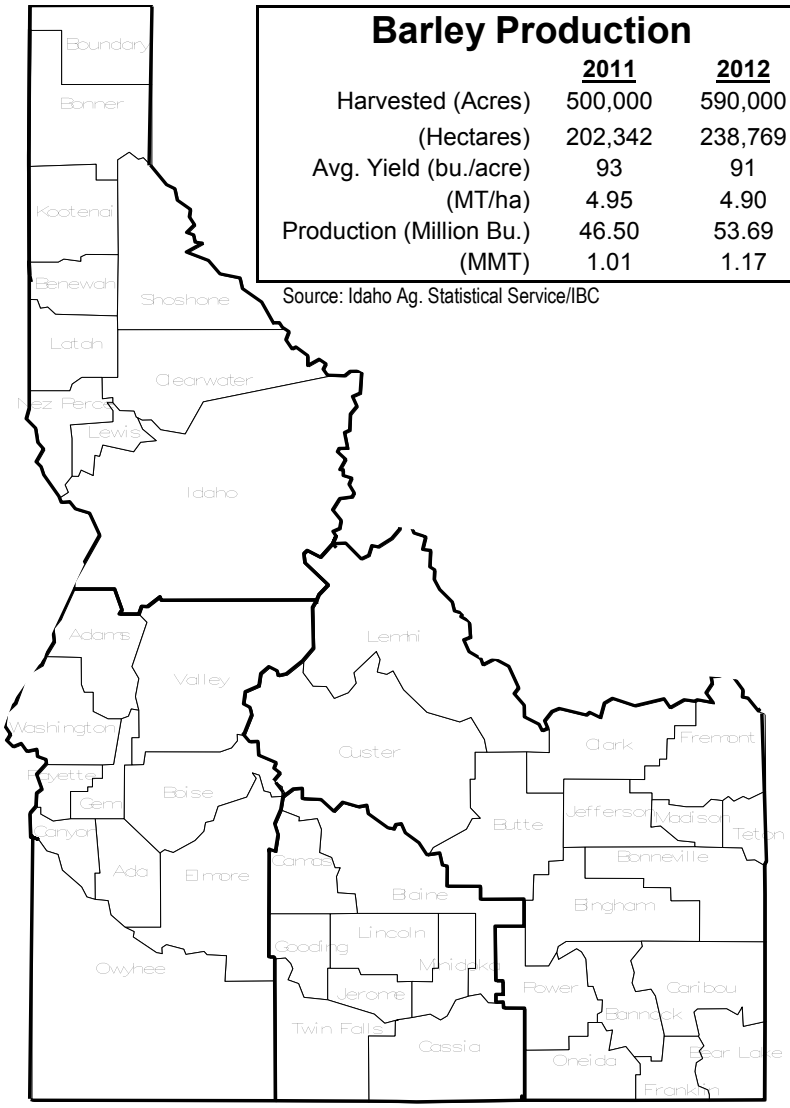
IDAHO BARLEY COMMISSION

2012

BARLEY QUALITY REPORT

2012 IDAHO BARLEY QUALITY REPORT



Barley Production

	2011	2012
Harvested (Acres)	500,000	590,000
(Hectares)	202,342	238,769
Avg. Yield (bu./acre)	93	91
(MT/ha)	4.95	4.90
Production (Million Bu.)	46.50	53.69
(MMT)	1.01	1.17

Source: Idaho Ag. Statistical Service/IBC

Summary

Idaho barley production totaled 53.69 million bushels from 500,000 harvested acres in 2012, representing a increase of 15% in output from the previous year. Quality was good overall.

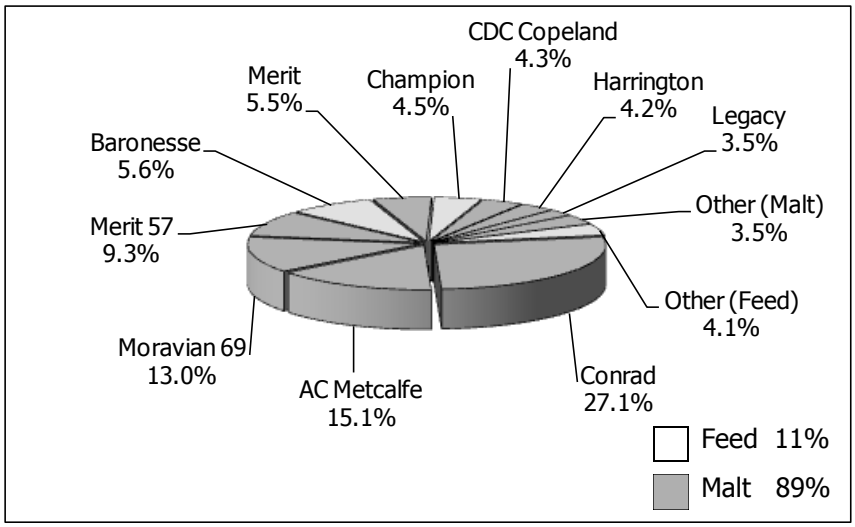
Approximately 79% of Idaho's barley sampled received a USDA/FGIS grade of #1. There were 638 barley samples collected from Idaho elevators, commodity brokers and farmers. The samples were separated by class, variety and region. They were graded at a licensed Federal Grain Inspection Service (FGIS) facility.

Average weight was slightly higher than last year at 50.4 pounds per bushel (lb/bu). Ninety-two percent of the 2-row malting barley crop tested 48 lb/bu or better and eighty-one percent of the 6-row malting barley crop tested 48 lb/bu or better. Overall thins averaged 1.95% and plumps averaged 88.48%. Protein averaged 12% statewide and moisture averaged 10.3%. The average for skinned and broken kernels was 1.7%.

Average Statewide Barley Quality

Type	# Samples	Test Wt. [1] (lb/bu)	Test Wt. [1] (kg/hl)	1000 Knl (grams)	Moist %	Thin[2] %	Protein	Sound[3]	Skn/Br[4] %	% Plump	Average
2-R Feed	36	49.93	64.31	42.20	9.97	3.47	12.20	99.37	1.00	80.83	1.31
6-R Feed	8	51.90	66.85	45.13	9.66	2.89	12.33	99.85	1.51	88.91	1.00
2-R Malting	113	50.85	65.50	41.71	10.31	3.61	11.61	99.55	1.58	90.03	1.27
6-R Malting	481	48.67	62.69	35.85	10.35	1.44	12.14	99.22	1.79	88.29	1.00
2012 Avg.	**638**	**50.47**	**65.00**	**41.11**	**10.32**	**1.95**	**12.05**	**99.49**	**1.74**	**88.48**	**1.25**
2011 Avg.	686	50.11	64.54	42.04	10.93	1.5	11.23	99.42	2.64	94.57	1.28
5 Yr Avg.	**579**	**49.47**	**63.73**	**40.14**	**10.27**	**2.51**	**11.73**	**99.24**	**1.80**	**88.65**	**1.45**

2012 IDAHO BARLEY VARIETIES
MALTING VS FEED



Source: 2012 IBC/Idaho Ag Statistics Service

Top Ten Idaho Varieties

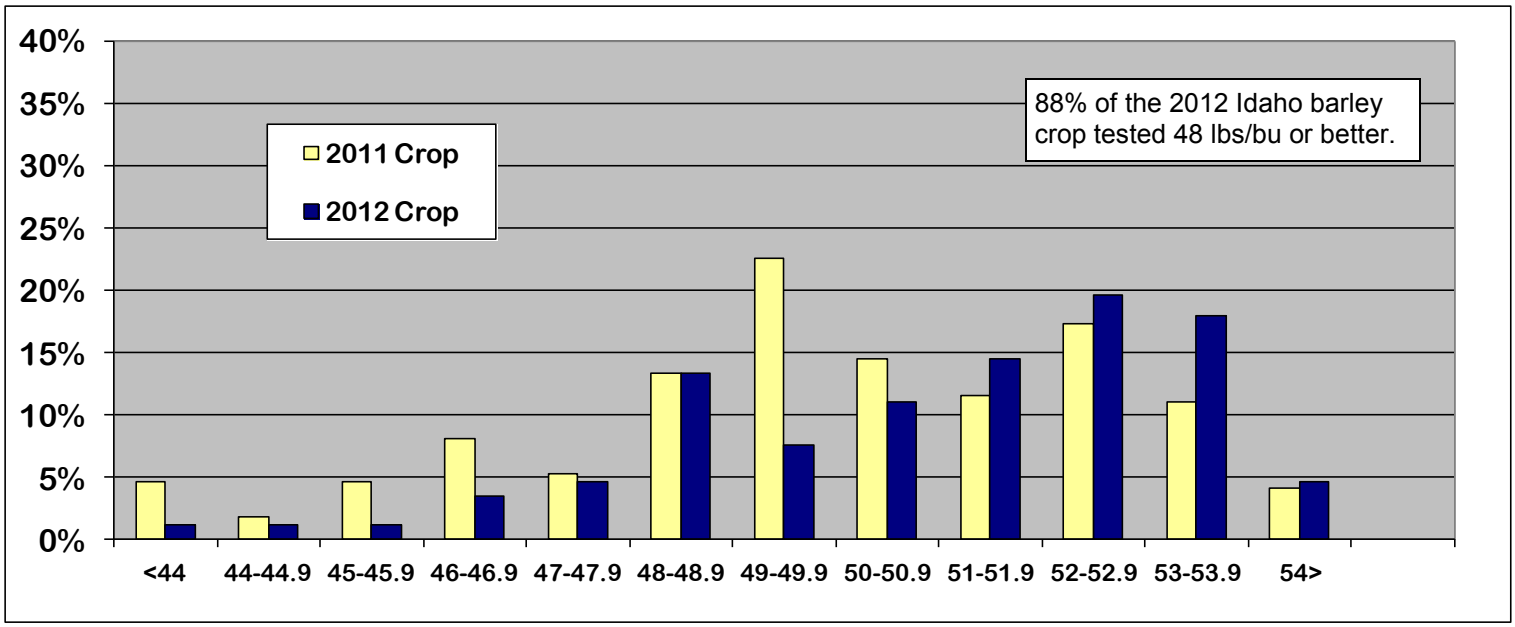
Variety		Planted Acres	Hectares	% of Prod.
Conrad	(2-Row Malt)	149,100	60,340	27.1%
AC Metcalfe	(2-Row Malt)	83,200	33,671	15.1%
Moravian 69	(2-Row Malt)	71,800	29,057	13.0%
Merit 57	(2-Row Malt)	51,300	20,761	9.3%
Baronesse	(2-Row Feed)	45,100	18,252	8.2%
Merit	(2-Row Malt)	30,300	12,262	5.5%
Champion	(2-Row Feed)	24,600	9,955	4.5%
CDC Copeland	(2-Row Malt)	21,500	8,701	3.9%
Harrington	(2-Row Malt)	18,100	7,325	3.3%
Legacy	(6-Row Malt)	13,200	5,342	2.4%
Other Malt		19,500	7,892	3.5%
Other Feed		22,700	9,187	4.1%
	TOTAL:	**550,400**	**222,744**	**100%**

Source: 2012 IBC/Idaho Ag Statistics Service

2012 Idaho Barley Quality By Variety

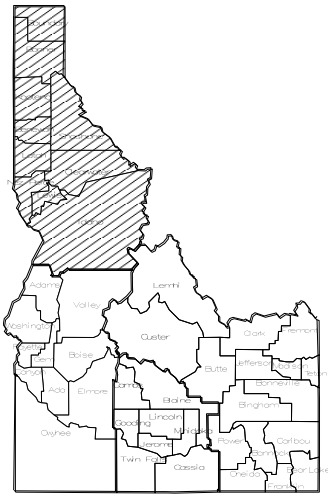
Variety	Type/Use	# Samples	Test Wt. (lbs/bu)	1000 Knl (grams)	Moistu		tein %	Sound %	Skn/Br%	Plump%	Average
Conrad	2-Row Malt	168	50.43	41.04	10.14	3.41	11.75	99.47	1.59	88.52	1.26
Legacy	6-Row Malt	147	52.00	45.10	10.16	2.43	12.46	99.90	2.06	86.71	1.00
Metcalfe	2-Row Malt	99	52.50	52.00	10.83	1.18	11.29	99.60	1.29	92.54	1.00
Copeland	2-Row Malt	64	50.00	35.00	10.27	1.50	12.30	99.80	1.45	88.52	1.00
IdaGold	2-Row Feed	11	51.00	0.00	10.18	1.59	11.85	99.60	4.28	83.60	1.00

Idaho Barley Test Weight Distribution 2011-2012



2012 Regional Quality

North Idaho



Barley Production

	2011	2012
Harvested (Acres)	34,000	40,710
(Hectares)	13,759	16,475
% Idaho Acreage	6.8%	6.9%

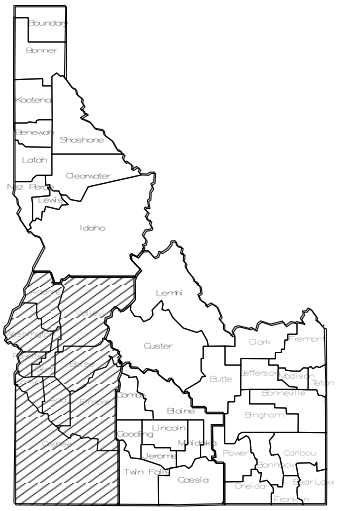
Source: Idaho Ag. Statistical Service/IBC

Barley Varieties Planted

Champion	49.8%
Camas	4.8%
Haybet	1.9%
Other Malting	1.7%
Other Feed	5.7%

Type	# Samples	Test Wt. [1] (lb/bu)	Test Wt. [1] (kg/hl)	1000 Knl (grams)	Moist %	Thin[2] %	Protein	Sound[3]	Skn/Br[4] %	% Plump[5]	Average
2-R Feed	5	53.40	68.78	42.20	9.54	2.92	10.52	99.86	0.60	92.00	1.00
2-R Malt	9	51.50	66.33	40.60	9.54	4.98	10.69	99.81	0.97	85.00	1.33
2012 Avg.	**14**	**52.18**	**67.21**	**40.76**	**9.54**	**4.24**	**10.63**	**99.83**	**0.93**	**85.70**	**1.21**
2011 Avg.	10	53.20	68.52	44.17	9.61	1.84	11.44	99.79	0.90	93.35	1.10
5 Yr Avg.	**13**	**49.38**	**61.26**	**42.47**	**8.76**	**4.70**	**11.20**	**91.26**	**0.92**	**89.53**	**1.26**

Southwest Idaho



Barley Production

	2011	2012
Harvested (Acres)	6,000	4,720
(Hectares)	2,428	1,910
% Idaho Acreage	1.2%	0.8%

Source: Idaho Ag. Statistical Service/IBC

Barley Varieties Planted

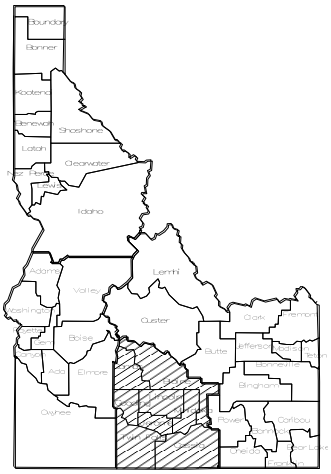
IdaGold	12.0%
Other Feed	56.0%
Other Malting	0.0%

Type	# Samples	Test Wt. [1] (lb/bu)	Test Wt. [1] (kg/hl)	1000 Knl (grams)	Moist %	Thin[2] %	Protein	Sound[3]	Skn/Br[4] %	% Plump[5]	Average
2-R Feed	5	51.9	66.85	0.00	7.75	7.04	11.10	99.66			1.40
2012 Avg.	**5**	**51.90**	**66.85**	**0.00**	**7.75**	**7.04**	**11.10**	**99.66**	**0.00**	**0.00**	**1.40**
2011 Avg.	10	48.18	62.05	0.00	9.05	5.77	11.54	99.64	0.00	0.00	1.00
5 Yr Avg.	**9**	**44.32**	**53.41**	**41.58**	**7.06**	**6.55**	**10.32**	**83.87**	**0.00**	**0.00**	**1.36**

[1] Weighted average by regional production
[2] % Thins: 2-rowed kernels passing through a 5.5/64 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

2012 Regional Quality

South Central Idaho



Barley Production

	2011	2012
Harvested (Acres)	132,500	154,580
(Hectares)	53,621	62,558
% Idaho Acreage	26.5%	26.2%

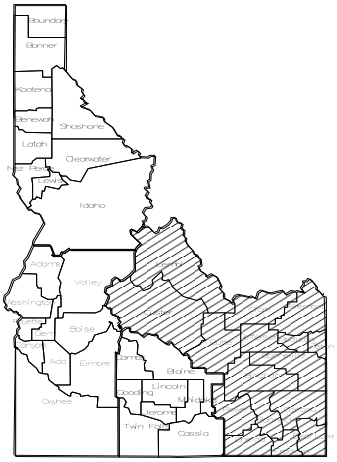
Source: Idaho Ag. Statistical Service/IBC

Barley Varieties Planted

Moravian 69	41.3%
Criton	4.7%
Baronesse	3.1%
Charles	2.9%
AC Metcalfe	2.4%
Haxby	1.7%
Millennium	1.1%
Other Malting	5.6%
Other Feed	8.1%

Type	# Samples	Test Wt. [1] (lb/bu)	Test Wt. [1] (kg/hl)	1000 Knl (grams)	Moist %	Thin[2] %	Protein	Sound[3]	Skn/Br[4] %	% Plump[5]	Average
2-R Feed	9	51.02	65.72	0.00	9.83	2.19	12.17	98.38	0.00	0.00	1.00
2-R Malting	10	51.02	65.71	43.50	10.32	2.76	11.86	99.81	2.07	90.91	1.20
6-R Malting	19	50.46	65.00	39.14	10.35	1.44	11.55	99.81	1.55	86.09	1.10
2012 Avg.	38	50.83	65.48	41.32	10.17	2.13	11.86	99.33	1.81	88.50	1.10
2011 Avg.	47	48.58	62.57	43.21	9.68	4.21	11.49	95.76	1.41	91.50	1.25
5 Yr Avg.	46	50.68	65.28	41.60	9.76	2.92	11.66	99.50	1.63	89.69	1.28

Southeast Idaho



Barley Production

	2011	2012
Harvested (Acres)	327,500	389,990
(Hectares)	132,535	157,827
% Idaho Acreage	65.5%	66.1%

Source: Idaho Ag. Statistical Service/IBC

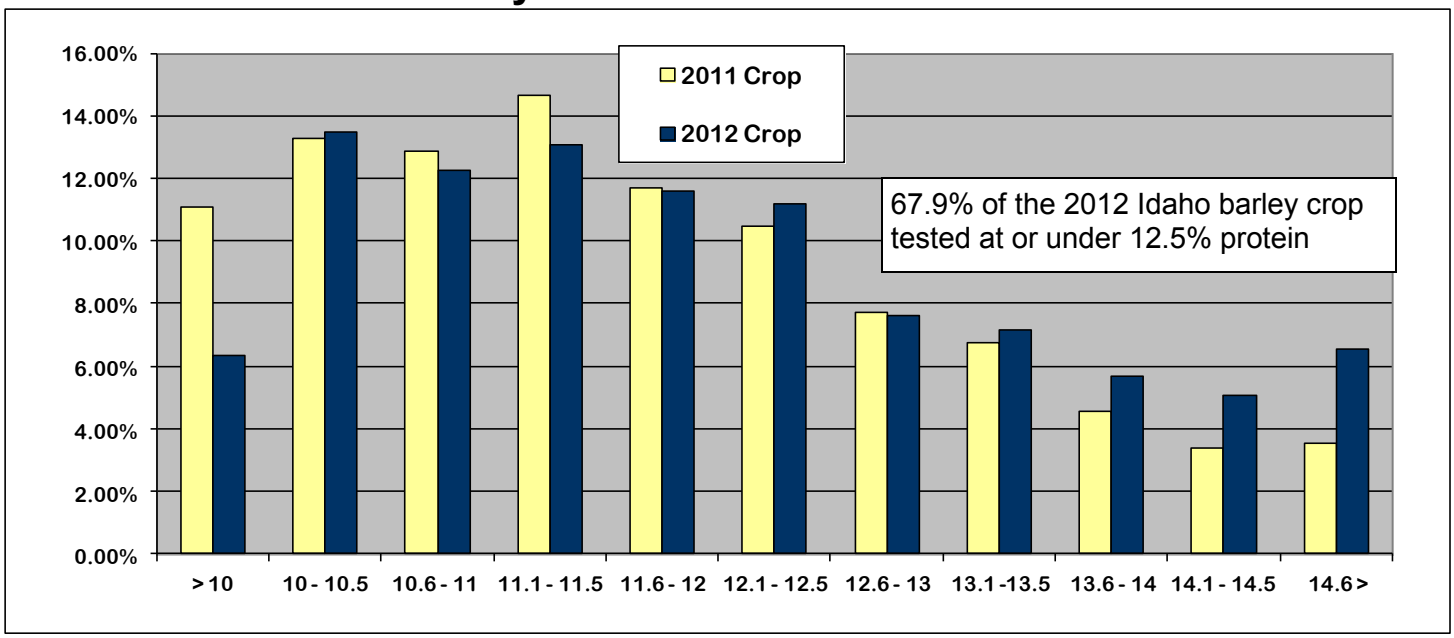
Barley Varieties Planted

Endeavor	28.0%
AC Metcalfe	19.7%
Merit 57	12.7%
Baronesse	8.8%
Merit	7.5%
Harrington	4.2%
Legacy	3.2%
CDC Copeland	2.7%
Moravian 69	1.4%
Other Malting	2.4%
Other Feed	1.1%

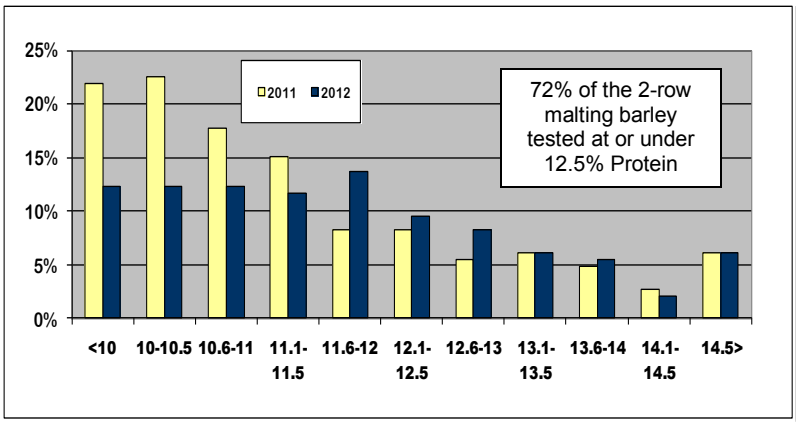
Type	# Samples	Test Wt. [1] (lb/bu)	Test Wt. [1] (kg/hl)	1000 Knl (grams)	Moist %	Thin[2] %	Protein	Sound[3]	Skn/Br[4] %	% Plump[5]	Average
2-R Feed	25	48.80	62.85	0.00	10.47	2.88	12.82	99.20	1.40	75.25	1.36
2-R Malting	94	50.77	65.40	41.64	10.39	3.57	11.67	99.50	1.59	90.50	1.28
6-R Malting	441	47.50	53.53	36.82	10.37	1.44	12.16	98.60	1.73	88.44	1.00
2012 Avg.	560	49.02	60.59	26.14	10.41	2.63	12.22	99.1	1.57	84.73	1.24
2011 Avg.	634	49.03	63.51	39.89	14.28	2.31	10.65	98.05	1.45	93.52	1.24
5 Yr Avg.	512	48.77	62.31	36.46	11.08	2.86	11.8	98.93	1.58	87.67	1.43

[3] % Sound = 100 % dockage free barley (minus) % damaged kernels, % foreign material, % other grains, % wild oats
[4] % Skinned and broken kernels [5] % Plumps: Kernels retained on or above 6/64 x 3/4 in. (2.4 x 19 mm) slotted sieve

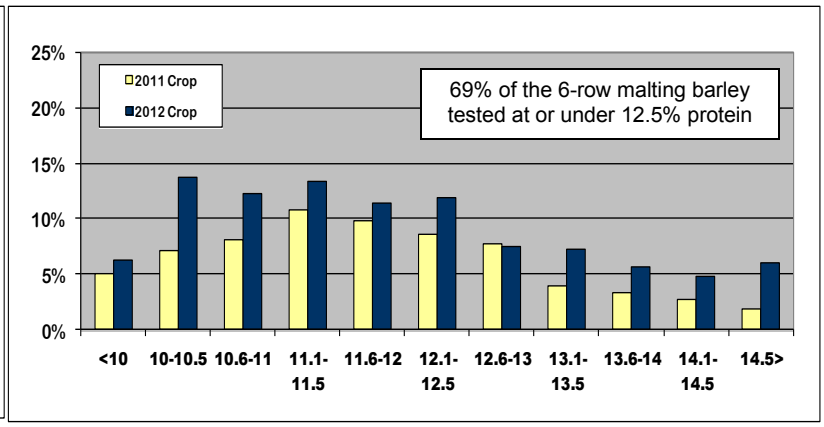
Idaho Barley Protein Distribution 2011-2012



2-Row Malting Barley Protein Distribution



6-Row Malting Barley Protein Distribution



METHODS EMPLOYED AND DEFINITION OF TERMS AND SYMBOLS

TEST WEIGHT - Test weight was determined on dockage free barley using a Seedburo 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 Barley[1] and 6-row barley which passes through a 5/64 x 3/4 slotted-hole sieve and 2-row malting barley[2] 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]
	Pounds	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
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]
	Pounds	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
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]
	Pounds	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
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 (*Crotalaris* spp.).,2 or more caster 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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