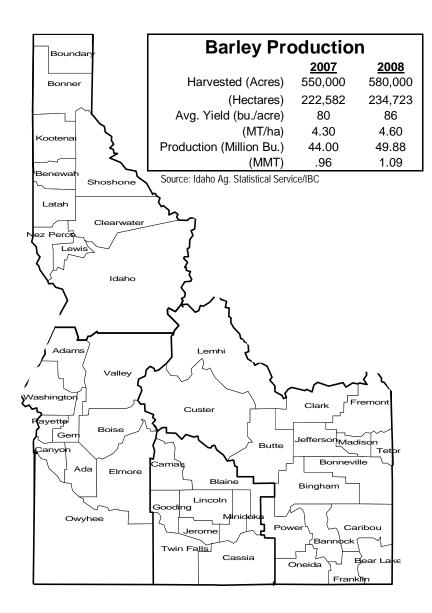


2008
BARLEY QUALITY
REPORT

2008 IDAHO BARLEY QUALITY REPORT



Summary

Idaho barley production totaled 49.88 million bushels from 580,000 harvested acres in 2008, an increase of 5% from the previous year. Quality was mostly good overall.

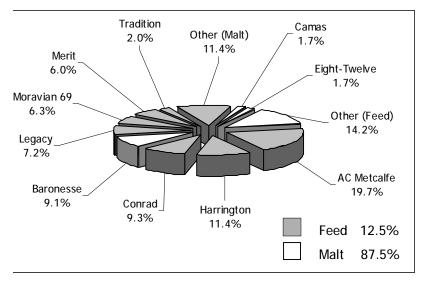
Approximately 73% of Idaho's barley sampled received a USDA/FGIS grade of #1. There were 262 barley samples collected from Idaho elevators, commodity brokers and farmers. The samples were separated by class, variety and region. They were graded at a licensed Federal Grain Inspection Service (FGIS) facility.

Average weight was higher than last year at 50.4 pounds per bushel (lb/bu). Ninety-three percent of the 2-row malting barley crop tested 48 lb/bu or better and ninety-six percent of the 6-row malting barley crop tested 48 lb/bu or better. Overall thins averaged 3.3% and plumps averaged 90.1%. Protein averaged 12% statewide and moisture averaged 11%. The average for skinned and broken kernels was 1.9%.

Average Statewide Barley Quality

| Туре | # Samples | Test | Wt. ¹ | 1000 Knl | Moist % | Thin² % | Protein | Sound ³ | Skn/Br ⁴ % | % Plump | Average |
|-------------|-----------|---------|------------------|----------|---------|---------|---------|--------------------|-----------------------|---------|---------|
| | | (lb/bu) | (kg/hl) | (grams) | | | | | | | |
| 2-R Feed | 45 | 48.62 | 62.63 | | 9.21 | 5.03 | 12.61 | 99.55 | | | 1.40 |
| 6-R Feed | 5 | 48.70 | 62.73 | 41.59 | 9.54 | 2.34 | 11.12 | 98.02 | | 96.9 | 1.60 |
| 2-R Malting | 181 | 51.01 | 65.70 | 42.87 | 9.68 | 3.27 | 11.90 | 99.56 | 1.83 | 90.55 | 1.34 |
| 6-R Malting | 27 | 49.93 | 64.30 | 39.03 | 9.86 | 1.20 | 11.48 | 99.65 | 2.08 | 89.07 | 1.07 |
| 2008 Avg. | 262 | 50.37 | 64.88 | 42.32 | 10.99 | 3.33 | 11.97 | 99.54 | 1.87 | 90.16 | 1.34 |
| 2007 Avg. | 221 | 48.10 | 61.95 | 35.79 | 8.58 | 4.27 | 11.57 | 99.00 | 1.34 | 85.10 | 1.64 |
| 5 Yr Avg. | 264 | 49.60 | 63.85 | 38.99 | 9.69 | 3.78 | 11.71 | 99.29 | 1.54 | 86.49 | 1.42 |

2008 IDAHO BARLEY VARIETIES MALTING VS FEED



| Top Ten Idaho Varieties | | | | | | | | |
|-------------------------|--------------|---------------|----------|------------|--|--|--|--|
| Var | iety | Planted Acres | Hectares | % of Prod. | | | | |
| AC Metcalfe | (2-Row Malt) | 95,900 | 38,810 | 19.7% | | | | |
| Harrington | (2-Row Malt) | 92,900 | 37,596 | 11.4% | | | | |
| Conrad | (2-Row Malt) | 62,800 | 25,415 | 9.3% | | | | |
| Baronesse | (2-Row Feed) | 51,400 | 20,801 | 9.1% | | | | |
| Legacy | (6-Row Malt) | 47,900 | 19,385 | 7.2% | | | | |
| Moravian 69 | (2-Row Malt) | 47,200 | 19,102 | 6.3% | | | | |
| Merit | (2-Row Malt) | 38,600 | 15,621 | 6.0% | | | | |
| Tradition | (6-Row Malt) | 17,500 | 7,082 | 2.0% | | | | |
| Camas | (2-Row Feed) | 9,300 | 3,764 | 1.7% | | | | |
| Eight-Twelve | (2-Row Feed) | 7,000 | 2,833 | 1.7% | | | | |
| Other Malt | | 3,900 | 1,578 | 11.4% | | | | |
| Other Feed | | 11,800 | 4,775 | 14.2% | | | | |
| | TOTAL | 486,200 | 196,762 | 100% | | | | |

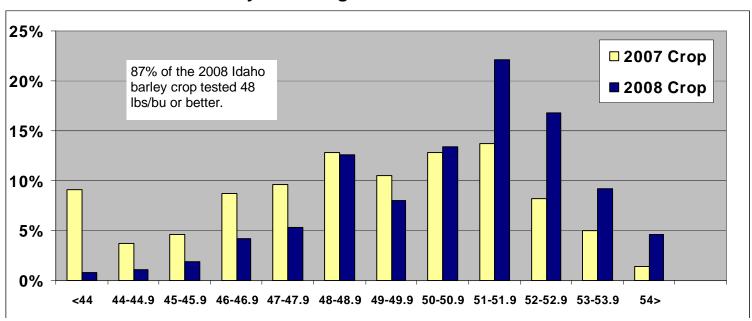
ource: 2008 IBC/Idaho Ag Statistics Service

Source: 2008 IBC/Idaho Ag Statistics Service

2008 Idaho Barley Quality By Variety

| Variety | Type/Use | # Samples | Test Wt. (lbs/bu) | 1000 Knl (grams) | Moisture % | Thin % | Protein % | Sound % | Skn/Br% | Plump% | Average |
|-------------|------------|-----------|----------------------|---------------------|------------|--------|-----------|---------|---------|--------|---------|
| Harrington | 2-Row Malt | 36 | 48.43 | 42.07 | 10.10 | 2.96 | 10.95 | 93.93 | 1.71 | 88.43 | 1.39 |
| AC Metcalfe | 2-Row Malt | 89 | 51.37 | 42.67 | 9.43 | 3.69 | 12.38 | 99.66 | 1.82 | 89.11 | 1.31 |
| Legacy | 6-Row Malt | 16 | 50.49 | 39.14 | 9.63 | 1.11 | 10.95 | 99.52 | 2.51 | 91.54 | 1.13 |
| Baronesse | 2-Row Feed | 21 | 48.70 | 42.19 | 8.62 | 6.09 | 12.64 | 94.83 | | | 1.43 |
| Merit | 2-Row Malt | 15 | 49.77 | 43.43 | 9.48 | 3.07 | 10.48 | 99.79 | 1.92 | 91.50 | 1.33 |
| Conrad | 2-Row Malt | 24 | 51.78 | 43.03 | 9.47 | 2.28 | 11.65 | 99.86 | 1.40 | 89.52 | 1.25 |
| Steptoe | 6-Row Feed | 2 | 45.50 | | 9.65 | 4.50 | 11.55 | 99.55 | | | 2.00 |
| Tradition | 6-Row Malt | 16 | 49.34 | 38.18 | 10.07 | 1.73 | 12.21 | 99.71 | 2.23 | 82.71 | 1.13 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Idaho Barley Test Weight Distribution 2007-2008



2008 Regional Quality

North Idaho



Barley Production

| | <u>2007</u> | <u>2008</u> |
|-------------------|-------------|-------------|
| Harvested (Acres) | 73,700 | 69,600 |
| (Hectares) | 29,826 | 28,167 |
| % Idaho Acreage | 13.4% | 12% |

Source: Idaho Ag. Statistical Service/IBC

Barley Varieties Planted

| Baronesse | 32.3% |
|---------------|-------|
| AC Metcalfe | 22.1% |
| Conrad | 16.5% |
| Camas | 14.5% |
| Spaulding | 7.6% |
| Harrington | 3.0% |
| Other Malting | 1.2% |
| Other Feed | 3.0% |
| | |

| Туре | # Samples | Test | Wt. ¹ | 1000 Knl | Moist % | Thin² % | Protein | Sound ³ | Skn/Br ⁴ % | % Plump ⁵ | Average |
|-------------|-----------|---------|------------------|----------|---------|---------|---------|--------------------|-----------------------|----------------------|---------|
| | | (lb/bu) | (kg/hl) | (grams) | | | | | | | |
| 2-R Feed | 16 | 48.00 | 61.82 | 43.41 | 9.29 | 5.05 | 12.47 | 99.57 | | 63.40 | 1.38 |
| 6-R Feed | 2 | 45.75 | 58.93 | | 9.65 | 2.08 | 14.00 | 99.85 | | | 2.00 |
| 2-R Malting | 1 | 48.00 | 61.82 | 39.82 | 10.00 | 7.40 | 12.40 | 99.70 | 2.00 | 80.40 | 3.00 |
| 2008 Avg. | 19 | 47.76 | 55.32 | | 8.35 | 4.64 | 11.14 | 88.52 | | | 1.32 |
| 2007 Avg. | 12 | 47.56 | 55.73 | | 7.63 | 8.90 | 11.87 | 90.05 | | | 1.67 |
| 5 Yr Avg. | 19 | 48.17 | 59.70 | 36.10 | 8.81 | 5.51 | 11.43 | 91.06 | 2.07 | 73.92 | 1.37 |



Southwest Idaho

Barley Production

| | <u>2007</u> | <u>2008</u> |
|----------------------|-------------|-------------|
| Harvested (Acres) | 6,600 | 9,860 |
| (Hectares) | 2,671 | 3,990 |
| % Idaho Acreage | 1 2% | 1 7% |

Source: Idaho Ag. Statistical Service/IBC

Barley Varieties Planted

| Baronesse | 32.3% |
|------------|-------|
| ldagold | 21.5% |
| Haybet | 13.8% |
| Millennium | 12.3% |
| Bear Lake | 3.1% |
| Other Feed | 16.9% |

| Type | # Samples | Test \ | Vt. 1 | 1000 Knl | Moist % | Thin ² % | Protein | Sound ³ | Skn/Br ⁴ % | % Plump⁵ | Average |
|----------|-----------|---------|---------|----------|---------|---------------------|---------|--------------------|-----------------------|----------|---------|
| | | (lb/bu) | (kg/hl) | (grams) | | | | | | | |
| 2-R Feed | 10 | 47.70 | 61.44 | 41.58 | 8.26 | 7.94 | 12.67 | 99.61 | | | 1.60 |

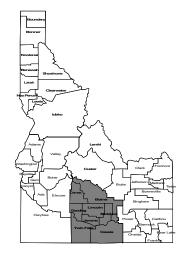
| 2008 Avg. | 10 | 47.70 | 61.44 | 41.58 | 8.26 | 7.94 | 12.67 | 99.61 | | | 1.60 |
|-----------|----|-------|-------|-------|------|------|-------|-------|------|-------|------|
| 2007 Avg. | 12 | 43.48 | 50.48 | | 6.98 | 8.14 | 10.91 | 80.96 | | | 1.42 |
| 5 Yr Avg. | 9 | 44.34 | 53.43 | | 7.29 | 5.00 | 10.00 | 83.94 | 2.80 | 80.70 | 1.34 |

 $^{^1}$ 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

2008 Regional Quality

South Central Idaho

Barley Varieties Planted

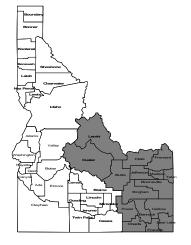


Barley Production

| | <u>2007</u> | <u>2008</u> | | | | |
|---|-------------|-------------|--|--|--|--|
| Harvested (Acres) | 123,200 | 133,400 | | | | |
| (Hectares) | 49,858 | 53,986 | | | | |
| % Idaho Acreage | 22.4% | 23% | | | | |
| Source: Idaho Ag. Statistical Service/IBC | | | | | | |

| Moravian 69 | 41.6% |
|---------------|-------|
| Conrad | 20.8% |
| Harrington | 12.1% |
| Eight Twelve | 5.6% |
| Gallatin | 5.1% |
| Haxby | 4.6% |
| AC Metcalfe | 4.1% |
| Other Malting | 0.5% |
| Other Feed | 5.6% |
| | |
| | |

| Туре | # Samples | Test | Wt. ¹ | 1000 Knl | Moist % | Thin² % | Protein | Sound ³ | Skn/Br ⁴ % | % Plump ⁵ | Average |
|-------------|-----------|---------|------------------|----------|---------|---------|---------|--------------------|-----------------------|----------------------|---------|
| | | (lb/bu) | (kg/hl) | (grams) | | | | | | | |
| 2-R Feed | 10 | 51.61 | 66.47 | | 8.70 | 1.20 | 12.24 | 99.40 | | | 1.10 |
| 6-R Feed | 2 | 48.75 | 62.79 | 41.59 | 10.45 | 2.05 | 10.95 | 95.40 | | 96.90 | 2.00 |
| 2-R Malting | 76 | 51.77 | 66.68 | 39.92 | 10.09 | 3.50 | 12.56 | 99.63 | 1.79 | 90.04 | 1.24 |
| | | | | | | | | | | | |
| 2008 Avg. | 88 | 51.68 | 66.57 | 42.70 | 9.36 | 3.19 | 12.48 | 99.51 | 1.81 | 88.91 | 1.24 |
| 2007 Avg. | 56 | 50.36 | 64.87 | 50.23 | 8.90 | 3.83 | 10.07 | 89.85 | 1.03 | 90.28 | 1.38 |
| 5 Yr Avg. | 82 | 50.56 | 65.12 | 42.83 | 9.24 | 2.99 | 11.23 | 97.69 | 1.46 | 91.51 | 1.21 |



Southeast Idaho

Barley Production

| | <u>2007</u> | <u>2008</u> | | | |
|---|-------------|-------------|--|--|--|
| Harvested (Acres) | 346,500 | 367,140 | | | |
| (Hectares) | 140,226 | 148,580 | | | |
| % Idaho Acreage | 63% | 63.3% | | | |
| Source: Idaho Ag. Statistical Service/IBC | | | | | |

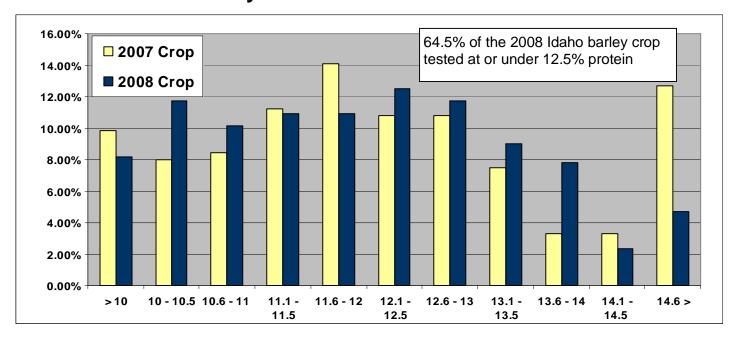
Barley Varieties Planted

| Harrington | 23.8% |
|---------------|-------|
| AC Metcalfe | 23.7% |
| Legacy | 14.3% |
| Merit | 11.3% |
| Conrad | 9.4% |
| Baronesse | 7.9% |
| Tradition | 5.3% |
| Moravian 69 | 1.1%` |
| Xena | 1.0% |
| Other Malting | 1.2% |
| Other Feed | 0.9% |

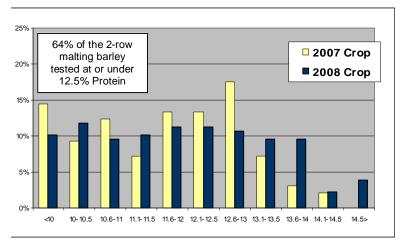
| | | | | | | | | Julei Fee | :u | 0.9% | |
|-------------|-----------|---------|---------|----------|---------|---------------------|---------|--------------------|-----------------------|----------|---------|
| Type | # Samples | Test | Wt. 1 | 1000 Knl | Moist % | Thin ² % | Protein | Sound ³ | Skn/Br ⁴ % | % Plump⁵ | Average |
| | | (lb/bu) | (kg/hl) | (grams) | | | | | | | |
| 2-R Feed | 43 | 46.34 | 59.69 | | 9.30 | 4.10 | 13.91 | 98.96 | | | 1.95 |
| 6-R Feed | 9 | 46.46 | 59.83 | | 10.02 | 4.87 | 13.54 | 98.50 | | | 2.11 |
| 2-R Malting | 63 | 50.01 | 64.41 | 40.71 | 9.04 | 3.73 | 11.47 | 99.59 | 2.02 | 88.48 | 1.57 |
| 6-R Malting | 30 | 48.17 | 62.04 | 35.58 | 9.12 | 2.82 | 11.53 | 99.70 | 2.10 | 80.43 | 1.53 |
| 2008 Avg. | 145 | 48.32 | 62.24 | 37.61 | 9.19 | 3.72 | 12.34 | 99.36 | 2.02 | 83.47 | 1.71 |
| 2007 Avg. | 128 | 47.91 | 61.71 | 79.48 | 9.08 | 3.82 | 12.46 | 99.30 | 2.11 | 84.41 | 1.76 |
| 5 Yr Avg | 152 | 48 91 | 62 93 | 68 98 | 9.56 | 3 92 | 12.05 | 98 60 | 1.60 | 85.62 | 1 57 |

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

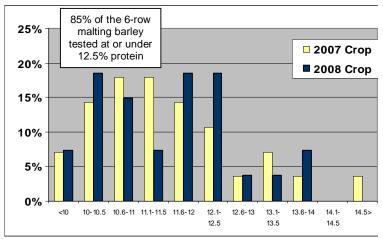
Idaho Barley Protein Distribution 2007-2008



2-Row Malting Barley Protein



6-Row Malting Barley Protein



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 Barley¹ and 6-row barley which passes through a $5/64 \times 3/4$ slotted-hole sieve and 2-row malting barley² which passes through a $5.5/64 \times 3/4$ 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

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

| | Minimum limits of - | | | Maximum Limits of - | | | | | | |
|------------|---------------------------|------------------------------|------------------------------|---------------------------------|---------------------|-----------------|--------------------------------|-----------------------------|--|--|
| Grade | 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..

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.

| | Minimum limits of - | | | Maximum Limits of - | | | | |
|------------|------------------------|------------------------------|------------------------------|---------------------|---------------------|--------------------------------|-----------------------------|--|
| Grade | 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.

| | Min | imum limits | of - | Maximum Limits of - | | | | |
|------------|------------------------|------------------------------|---------------------------------|----------------------------|---------------------|--------------------------------|-----------------------------|--|
| Grade | 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:

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

⁽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 (HI) 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/HI = Hľ/Ha Bu/A x 0.869 Bu/A x .05380 = MT/Ha

| Me | etric 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/HI x .7764 | = Lb/Bu |
| Hl/Ha x 1.15 | = Bu/A |
| MT/Ha x 18.59 | = Bu/A |
| | |

| STANDARDS | | | | | | |
|-----------|--------|-------|--|--|--|--|
| | Lbs/Bu | Kg/HI | | | | |
| 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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