

STRIPE RUST SPRING BARLEY EVALAUTIONS – 2006: The attached data was provided by Dr. Xianming Chen, Plant Pathologist, USDA/ARS, Pullman, WA that lists the stripe rust evaluations for spring barley varieties included in the 2006 WSU Extension Cereal Variety Testing Program nurseries. We appreciate the support that Dr. Chen provides on conducting these evaluations. The data represents stripe rust evaluations at multiple locations in 2006. Included in the data is a listing of Infection Type (IT) {see discussion below} and Severity (%) – the percent of leaf area of a variety that is infected by stripe rust at the time of evaluation. In some situations there are two numbers separated by a comma (,) under the IT (infection type) column. When this occurs the majority of the plants of a variety have an IT represented by the first number and a few have IT represented by the second number. In addition to stripe rust, Dr. Chen reports on other foliar diseases when observed.

This is the message received from Dr. Chen: (Please note that the Mt Vernon data was the only adequate data collected for Stripe rust in barley in 2006).

Hello, everyone:

The attached is the stripe rust data file for the 2006 Spring Barley Extension Nursery (Variety Trial Nursery) coordinated by John Burns. Please note that only the test at Mt Vernon was adequate. Stripe rust in other locations started too late and developed too slowly to have adequate data. Let me know if you have any questions. Thank you for your cooperation!

*Best wishes,
Xianming*

STRIPE RUST: INFECTION TYPES: A 0-9 scale described below was used for recording infection types (ITs). Generally, an infection type (IT) from 0-4 shows necrotic symptoms with slight rust sporulation. Scores of 5-9 indicate damaging infection – the rust is continuing to develop and infect. **SEVERITY (%)**: Severity is a percentage of the leaf area of a variety that is being infected with stripe rust. The following scale is described in: *Technical Bulletin Number 1788, Virulence, Aggressiveness, Evolution, and Distribution of Races of Puccinia striiformis (the Cause of Stripe Rust of Wheat) in North America, 1968-87, Feb. 1992*. Both scales are used in the data sets to depict the impact of stripe rust on varieties.

- 0 = no visible signs or symptom
- 1 = necrotic and/or chlorotic flecks; no sporulation
- 2 = Necrotic and/or chlorotic blotches or stripes; no sporulation
- 3 = Necrotic and/or chlorotic blotches or stripes; trace sporulation
- 4 = Necrotic and/or chlorotic blotches or stripes; light sporulation
- 5 = Necrotic and/or chlorotic blotches or stripes; intermediate sporulation
- 6 = Necrotic and /or chlorotic blotches or stripes; moderate sporulation
- 7 = Necrotic and/or chlorotic blotches or stripes; abundant sporulation
- 8 = Chlorosis behind sporulating areas; abundant sporulation
- 9 = No necrosis or chlorosis; abundant sporulation

TABLE XMC0652. STRIPE RUST INFECTION TYPE (IT) AND SEVRITY (%) AND LEAF RUST SEVERITY (%) ON CULTIVARS AND LINES IN THE SPRING BARLEY EXTENSION NURSERY (EXP52) AT SPILLMAN FARM (LOC01), PLANT PATH FARM (LOC02), AND WHITLOW FARM (LOC04) NEAR PULLMAN, MT VERNON (LOC05), WALLA WALLA (LOC06), AND LIND (LOC07), WA WHEN RECORDED AT THE INDICATED DATES AND STAGES OF PLANT GROWTH IN 2006 UNDER NATURAL INFECTION.

NOTE: 1) ONLY THE MT VERNON LOCATION HAD SEVERE STRIPE RUST FOR GOOD DATA. STRIPE RUST STARTED TOO LATE AND DEVELOPED TOO SLOW TO HAVE ADEQUATE DATA. THEREFORE, ENTRIES THAT WERE SUSCEPTIBLE (IT 8 ND SEVERITY OF 50% AND HIGHER SHOULD BE CONSIDERED SUSCEPTIBLE.

NOTE: 2) SUSCEPTIBILITY TO POWDERY MILDEW (PM) IS MARKED WITH "X" AND TO SCALD MARKED WITH PERCENTAGE OF SEVERITY. (X. CHEN, USDA/ARS, PULLMAN, WA, 2006).

CLASS	2006 NAME	Stripe Rust														NOTE	
		LOC1		LOC2		LOC4		LOC5				LOC6		LOC7		LOC5	
		Spillman Farm		Pl. Path Farm (WSU)		Whitlow Farm		Mt Vernon				Walla Walla		Lind		Mt Vernon	
		7/13		7/13		7/17		6/9		7/6		6/29		6/29		7/6	
		L. Milk		L. Milk		S. Dough		E. Boot		S. Dough		S. Dough		S. Dough		S. Dough	
IT	%	IT	%	IT	%	IT	%	IT	%	IT	%	IT	%	IT	%	PM	Scald
2-row	BARONESSE	0	0	0	0	3	5	8	5	8	30	0	0	0	0		
2-row	FARMINGTON	0	0	0	0	0	0	8	2	8	50	0	0	0	0		40
2-row	BOB	0	0	0	0	0	0	0	0	2	2	0	0	0	0		
2-row	RADIANT	0	0	0	0	0	0	8	2	8	40	0	0	0	0		
2-row	BOULDER	0	0	5	5	8	5	8	5	8	50	0	0	0	0		
2-row	YU-501-385D	0	0	0	0	8	5	8	5	8	60	0	0	0	0		
2-row	YU-501-385N	0	0	5	5	8	5	8	2	8	80	0	0	0	0		
2-row	HE-8805	0	0	0	0	0	0	8	2	8,2	20	0	0	0	0		
2-row	HARRINGTON	0	0	0	0	0	0	8	2	8	80	0	0	0	0		10
2-row	AC METCALFE	0	0	0	0	0	0	8	1	8	10	0	0	0	0		
2-row	SPAULDING	0	0	0	0	8	5	8	5	8	90	8	5	0	0		
2-row	BURTON	0	0	5	5	5	10	8	2	8	100	0	0	0	0		
6-row	MOREX	8	30	0	0	0	0	8	2	8	100	0	0	0	0	X	
6-row	LEGACY	0	0	8	1	8	5	2	2	8	100	0	0	0	0	X	
2-row	01NZ111	0	0	0	0	0	0	8	2	8	20	0	0	0	0		
6-row	01NZ392	0	0	0	0	0	0	8	5	8	100	0	0	0	0		
6-row	01NZ706	0	0	0	0	0	0	8	5	8	100	0	0	0	0		
6-row	01NZ384	0	0	0	0	0	0	8	5	8	100	0	0	0	0	X	
6-row	01NZ338	0	0	0	0	0	0	8	10	8	100	0	0	8	5		
2-row	03NZ199	0	0	0	0	5	10	2	2	8	10	0	0	0	0		30
2-row	03NZ885	0	0	0	0	0	0	8	2	8	30	0	0	0	0		20
2-row	WA 7330-00	0	0	0	0	8	5	8	2	8	50	0	0	0	0		20
2-row	WA 15279-00	0	0	0	0	0	0	8	2	8	70	0	0	0	0		30
2-row	WA 10701-99	0	0	0	0	0	0	8	5	8	100	0	0	0	0		10
2-row	02WA-7018.13	0	0	0	0	0	0	8	5	8	30	0	0	8	5		50
2-row	02WA-7047.24	0	0	0	0	0	0	8	2	8	70	0	0	0	0		50
2-row	02WA-7028.9	0	0	0	0	0	0	8	2	8	50	0	0	0	0		
2-row	02WA-7029.7	0	0	0	0	0	0	8	5	8	5	0	0	0	0		20
2-row	02WA-7052.9	0	0	0	0	0	0	2	2	8	10	0	0	0	0		
2-row	03WZN-164	0	0	5	30	0	0	0	0	8	40	8	10	0	0		10
2-row	02WZN-1015	0	0	0	0	0	0	8	5	8	30	0	0	0	0		10
2-row	02WZN-1095	0	0	0	0	0	0	0	0	8	60	0	0	0	0	X	50
2-row	02WZN-1100	0	0	0	0	0	0	5	2	8	80	0	0	0	0		30
2-row	03WZN-249	0	0	0	0	0	0	8	2	8	20	0	0	0	0		
2-row	03WZN-262	0	0	0	0	0	0	8	2	2	2	0	0	0	0		10
2-row	03GNZ-716	0	0	0	0	0	0	8	2	8	80	0	0	0	0		30
2-row	03GNZ-722	0	0	0	0	0	0	8	5	8	80	0	0	0	0		20
2-row	03GNZ-834	0	0	0	0	0	0	8	2	8	70	0	0	0	0		20
2-row	WA 9820-98	0	0	0	0	0	0	8	0	8	5	0	0	0	0		
2-row	MERESSE	0	0	0	0	0	0	8	2	8	100	0	0	0	0		