EFFECT OF EXPERIMENTAL HEADS-UP ON WHEAT AND BARLEY LEAF SPOT DISEASES AND YIELD AT MELFORT, 2002

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OBJECTIVE: to determine the impact of HeadsUP (94815) on leaf spot diseases, yield and quality of wheat and barley.

FUNGICIDES: Heads-Up (94815) – seed treatment: 20 grams/20 L water for 125 bushel seed
Foliar application: 1gram/liter of water applied @ 100 L/ha

CULTIVARS: AC Barrie wheat and Harrington barley

MATERIALS & METHODS: the experiment was a split-plot design with 6 replicates. Cultivars were main plots and fungicide treatments the sub-plots (4.8 X 10 M).

A preseeding burn-off was conducted with 1.25 L/ha Round-up (glyphosate). The experiment was seeded on summerfallow at the Melfort Research Farm May 21st using a John Deere Hoe Drill. Forty-five kg/ha of 11-51-0 fertilizer was seed placed. Plots were blanket fertilized with 34-0-0 at 84 kg actual N/ha on June 4th. Pardner (bromoxynil) was applied on June 24th for broadleaf weed control. There were few grassy weeds present.

A solution of Heads-Up @ 20 grams/125 bushels of seed using distilled water was applied as a seed treatment, the seed was allowed to air dry prior to seeding. Heads-Up was applied (1 gram/liter of water @ 100 L/ha) at the flag leaf stage, July 3 rd. Diseases were assessed at the soft dough stage of growth on 25 plants per plot (August 1st). Flag and Flag-1 (penultimate) leaves were assessed on a 0-11 point scale based on the % of tissue infected. Plants were also assigned a rating between 0 –11 based on assessment of disease symptoms on foliage of the whole plant.

Plots were harvested by straight combining on Sept 12th. The harvested area of each plot was 1.25 X10 M.

RESULTS: See Table 1. Experimental conditions were poor due to the drought.

CONCLUSIONS: Extremely dry conditions during spring and early summer limited disease development. Mid to late season precipitation resulted in delayed maturity.

Table 1. Results of Heads-Up at Melfort 2002. Data are the means of 6 replicates.

Cultivar / Fungicide Treatment	Flag (0-11)	Flag-1 (0-11)	Whole Plant (0-11)	Yield (kg/ha)	BW (kg/hl)	TKW (grams)	%Plump Kernels
AC Barrie Wheat							
Check	0.3 a	0.6 a	0.9 a	1964 b	75.5 a	35.4 a	94.4 ab
Tilt	0.2 b	0.4 a	0.5 a	1812 b	75.6 a	34.8 a	93.4 b
Headline	0.2 b	0.3 a	0.4 a	1843 b	75.5 a	35.2 a	93.7 b
Heads-Up	**0.2 ab**	**0.5 a**	**0.8 a**	**2290 a**	**75.9 a**	**35.9 a**	**94.8 a**
$LSD_{(0.05)}$	0.2	0.3	0.6	305	0.7	1.4	1.1
Harrington Barley							
Check	2.0 ab	3.1 a	5.0 a	1871 a	60.6 a	35.4 a	83.8 a
Tilt	2.1 a	3.2 a	4.9 a	1717 a	59.4 a	33.9 a	84.1 a
Headline	1.6 b	2.1 b	3.4 b	1917 a	59.7 a	34.7 a	82.6 a
Heads-Up	2.4 a	3.1 a	4.8 a	1877 a	60.3a	35.4 a	79.5 a
$LSD_{(0.05)}$	0.5	0.4	0.6	542	1.8	2.3	5.5