RECOMMENDED*
QUALITY TARGETS FOR HARD RED WINTER WHEAT

HWW Quality Targets Committee
Approved February, 2006

** "The purpose of Recommended Quality Targets (RQT) for Hard Red Winter Wheat (HRW) is to provide specific quality 'goals' for the breeding community, wheat producers, and marketing programs in order to assist and guide the decisions needed to maintain the consistency and end-use quality of the U.S. HRW market class. The RQT will be dynamic over time in direct response to the primary needs of the marketplace (domestic and foreign), and the needs of the U.S. industry to breed, produce and market wheats to meet market needs. The RQT should NOT be used as essential criteria for variety release decisions in breeding programs, or as marketing/grading standards for private companies or federal/state agencies. This* ***Statement of Purpose*** *must accompany all published forms of the RQT."* *HWWQT Committee, 2006*

Quality Parameter (End-Use: Pan Bread)	Recommended Target Value
Wheat	
Test Weight (lb/bu)	***> 60***
SKCS-Hardness Index (SK-HI)	***60 – 80***
SK-HI Standard Deviation	***< 17.0***
SKCS-Weight (SK-WT, mg)	***> 30.0***
SK-WT Standard Deviation	***< 8.0***
SKCS-Diameter (SK-SZ, mm)	***> 2.40***
SK-SZ Standard Deviation	***< 0.40***
Protein Content (%, 12% mb)	***> 12.0***
Ash Content (%, 12% mb)	***< 1.60***
Falling Number (sec)	***> 300***
Straight Grade Flour Yield (%)	***> 68***
Flour	
Flour Color L-Value (Minolta Colorimeter)	***> 90***
Gluten Index	***> 95***
Sedimentation Volume (cc)	***> 40***
Farinograph:	
Water Absorption (%, 14% mb)	***62+***
Peak Time (min)	***4.00 – 8.00***
Stability (min)	***10.00-16.00***
Mixograph:	
Water Absorption (%, 14% mb)	***62+***
Peak Time (min)	***3.00 – 6.00***
Mixing Tolerance (HWWQL Score, 0-6)	***3.0***
Straight Dough Pup Method:	
Water Absorption (%, 14% mb)	***62+***
Mix Time (min)	***3.00 – 5.00***
Loaf Volume (cc)	***> 850***
Crumb Score (HWWQL Score, 0-6)	***> 3.0***

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RECOMMENDED*
QUALITY TARGETS FOR HARD WHITE WINTER WHEAT

HWW Quality Targets Committee
Approved February, 2007
(adopted from the PNW-WQC)

Dual Purpose -- Chinese Noodles and Western Pan Bread		
	Chinese Hard-Bite Noodles (1)	**Pan Bread**
Wheat Quality Parameter		
Test Weight (lb/bu)	60 Minimum	60 Minimum
Kernel Hardness (SKCS 4100)	65 - 90	65 Minimum
Kernel Diameter (mm) (SKCS 4100)	2.5 Minimum	2.5 Minimum
Falling Number (seconds)	300 Minimum	300 Minimum
Protein (%, 12% mb)	11-15.0	11.5-14.0
Ash (%, 14% mb)	1.4 Maximum	1.6 Maximum
PPO Level by L-DOPA (WWQL Method)	0	N/A
Flour Quality Parameter		
Protein (%, 14% mb)	10-13.5	10.2-13
Ash (14% mb)	0.38-0.45	N/A
Patent Flour Yield at 0.4% Ash (%)	60 (by Buhler)	N/A
Straight-Grade Flour Yield at 0.45% Ash (%)	70 (by Buhler)	N/A
L* (Minolta Colorimeter CR 310)	91 Minimum	N/A
Wet Gluten (%, 14% mb)	30 Minimum (2)	28
Farinograph Absorption (%, 14% mb)	60 Minimum (2)	60
Farinograph Stability (minutes)	12 Minimum (2)	12
Amylograph Peak Viscosity (Bu) (3)	500-850	500 minimum
Mixograph Peak Time (minutes)	N/A	3-7 @ 5.5 mm peak ht.
Mixograph Absorption (%)	N/A	60
Chinese Raw Noodle Quality Parameter (Refer to WMC Protocol) (4)		
Chinese Raw Noodle Dough Sheet L*24 h	72 Minimum	N/A
Chinese Raw Noodle Dough Sheet L*0-L*24	10 Maximum	N/A
Chinese Raw Noodle Dough Sheet b* 24 h	25 Maximum	N/A
Cooked Noodle Hardness (g)	1250 Minimum (2)	N/A
Pan Bread Quality Parameter		
Pup Loaf Volume (cc)	N/A	900 @11% flour

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		protein
Notes:		
(1) Chinese raw, Chinese wet, Chinese instant fried, Philippine instant fried, Malaysia		
hokkien and Thai bamee noodles.		
(2) Straight-grade flour of 12% protein wheat.		
(3) Method: 65 g untreated flour + 450 ml deionized water.		
(4) Noodle formula: straight-grade flour, 100%; water, 28%; and sodium chloride, 1.2%.		
Noodle sizes: 2.5 mm (width) x 1.2 mm (thickness).		
Noodle textural measurement: cook 100 g noodles in 1000 ml deionized water for 5 min,		
rinse in 27^0C water and drain. Measure noodle texture on five noodle strands by compressing		
to 70% of noodle thickness with a 5-mm flat probe attached to TA.XT2 Texture Analyzer.		

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OTHER WHITE WHEAT PRODUCTS:

	Korean Instant Noodles	Chinese Northern-Type Steamed Bread	Hamburger /Hotdog Buns
Wheat Quality Parameter			
Test Weight (lb/bu)	60 Minimum	60 Minimum	60 Minimum
Kernel Hardness (SKCS 4100)	65 Minimum	65 Minimum	65 Minimum
Kernel Diameter (mm) (SKCS 4100)	2.5 Minimum	2.5 Minimum	2.5 Minimum
Falling Number (seconds)	300 Minimum	350-400	300 Minimum
Protein (%, 12% mb)	10-11.0	10-11.5	13-15.0
Ash (%, 14% mb)	1.4 Maximum	1.4 Maximum	1.6 Maximum
PPO Level by L-DOPA (WWQL Method)	0-0.2	0-0.2	N/A
Flour Quality Parameter			
Protein (%, 14% mb)	8.5-9.5	8.5-10.0	12.2-13.0
Ash (14% mb)	0.38-0.40	0.38-0.45	N/A
Patent Flour Yield at 0.4% Ash (%)	60 (by Buhler)	60 (by Buhler)	N/A
Straight-Grade Flour Yield at 0.45% Ash (%)	70 (by Buhler)	70 (by Buhler)	N/A
L* (Minolta Colorimeter CR 310)	91 Minimum	91 Minimum	N/A
Wet Gluten (%, 14% mb)	N/A	28-30	34.5
Farinograph Absorption (%, 14% mb)	58-60	60-62	64
Farinograph Stability (minutes)	7.5-8.5	4-6.0	15-18.0
Amylograph Peak Viscosity (Bu) (1)	800 Minimum	500 Minimum	500 Minimum
Amylograph Breakdown (Bu)	200 Minimum	N/A	N/A
Mixograph Peak Time (minutes)	N/A	N/A	4-7 @ 5.8 mm peak ht.
Mixograph Absorption (%)	N/A	N/A	64
Notes:			
(1) Method: 65 g untreated flour + 450 ml deionized water.			

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