



Request for Support for Registration of 'Bill Coors 100'

Crop: Barley (*Hordeum vulgare* L.)
Type: Two-row, spring, hulled (Malt)
Proposers: Bob Brunick

Malting Barley Variety Development Center
Molson Coors
7 N 400 W
Burley, ID 83318

U.S. Test #'s: Moravian 150 or Pop08-150-031
Canadian Test #'s: TR17409
Pedigree: Moravian 119/CDC Kendall (F1)//Moravian 119
Area of Adaptation: Western U.S. and Alberta, Canada

Description:

Bill Coors 100 has been tested in Canada as TR17409. **Bill Coors 100** is a high yielding, semi-dwarf, two-row, hulled malt barley with good adaptability to the Western United States and Alberta, Canada. **Bill Coors 100** was developed to be grown, primarily, under irrigated production conditions. **Bill Coors 100** has excellent crown and stem strength and typically lodges at less than 5% under irrigated conditions. **Bill Coors 100** produces exceptional malt with high extract, low viscosity and low wort beta-glucan with grain protein lower than AC Metcalfe. **Bill Coors 100** has excellent hull adherence as both barley and malt. The FAN, AA and DP levels are similar to or slightly higher than AC Metcalfe. **Bill Coors 100** is produced on nearly 60,000 acres annually in Montana solely for Molson Coors. **Bill Coors 100** was grown on about 250 acres, 500 acres and 1,500 acres in Alberta in 2017, 2018 and 2019, respectively. **Bill Coors 100** has proven to be an ideal variety for Molson Coors' production of irrigated barley in southern Alberta. **Bill Coors 100** has been produced in a closed loop system in southern Alberta and it is a variety that reduces risk for Molson Coors and the growers in Molson Coors' direct contract system.

Strengths:

- Commercial yields under irrigation are typically 120-170 bu/acre
- Straw strength (> AC Metcalfe & CDC Copeland with little to no lodging and stem breakage).
- Grain protein (lower than AC Metcalfe).
- Wort Beta-glucan (lower wort beta-glucan than AC Metcalfe & CDC Copeland)
- Malt extract (> AC Metcalfe & CDC Copeland).
- FAN (slightly higher than AC Metcalfe & CDC Copeland).
- Grain plumpness (\geq AC Metcalfe & CDC Copeland).

Neutral characteristics:

- Test weight (lower than AC Metcalfe).
- Maturity (1-3 days later than malt checks).
- Malt enzyme activity (slightly higher than AC Metcalfe & CDC Copeland).

Weaknesses:

- Yields slightly less, under average dryland conditions than AAC Synergy & CDC Copeland.
- Grain protein content is typically 0.5-1% higher than AAC Synergy & CDC Copeland.
- Values for peeled & broken kernels are slightly higher AAC Synergy & CDC Copeland.
- Not extensively tested for reactions to FHB, leaf, stem & root diseases but testing in Coop trials indicate it is slightly more susceptible to the blotches & FHB than the malt checks.

2017 CoOp Agronomic summary.

ENTRY	NAME	YRS	YIELD KG HA ⁻¹	YIELD RANK	YLD AS %COPE	DAYS	DAYS	HEIGHT CM	LODGING SCORE	TEST	KERNEL	
						TO HEAD	TO MATURITY			WEIGHT KG HL ⁻¹	WEIGHT g M ⁻¹	% PLUMP > 6/64
		(Sites)	(14)	(14)	(14)	(13)	(12)	(14)	(3)	(16)	(14)	(14)
1	CDC Copeland	C	6302	31	100	57.9	87.8	80.8	2.7	65.1	43.6	90.0
2	AC Metcalfe	C	6123	39	97	54.8	87.8	75.8	3.1	66.6	42.2	90.3
3	AAC Synergy	C	6450	22	102	55.0	88.2	75.8	1.6	66.1	45.4	93.8
25	TR17409 (Bill Coors 100)	1	6200	35	98	57.1	89.8	63.3	1.7	64.8	44.7	92.2

2017 CoOp Disease summary.

ENTRY	NAME	YRS	NET BLOTCH							SPOT BLOTCH				FUSARIUM HEAD BLIGHT					
			Seedling			Netform		Spotform	Field	Seedling	Field Ratings			Brandon			Morden		Charlottetown
			102	MBV25	858	Lacombe	Lacombe	Melfort	1903	Brand	Meif	Sask	HEAD	FHB	DON	FHB	DON	DON	
1	CDC Copeland	C	2	7	8	1.5	5.0	0.0	9	6.5	6.3	6.0	58.0	1.3	25.0	2.0	67.7		
2	AC Metcalfe	C	7	8	8	4.0	5.0	4.5	8	4.5	3.0	3.3	53.0	2.2	21.5	2.8	79.0		
3	AAC Synergy	C	1	2	3	0.0	3.5	0.0	6	2.5	2.3	1.8	56.7	2.0	20.2	2.2	90.0		
25	TR17409 (Bill Coors 100)	1	8	8	8	4.0	5.0	0.0	8	5.5	5.0	5.0	54.7	3.2	27.3	2.5	86.5		

2017 CoOp Disease summary.

ENTRY	NAME	YRS	STEM RUST				SCALD			SMUTS		BYDV			
			2017 CDC			Rpg#1	Seedling	Lacombe	Edmonton	S'toon (%)	Morden (%)	(Rating)			U of Illinois
			MCC IT	Sr Sev	Sr IT							Marker	WRS2275	Covered	
1	CDC Copeland	C				R	S	5.0	8.5	9.3	45.7	5	8	R	6.5
2	AC Metcalfe	C				R	S	5.0	6.5	12.3	0.0	13	11	R	5.5
3	AAC Synergy	C				R	S	5.0	9.0	22.6	69.4	15	31	MR	6.0
25	TR17409 (Bill Coors 100)	1				S	S	4.5	8.0	2.1	95.7	4	5	R	-

2017 CooP Alberta disease nursery ratings - scald and net blotch.

ENTRY	NAME	YRS	Scald		Net Blotch - Lacombe	
			Lacombe (n=2)	Edmonton (n=2)	Netform	Spotform
					2-Aug	8-Aug
1	CDC Copeland	C	5.0	8.5	1.5	5.0
2	AC Metcalfe	C	5.0	6.5	4.0	5.0
3	AAC Synergy	C	5.0	9.0	0.0	3.5
25	TR17409 (Bill Coors 100)	1	4.5	8.0	4.0	5.0

2017 CooP Manitoba and PEI disease nursery ratings - fusarium head blight and stem rust.

ENTRY	NAME	YRS	Fusarium Head Blight								Stem Rust				
			Brandon (n=2)			Morden (n=2)		Charlottetown [^]			Seedling	Morden Field Rating 2017 CDC			
			HEAD ^a	FHB ^b	DON ^c	FHB ^b	DON ^c	Severity ^d	Incidence ^e	Index ^f	DON ^c	MCC IT ^g	Sr Sev	Sr IT	Rpg#1
1	CDC Copeland	C	58.0	1.3	25.0	2.0	67.7								R
2	AC Metcalfe	C	53.0	2.2	21.5	2.8	79.0								R
3	AAC Synergy	C	56.7	2.0	20.2	2.2	90.0								R
25	TR17409 (Bill Coors 100)	1	54.7	3.2	27.3	2.5	86.5								S

2017 CooP Manitoba and Illinois seedling and nursery disease ratings - net blotch, scald, spot blotch, smut, and BYDV.

ENTRY	NAME	YRS	Net Blotch			Scald		Spot Blotch		Smuts			Barley Yellow Dwarf Virus (n=2)	
			Morden Seedling			Morden Seedling		Morden Seedling		Morden Field Rating			Overall Surface borne Smut Rating	
			102 ^{a,c}	MBV25 ^{b,c}	858 ^{a,c}	WRS2275 ^{d,e}	Brandon (n=2)	1903 ^{g,h}	<i>U. nuda</i> ⁱ	<i>U. hordei</i> ^j	<i>U. nigra</i> ^k			U of Illinois ^m
1	CDC Copeland	C	2	7	8	S	6.5	9		5	8	R		6.5
2	AC Metcalfe	C	7	8	8	S	4.5	8		13	11	R		5.5
3	AAC Synergy	C	1	2	3	S	2.5	6		15	31	MR		6.0
25	TR17409 (Bill Coors 100)	1	8	8	8	S	5.5	8		4	5	R		-

Table 20. Saskatchewan disease nursery ratings - covered and loose smut, net blotch and spot blotch.

ENTRY	NAME	YRS	Covered Smut ^a		Loose Smut ^b		Net Blotch (n=2) ^c		Spot Blotch (n=2) ^c		Spot Blotch (n=2) ^d	
			Saskatoon		Saskatoon		Melfort		Melfort		Saskatoon	
							(0 - 9)		(0 - 9)		(0 - 9)	
1	CDC Copeland	C	9.3		45.7		0.0		6.3		6.0	
2	AC Metcalfe	C	12.3		0.0		4.5		3.0		3.3	
3	AAC Synergy	C	22.6		69.4		0.0		2.3		1.8	
25	TR17409 (Bill Coors 100)	1	2.1		95.7		0.0		5.0		5.0	

2017 Coop Malting Quality Data for 2R Entries Grown in Indian Head (GRL data)

Entry	Barley						Malt							Wort					
			K. Wt.	Protein	Germination		Steepout		PUG	P & B	Malt Protein	Diastatic Power	Alpha-Amylase	Fine Extract	Soluble Protein	Kolbach Index	β-Glucan	Visc. cP	FAN mg/L
	>7/64	>6/64			4 ml	8 ml	Moist.	Friab.											
CDC Copeland	66.4	94.5	45	10.7	100	97	44.7	95.6	0	3.2	11.5	108	68.8	78.9	3.84	33.3	104	1.45	148
AC Metcalfe	63.4	94.1	43.4	11.7	100	98	43.9	83.6	0.8	2.9	12	131	95.3	81.3	3.82	31.8	205	1.49	155
AAC Synergy	80.8	97.4	47.8	11	100	94	44.8	96.9	0	4.5	11.7	124	93.3	81.1	3.84	32.7	64	1.45	149
TR17409 (Bill Coors 100)	82.6	98.2	46.6	11.2	99	94	45.4	95.9	0.1	3.3	11.9	152	111.6	81.8	4.34	36.6	56	1.45	176

2017 Coop Malting Quality Data for 2R Entries Grown in Brandon (GRL data)

Entry	Barley						Malt							Wort					
			K. Wt.	Protein	Germination		Steepout		PUG	P & B	Malt Protein	Diastatic Power	Alpha-Amylase	Fine Extract	Soluble Protein	Kolbach Index	β-Glucan	Visc. cP	FAN mg/L
	>7/64	>6/64			4 ml	8 ml	Moist.	Friab.											
CDC Copeland	61.7	91.7	44	9.5	99	95	45.1	92	0.4	1.6	10.3	101	67.5	81.9	4.35	42.1	126	1.46	170
AC Metcalfe	57.7	92.9	43.3	11.5	100	89	45.2	79.3	2.7	2.4	11.6	134	88.5	81.4	4.4	38	201	1.47	200
AAC Synergy	85.8	97.6	49.8	10.4	100	78	45.4	93.3	0.3	2.1	11.1	113	76	81.6	4.24	38.2	68	1.43	171
TR17409 (Bill Coors 100)	85.3	97.5	49.9	9.9	99	89	46.1	96	0.3	5.7	10.5	129	94	82.3	4.42	42	59	1.45	215

2017 Coop Malting Quality Data for 2R Entries Grown in Melfort (BARI data)

Entry	Barley						Malt							Wort					
			K. Wt.	Protein	Germination		Steepout		PUG	P & B	Malt Protein	Diastatic Power	Alpha-Amylase	Fine Extract	Soluble Protein	Kolbach Index	β-Glucan	Visc. cP	FAN mg/L
	>7/64	>6/64			4 ml	8 ml	Moist.	Friab.											
CDC Copeland	-	97.5	46.5	13.1	99	97	39.5	91.7	-	-	12	141	78	80	4.4	36.7	111	1.39	135
AC Metcalfe	-	97.2	43.7	13.6	96	96	40.9	82.5	-	-	12.1	156	106.1	80.6	4.75	39.3	188	1.4	167
AAC Synergy	-	98	47.1	13	97	93	40.1	92.2	-	-	12.5	155	101.2	80.4	4.94	39.5	69	1.35	166
TR17409 (Bill Coors 100)	-	97.2	43	13.4	100	98	41.2	89.2	-	-	12.6	170	106.2	81.3	5.02	39.9	43	1.37	181

2017 Coop Malting Quality Data for 2R Entries - Mean of Three Stations

Entry	Barley						Malt							Wort					
			K. Wt.	Protein	Germination		Steepout		PUG	P & B	Malt Protein	Diastatic Power	Alpha-Amylase	Fine Extract	Soluble Protein	Kolbach Index	β-Glucan	Visc. cP	FAN mg/L
	>7/64	>6/64			4 ml	8 ml	Moist.	Friab.											
CDC Copeland	64.1	94.6	45.2	11.1	99	96	43.1	93.1	0.2	2.4	11.3	117	71.4	80.3	4.2	37.4	114	1.43	151
AC Metcalfe	60.6	94.7	43.5	12.3	99	94	43.3	81.8	1.8	2.6	11.9	140	96.6	81.1	4.32	36.4	198	1.45	174
AAC Synergy	83.3	97.7	48.2	11.5	99	88	43.4	94.1	0.2	3.3	11.8	131	90.2	81	4.34	36.8	67	1.41	162
TR17409 (Bill Coors 100)	84	97.6	46.5	11.5	99	94	44.2	93.7	0.2	4.5	11.7	150	103.9	81.8	4.59	39.5	53	1.42	191

Table 4. 2018 Agronomic Coop Summary.

ENTRY	NAME	YRS	YIELD			DAYS		DAYS		TEST KERNEL					
			KG HA ⁻¹	RANK	%COPE	HEAD	MATURITY	HEIGHT	LOGGING	WEIGHT	WEIGHT	% PLUMP	% THIN	NIT % Grain	
	(Sites)		(15)	(15)	(15)	(16)	(16)	(17)	(1)	(16)	(15)	(16)	(1)	(3)	
1	CDC Copeland	C	5818	41	100	57.0	92.5	77.8	2.3	66.2	49.2	95.7	2.1	11.5	
2	AC Metcalfe	C	5601	44	96	53.6	91.6	71.9	3.7	67.8	48.3	96.2	3.2	12.5	
3	AAC Synergy	C	6282	21	108	54.6	92.5	72.4	2.3	66.9	50.3	97.3	1.6	11.9	
11	TR17409	2	5773	43	99	55.7	93.2	60.7	2.3	66.5	50.4	97.3	3.3	12.0	

Table 8. 2018 Coop Disease summary.

ENTRY NAME	YRS	NET BLOTCH							SPOT BLOTCH			FUSARIUM HEAD BLIGHT								
		Seedling			Netform		Spotform		ald (Netfor	Seedling	Field Ratings		Brandon			Morden		Charlottetown		
		102	MBV25	858	Lacombe	Lacombe	Melfort	1903	Brand	Melf	HEAD	FHB	DON	FHB	DON	Severity	Incidence	Index	DON	
1	CDC Copeland	C	3	3	6	1.5	4.0	0.0	8	2.5	5.5	59.7	1.5	16.4	1.7	4.7	no data	no data	no data	14.7
2	AC Metcalfe	C	8	2	7	1.5	5.0	5.0	7	3.0	3.0	57.7	0.8	9.6	1.5	7.9				4.1
3	AAC Synergy	C	4	5	5	0.0	3.5	0.0	5	1.5	1.5	58.0	1.2	26.0	1.3	8.5				10.7
11	TR17409	2	7	5	6	4.0	5.0	1.0	5	6.0	4.0	54.7	3.3	17.3	2.8	9.5				5.9

ENTRY NAME	YRS	STEM RUST					SCALD			S'toon (%)	SMUTS			BYDV U of Illinois	
		018 CDC					Seedling	Lacombe	Edmonton		Morden				
		Seedling	orden	Field Rating	Rpg#1	Marker					WRS2275	U. nuda (%)	U. hordei (%)		U. nigra irface borne (Rating)
1	CDC Copeland	C	;1-	1	R	R	S	5.0	7.0	6.4	33	6	12	R	5.0
2	AC Metcalfe	C	;1-	2	MR	R	S	4.0	6.0	1.7	0	22	24	MR	3.5
3	AAC Synergy	C	;1-1	5	MR	R	MS	5.0	5.5	11.0	64	15	35	MR	6.5
11	TR17409	2	33+	25	I	S	S	4.5	7.5	0.9	92	25	18	MR	5.5

Table 18. 2018 Alberta disease nursery ratings - scald and net blotch.

ENTRY	NAME	YRS	Scald		Net Blotch - Lacombe	
			Lacombe (n=2)	Edmonton (n=2)	Netform (n=2)	Spotform (n=2)
				26-Jul	2-Aug	2-Aug
1	CDC Copeland	C	5.0	7.0	1.5	4.0
2	AC Metcalfe	C	4.0	6.0	1.5	5.0
3	AAC Synergy	C	5.0	5.5	0.0	3.5
11	TR17409	2	4.5	7.5	4.0	5.0

Table 19. 2018 Manitoba and PEI disease nursery ratings - fusarium head blight and stem rust.

ENTRY	NAME	YRS	Fusarium Head Blight								Stem Rust				
			Brandon (n=3)			Morden (n=3)		Charlottetown			Seedling	Morden Field Rating		2018 CDC	
			HEAD ^a	FHB ^b	DON ^c	FHB ^b	DON ^c	Severity ^d	Incidence ^e	Index ^f	DON ^c	MCC IT ^g	Sr Sev	Sr IR	Rpg#1
1	CDC Copeland	C	59.7	1.5	16.4	1.7	4.7	no data	no data	no data	14.7	;1-	1	R	R
2	AC Metcalfe	C	57.7	0.8	9.6	1.5	7.9				4.1	;1-	2	MR	R
3	AAC Synergy	C	58.0	1.2	26.0	1.3	8.5				10.7	;1-1	5	MR	R
11	TR17409	2	54.7	3.3	17.3	2.8	9.5				5.9	33+	25	I	S

Table 20. 2018 Manitoba and Illinois seedling and nursery disease ratings - net blotch, scald, spot blotch, smut, and BYDV.

ENTRY	NAME	YRS	Net Blotch			Scald		Spot Blotch		Smuts			Barley Yellow Dwarf Virus (n=2)	
			Morden Seedling			Morden Seedling		Morden Seedling		Morden Field Rating			Overall Surface borne Smut Rating ^k	
			102 ^{a,c}	MBV25 ^{b,c}	858 ^{a,c}	WRS2275 ^{d,e}	Brandon (n=2)	1903 ^{g,h}	<i>U. nuda</i> ⁱ	<i>U. hordei</i> ^k	<i>U. nigra</i> ^k	Rating ^k	U of Illinois ^m	
1	CDC Copeland	C	3	3	6	S	2.5	8	33	6	12	R	5.0	
2	AC Metcalfe	C	8	2	7	S	3.0	7	0	22	24	MR	3.5	
3	AAC Synergy	C	4	5	5	MS	1.5	5	64	15	35	MR	6.5	
11	TR17409	2	7	5	6	S	6.0	5	92	25	18	MR	5.5	

Table 21. 2018 Saskatchewan disease nursery ratings - covered smut, net blotch and spot blotch.

ENTRY	NAME	YRS	Covered Smut ^a	Net-form Net Blotch (n=2) ^b		Spot Blotch (n=2) ^b		Spot Blotch (n=2) ^c
			Saskatoon	Melfort	Melfort	Saskatoon	Saskatoon	
				(0 - 9)	(0 - 9)	(0 - 9)	(0 - 9)	
1	CDC Copeland	C	6.4	0.0	5.5	no data		
2	AC Metcalfe	C	1.7	5.0	3.0			
3	AAC Synergy	C	11.0	0.0	1.5			
11	TR17409	2	0.9	1.0	4.0			

Table 23. 2018 Coop Malt quality - Site 1 (Brandon - GRL).

ENTRY NAME			Barley			Malt							Wort							
			Plump		1000	Germination Energy		Steepout		Malt	Diastatic	Alpha-	Fine	Soluble	Kolbach					
			>7/64	>6/64	K. Wt.	Protein	4 ml	8 ml	Moist	Friab.	P&B ^b	Protein	Power	Amylase	Extract	Protein	Index	FAN	β-Glucan	Visc.
YRS	%	%	g	%	%	%	%	%	%	°L	D.U.	%	%	%	mg/L	mg/L	cP			
1	CDC Copeland	C	77.9	97.5	51.7	10.5	99	92	44.9	82.1	2.4	11.2	127	73.0	81.6	4.46	39.9	181	192	1.48
2	AC Metcalfe	C	75.7	97.6	50.7	11.5	99	92	44.7	75.0	2.8	11.8	155	93.4	81.7	4.25	36.2	182	156	1.46
3	AAC Synergy	C	86.2	98.6	52.4	11.7	100	96	44.6	74.8	3.0	12.3	139	76.1	82.0	4.23	34.5	160	116	1.43
11	TR17409	2	85.0	98.1	54.2	11.5	97	93	46.4	83.2	5.8	11.9	138	97.1	82.5	5.36	45.1	237	126	1.51

Table 24. 2018 Coop Malt quality - Site 2 (Saskatoon Kernen - GRL).

ENTRY NAME			Barley			Malt							Wort							
			Plump		1000	Germination Energy		Steepout		Malt	Diastatic	Alpha-	Fine	Soluble	Kolbach					
			>7/64	>6/64	K. Wt.	Protein	4 ml	8 ml	Moist	Friab.	P&B ^b	Protein	Power	Amylase	Extract	Protein	Index	FAN	β-Glucan	Visc.
YRS	%	%	g	%	%	%	%	%	%	°L	D.U.	%	%	%	mg/L	mg/L	cP			
1	CDC Copeland	C	79.0	96.6	49.6	12.3	98	94	45.2	77.2	7.0	12.5	157	69.1	80.7	3.92	31.4	156	98	1.45
2	AC Metcalfe	C	78.5	97.2	48.8	13.4	100	99	44.6	43.7	9.4	13.7	195	94.7	80.4	4.53	33.1	191	110	1.44
3	AAC Synergy	C	87.6	98.8	52.5	12.4	96	98	44.2	54.8	6.2	12.6	162	79.1	81.2	3.61	28.7	139	95	1.43
11	TR17409	2	84.3	98.1	51.3	12.8	100	79	46.6	71.5	6.3	13.1	187	93.1	80.9	4.90	37.5	215	88	1.44

Table 25. 2018 Coop Malt quality - Site 3 (Indian Head - BARI).

ENTRY NAME			Barley			Malt							Wort							
			Plump		1000	Germination Energy		Steepout		Malt	Diastatic	Alpha-	Fine	Soluble	Kolbach					
			>7/64 ^a	>6/64	K. Wt.	Protein	4 ml	8 ml	Moist	Friab.	P&B ^{ab}	Protein ^c	Power	Amylase	Extract	Protein	Index	FAN	β-Glucan	Visc.
YRS	%	%	g	%	%	%	%	%	%	°L	D.U.	%	%	%	mg/L	mg/L	cP			
1	CDC Copeland	C	-	99.3	44.6	10.7	100	100	43.2	-	-	10.0	119	69.0	84.4	4.20	41.8	153	72	1.43
2	AC Metcalfe	C	-	98.8	44.5	11.7	100	100	43.6	-	-	10.7	135	86.9	82.9	4.41	41.1	174	153	1.46
3	AAC Synergy	C	-	99.5	47.0	11.0	100	100	41.1	-	-	10.7	129	79.9	84.5	3.08	28.9	102	126	1.41
11	TR17409	2	-	99.4	49.2	11.8	97	98	42.1	-	-	10.3	180	87.8	81.4	4.85	47.0	208	110	1.44

Table 22. 2018 Coop Malt quality - mean of 3 stations.

ENTRY NAME			Barley			Malt							Wort							
			Plump		1000	Germination Energy		Steepout		Malt	Diastatic	Alpha-	Fine	Soluble	Kolbach					
			>7/64 ^a	>6/64	K. Wt.	Protein	4 ml	8 ml	Moist	Friab.	P&B ^{ab}	Protein	Power	Amylase	Extract	Protein	Index	FAN	β-Glucan	Visc.
YRS	%	%	g	%	%	%	%	%	%	°L	D.U.	%	%	%	mg/L	mg/L	cP			
1	CDC Copeland	C	78.5	97.8	48.6	11.2	99	95	44.4	79.7	4.7	11.2	134	70.4	82.2	4.19	37.7	163	121	1.45
2	AC Metcalfe	C	77.1	97.9	48.0	12.2	100	97	44.3	59.4	6.1	12.1	162	91.7	81.7	4.40	36.8	182	140	1.45
3	AAC Synergy	C	86.9	99.0	50.6	11.7	99	98	43.3	64.8	4.6	11.8	143	78.4	82.6	3.64	30.7	134	112	1.42
11	TR17409	2	84.7	98.5	51.6	12.0	98	90	45.0	77.4	6.0	11.8	168	92.7	81.6	5.04	43.2	220	108	1.46

Pile Data of 'Bill Coors 100' Malting Barley Commercially Malted by CMC - Calgary, Alberta Canada

Pile	% Malt Moisture	% Extract Fine, as is	% Extract Fine, DB	% Extract Coarse, as is	% Extract Coarse, DB	F/C	ASBC Color	DP (U/ml)	AA (U/ml)	Total Protein (%)	Wort Protein (%)	S/T %	pH	Wort Viscosity cP	BG, mg/L	Turbidity, NTU	FAN, mg/L	2.8mm	2.4mm	2.0mm	Thru 2.0mm	Friability
1	4.1	79.4	82.8	78.5	81.8	1.0	2.62	148	59	11.6	5.5	47.1	5.93	1.45	71	6.8	233	91.7	7.0	1.0	0.3	91.2
2	4.5	79.1	82.8	78.1	81.7	1.0	1.97	169	59	11.7	5.6	47.7	5.90	1.45	85	6.9	247	88.1	10.0	1.5	0.4	91.8
3	4.4	79.4	83.1	78.4	82.0	1.0	2.24	167	58	11.8	5.7	48.8	5.87	1.47	86	9.2	256	89.7	8.5	1.4	0.4	89.2
4	4.7	79.0	82.9	78.1	82.0	0.9	1.46	197	66	11.6	4.8	41.8	6.06	1.43	50	5.1	198	89.6	9.1	1.0	0.3	87.0
5	4.2	80.0	83.5	79.1	82.5	0.9	2.32	159	65	11.2	5.8	51.8	5.94	1.46	55	8.7	274	83.7	13.2	2.4	0.7	89.6
6	4.2	77.4	80.8	76.5	79.8	1.0	1.88	148	56	10.9	4.9	44.6	6.03	1.48	69	14.8	210	81.9	14.2	3.0	0.9	87.8
7	3.6	79.2	82.2	78.4	81.3	0.9	2.16	155	64	11.3	5.5	48.9	5.95	1.46	60	9.3	258	87.0	10.8	1.7	0.5	92.4
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