



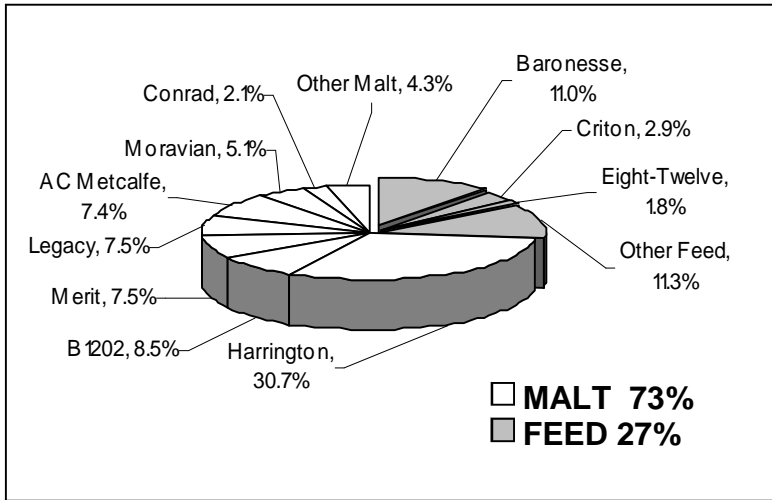
*2005*

*BARLEY QUALITY*

*REPORT*



# 2005 IDAHO BARLEY VARIETIES MALTING VS FEED



Source: 2005 IBC/Idaho Ag Statistics Service

### Top Ten Idaho Varieties

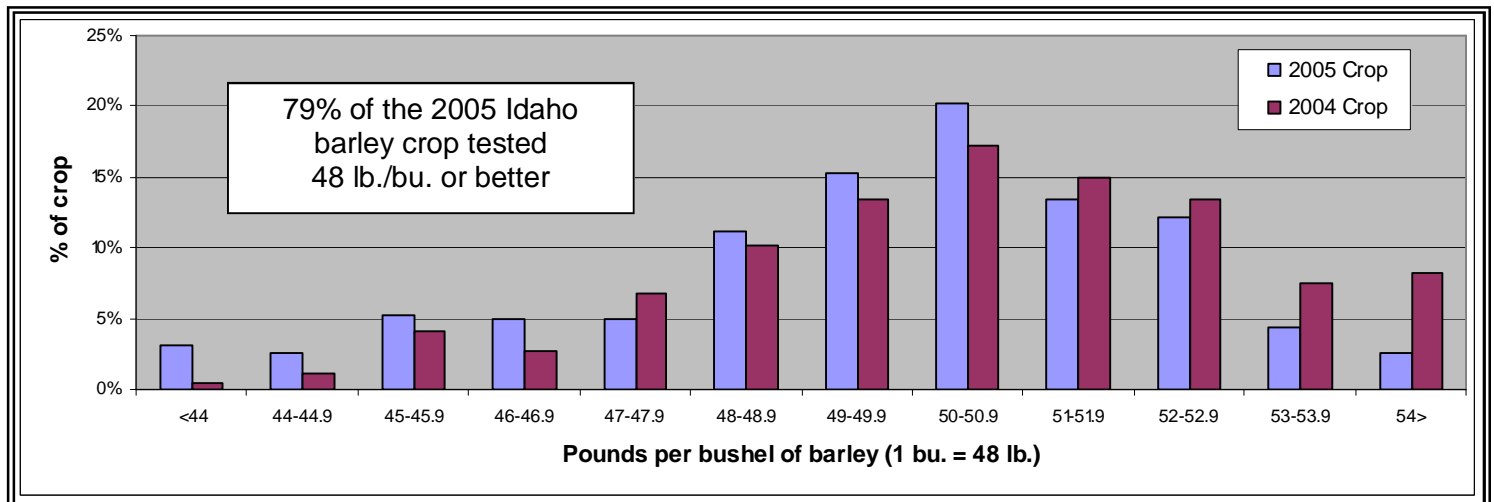
Variety	Planted Acres	Hectares	% of Prod.
Harrington (2-Row Malt)	193,700	78,389	30.7%
Baronesse (2-Row Feed)	69,400	28,086	11.0%
B1202 (2-Row Malt)	53,600	21,692	8.5%
Merit (2-Row Malt)	47,000	19,021	7.5%
Legacy (6-Row Malt)	47,000	19,021	7.5%
AC Metcalfe (6-Row Malt)	46,400	18,778	7.4%
Moravian 69 (2-Row Malt)	32,100	12,991	5.1%
Criton (2-Row Feed)	18,200	7,365	2.9%
Conrad (2-Row Malt)	13,200	5,342	2.1%
Eight-Twelve (6-Row Feed)	11,100	4,492	1.8%
Other (Feed Barley)	71,300	28,855	11.3%
Other (Malt Barley)	27,000	10,927	4.3%
<b>TOTAL:</b>	<b>630,000</b>	<b>254,957</b>	<b>100%</b>

Source: 2005 IBC/Idaho Ag Statistics Service

## 2005 Idaho Barley Quality By Variety

Variety	Type/Use	# Samples	Test Wt. (lbs/bu)	1000 Knl (grams)	Moisture %	Thin %	% Protein	% Sound %	% Skn/Br%	Plump%	Average
B-1202	2-R Malt	9	50.17	64.61	9.78	3.44	10.90	99.90	1.29	92.87	1.22
Baronesse	2-R Feed	32	50.62	65.19	9.68	2.94	11.42	99.47			1.09
Conrad	2-R Malt	4	51.50	66.33	9.70	1.90	11.00	99.85	1.38	94.20	1.00
Foster	6-R Malt	28	49.14	61.03	8.99	1.78	11.52	99.50	1.81	88.12	1.25
Harrington	2-R Malt	69	49.91	64.28	9.24	4.41	12.04	99.71	1.75	87.48	1.59
Ida-Gold II	2-R Feed	2	48.75	62.79	8.75	4.70	13.05	99.80			1.00
Legacy	6-R Malt	21	49.24	63.41	9.42	4.76	11.66	99.73	2.03	80.36	1.57
Merit	2-R Malt	9	48.53	62.51	9.49	5.44	9.96	99.79	1.04	82.96	1.78
Metcalfe	2-R Malt	20	49.53	63.78	9.19	6.28	12.05	99.43	1.87	77.83	1.55
Millenium	6-R Feed	2	49.25	63.43	9.20	1.85	11.75	99.70			1.00
Sprinter	6-R Feed	2	51.75	66.65	9.50	1.00	11.30	99.70			1.00
Stander	6-R Malt	13	49.81	64.15	10.61	4.12	10.99	98.46	2.08	73.46	1.46
Steptoe	6-R Feed	2	45.25	58.28	8.85	2.70	10.70	99.70			2.00
Tradition	6-R Malt	3	47.33	60.96	9.77	6.07	12.82	99.80	0.60	75.30	2.00

## Idaho Barley Test Weight Distribution 2004-2005



# 2005 Regional Quality

## North Idaho

### Barley Varieties Planted

Variety	Acres	Hectares	%
Baronesse	15,200	6,151	26.7%
AC Metcalfe	12,400	5,018	21.8%
Camas	8,400	3,399	14.7%
Legacy	3,300	1,335	5.8%
Merit	1,400	567	2.5%
Lacey	1,000	405	1.8%
B1202	900	364	1.6%
Other	14,400	5,828	25.3%
<b>Total</b>	<b>57,000</b>	<b>23,068</b>	<b>100%</b>

### Barley Production

	2004	2005
<b>Harvested (Acres)</b>	76,050	54,000
(Hectares)	30,777	21,853
% Idaho Acreage	11.7%	9%

Source: Idaho Ag. Statistical Service/IBC



Type	# Samples	Text Wt. <sup>1</sup> (lb/bu)	(kg/hl)	1000 Knl (grams)	Moist %	Thin <sup>2</sup> %	Protein	Sound <sup>3</sup>	Skn/Br <sup>4</sup> %	% Plump	Average
2-R Feed	8	51.00	65.68		8.89	4.44	11.81	99.78			1.00
2-R Malting	10	49.15	63.30	34.50	9.11	8.13	11.54	99.21	0.80	64.93	1.50
6-R Malting	3	48.00	61.82	31.43	9.37	10.40	12.06	99.07	2.40	47.57	2.00
<b>2005 Avg.</b>	<b>21</b>	<b>49.69</b>	<b>64.00</b>	<b>34.68</b>	<b>9.06</b>	<b>7.05</b>	<b>11.72</b>	<b>99.40</b>	<b>2.63</b>	<b>64.01</b>	<b>1.38</b>
2004 Avg.	36	49.65	63.95	37.52	10.33	3.09	11.50	99.21	1.50	83.83	1.47
5 Yr Avg.	32	49.05	63.18	36.26	9.48	4.34	11.78	98.75	1.98	74.54	1.55

## Southwest Idaho

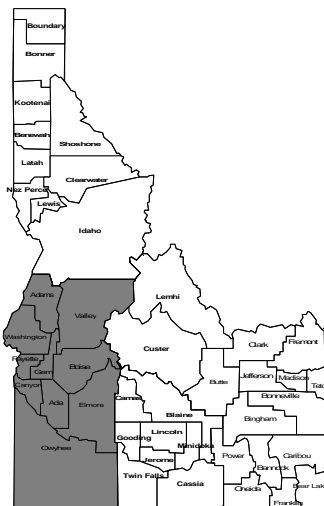
### Barley Varieties Planted

Variety	Acres	Hectares	%
Steptoe	3,200	1,295	32.0%
Idagold	1,400	567	14.0%
Baronesse	1,200	486	12.0%
Millennium	1,000	405	10.0%
Idagold II	500	202	5.0%
Other	2,700	1,093	27.0%
<b>Total</b>	<b>10,000</b>	<b>4,047</b>	<b>100%</b>

### Barley Production

	2004	2005
<b>Harvested (Acres)</b>	16,250	9,600
(Hectares)	6,576	3,885
% Idaho Acreage	2.5%	1.6%

Source: Idaho Ag. Statistical Service/IBC



Type	# Samples	Text Wt. <sup>1</sup> (lb/bu)	(kg/hl)	1000 Knl (grams)	Moist %	Thin <sup>2</sup> %	Protein	Sound <sup>3</sup>	Skn/Br <sup>4</sup> %	% Plump	Average
2-R Feed	10	51.43	66.24		8.18	2.70	9.19	99.80			1.10
<b>2005 Avg.</b>	<b>10</b>	<b>51.43</b>	<b>66.24</b>		<b>8.18</b>	<b>2.70</b>	<b>9.19</b>	<b>99.80</b>			<b>1.10</b>
2004 Avg.	8	48.75	62.79	37.06	9.80	2.35	11.85	99.83	2.80	80.70	1.25
5 Yr Avg.	9	49.69	64.00	39.20	8.88	3.94	11.14	96.58	2.59	83.87	1.38

<sup>1</sup> Weighted average by regional production

<sup>2</sup> % 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

# 2005 Regional Quality

## South Central Idaho



### Barley Production

	2004	2005
<b>Harvested (Acres)</b>	173,550	136,200
(Hectares)	70,235	55,119
% Idaho Acreage	26.7%	22.7%

Source: Idaho Ag. Statistical Service/IBC

### Barley Varieties Planted

Variety	Acres	Hectares	%
Harrington	51,400	20,801	35.9%
Moravian	30,400	12,303	21.3%
Criton	12,800	5,180	9.0%
Eight-Twelve	9,300	3,764	6.5%
Baronesse	8,100	3,278	5.7%
Foster	4,200	1,700	2.9%
Idagold	3,800	1,538	2.7%
Mucho	3,100	1,255	2.2%
Sunstar Double	2,600	1,052	1.8%
Logan	2,600	1,052	1.8%
Other	14,700	5,949	10.3%
<b>Total</b>	<b>143,000</b>	<b>57,871</b>	<b>100%</b>

Type	# Samples	Text Wt. <sup>1</sup>		1000 Knl	Moist %	Thin <sup>2</sup> %	Protein	Sound <sup>3</sup>	Skn/Br <sup>4</sup> %	% Plump	Average
		(lb/bu)	(kg/hl)	(grams)							
2-R Feed	42	50.32	64.81		8.92	3.18	12.04	99.52			1.10
6-R Feed	8	47.50	61.18		9.04	2.60	11.48	99.76			1.50
2-R Malting	24	51.29	66.06	41.68	9.27	4.00	11.60	99.46	1.80	88.33	1.35
6-R Malting	26	49.27	63.45	37.26	8.99	1.84	11.57	99.47	1.86	87.78	1.23
<b>2005 Avg.</b>	<b>100</b>	<b>50.13</b>	<b>64.57</b>	<b>39.82</b>	<b>9.05</b>	<b>3.05</b>	<b>11.76</b>	<b>99.50</b>	<b>1.83</b>	<b>88.09</b>	<b>1.23</b>
2004 Avg.	70	51.13	65.85	40.12	9.70	1.53	11.26	99.70	1.39	92.94	1.09
5 Yr Avg.	100	50.15	64.59	40.23	9.27	2.48	11.86	99.64	1.60	90.66	1.16

## Southeast Idaho



### Barley Production

	2004	2005
<b>Harvested (Acres)</b>	384,150	400,200
(Hectares)	155,463	161,959
% Idaho Acreage	59.1%	66.7%

Source: Idaho Ag. Statistical Service/IBC

### Barley Varieties Planted

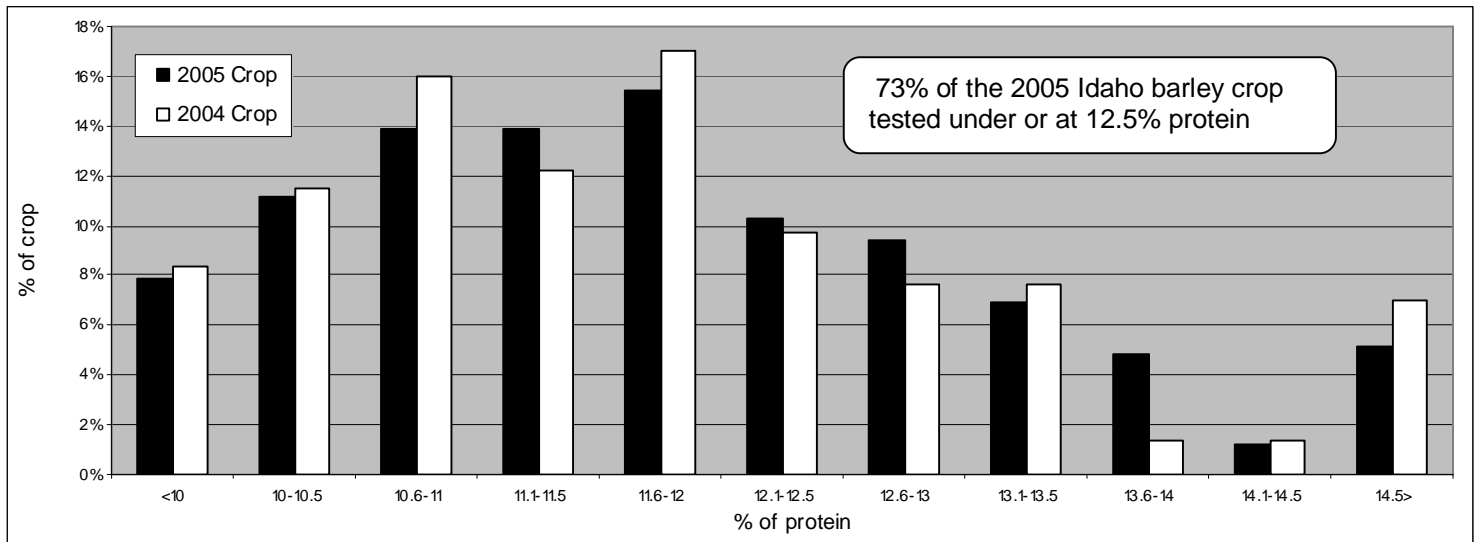
Variety	Acres	Hectares	%
Harrington	130,600	52,853	31.1%
B1202	52,300	21,165	12.5%
Merit	45,600	18,454	10.9%
Baronesse	44,900	18,171	10.7%
Legacy	43,700	17,685	10.4%
AC Metcalfe	33,000	13,355	7.9%
Conrad	13,200	5,342	3.1%
Criton	5,300	2,145	1.3%
Hector	4,800	1,943	1.1%
Stander	3,900	1,578	0.9%
Other	42,700	17,280	10.2%
<b>Total</b>	<b>420,000</b>	<b>169,971</b>	<b>100%</b>

Type	# Samples	Text Wt. <sup>1</sup>		1000 Knl	Moist %	Thin <sup>2</sup> %	Protein	Sound <sup>3</sup>	Skn/Br <sup>4</sup> %	% Plump	Average
		(lb/bu)	(kg/hl)	(grams)							
2-R Feed	58	48.56	62.54		9.89	5.90	13.08	99.14			1.57
6-R Feed	12	46.29	59.62		10.01	5.56	12.12	99.66			1.82
2-R Malting	77	49.37	63.58	39.86	9.33	4.56	11.78	99.70	1.51	87.87	1.61
6-R Malting	34	49.41	61.76	34.57	9.88	4.29	11.63	99.27	1.87	79.99	1.56
<b>2005 Avg.</b>	<b>181</b>	<b>48.89</b>	<b>62.63</b>	<b>37.97</b>	<b>9.66</b>	<b>5.02</b>	<b>12.15</b>	<b>99.43</b>	<b>1.64</b>	<b>94.67</b>	<b>1.60</b>
2004 Avg.	168	50.07	64.49	38.99	10.30	3.85	12.03	98.63	1.42	86.22	1.36
5 Yr Avg.	162.8	48.76	62.66	38.43	9.79	5.26	12.60	99.10	1.86	88.47	1.68

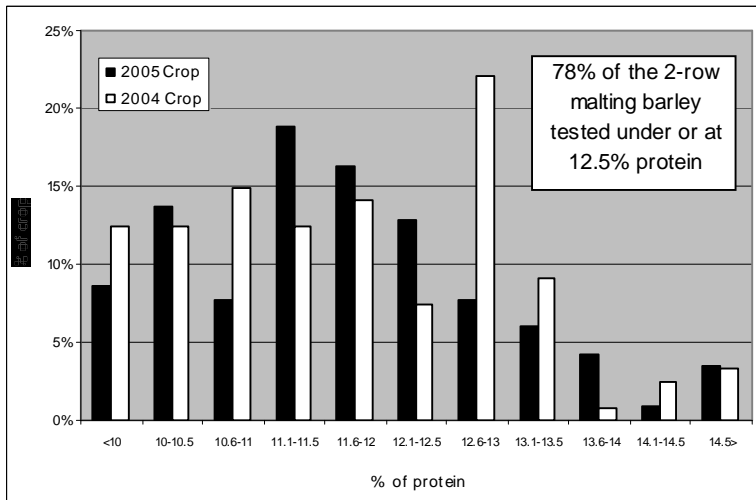
<sup>3</sup> % Sound = 100 % dockage free barley (minus) % damaged kernels, % foreign material, % other grains, % wild oats

<sup>4</sup> % Skinned and broken kernels = % Plumps: Kernels retained on or above 6/64 x 3/4 in. (2.4 x 19 mm) slotted sieve

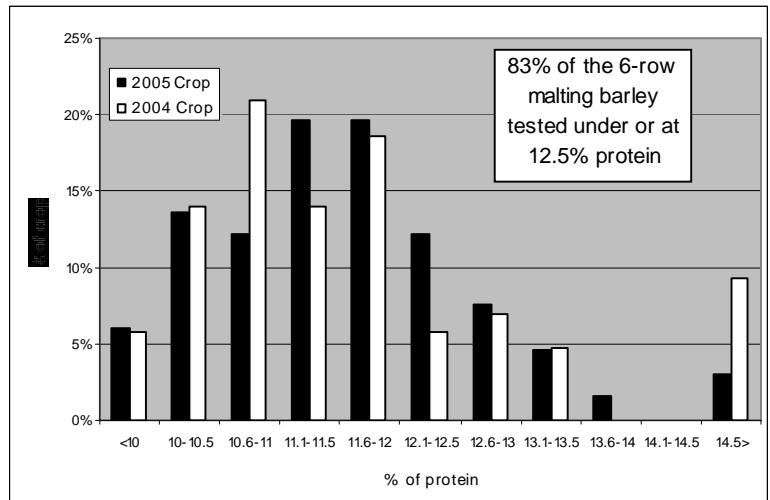
# Idaho Barley Protein Distribution 2004-2005



## 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 Seedbuco 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<sup>1</sup> and 6-row barley which passes through a 5/64 x 3/4 slotted-hole sieve and 2-row malting barley<sup>2</sup> which passes through a 5.5/64 x 3/4 slotted-hole sieve after sieving.

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

<sup>2</sup> 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 <sup>1</sup>	Damaged Kernels <sup>1</sup>	Foreign Material	Other Grains	Skinned & Broken Kernels	Thin Barley <sup>2</sup>
	<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

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

<sup>2</sup> 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 <sup>1</sup>	Wild Oats	Foreign Material	Skinned & Broken Kernels	Thin Barley <sup>2</sup>
	<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

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

<sup>2</sup> 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 <sup>1</sup>	Damaged Kernels <sup>1</sup>	Heat Damaged Kernels	Foreign Material	Skinned & Broken Kernels	Thin Barley <sup>2</sup>
	<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.

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

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

## METRIC CONVERSION TABLES FOR BARLEY

<b>U.S. to Metric</b>	
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

<b>Metric to U.S.</b>	
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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