



2013

BARLEY QUALITY

REPORT

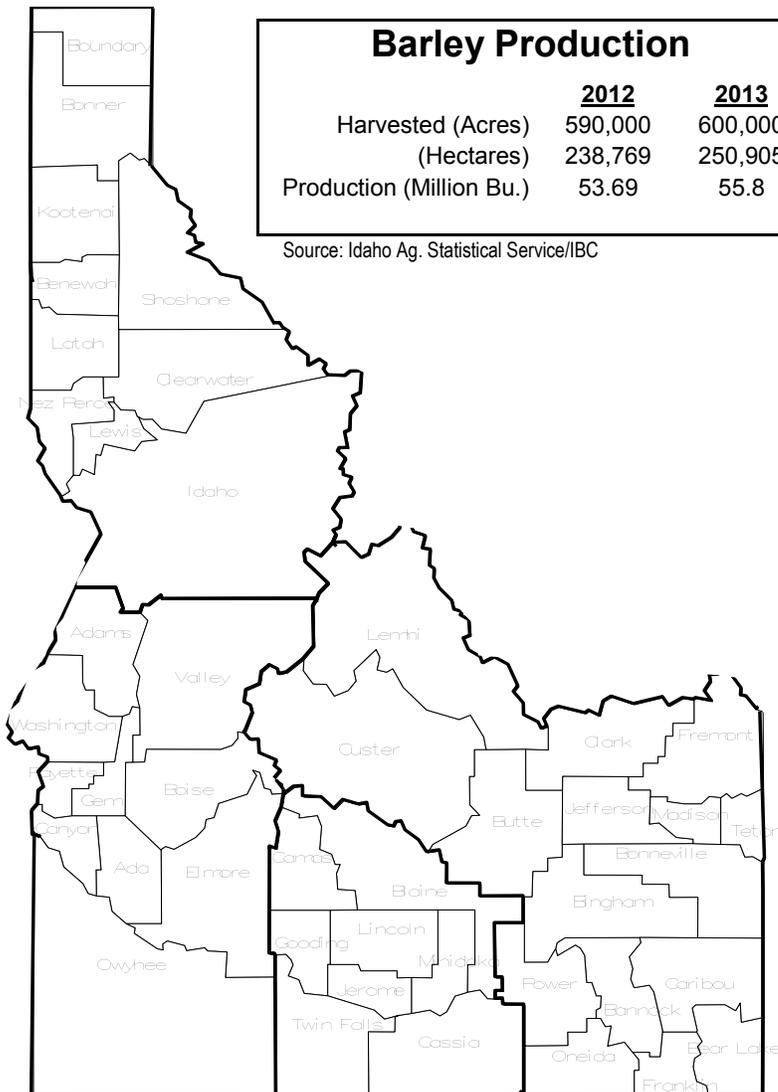
2013 IDAHO BARLEY QUALITY REPORT

Summary

Idaho barley production totaled 58.8 million bushels from 600,000 harvested acres in 2013, representing an increase of 4% in output from the previous year. Quality was good overall.

Approximately 69% of Idaho's barley sampled received a USDA/FGIS grade of #1. There were 708 barley samples collected from Idaho elevators, commodity brokers and farmers. The samples were separated by class, variety and region. They were graded at a licensed Federal Grain Inspection Service (FGIS) facility.

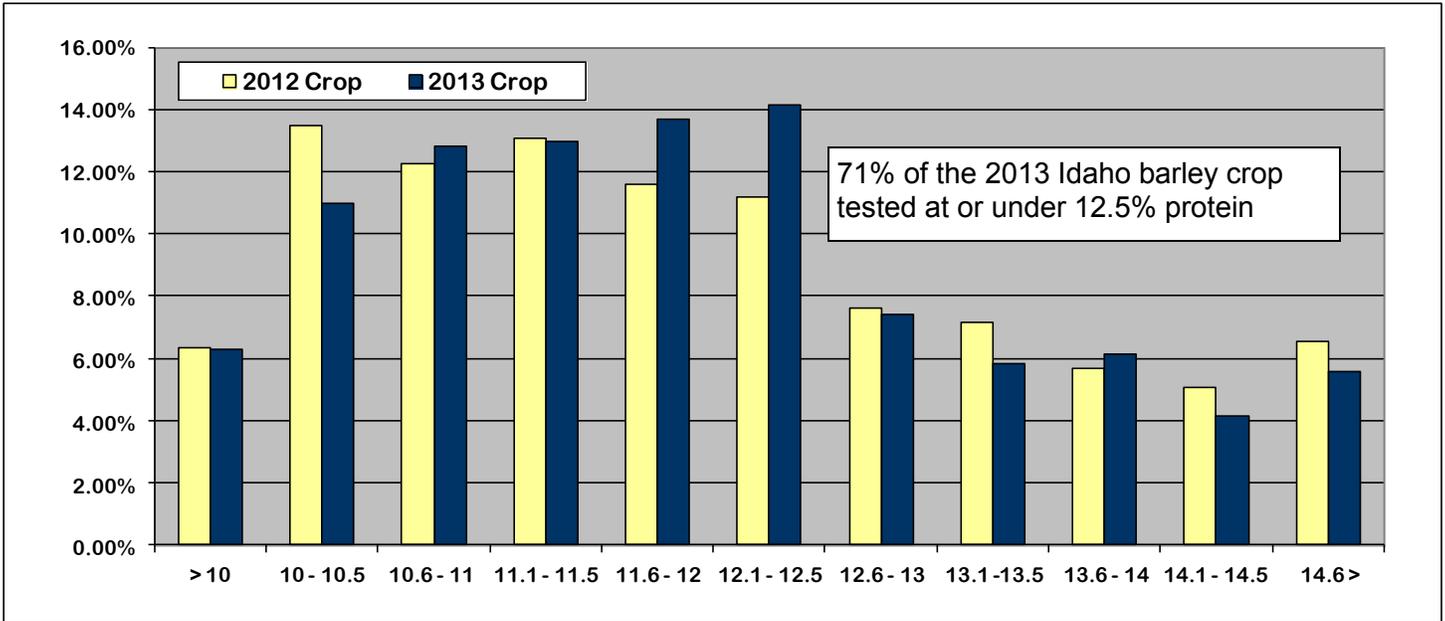
Average weight was slightly lower than last year at 49.35 pounds per bushel (lb/bu). Ninety-four percent of the 2-row malting barley crop tested 48 lb/bu or better and eighty-eight percent of the 6-row malting barley crop tested 48 lb/bu or better. Overall thins averaged 2.42% and plumps averaged 87.48%. Protein averaged 11.93% statewide and moisture averaged 10.75%. The average for skinned and broken kernels was 1.29%.



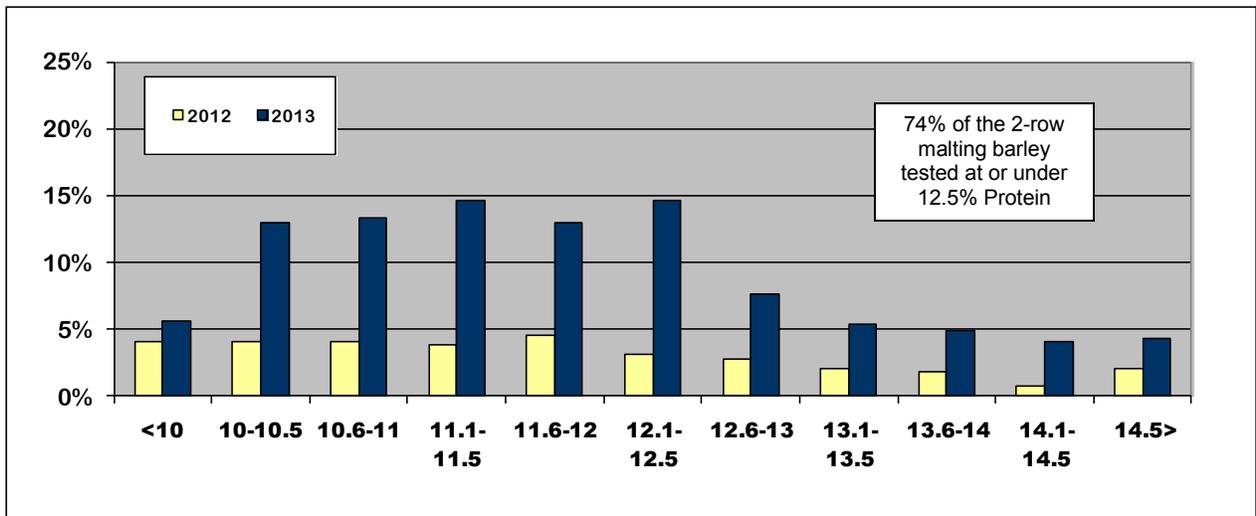
Average Statewide Barley Quality

Type	# Samples	Test Wt. ¹		1000 Knl (grams)	Moist %	Thin ² %	Protein	Sound ³	Skn/Br ⁴ %	% Plump	Average
		(lb/bu)	(kg/ha)								
2-R Feed	121	49.15	63.31	42.41	10.66	2.80	12.25	99.54	1.76	89.07	1.36
6-R Feed	7	50.36	64.86	0.00	9.90	5.77	11.11	99.73	0.00	0.00	1.29
2-R Malting	451	50.03	64.44	41.53	10.64	1.96	11.85	99.77	1.31	88.74	1.42
6-R Malting	129	47.13	60.70	37.55	11.27	3.76	11.79	99.64	1.41	82.34	1.00
2013 Avg.	708	49.35	63.57	41.06	10.75	2.42	11.93	99.63	1.29	87.48	1.41
2012 Avg.	638	50.47	65.00	41.11	10.32	1.95	12.05	99.49	1.74	88.48	1.25
5 Yr Avg.	676	49.72	64.04	41.19	10.71	2.14	11.80	99.36	1.79	89.28	1.41

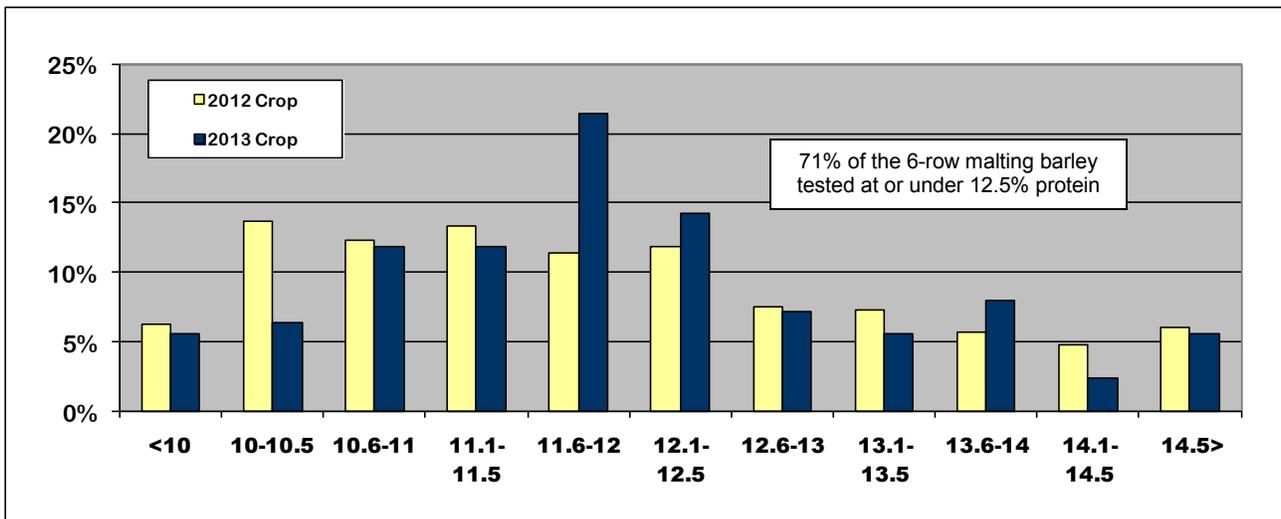
Idaho Barley Protein Distribution 2012-2013



2-Row Malting Barley Protein Distribution

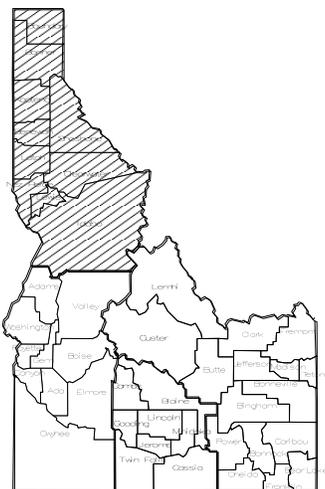


6-Row Malting Barley Protein Distribution



2013 Regional Quality

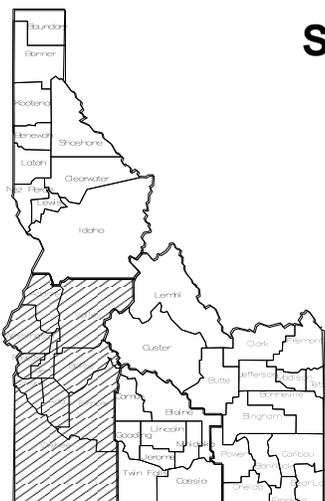
North Idaho



North Idaho averaged about 8% of total barley acres over the past 5 years. Total 2013 harvested acres for this region are estimated at 48,000.

Type	# Samples	Test Wt. ¹		1000 Knl (grams)	Moist %	Thin ² %	Protein	Sound ³	Skn/Br ⁴ %	% Plump ⁵	Average
		(lb/bu)	(kg/hl)								
2-R Feed	6	52.67	67.83	0.00	10.08	1.43	11.17	99.83	0.00	0.00	1.17
2-R Malt	4	49.63	63.92	43.10	9.75	5.30	11.50	99.90	1.20	85.00	1.50
2013 Avg.	10	51.45	66.27	43.10	9.95	2.98	11.30	99.86	1.20	85.00	1.30
2012 Avg.	14	52.18	67.21	40.76	9.54	4.24	10.63	99.83	0.93	85.70	1.21
5 Yr Avg.	12	49.61	61.56	42.68	8.89	4.37	11.08	91.30	1.01	66.01	1.27

Southwest Idaho



Southwest Idaho averaged about 0.1% of total barley acres over the past 5 years. Total 2013 harvested acres for this region are estimated at 6,000.

Type	# Samples	Test Wt. ¹		1000 Knl (grams)	Moist %	Thin ² %	Protein	Sound ³	Skn/Br ⁴ %	% Plump ⁵	Average
		(lb/bu)	(kg/hl)								
2-R Feed	6	50.92	65.58	0.00	8.28	6.10	11.22	99.73	0.00	0.00	1.33
6-R Feed	2	50.50	65.04	0.00	8.40	2.85	11.85	99.80	0.00	0.00	1.00
2013 Avg.	8	50.71	65.31	0.00	8.34	4.48	11.53	99.77	0.00	0.00	1.17
2012 Avg.	5	51.90	66.85	0.00	7.75	7.04	11.10	99.66	0.00	0.00	1.40
5 Yr Avg.	9	50.39	61.23	41.58	8.08	6.67	11.55	95.93	0.00	0.00	1.32

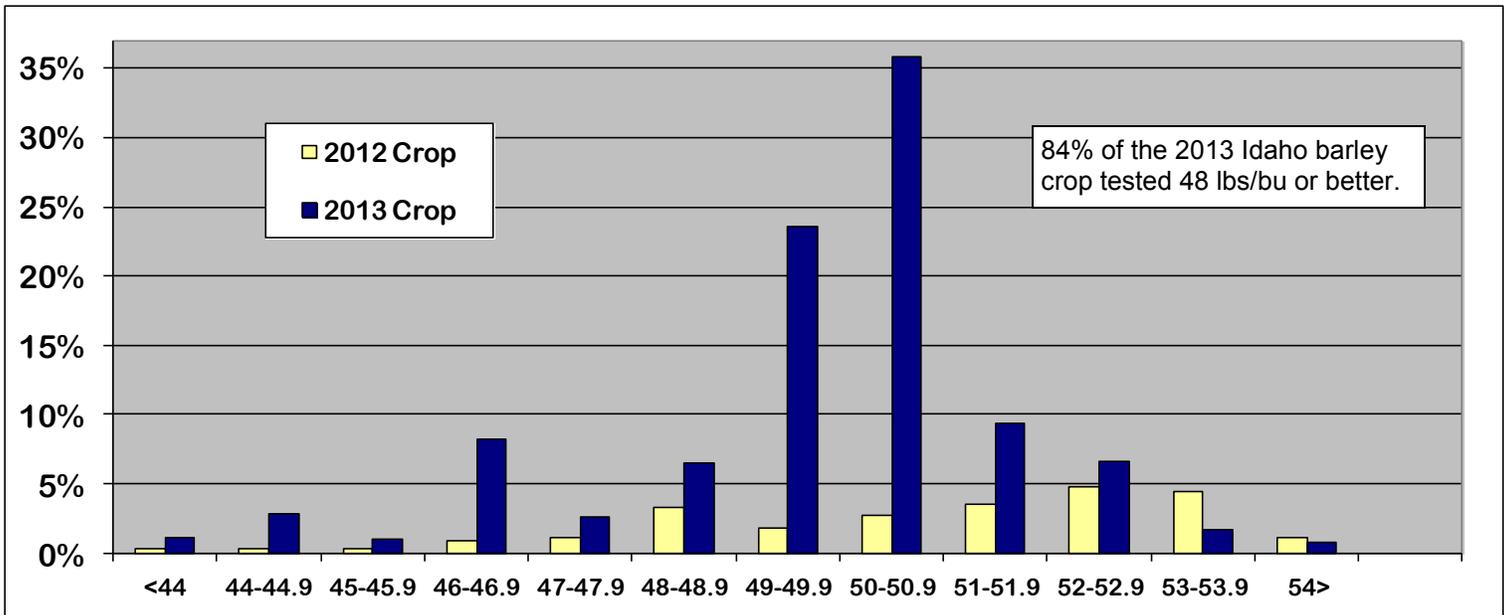
¹ Weighted average by regional production

² % Thins: 2-rowed kernels passing through a 5/64 x 3/4 in. (2.2 x 19 mm) slotted sieve
6-rowed kernels passing through a 5/64 x 3/4 in. (2.0 x 19 mm) slotted sieve

2013 Idaho Barley Quality By Variety

Variety	Type/Use	# Samples	Test Wt. (lbs/bu)	1000 Knl (grams)	Moisture %	Thin %	Protein %	Sound %	Skn/Br%	Plump%	Average
Metcalfe	2-Row Malt	150	49.83	0.00	10.47	1.77	12.16	0.00	1.27	86.13	1.29
Conrad	2-Row Malt	120	49.34	40.83	10.41	3.42	11.76	99.68	1.07	89.42	1.35
Legacy	6-Row Malt	111	50.32	0.00	10.39	1.32	11.89	0.00	1.32	92.08	1.00
Copeland	2-Row Malt	106	49.63	41.27	11.07	2.67	11.98	99.57	1.10	90.15	1.40
Moravian 69	2-Row Malt	63	49.46	0.00	10.16	1.98	11.33	0.00	1.27	86.13	1.00

Idaho Barley Test Weight Distribution 2012-2013



METHODS EMPLOYED AND DEFINITION OF TERMS AND SYMBOLS

TEST WEIGHT - Test weight was determined on dockage free barley using a Seedburow Model #8850 computer grain scale. Test weight was expressed in pounds per bushel. In the event sample moisture exceeded 13.5%, the sample was allowed to air-dry prior to test weight determination.

MOISTURE - Moisture expressed as % of total weight was determined by using a Dicky-john gac2100.

PROTEIN - Percent total protein calculated on a dry basis was determined by infratech model 1241 whole grain analyzer using ANN calibration.

PLUMP BARLEY - Barley that remains on top of a 6/64 x 3/4 slotted-hole sieve after sieving.

THIN BARLEY - For the class Barley¹ and 6-row barley which passes through a 5/64 x 3/4 slotted-hole sieve and 2-row malting barley² which passes through a 5.5/64 x 3/4 slotted-hole sieve after sieving.

¹ The class Barley is a mixture of 10% or more of 2-row barley or 6-row barley.

² 2-row malting barley is sieved on a 5.5/64 x 3/4 slotted-hole sieve which would be higher thins.

USDA/FGIS

United States Grades and Grade Requirements

§ 810.204 Grades and grade requirements for the subclasses Six-rowed Malting Barley and Six-rowed Blue Malting Barley.

Grade	Minimum limits of -			Maximum Limits of -				
	Test Weight Per/bu.	Suitable Malting Types	Sound Barley ¹	Damaged Kernels ¹	Foreign Material	Other Grains	Skinned & Broken Kernels	Thin Barley ²
	<i>Pounds</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
U.S. No. 1	47.0	95.0	97.0	2.0	.5	2.0	4.0	7.0
U.S. No. 2	45.0	95.0	94.0	3.0	1.0	3.0	6.0	10.0
U.S. No. 3	43.0	95.0	90.0	4.0	2.0	5.0	8.0	15.0
U.S. No. 4	43.00	95.0	87.0	5.0	3.0	5.0	10.0	15.0

¹ Injured-by-frost kernels and injured-by-mold kernels are not considered damaged kernels or considered against sound barley..

² Use the 5/64 x 3/4 slotted-hole sieve

Note: Malting barley shall not be infested in accordance with § 810.07(b) and shall not contain any special grades as defined in § 810.206. Six-rowed Malting barley and Six-rowed Blue Malting barley varieties not meeting the requirements of this section shall be graded in accordance with standards established for the class Barley.

§ 810.205 Grades and grade requirements for Two-rowed Malting Barley.

Grade	Minimum limits of -			Maximum Limits of -			
	Test Weight Per/bu.	Suitable Malting Types	Sound Barley ¹	Wild Oats	Foreign Material	Skinned & Broken Kernels	Thin Barley ²
	<i>Pounds</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
U.S. No. 1	50.0	97.0	98.0	1.0	0.5	5.0	5.0
U.S. No. 2	48.0	97.0	98.0	1.0	1.0	7.0	7.0
U.S. No. 3	48.0	95.0	96.0	2.0	2.0	10.0	10.0
U.S. No. 4	48.0	95.0	93.0	3.0	3.0	10.0	10.0

¹ Injured-by-frost kernels and injured-by mold kernels are not considered damaged kernels or considered against sound barley

² Use the 5.5/64 x 3/4 slotted-hole sieve.

Note: Malting barley shall not be infested in accordance with § 810.07(b) and shall not contain any special grades as defined in § 810.206. Two-rowed Malting barley varieties not meeting the requirements of this section shall be graded in accordance with standards established for the class Barley.

§ 810.206 Grades and grade requirements for Barley.

Grade	Minimum limits of -			Maximum Limits of -			
	Test Weight Per/bu.	Sound Barley ¹	Damaged Kernels ¹	Heat Damaged Kernels	Foreign Material	Skinned & Broken Kernels	Thin Barley ²
	<i>Pounds</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
U.S. No. 1	47.0	97.0	2.0	0.2	1.0	4.0	10.0
U.S. No. 2	45.0	94.0	4.0	0.3	2.0	8.0	15.0
U.S. No. 3	43.0	90.0	6.0	0.5	3.0	12.0	25.0
U.S. No. 4	40.0	85.0	8.0	1.0	4.0	18.0	35.0
U.S. No. 5	36.0	75.0	10.0	3.0	5.0	28.0	75.0

U.S. Sample grade shall be barley that:

- (a) Does not meet the requirements for the grades 1, 2, 3, 4, or 5: or
- (b) Contains 8 or more stones or any number of stones which have an aggregate weight in excess of 0.2 percent of the sample weight, 2 or more pieces of glass, 3 or more crotalaria seeds (*Crotalaria* spp.), 2 or more castor beans (*Ricinus communis* L), 4 or more particles of unknown foreign substance(s) or commonly recognized harmful or toxic substance(s), 8 or more cocklebur (*Xanthium* spp.) or similar seeds singly or in combination, 10 or more rodent pellets, bird droppings, or equivalent quantity of other animal filth per 1-1/8 to 1-1/4 quarts of barley: or
- (c) Has a musty, sour, or commercially objectionable foreign odor (except smut or garlic odor); or
- (d) Is heating or otherwise of distinctly low quality.

¹ Includes heat damaged kernels. Injured-by-frost kernels and injured-by-mold kernels are not considered damaged kernels or considered against sound barley..

² Use the 5/64 x 3/4 slotted-hole sieve

METRIC CONVERSION TABLES FOR BARLEY

U.S. to Metric	
1 Wet Quart (Qt)	= 0.9464 Liter (L)
1 Dry Quart	= 1.10 Liters
1 Wet Gallon (Gal)	= 3.785 Liters
1 Wet Gallon	= 0.0378 Hectoliter (Hl)
1 Dry Gallon	= 4.404 Liters
1 Dry Gallon	= 0.044 Hectoliter
1 Bushel	= 0.352 Hectoliter
1 Acre (A)	= 0.404694 Hectare (Ha)
1 Pound (Lb)	= 0.4536 Kilogram (Kg)
1 Mile (Mi)	= 1.610 Kilometers (Km)
1 Bu. Barley	= .021772 Metric Ton
1 Beer Barrel	= 31.0 Gallons
Lb/Bu x 1.288	= Kg/Hl
Bu/A x 0.869	= Hl/Ha
Bu/A x .05380	= MT/Ha

Metric to U.S.	
1 Liter	= 1.0567 Wet Quarts
1 Liter	= 0.098 Dry Quart
1 Liter	= .2642 Wet Gallon
1 Hectoliter	= 26.42 Wet Gallons
1 Liter	= .227 Dry Gallon
1 Hectoliter	= 22.70 Dry Gallons
1 Hectoliter	= 2.838 Bushels
1 Hectare	= 2.471 Acres
1 Kilogram	= 2.2046 Pounds
1 Kilometer	= 0.62 Mile
1 Metric Ton	= 45.9296 Bu. of Barley
1.1734 Hectoliters	= 1 Beer Barrel
Kg/Hl x .7764	= Lb/Bu
Hl/Ha x 1.15	= Bu/A
MT/Ha x 18.59	= Bu/A

STANDARDS

	Lbs/Bu	Kg/Hl
Malt	34	43.79
Barley	48	61.82

ACKNOWLEDGMENTS

The Idaho Barley Commission would like to thank the barley producers, elevator operators and commodity dealers who participated in our barley quality survey. Their combined efforts were responsible for the success of this survey.

Additional copies of this report are available by contacting the Idaho Barley Commission.



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