later in the fall will reduce the level of infection due to a shorter window of opportunity for infection by aphids. Fall aerial applications of insecticides can be effective, but it is challenging to get the timing right. Always scout your fields before making crop management decisions.

The second challenge that we face this fall is one we have been talking about since the field days in June – the potential for fall infections of stripe rust. Given the high inoculum levels we experienced this past growing

season, and the below average temperatures that have continued most of the summer, it is very likely we will again see fall infections of stripe rust. In our drier areas, the benefits of early seeding still outweigh delaying.

One consideration is variety selection. The following list, provided by Mike Flowers and the OSU Cereal Breeding Program, is based on their many observations across the state this past season. The following varieties are highly susceptible to stripe rust:

Soft White Winter	Hard Red Winter
AP Badger	AP Paladin
AP Legacy	Bauermeister
Goetze	Esperia
Tubbs 06	Genesi
Xerpha	UICF Grace
	WB Rimrock
	WB Tucson
	Whetstone

The issue of variety selection is often one of that involves several factors, but if all other things were equal - one would select the top yielding variety for the area in which you grow wheat. In Umatilla County, we have long-term average yields that range from 25 bu. to 90+ bu. and our plant breeders have provided a selection of varieties for

these different production areas.

When deciding which variety to plant, if, for example, you are in a high production area, you would probably want to select the highest yielding variety with the highest level of stripe rust resistance. So perhaps you would choose Legion over Tubbs06.

This year, we were able to control the stripe rust through timely treatments with fungicides and it turned out to be a good investment. I don't have hard

numbers for the acres treated in Umatilla County, but I estimate that 90% of 250,000 acres were treated once, another 40% treated a second time and maybe 25% treated a third time for a total treated acreage of about 387,000. Treatment costs varied but even with saving the application costs by tank mixing with herbicide treatments in early spring, I estimate fungicide treatments

costs growers about \$3.6 million in 2011.

These additional production costs were fairly easy to swallow as prices were good and yield potential was higher than average. If these variables change, which they always do, then the choice might be harder to make.

Long term, I think we will need to look at varieties with higher levels of resistance to the current stripe rust races rather than relying on fungicides. Short term, I think we are setup for a possible repeat of last fall with early infections of stripe rust and we should plan accordingly.

These bullet points are from an article in my newsletter in March noting the status of stripe rust resistance by variety:

- Tubbs 06 – low levels of HTAP
- Goetze
 - * major gene resistance broke in 2010
 - * fairly susceptible in early growth stages
 - * good level of HTAP
- Stephens – high level of HTAP
- Madsen, ORCF101, ORCF102
 - * So far – so good

* Major gene resistance is unknown

Now the results are in for levels of infection and yields for 2011, and the pattern pretty well followed what was predicted. Tubbs 06 and Goetze continued to see high levels of stripe rust, while Stephens suffered because the HTAP kicked in very late. The good news is that growers were timely in their control efforts, the rains came, and we were able to see some record breaking yields across all of our production zones in the county.

The following table combines stripe rust disease readings from the Oregon Statewide Elite Variety trials and yields of those same varieties at the Pendleton/Ruggs and Hermiston sites. I am highlighting only the most commonly planted winter wheat varieties. The complete results of disease notes and yields from the trials

are available online at www.cerealcentral.com. It is interesting to note the different levels of infection at the two different sites.

I have included the 2 and 3 year averages when available – realizing that yields were impacted in 2010 and 2011 by stripe rust. 2009 was a year with low stripe rust levels and it is beneficial to include those yields in the average when available.

While weather conditions may return to drier patterns, researchers in Oregon and Washington have noted that stripe rust races have changed and so long-term we will need to respond also. Fortunately, two years have given our wheat breeders an opportunity to do some serious selections for stripe rust resistance but it will take a few years to reap the benefits and bring those selections into our production system.
-MKC

Variety	Pendleton – Ruggs			Hermiston, Irrigated		
	Stripe Rust % 6/4/2011	2011 bu/A	3 yr avg bu/A	Stripe Rust % 6/13/2011	2011 bu/A	2 yr avg* bu/A
Cara (Club)	0.8	139.2	--	1	147	125.2
Coda (Club)	2.5	127.8	112.3	12.5	119.7	107.3
Madsen	4.5	136.8	117.9	5	132.9	121.3
Skiles	5.3	130.5	111.9	3	134.3	127.3
Legion	6.8	138.2	117.9	33.8	128	114.6
ORCF 101R**	12.5	128.7	115.8	5.3	147.1	129.5
Stephens	17.5	98.0	97.9	70	104.6	104.8
Westbred 528	20	106.2	105.6	72.5	93	103.8
ORCF 101	30	88.9	97.0	51.3	106	102.3
ORCF 102	37.5	85.8	103.6	82.5	97.5	104.3
Goetze/Skiles	55	89.6	--	58.8	78.9	--
Tubbs 06	57.5	68.4	84.6	90	59.1	75.1
Goetze	67.5	75.2	85.6	72.5	64.2	87.3
Site Average	24.6	110.9	104.4	42.4	113.3	105.3
LSD (0.05)	8.6	10.9	6.1	13.1	17.1	8.4
CV (%)	25.0	7.0	7.3	22.1	10.8	7.5

*Hermiston 2-year data is from 2011 and 2009. 2010 is not available at this site.

** A reselection of ORF101 that will be available in fall of 2012 and sold as ORCF 101.

Aphid Sampling and Testing – This Fall - HELP NEEDED!!!

This fall, OSU Extension will be re-evaluating aphids in wheat looking at the potential for aphids to vector virus or inject toxins. Our focus will be on cherry-oat aphid, corn leaf aphid, English grain aphid, greenbug and the Russian wheat aphid in both the irrigated and dryland wheat in the Columbia Plateau region.



Bird cherry-oat aphid

Photo - OK State

a plant; shake stems for 3-5 seconds to allow aphids to drop into the white paper. With the aid of the brush, pick up the aphids carefully and placed them in the vial. The vial should contain alcohol (85-95%). Unfortunately, we won't be able to send you alcohol since there are shipping restrictions for liquids. Use one vial per field. Make sure to LABEL your vial with the following information:

1. **Collector name (your name)**
2. **GPS coordinate (if information is available)**
3. **Sampling date**

Send samples to Silvia Rondon, HAREC, 2121 South First Street, Hermiston, OR 97838.

We need your help locating and collecting samples from across the area over the fall season. We are offering limited supplies for Oregon growers to collect aphids in wheat fields. You will receive 20 vials, a sample brush, and a laminated white paper to use for your collection efforts, if you contact us. Call Mary Corp (541)278-5403 or email mary.corp@oregonstate.edu to get connected with this research project.

How to collect aphids- the “plastic method”

Simply, placed a white laminated paper below the stems of



2011 Hales Winter Wheat Variety Trial

Variety	Yield bu/A	Test Wt lb/bu	Protein %
Legion	132.0	60.8	9.3
WB 528	125.5	62.7	9.2
Goetze	121.0	60.8	9.3
AP 700 CL	119.7	62.2	9.2
ORCF 102	118.5	61.8	9.5
Stephens	118.2	61.8	9.6
Goetze/Skiles	118.0	61.5	10.1
Tubbs 06	117.7	60.8	9.3
ORCF 101	114.2	61.9	9.2
Skiles	110.9	62.2	9.4

Planting Date: October 13, 2010

IH double disk drill, 7 " spacing

Planting conditions: into moisture, Fertilizer: 90N + 12S shanked in the fall with topdress of 23 lb in March

Fungicide treatments: Tilt with herbicide in early spring followed later by application of Tebustar



Jacob and Michael Hales smiling over their golden harvest results at the 2011 Winter Wheat Drill Strip Variety Trial located at the corner of Reeder Rd and Rothrock Rd east of Pendleton.

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CALENDAR

September, October, November, December

Oct. 16-19 **ASA International Annual Meeting**

Location: San Antonio, TX
Contact: www.agronomy.org

Nov. 1 **Oregon Ag Safety Seminar**

Location: Red Lion Inn, Pendleton
Contact: Richard 503-370-7024

Nov. 2-4 **WA State Weed Conference**

Location: Yakima Convention Center
Yakima, WA
Contact: 509-783-4676

Nov. 16-18 **Tri-State Grain Growers Convention**

Location: Davenport Hotel, Spokane, WA
Contact: www.washingtongrainalliance.com
800-598-6890

Nov. 29-
Dec. 1

Hermiston Farm Fair & Trade Show

Location: Hermiston Conference Center
Contact: Chamber of Commerce
541-567-8321

Dec. 14

**Columbia Basin Cereal Seminar
& Sustainable Ag Forum**

Location: BMCC, Pendleton, OR
Contact: Shevon Hatcher 541-278-5403



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