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Quality of Ontario wheat 2009

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Introduction

Ontario wheat production for the 2009 crop year was estimated at 2.0 million tonnes[1]. The primary grading factors were mildew and fusarium damage. Samples used in the preparation of all grade composites were drawn by field personnel with Weather Innovations Incorporated (WIN) from all wheat growing areas on the basis of county production. Individual samples were forwarded to the Canadian Grain Commission office in Winnipeg for grading and preliminary analyses. Composite samples representing soft red winter wheat varieties were made by the Grain Research Laboratory, Canadian Grain Commission for quality analysis. An insufficient number of samples of soft white winter, hard red winter and hard red spring wheat were received to produce robust composites. Quality analysis results for soft red winter wheat are shown in Table 1. Data from the 2008 survey are shown in the quality table for comparison purposes.

[1] Statistics Canada, *Field Crop Reporting Series,* http://www.statcan.gc.ca/pub/22-002-x/22-002-x2009007-eng.pdf Vol. 88, No. 7, Oct.2009

Wheat, Canada Eastern White Winter

See introduction regarding insufficient sample to produce composite for this class.

Wheat, Canada Eastern Red – soft red winter wheat

Quality data for Canada Eastern Red wheat composites representing soft red winter wheat varieties are shown in Table 1. Test weight and wheat ash content for the No. 1 grade are similar to 2008. Kernel weight is slightly higher. Wheat protein is almost 1% lower. Wheat falling number, flour amylograph peak viscosity values and alpha-amylase activity indicate soundness in both the No. 1 and No. 2 grades. Milling yield is similar for the No. 1 grade compared to 2008, but at 0.03% higher flour ash content. Flour colour is also similar to 2008. Wet gluten content is slightly lower for 2009. Farinograph strength is slightly weaker than last year. Alveograph data indicate less extensibility and slightly less resistance to deformation resulting in lower W values compared to 2008. Cookie spread is slightly higher while ratio of spread to thickness values is slightly lower compared to 2008 for the No. 1 grade. Electrophoretic analyses of all three grades indicates 25R47 to be the predominant variety.

Wheat, Canada Eastern Red – hard red winter wheat

See introduction regarding insufficient sample to produce composite for this class.

Wheat, Canada Eastern Red – hard red spring wheat

See introduction regarding insufficient sample to produce composite for this class.

Table 1 - Wheat, Canada Eastern Red - soft red winter wheat varieties
Quality data for 2009 and 2008 harvest sample grade composites

	2009			2008
Quality parameter[1]	No.1	No. 2	No. 3	No.1
Wheat				
Test weight, kg/hL	80.1	77.8	77.4	80.4
Weight per 1000 kernels, g	37.9	38.4	36.0	35.5
Protein content, %	8.5	8.6	8.7	9.4
Protein content, % (dry matter basis)	9.8	9.9	10.1	10.9
Ash content, %	1.45	1.43	1.47	1.46
α-amylase activity, units/g	3.0	5.0	20.0	3.5
Falling number, s	345	310	255	370
Flour yield, %	75.6	75.4	74.5	75.4
PSI, %	72	71	71	71
Flour				
Protein content, %	7.6	7.5	7.6	8.4
Wet gluten content, %	19.8	18.8	19.6	22.1
Ash content, %	0.48	0.46	0.45	0.45
Grade colour, Satake units	-1.2	-0.8	-0.1	-1.1
AGTRON colour, %	72	68	64	70
Starch damage, %	3.3	3.4	3.6	3.5
α-amylase activity, units/g	1.0	2.0	8.0	1.0
Amylograph peak viscosity, BU	525	370	120	640
Maltose value, g/100g	1.1	1.2	1.5	1.2
AWRC, %	61.6	61.1	62.1	60.9
Farinogram				
Absorption, %	50.6	50.8	50.8	51.2
Development time, min	1.00	1.00	1.00	1.00
Mixing tolerance index, BU	105	100	95	85
Stability, min	1.0	1.5	1.5	2.5
Alveogram				
Length, mm	73	79	92	109
P (height x 1.1), mm	27	30	31	30
W, x 10^{-4} joules	49	80	81	72
Cookie test				
Spread, mm	85.5	84.9	84.1	83.6
Ratio (spread/thickness)	8.8	8.8	8.7	9.3

[1] Unless otherwise specified, data are reported on a 13.5% moisture basis for wheat and a 14.0% moisture basis for flour