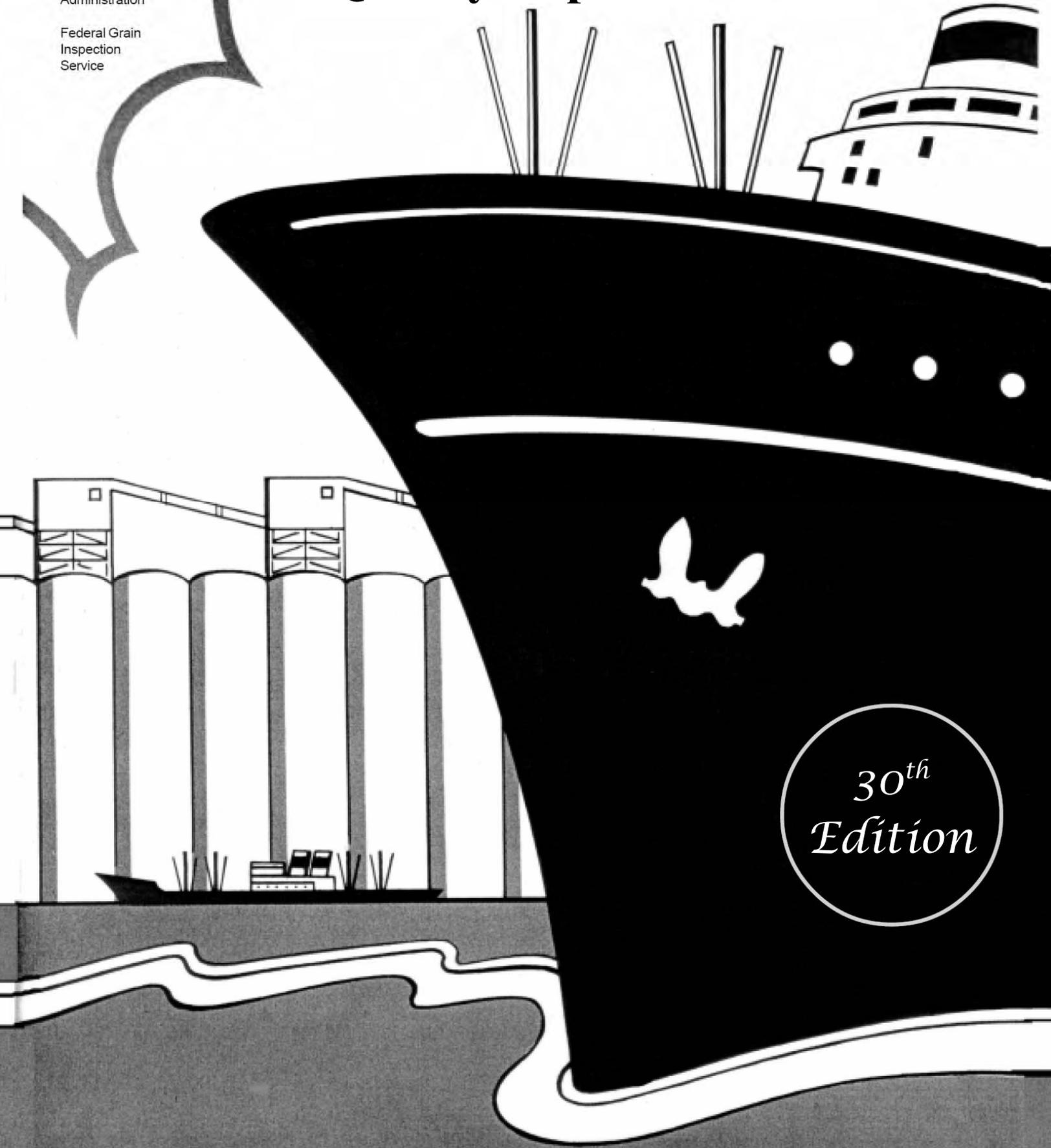




Grain Inspection,  
Packers and  
Stockyards  
Administration

Federal Grain  
Inspection  
Service

# 2013 U.S. Grain Exports: Quality Report



*30<sup>th</sup>  
Edition*

## Table of Contents

<b>INTRODUCTION .....</b>	<b>1</b>
<b>WHEAT .....</b>	<b>2</b>
<b>WHEAT GRADES AND GRADE REQUIREMENTS .....</b>	<b>2</b>
<i>Table 1. U.S. Wheat Exports: Number of lots and quantity exported by class and grade, 2011-2013.....</i>	<i>4</i>
<i>Table 2. Summary of export Hard Red Winter wheat quality, 2011-2013.....</i>	<i>6</i>
Figure 1. HRW Dockage Distribution, All Grades .....	8
Figure 2. HRW Protein Distribution, All Grades .....	9
<i>Table 3. Summary of export Hard Red Spring wheat quality, 2011-2013.....</i>	<i>10</i>
Figure 3. HRS Dockage Distribution, All Grades .....	12
Figure 4. HRS Protein Distribution, All Grades .....	13
<i>Table 4. Summary of export Soft Red Winter wheat quality, 2011-2013.....</i>	<i>14</i>
Figure 5. SRW Dockage Distribution, All Grades.....	16.
Figure 6. SRW Protein Distribution, All Grades.....	17.
<i>Table 5. Summary of export Durum wheat quality, 2011-2013.....</i>	<i>18</i>
Figure 7. DU Dockage Distribution, All Grades.....	20.
Figure 8. DU Protein Distribution, All Grades.....	21
<i>Table 6. Summary of export Soft White wheat quality, 2011-2013.....</i>	<i>22</i>
Figure 9. SWH Dockage Distribution, All Grades .....	24
Figure 10. SWH Protein Distribution, All Grades .....	25
<i>Table 7. Summary of export Hard White wheat quality, 2011-2013.....</i>	<i>26</i>
<i>Table 8. Summary of export Mixed wheat quality, 2011-2013.....</i>	<i>28</i>
<b>CORN .....</b>	<b>29</b>
<b>CORN GRADES AND GRADE REQUIREMENTS .....</b>	<b>29</b>
<i>Table 9. U.S. Corn Exports: Number of lots and quantity exported by class and grade, 2011-2013.....</i>	<i>31</i>
<i>Table 10. Summary of export Yellow Corn quality, 2011-2013.....</i>	<i>32</i>
<i>Table 11. Summary of export White Corn quality, 2011-2013.....</i>	<i>34</i>
Figure 11. Corn BCFM Distribution, Grade 2 .....	36
Figure 12. Corn BCFM Distribution, Grade 3 .....	37
<b>SOYBEANS.....</b>	<b>38</b>
<b>SOYBEAN GRADES AND GRADE REQUIREMENTS .....</b>	<b>38</b>
<i>Table 12. U.S. Soybean Exports: Number of lots and quantity exported by grade, 2011-2013.....</i>	<i>39</i>
<i>Table 13. Summary of export Soybean quality, 2011-2013.....</i>	<i>40</i>
Figure 13. Soybean FM Distribution, Grade 2 .....	42
Figure 14. Soybean Protein Distribution, All Grades .....	43
Figure 15. Soybean Oil Distribution, All Grades .....	44

<b>OTHER GRAIN EXPORTS.....</b>	<b>45</b>
<b>SORGHUM.....</b>	<b>45</b>
<b>SORGHUM GRADES AND GRADE REQUIREMENTS.....</b>	<b>45</b>
<i>Table 14. U.S. Sorghum Exports: Number of lots and quantity exported by class and grade, 2011-2013.....</i>	<i>47</i>
<i>Table 15. Summary of export Sorghum quality, 2011-2013.....</i>	<i>48</i>
Figure 16. Sorghum BNFM Distribution, Grade 2.....	50
Figure 17. Sorghum FM Distribution, Grade 2.....	51
<b>BARLEY.....</b>	<b>52</b>
<b>BARLEY GRADES AND GRADE REQUIREMENTS.....</b>	<b>52</b>
<i>Table 16. U.S. Barley Exports: Number of lots and quantity exported by grade, 2011-2013.....</i>	<i>54</i>
<i>Table 17. Summary of export Barley quality, 2011-2013.....</i>	<i>55</i>
<b>CANOLA.....</b>	<b>56</b>
<b>CANOLA GRADES AND GRADE REQUIREMENTS.....</b>	<b>56</b>
<i>Table 18. U.S. Canola Exports: Number of lots and quantity exported by grade, 2011-2013.....</i>	<i>57</i>
<i>Table 19. Summary of export Canola quality, 2011-2013.....</i>	<i>58</i>
<b>FLAXSEED.....</b>	<b>59</b>
<b>FLAXSEED GRADES AND GRADE REQUIREMENTS.....</b>	<b>59</b>
<i>Table 20. U.S. Flaxseed Exports: Number of lots and quantity exported by grade, 2010-2012.....</i>	<i>60</i>
<i>Table 21. Summary of export Flaxseed quality, 2010-2012.....</i>	<i>60</i>
<b>APPENDIX.....</b>	<b>61</b>

## Introduction

The *2013 U.S. Grain Exports: Quality Report* is produced by the Federal Grain Inspection Service (FGIS) of the U.S. Department of Agriculture's Grain Inspection, Packers and Stockyards Administration. The report is the result of FGIS' efforts to determine, document, and disseminate critical information regarding U.S. export grain quality.

The 2013 report is the thirtieth edition of this annual summary of export grain quality. The report summarizes the quality of export wheat, corn, soybeans, sorghum, barley, and canola. Mixed grain, rye, and sunflower seed are not included in this year's report; no lots have been reported in the past 7 years. There were also no lots reported for flaxseed this year so the data shown represents 2010-2012.

## Organization of the Report

The report contains chapters addressing export wheat, export corn, export soybeans, and other grains. Each chapter contains:

- Standards and definitions for each grain,
- Tables that clearly illustrate all factor result averages at each applicable U.S. grade level, and
- Factor quality distribution graphs for selected factors.

In addition, an appendix contains figures illustrating select quantity and quality trends over time.

## Methodology

FGIS collects and documents information about export grain shipments in the automated Export Grain Information System (EGIS). This system contains one record for each export lot inspected and/or weighed. In the case of some railcar exports, each record may contain information from several lots which were aggregated to simplify internal reporting. For the purposes of this export quality report, only information from waterborne export shipments was used. Waterborne export shipments represented 93 percent of the total export lots in the EGIS database for 2013. Generally, each EGIS record contains the quantity of the lot and the average factor results certified for the lot. The tables in this report contain descriptive statistics which summarize these lot quantities and the weighted averages. Where appropriate, tables are provided which show the number of lots and the quantity of grain which was used to generate the descriptive statistics. Many of the tables summarize factor averages by grade.

A U.S. grade is determined by analyzing the physical and biological factors present in the sample. Limits for the grading factors are established for each numerical grade. Grades range from U.S. No. 1 (highest) to U.S. Sample grade (lowest). When a particular grade is cited in this report, it includes lots certified at that grade plus lots certified with the "or better" designation. For example, U.S. No. 2 grade includes lots which were certificated as "U.S. No. 2" and lots certificated as "U.S. No. 2 or better." Factors that exceed the established limits, except for test weight, lower the grade. The established limits for test weight represent minimum requirements for each grade.

This report does not contain data on the volume of export grain in bushels. Listed to the right are the equations for converting the approximate quantity of grain from metric tons to bushels.

<b>Conversion Equation</b>	
<b>Bushels =</b>	$\frac{\text{Metric Tons} \times 2204.622 \text{ Pounds}}{\text{Legal Test Weight/Bushel of Grain}}$
Legal Test Weights Per Bushel for Specific Grains	
<b>Wheat =</b>	60 pounds/bushel
<b>Corn =</b>	56 pounds/bushel
<b>Soybeans =</b>	60 pounds/bushel
<b>Canola =</b>	50 pounds/bushel
<b>Sorghum =</b>	56 pounds/bushel
<b>Barley =</b>	48 pounds/bushel
<b>Sunflower Seed =</b>	28 pounds/bushel
<b>Rye =</b>	56 pounds/bushel
<b>Oats =</b>	32 pounds/bushel

## Wheat

### Wheat Grades and Grade Requirements

Wheat is divided into eight classes: Hard Red Spring wheat, Hard Red Winter wheat, Soft Red Winter wheat, Durum wheat, Hard White wheat, Soft White wheat, Unclassed wheat, and Mixed wheat. The classes Hard Red Spring wheat, Soft White wheat, and Durum wheat are further divided into subclasses. There are no subclasses in the classes Hard Red Winter wheat, Soft Red Winter wheat, Hard White wheat, Unclassed wheat, and Mixed wheat. Each class and subclass is divided into five U.S. numerical grades and U.S. Sample grade. Special grades are provided to emphasize special qualities or conditions affecting the value of wheat. Special grades are added to and made a part of the grade designation. They do not affect the numerical or Sample grade designation.

#### U.S. Standards for Wheat

Grade	Minimum Limits of:		Maximum Limits of -						
	Test Weight per bushel		Damaged Kernels		Foreign material (percent)	Shrunken and broken kernels (percent)	Defects <u>3/</u> (percent)	Wheat of other classes <u>4/</u>	
	Hard Red Spring Wheat or White Club Wheat <u>1/</u> (pounds)	All other classes and subclasses (pounds)	Heat damage (part of total) (percent)	Total <u>2/</u> (percent)				Contrasting classes (percent)	Total <u>5/</u> (percent)
U.S. No. 1	58.0	60.0	0.2	2.0	0.4	3.0	3.0	1.0	3.0
U.S. No. 2	57.0	58.0	0.2	4.0	0.7	5.0	5.0	2.0	5.0
U.S. No. 3	55.0	56.0	0.5	7.0	1.3	8.0	8.0	3.0	10.0
U.S. No. 4	53.0	54.0	1.0	10.0	3.0	12.0	12.0	10.0	10.0
U.S. No. 5	50.0	51.0	3.0	15.0	5.0	20.0	20.0	10.0	10.0

#### U.S. Sample Grade:

U.S. Sample Grade is wheat that:

- (a) Does not meet the requirements for grades U.S. No. 1, 2, 3, 4, or 5; or
- (b) Contains 4 or more stones or any number of stones which have an aggregate weight in excess of 0.1 percent of the sample weight, 1 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 an unknown foreign substance(s) or a commonly recognized harmful or toxic substance(s), 2 or more rodent pellets, bird dropping, or an equivalent quantity of other animal filth per 1,000 grams of wheat; or
- (c) Contains 5 or more animal filth, castor beans, crotalaria seeds, glass, stones, or unknown foreign substance(s) in any combination; or
- (d) Has a musty, sour, or commercially objectionable foreign odor (except smut or garlic odor); or
- (e) Is heating or otherwise of distinctly low quality.
- (f) Contains more than 31 insect-damaged kernels in 100 grams.

1/ These requirements also apply when Hard Red Spring or White Club wheat predominates in a sample of Mixed wheat.

2/ Includes heat-damaged kernels.

3/ Includes damaged kernels (total), foreign material, shrunken and broken kernels.

4/ Unclassed wheat of any grade may contain not more than 10.0 percent of wheat of other classes.

5/ Includes contrasting classes.

## Wheat

### Definitions

**Test weight (lb/bu)** is pounds of grain per Winchester bushel, determined by an approved device after the removal of dockage.

**Test weight (kg/hl)** is the metric system equivalent to pounds per bushel. Kilograms per hectoliter are calculated as follows:

For **Durum** wheat, multiply pounds per bushel by 1.292 and add 0.630. For **all other classes of wheat**, multiply pounds per bushel by 1.292 and add 1.419.

**Heat-damaged kernels** are kernels, pieces of wheat kernels, and other grains which have been materially discolored and damaged by heat.

**Damaged kernels (total)** are kernels, pieces of wheat kernels, and other grains that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, heat-damaged, insect bored, mold-damaged, sprout-damaged, or otherwise materially damaged.

**Foreign material** is all matter other than wheat which remains in a sample after removal of dockage and shrunken and broken kernels.

**Shrunken and broken kernels** are kernels, kernel pieces, and other matter that pass through a 0.064-by 3/8-inch oblong-hole sieve.

**Total defects** are the sum of three factors: damaged kernels (total), shrunken and broken kernels, and foreign material. In the factor summary tables, the average values listed for total defects may not equal the sum of the component factor averages due to rounding.

**Dockage** includes all matter other than wheat that can be removed from the original sample by use of an approved device. The percentage of dockage in a sample does not affect the numerical grade.

**Moisture** is the water content of grain as determined by an approved electronic moisture meter. The percentage of moisture in a sample does not affect the numerical grade.

**Contrasting classes** include:

\* Durum, Soft White, and Unclassed wheats in the classes Hard Red Spring and Hard Red Winter wheats.

\* Hard Red Spring, Hard Red Winter, Hard White, Soft Red Winter, Soft White, and Unclassed wheats in the class Durum wheat.

\* Durum and Unclassed wheats in the class Soft Red Winter wheat.

\* Durum, Hard Red Spring, Hard Red Winter, Soft Red Winter and Unclassed wheats in the classes Hard White wheat and Soft White wheat.

**Wheat of other classes** is any class that is mixed with the predominant class.

**Protein** is the protein content of grain as determined by an approved near infrared transmittance (NIRT) instrument calibrated against a Combustion Nitrogen Analyzer, or CNA (percent nitrogen multiplied by 5.7). The percentage of protein in a sample does not affect the numerical grade. Protein is certified on a 12 percent moisture basis.

**Mixed wheat** is a combination of classes of wheat which does not meet the minimum requirements of a specific class.

Table 1. U.S. Wheat Exports: Number of lots and quantity exported by class and grade, 2011-2013

Class	Grade	2011		2012		2013	
		No. of Lots	Metric Tons	No. of Lots	Metric Tons	No. of Lots	Metric Tons
Hard Red	U.S. No. 1	54	396,817	92	828,295	74	593,361
Winter Wheat	U.S. No. 2	687	13,789,897	720	11,982,133	768	13,644,707
	U.S. No. 3	1	1,478	--	--	--	--
	U.S. Sample Grade	--	--	--	--	2	1,794
	Not Inspected	--	--	--	--	--	--
	All lots	742	14,188,192	812	12,810,428	844	14,239,862
Hard Red	U.S. No. 1	128	1,383,739	118	1,442,760	109	1,595,740
Spring Wheat	U.S. No. 2	433	6,638,466	514	6,943,813	388	5,752,175
	U.S. No. 3	2	17,459	--	--	--	--
	No Grade	--	--	--	--	3	31,787
	U.S. Sample Grade	--	--	1	8,143	--	--
	Not Inspected	1	1,243	--	--	--	--
	All lots	564	8,040,907	633	8,394,716	500	7,379,702
Soft Red	U.S. No. 1	2	3,030	6	35,518	2	6,640
Winter Wheat	U.S. No. 2	258	3,187,620	394	4,843,044	476	9,990,709
	U.S. No. 3	23	164,275	3	30,459	6	109,909
	U.S. No. 4	--	--	2	56,722	--	--
	U.S. Sample Grade	6	90,026	26	854,689	14	232,511
	Not inspected	--	3,444,951	--	--	--	--
	All lots	289	1,975,076	431	5,820,432	498	10,339,769
Durum Wheat	U.S. No. 1	22	204,168	16	199,643	22	--
	U.S. No. 2	24	168,471	39	234,792	56	--
	U.S. No. 3	16	192,144	15	142,740	8	--
	U.S. No. 4	7	87,143	2	12,340	--	--
	No Grade	--	--	--	--	5	85,416
	U.S. Sample Grade	--	--	--	--	--	--
	All lots	69	651,926	72	589,515	91	1,055,635
Soft White	U.S. No. 1	98	671,685	130	926,022	97	773,968
Wheat	U.S. No. 2	175	3,979,915	255	5,336,179	207	4,868,035
	U.S. No. 3	--	--	2	77,000	--	--
	U.S. No. 4	2	117,249	15	698,623	4	95,578
	U.S. Sample Grade	3	36,547	11	293,178	4	69,180
	Not Inspected	--	--	--	--	--	--
	All lots	278	4,805,396	413	7,331,002	312	5,807,761
Hard White	U.S. No. 1	--	--	--	--	--	--
Wheat	U.S. No. 2	1	11,001	11	75,211	--	--
	U.S. No. 3	2	4,326	3	19,794	--	--
	U.S. No. 4	11	102,945	14	87,768	8	59,306
	All lots	14	118,272	28	182,773	8	59,306

-- = No lots reported in the category.

Table 1. U.S. Wheat Exports: Number of lots and quantity exported by class and grade, 2011-2013, continued

Class	Grade	2011		2012		2013	
		No. of Lots	Metric Tons	No. of Lots	Metric Tons	No. of Lots	Metric Tons
Mixed Wheat	U.S. No 1	--	--	2	5,792	--	--
	U.S. No 2	1	11,015	--	--	1	4,882
	U.S. No. 4	--	--	--	--	2	24,680
	U.S. Sample Grade	--	--	13	725,039	--	--
	All lots	1	11,015	15	730,831	3	29,562
All Classes	U.S. No. 1	304	2,659,439	364	3,438,030	304	3,217
	U.S. No. 2	1,579	27,786,385	1,933	29,415,172	1,896	34,848,074
	U.S. No. 3	44	379,682	23	269,993	14	244,967
	U.S. No. 4	20	307,337	33	855,453	14	180,564
	U.S. No. 5	--	--	--	--	--	--
	No Grade	--	--	--	--	8	117,203
	U.S. Sample Grade	9	126,573	51	1,881,049	20	303,485
	Not Inspected	1	1,243	--	--	--	--
	All lots	1,957	31,260,659	2,404	35,859,697	2,256	38,911,597

-- = No lots reported in the category.

Table 2. Summary of export Hard Red Winter wheat quality, 2011-2013

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of				No. of				No. of			
			Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	60.0	54	61.6	60.0	63.3	92	61.5	60.1	63.2	74	61.5	60.0	63.6
	U.S. No. 2	58.0	687	61.1	58.1	64.1	720	61.3	59.4	64.4	767	61.1	59.2	63.7
	U.S. No. 3	56.0	1	60.0	60.0	60.0	--	--	--	--	--	--	--	--
	Sample Grade	54.0	--	--	--	--	--	--	--	--	2	60.7	60.7	60.7
	All lots	N/A	742	61.1	58.1	64.1	812	61.3	59.4	64.4	843	61.1	59.2	63.7
Test Weight (kg/hl)	U.S. No. 1	N/A	54	81.0	78.9	83.2	92	80.9	79.1	83.1	74	80.8	79.0	83.6
	U.S. No. 2	N/A	687	80.3	76.5	84.2	720	80.7	78.2	84.6	767	80.3	77.9	83.7
	U.S. No. 3	N/A	1	78.9	78.9	78.9	--	--	--	--	--	--	--	--
	Sample Grade	N/A	--	--	--	--	--	--	--	--	2	79.8	79.8	79.8
	All lots	N/A	742	80.4	76.5	84.2	812	80.7	78.2	84.6	843	80.4	77.9	83.7
Moisture	U.S. No. 1	N/A	54	10.8	9.0	12.3	92	10.7	9.5	12.4	74	10.3	8.3	12.1
	U.S. No. 2	N/A	687	11.1	8.9	12.8	720	10.9	9.1	12.2	764	11.0	8.7	12.5
	U.S. No. 3	N/A	1	11.7	11.7	11.7	--	--	--	--	--	--	--	--
	Sample Grade	N/A	--	--	--	--	--	--	--	--	2	0.0	0.0	0.0
	All lots	N/A	742	11.1	8.9	12.8	812	10.8	9.1	12.4	840	10.9	8.3	12.5
Heat-damaged Kernels	U.S. No. 1	0.2	54	0.0	0.0	0.0	92	0.0	0.0	0.0	74	0.0	0.0	0.0
	U.S. No. 2	0.2	687	0.0	0.0	0.2	720	0.0	0.0	0.2	768	0.0	0.0	0.2
	U.S. No. 3	0.5	1	0.0	0.0	0.0	--	--	--	--	--	--	--	--
	Sample Grade	N/A	--	--	--	--	--	--	--	--	2	0.0	0.0	0.0
	All lots	N/A	742	0.0	0.0	0.2	812	0.0	0.0	0.2	844	0.0	0.0	0.2
Damaged Kernels (Total)	U.S. No. 1	2.0	54	0.3	0.0	1.4	92	0.2	0.0	1.1	74	0.1	0.0	0.8
	U.S. No. 2	4.0	687	1.0	0.0	3.3	720	0.7	0.0	3.0	768	0.7	0.0	2.5
	U.S. No. 3	7.0	1	1.9	1.9	1.9	--	--	--	--	--	--	--	--
	Sample Grade	N/A	--	--	--	--	--	--	--	--	2	0.6	0.6	0.6
	All lots	N/A	742	1.0	0.0	3.3	812	0.7	0.0	3.0	844	0.7	0.0	2.5
Foreign Material	U.S. No. 1	0.4	54	0.1	0.0	0.2	92	0.1	0.0	0.4	74	0.1	0.0	0.2
	U.S. No. 2	0.7	687	0.2	0.0	0.6	720	0.2	0.0	0.5	768	0.2	0.0	0.6
	U.S. No. 3	1.3	1	1.0	1.0	1.0	--	--	--	--	--	--	--	--
	Sample Grade	3.0	--	--	--	--	--	--	--	--	2	0.1	0.1	0.1
	All lots	N/A	742	0.2	0.0	1.0	812	0.2	0.0	0.5	844	0.2	0.0	0.6
Shrunken and Broken	U.S. No. 1	3.0	54	1.4	0.5	2.7	92	1.5	0.7	2.6	74	1.7	0.7	2.7
	U.S. No. 2	5.0	687	1.5	0.2	2.6	720	1.6	0.7	3.0	768	1.6	0.4	3.0
	U.S. No. 3	8.0	1	1.9	1.9	1.9	--	--	--	--	--	--	--	--
	Sample Grade	N/A	--	--	--	--	--	--	--	--	2	1.3	1.3	1.3
	All lots	N/A	742	1.5	0.2	2.7	812	1.6	0.7	3.0	844	1.6	0.4	3.0
Total Defects <sup>1</sup>	U.S. No. 1	3.0	54	1.7	0.7	2.9	92	1.9	0.9	2.8	74	1.9	0.8	2.9
	U.S. No. 2	5.0	687	2.7	0.3	4.8	720	2.6	0.8	5.0	768	2.5	0.7	4.2
	U.S. No. 3	8.0	1	4.8	4.8	4.8	--	--	--	--	--	--	--	--
	Sample Grade	N/A	--	--	--	--	--	--	--	--	2	2.0	2.0	2.0
	All lots	N/A	742	2.6	0.3	4.8	812	2.5	0.8	5.0	844	2.5	0.7	4.2

Table 2. Summary of export Hard Red Winter wheat quality, 2011-2013, continued

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Dockage	U.S. No. 1	N/A	54	0.3	0.2	1.4	92	0.3	0.2	0.9	74	0.3	0.1	0.6
	U.S. No. 2	N/A	687	0.6	0.2	1.0	718	0.6	0.2	1.0	768	0.6	0.1	11.6
	U.S. No. 3	N/A	1	1.7	1.7	1.7	--	--	--	--	--	--	--	--
	Sample Grade	N/A	--	--	--	--	--	--	--	--	2	0.6	0.6	0.6
	All lots	N/A	742	0.6	0.2	1.7	810	0.6	0.2	1.0	844	0.5	0.1	11.6
Wheat of	U.S. No. 1	3.0	54	0.8	0.0	2.3	92	0.6	0.0	2.3	74	0.7	0.0	2.3
Other Classes	U.S. No. 2	5.0	687	1.0	0.0	4.9	720	1.1	0.0	4.1	765	1.4	0.0	4.7
	U.S. No. 3	10.0	1	0.0	0.0	0.0	--	--	--	--	--	--	--	--
	Sample Grade	N/A	--	--	--	--	--	--	--	--	2	3.1	3.1	3.1
	All lots	N/A	742	1.0	0.0	4.9	812	1.1	0.0	4.1	841	1.4	0.0	4.7
Contrasting Classes	U.S. No. 1	1.0	54	0.4	0.0	1.0	92	0.3	0.0	1.0	74	0.3	0.0	0.9
	U.S. No. 2	2.0	687	0.1	0.0	1.3	720	0.1	0.0	1.3	768	0.1	0.0	1.4
	U.S. No. 3	3.0	1	0.0	0.0	0.0	--	--	--	--	--	--	--	--
	Sample Grade	10.0	--	--	--	--	--	--	--	--	2	0.0	0.0	0.0
	All lots	N/A	742	0.1	0.0	1.3	812	0.1	0.0	1.3	844	0.1	0.0	1.4
Protein (as is basis)	U.S. No. 1	N/A	54	12.1	11.6	13.4	91	12.5	11.6	13.4	30	12.4	11.7	12.8
	U.S. No. 2	N/A	680	11.9	10.2	14.4	715	12.1	9.7	14.5	231	12.1	11.1	13.6
	U.S. No. 3	N/A	1	11.8	11.8	11.8	--	--	--	--	--	--	--	--
	Sample Grade	N/A	--	--	--	--	--	--	--	--	2	12.4	12.4	12.4
	All lots	N/A	735	11.9	10.2	14.4	806	12.1	9.7	14.5	263	12.1	11.1	13.6
Protein (12% moisture)	U.S. No. 1	N/A	54	11.9	11.5	13.0	91	12.3	11.5	13.1	30	12.1	11.5	12.5
	U.S. No. 2	N/A	680	11.8	10.0	14.0	715	11.9	9.5	14.5	231	11.9	11.0	13.4
	U.S. No. 3	N/A	1	11.8	11.8	11.8	--	--	--	--	--	--	--	--
	Sample Grade	N/A	--	--	--	--	--	--	--	--	2	12.2	12.2	12.2
	All lots	N/A	735	11.8	10.0	14.0	806	11.9	9.5	14.5	263	11.9	11.0	13.4

N/A = Does not apply.

-- = No lots reported in this category.

<sup>1</sup>The sum of the component factor averages may not equal the average for this factor due to rounding.

Figure 1. HRW Dockage Distribution, All Grades

**U.S. WHEAT EXPORTED, 2013**  
**DISTRIBUTION FOR DOCKAGE – ALL GRADES**  
**HRW**

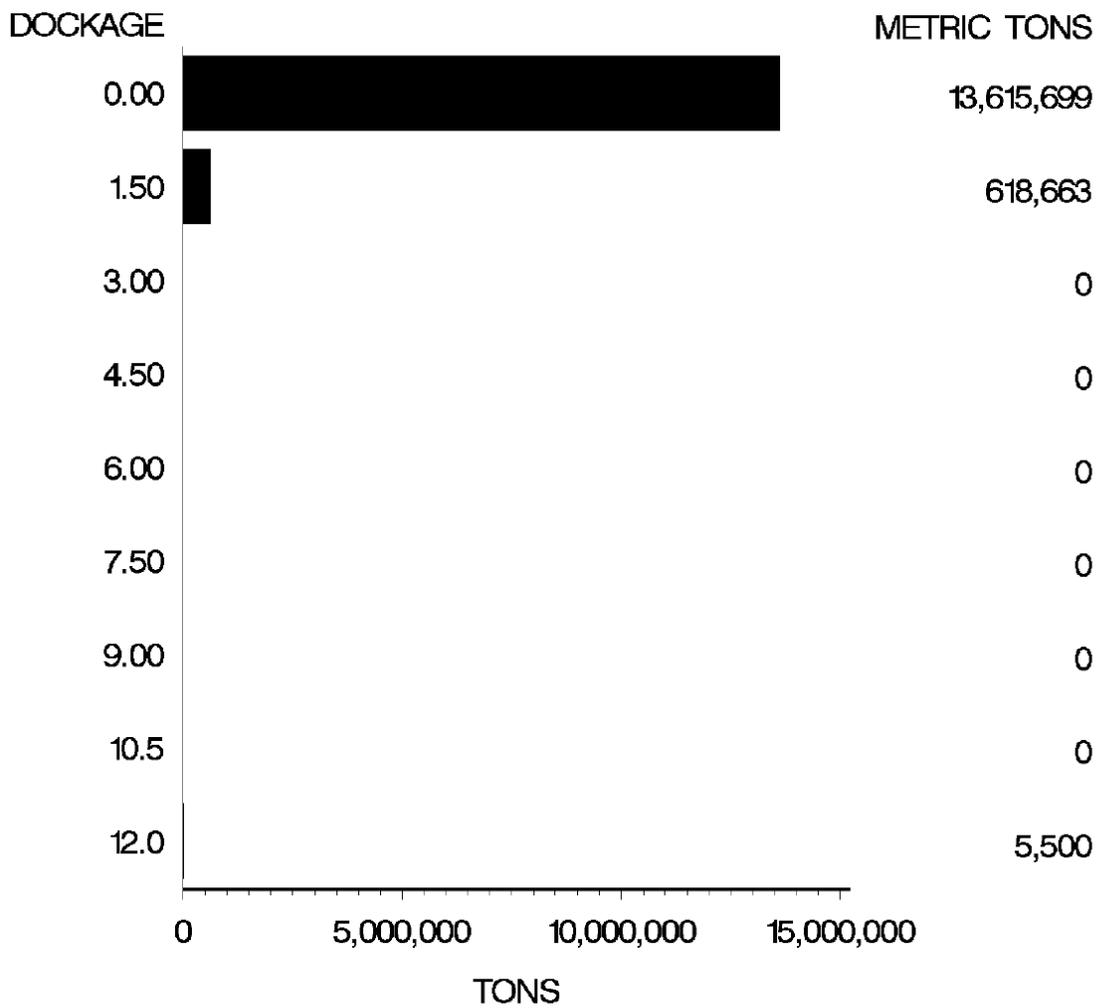


Figure 2. HRW Protein Distribution, All Grades

**U.S. WHEAT EXPORTED, 2013**  
**DISTRIBUTION FOR PROTEIN (12% M) – ALL GRADES**  
**HRW**

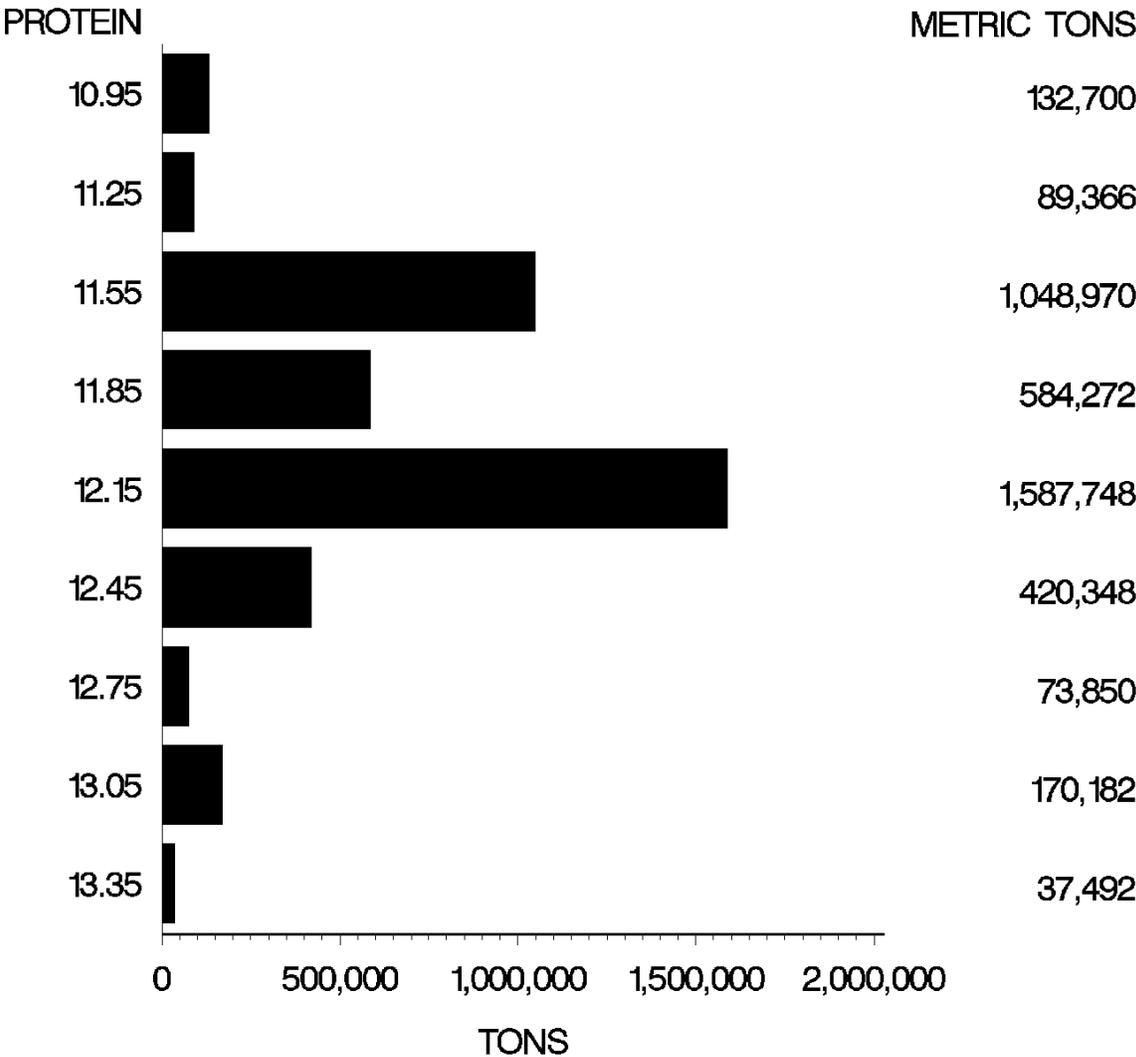


Table 3. Summary of export Hard Red Spring wheat quality, 2011-2013

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of				No. of				No. of			
			Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	58.0	128	61.7	60.1	63.9	118	61.7	60.5	63.5	109	62.0	60.3	64.3
	U.S. No. 2	57.0	433	61.7	58.9	64.3	514	61.8	59	63.8	385	62.1	60.2	79.0
	U.S. No. 3	55.0	2	61.7	60.7	62.4	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	1	61.5	61.5	61.5	--	--	--	--
	All lots	N/A	563	61.7	58.9	64.3	633	61.7	59	63.8	494	62.0	60.2	79.0
Test Weight (kg/ha)	U.S. No. 1	N/A	128	81.2	79.0	84.0	118	81.1	79.6	83.5	109	81.5	79.3	84.5
	U.S. No. 2	N/A	433	81.2	77.5	84.5	514	81.2	77.6	83.8	385	81.6	79.2	103.0
	U.S. No. 3	N/A	2	81.1	79.8	82.0	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	1	80.9	80.9	80.9	--	--	--	--
	All lots	N/A	563	81.2	77.5	84.5	633	81.2	77.6	83.8	494	81.6	79.2	103.0
Moisture	U.S. No. 1	N/A	128	11.7	9.5	13.4	118	11.3	9.9	13.1	109	11.2	9.1	13.0
	U.S. No. 2	N/A	433	12.2	9.8	13.5	514	11.5	9.4	13.2	382	11.4	9.2	13.7
	U.S. No. 3	N/A	2	13.1	12.9	13.2	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	1	10.1	10.1	10.1	--	--	--	--
	All lots	N/A	563	12.1	9.5	13.5	633	11.5	9.4	13.2	491	11.4	9.1	13.7
Heat-damaged Kernels	U.S. No. 1	0.2	128	0.0	0.0	0.1	118	0.0	0.0	0.0	109	0.0	0.0	0.0
	U.S. No. 2	0.2	433	0.0	0.0	0.2	514	0.0	0.0	0.2	384	0.0	0.0	0.1
	U.S. No. 3	0.5	2	0.1	0.0	0.2	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	1	0.0	0.0	0.0	--	--	--	--
	All lots	N/A	563	0.0	0.0	0.2	633	0.0	0.0	0.2	493	0.0	0.0	0.1
Damaged Kernels (Total)	U.S. No. 1	2.0	128	0.4	0.0	1.6	118	0.4	0	1.4	109	0.3	0.0	1.4
	U.S. No. 2	4.0	433	0.7	0.0	4.0	514	0.6	0	2.6	384	0.4	0.0	3.6
	U.S. No. 3	7.0	2	4.0	0.9	6.1	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	1	0.2	0.2	0.2	--	--	--	--
	All lots	N/A	563	0.7	0.0	6.1	633	0.5	0	2.6	493	0.4	0.0	3.6
Foreign Material	U.S. No. 1	0.4	128	0.1	0.0	0.3	118	0.1	0	0.4	109	0.1	0.0	0.4
	U.S. No. 2	0.7	433	0.1	0.0	0.5	514	0.1	0	0.6	384	0.1	0.0	0.4
	U.S. No. 3	1.3	2	0.1	0.1	0.1	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	1	0.1	0.1	0.1	--	--	--	--
	All lots	N/A	563	0.1	0.0	0.5	633	0.1	0	0.6	493	0.1	0.0	0.4
Shrunken and Broken	U.S. No. 1	3.0	128	1.1	0.4	2.2	118	1.4	0.5	2.4	109	1.5	0.5	2.7
	U.S. No. 2	5.0	433	1.1	0.4	2.2	514	1.5	0.6	2.5	384	1.4	0.4	2.7
	U.S. No. 3	8.0	2	1.0	0.8	1.2	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	1	1.2	1.2	1.2	--	--	--	--
	All lots	N/A	563	1.1	0.4	2.2	633	1.4	0.5	2.5	493	1.4	0.4	2.7

Table 3. Summary of export Hard Red Spring wheat quality, 2011-2013, continued

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Total Defects <sup>1</sup>	U.S. No. 1	3.0	128	1.6	0.5	2.8	118	2.0	0.7	3.0	109			
	U.S. No. 2	5.0	433	1.9	0.8	4.9	514	2.1	1	4.7	388			
	U.S. No. 3	8.0	2	5.0	2.2	7.0	--	--	--	--	--	--	--	--
	No Grade	N/A	--	--	--	--	--	--	--	--	3	0.0	0.0	0.0
	U.S. Sample Grade	N/A	--	--	--	--	1	1.5	1.5	1.5	--	--	--	--
	All lots	N/A	563	1.9	0.5	7.0	633	2.1	0.7	4.7	500	1.9	0.0	4.3
Dockage	U.S. No. 1	N/A	128	0.3	0.1	1.1	115	0.3	0.1	1.3	109	0.3	0.1	0.8
	U.S. No. 2	N/A	433	0.4	0.1	1.0	514	0.4	0.2	1.2	388	0.4	0.1	1.0
	U.S. No. 3	N/A	2	0.6	0.5	0.8	--	--	--	--	--	--	--	--
	No Grade	N/A	--	--	--	--	--	--	--	--	3	0.1	0.1	0.1
	U.S. Sample Grade	N/A	--	--	--	--	1	0.6	0.6	0.6	--	--	--	--
	All lots	N/A	563	0.4	0.1	1.1	630	0.4	0.1	1.3	500	0.4	0.1	1.0
Wheat of Other Classes	U.S. No. 1	3.0	128	0.6	0.0	2.0	118	0.9	0.0	2.6	109	0.8	0.0	2.9
	U.S. No. 2	5.0	433	0.6	0.0	5.0	514	1.1	0.0	4.4	384	1.0	0.0	4.2
	U.S. No. 3	10.0	2	1.2	0.2	1.9	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	1	0.6	0.6	0.6	--	--	--	--
	All lots	N/A	563	0.6	0.0	5.0	633	1	0.0	4.4	493	0.9	0.0	4.2
Contrasting Classes	U.S. No. 1	1.0	128	0.3	0.0	1.0	118	0.2	0.0	0.8	109	0.2	0.0	0.9
	U.S. No. 2	2.0	433	0.2	0.0	1.7	514	0.3	0.0	1.4	384	0.3	0.0	1.4
	U.S. No. 3	3.0	2	0.0	0.0	0.0	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	1	0.5	0.5	0.5	--	--	--	--
	All lots	N/A	563	0.2	0.0	1.7	633	0.3	0.0	1.4	493	0.3	0.0	1.4
Protein (as is basis)	U.S. No. 1	N/A	127	13.9	8.4	15.0	114	14.4	13.4	15.1	36	14.5	14.2	15.1
	U.S. No. 2	N/A	426	13.6	11.8	15.0	501	14.0	12.4	15.4	116	14.4	13.6	15.6
	U.S. No. 3	N/A	2	13.2	12.8	13.9	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	1	14.3	14.3	14.3	--	--	--	--
	All lots	N/A	555	13.6	8.4	15.0	616	14.1	12.4	15.4	152	14.4	13.6	15.6
Protein (12% moisture)	U.S. No. 1	N/A	127	13.9	8.3	15.1	114	14.3	13.5	15.2	36	14.3	14.0	14.9
	U.S. No. 2	N/A	426	13.6	11.9	15.0	501	14	12.5	15.4	116	14.2	13.6	15.5
	U.S. No. 3	N/A	2	13.4	13.0	14.0	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	1	14	14	14	--	--	--	--
	All lots	N/A	555	13.6	8.3	15.1	616	14	12.5	15.4	152	14.2	13.6	15.5

N/A = Does not apply.

-- = No lots reported in this category.

<sup>1</sup>The sum of the component factor averages may not equal the average for this factor due to rounding.

Figure 3. HRS Dockage Distribution, All Grades

**U.S. WHEAT EXPORTED, 2013  
DISTRIBUTION FOR DOCKAGE – ALL GRADES  
HRS**

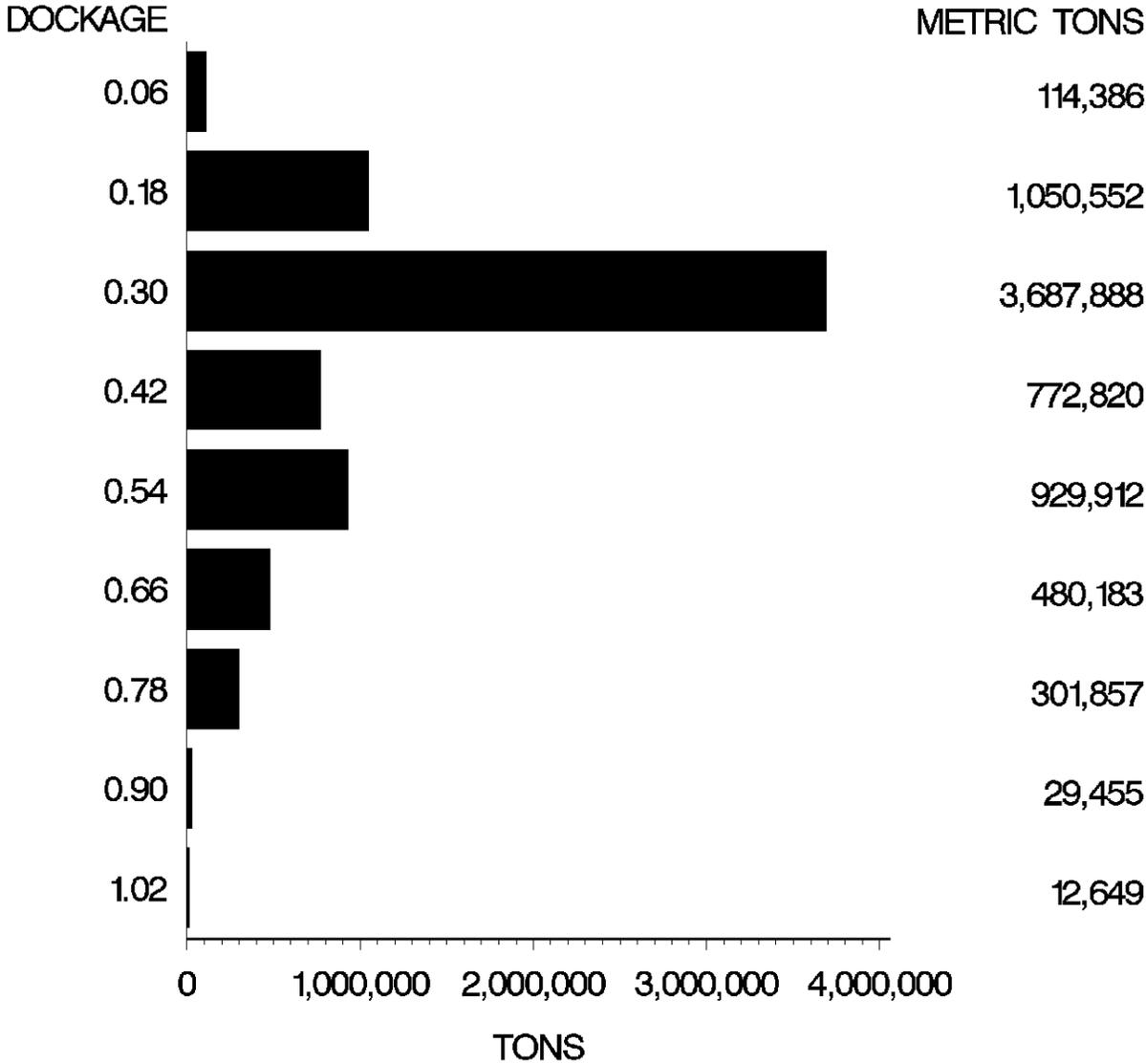


Figure 4. HRS Protein Distribution, All Grades

**U.S. WHEAT EXPORTED, 2013**  
**DISTRIBUTION FOR PROTEIN (12% M) – ALL GRADES**  
**HRS**

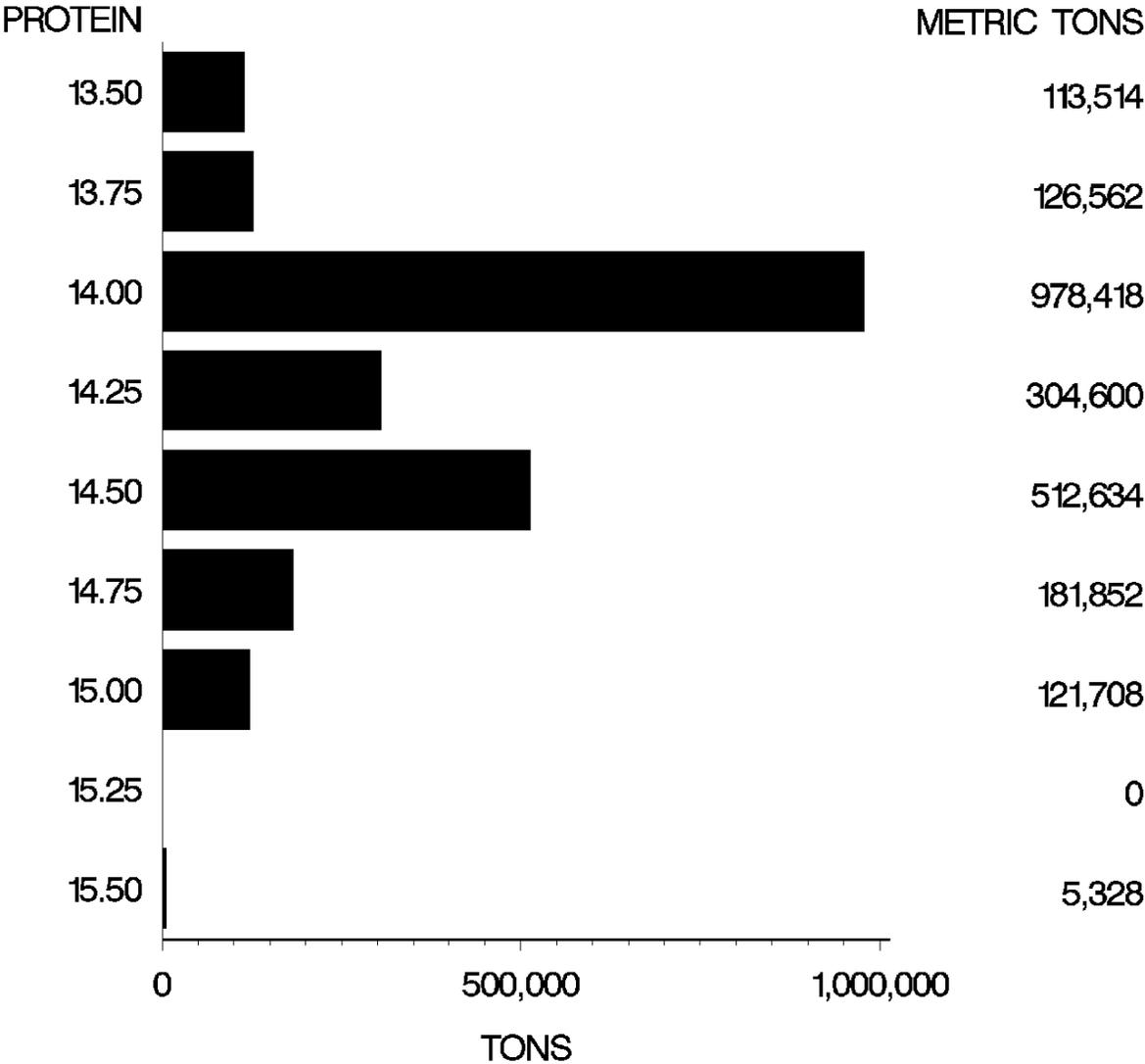


Table 4. Summary of export Soft Red Winter wheat quality, 2011-2013

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of				No. of				No. of			
			Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	60.0	2	61.0	60.7	61.4	6	60.1	60.0	60.3	2	61.8	61.8	61.8
	U.S. No. 2	58.0	257	59.4	58.0	62.0	394	60.0	58.3	61.8	472	59.9	58.0	61.5
	U.S. No. 3	56.0	23	58.3	57.2	59.3	3	58.4	58.4	58.4	6	59.7	57.6	60.3
	U.S. No. 4	54.0	--	--	--	--	2	59.3	59.3	59.3	--	--	--	--
	U.S. Sample Grade	N/A	6	58.3	57.1	58.7	26	58.6	56.6	60.2	14	59.3	57.4	60.1
	All lots	N/A	288	59.3	57.1	62.0	431	59.8	56.6	61.8	494	59.9	57.4	61.8
Test Weight (kg/hl)	U.S. No. 1	N/A	2	80.3	79.8	80.7	6	79.1	78.9	79.3	2	81.3	81.3	81.3
	U.S. No. 2	N/A	258	76.8	1.4	81.5	394	78.9	76.8	81.3	472	78.8	76.4	80.9
	U.S. No. 3	N/A	23	76.8	75.3	78.0	3	76.8	76.8	76.8	6	78.6	75.8	79.4
	U.S. No. 4	N/A	--	--	--	--	2	78.1	78.1	78.1	--	--	--	--
	U.S. Sample Grade	N/A	6	76.7	75.1	77.3	26	77.2	74.6	79.2	14	78.0	75.6	79.1
	All lots	N/A	289	76.8	1.4	81.5	431	78.6	74.6	81.3	494	78.8	75.6	81.3
Moisture	U.S. No. 1	N/A	2	13.2	13.1	13.2	6	12.3	11.0	12.6	2	12.3	12.3	12.3
	U.S. No. 2	N/A	257	12.3	9.9	13.4	394	12.2	11.1	13.1	470	12.6	11.4	13.6
	U.S. No. 3	N/A	23	12.4	11.8	13.0	3	13.1	13.1	13.1	6	12.6	12.5	12.8
	U.S. No. 4	N/A	--	--	--	--	2	12.8	12.8	12.8	--	--	--	--
	U.S. Sample Grade	N/A	6	12.1	11.5	13.0	26	11.8	11.5	12.8	14	12.1	11.4	12.7
	All lots	N/A	288	12.3	9.9	13.4	431	12.2	11.0	13.1	492	12.6	11.4	13.6
Heat-damaged Kernels	U.S. No. 1	0.2	2	0.0	0.0	0.0	6	0.0	0.0	0.0	2	0.0	0.0	0.0
	U.S. No. 2	0.2	258	0.0	0.0	0.2	394	0.0	0.0	0.2	476	0.0	0.0	0.1
	U.S. No. 3	0.5	23	0.0	0.0	0.1	3	0.0	0.0	0.0	6	0.0	0.0	0.1
	U.S. No. 4	1.0	--	--	--	--	2	0.1	0.1	0.1	--	--	--	--
	U.S. Sample Grade	N/A	6	0.2	0.0	1.2	26	0.1	0.0	0.4	14	0.1	0.0	0.2
	All lots	N/A	289	0.0	0.0	1.2	431	0.1	0.0	0.4	498	0.0	0.0	0.2
Damaged Kernels (Total)	U.S. No. 1	2.0	2	0.8	0.5	1.1	6	1.2	0.8	1.9	2	1.1	1.1	1.1
	U.S. No. 2	4.0	258	2.1	0.0	4.0	394	1.8	0.2	4.0	476	1.6	0.5	3.9
	U.S. No. 3	7.0	23	2.7	0.6	6.4	3	4.7	4.7	4.7	6	2.8	1.1	6.3
	U.S. No. 4	10.0	--	--	--	--	2	3.7	3.7	3.7	--	--	--	--
	U.S. Sample Grade	N/A	6	11.0	3.3	30.2	26	7.2	3.0	23.4	14	3.4	0.8	9.7
	All lots	N/A	289	2.4	0.0	30.2	431	2.6	0.2	23.4	498	1.7	0.5	9.7
Foreign Material	U.S. No. 1	0.4	2	0.0	0.0	0.0	6	0.1	0.1	0.2	2	0.1	0.1	0.1
	U.S. No. 2	0.7	258	0.1	0.0	0.5	394	0.1	0.0	0.5	476	0.1	0.0	0.6
	U.S. No. 3	1.3	23	0.1	0.0	0.2	3	0.1	0.1	0.1	6	0.1	0.0	0.1
	U.S. No. 4	3.0	--	--	--	--	2	0.0	0.0	0.0	--	--	--	--
	U.S. Sample Grade	N/A	6	0.2	0.1	0.3	26	0.1	0.0	0.3	14	0.1	0.0	0.3
	All lots	N/A	289	0.1	0.0	0.5	431	0.1	0.0	0.5	498	0.1	0.0	0.6
Shrunken and Broken	U.S. No. 1	3.0	2	0.5	0.4	0.6	6	0.7	0.6	0.7	2	0.3	0.3	0.3
	U.S. No. 2	5.0	258	0.7	0.0	1.5	394	0.7	0.1	1.3	476	0.7	0.4	1.6
	U.S. No. 3	8.0	23	1.1	0.7	1.7	3	0.9	0.9	0.9	6	1.0	0.6	1.4
	U.S. No. 4	12.0	--	--	--	--	2	1.1	1.1	1.1	--	--	--	--
	U.S. Sample Grade	N/A	6	1.1	0.6	1.3	26	1.1	0.8	1.3	14	0.9	0.7	1.1
	All lots	N/A	289	0.8	0.0	1.7	431	0.8	0.1	1.3	498	0.7	0.3	1.6

Table 4. Summary of export Soft Red Winter wheat quality, 2011-2013, continued

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
<b>Total Defects</b> <sup>1</sup>	U.S. No. 1	3.0	2	1.3	1.1	1.5	6	2.0	1.5	2.6	2	1.5	1.5	1.5
	U.S. No. 2	5.0	258	2.9	0.0	4.9	394	2.7	1.1	5	476	2.4	1.1	4.7
	U.S. No. 3	8.0	23	4.0	1.8	7.5	3	5.7	5.7	5.7	6	3.9	1.7	7.1
	U.S. No. 4	12.0	--	--	--	--	2	4.8	4.8	4.8	--	--	--	--
	U.S. Sample Grade	N/A	6	12.3	4.0	31.0	26	8.4	3.8	24.5	14	4.4	1.6	11.1
	All lots	N/A	289	3.2	0.0	31.0	431	3.5	1.1	24.5	498	2.5	1.1	11.1
<b>Dockage</b>	U.S. No. 1	N/A	2	0.7	0.6	0.7	6	1.1	0.9	1.2	2	0.6	0.6	0.6
	U.S. No. 2	N/A	249	0.8	0.1	1.4	393	0.8	0.4	1.8	476	0.6	0.1	1.7
	U.S. No. 3	N/A	22	0.8	0.5	1.2	3	0.5	0.5	0.5	6	0.9	0.6	1.0
	U.S. No. 4	N/A	--	--	--	--	2	0.7	0.7	0.7	--	--	--	--
	U.S. Sample Grade	N/A	5	2.4	0.6	3.3	26	1.2	0.7	2.2	12	1.2	0.6	2.4
	All lots	N/A	278	0.8	0.1	3.3	430	0.8	0.4	2.2	496	0.7	0.1	2.4
<b>Wheat of Other Classes</b>	U.S. No. 1	3.0	2	0.1	0.0	0.1	6	1.4	0.0	1.8	2	1.0	1.0	1.0
	U.S. No. 2	5.0	258	0.5	0.0	4.2	394	0.5	0.0	3.8	475	0.5	0.0	4.6
	U.S. No. 3	10.0	23	1.4	0.0	6.0	3	0.7	0.7	0.7	6	0.7	0.1	1.2
	U.S. No. 4	10.0	--	--	--	--	2	0.1	0.1	0.1	--	--	--	--
	U.S. Sample Grade	N/A	6	0.1	0.0	0.2	26	0.4	0.0	0.9	14	0.5	0.0	1.9
	All lots	N/A	289	0.5	0.0	6.0	431	0.5	0.0	3.8	497	0.5	0.0	4.6
<b>Contrasting Classes</b>	U.S. No. 1	1.0	2	0.0	0.0	0.0	6	0.0	0.0	0.0	2	0.0	0.0	0.0
	U.S. No. 2	2.0	258	0.0	0.0	0.7	394	0.0	0.0	0.6	476	0.0	0.0	0.4
	U.S. No. 3	3.0	23	0.0	0.0	0.0	3	0.1	0.1	0.1	6	0.0	0.0	0.1
	U.S. No. 4	10.0	--	--	--	--	2	0.0	0.0	0.0	--	--	--	--
	U.S. Sample Grade	N/A	6	0.0	0.0	0.0	26	0.0	0.0	0.2	14	0.0	0.0	0.1
	All lots	N/A	289	0.0	0.0	0.7	431	0.0	0.0	0.6	498	0.0	0.0	0.4
<b>Protein (as is basis)</b>	U.S. No. 1	N/A	2	10.8	10.6	10.9	4	10.9	10.8	11.2	--	--	--	--
	U.S. No. 2	N/A	213	10.1	9.2	12.8	321	10.3	9.1	11.6	153	10.0	8.8	10.8
	U.S. No. 3	N/A	21	10.0	9.4	10.7	3	9.6	9.6	9.6	2	9.4	9.4	9.4
	U.S. No. 4	N/A	--	--	--	--	2	9.5	9.5	9.5	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	5	9.2	9.1	9.6	--	--	--	--
	All lots	N/A	236	10.1	9.2	12.8	335	10.3	9.1	11.6	155	10.0	8.8	10.8
<b>Protein (12% moisture)</b>	U.S. No. 1	N/A	2	10.9	10.7	11.1	4	10.8	10.7	11.3	--	--	--	--
	U.S. No. 2	N/A	213	10.2	9.3	12.9	321	10.4	9.2	11.6	153	10.1	8.9	10.8
	U.S. No. 3	N/A	21	10.1	9.5	10.7	3	9.7	9.7	9.7	2	9.5	9.5	9.5
	U.S. No. 4	N/A	--	--	--	--	2	9.6	9.6	9.6	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	5	9.3	9.2	9.7	--	--	--	--
	All lots	N/A	236	10.2	9.3	12.9	335	10.3	9.2	11.6	155	10.1	8.9	10.8

N/A = Does not apply.

-- = No lots reported in this category.

<sup>1</sup>The sum of the component factor averages may not equal the average for this factor due to rounding.

Figure 5. SRW Dockage Distribution, All Grades

**U.S. WHEAT EXPORTED, 2013**  
**DISTRIBUTION FOR DOCKAGE – ALL GRADES**  
**SRW**

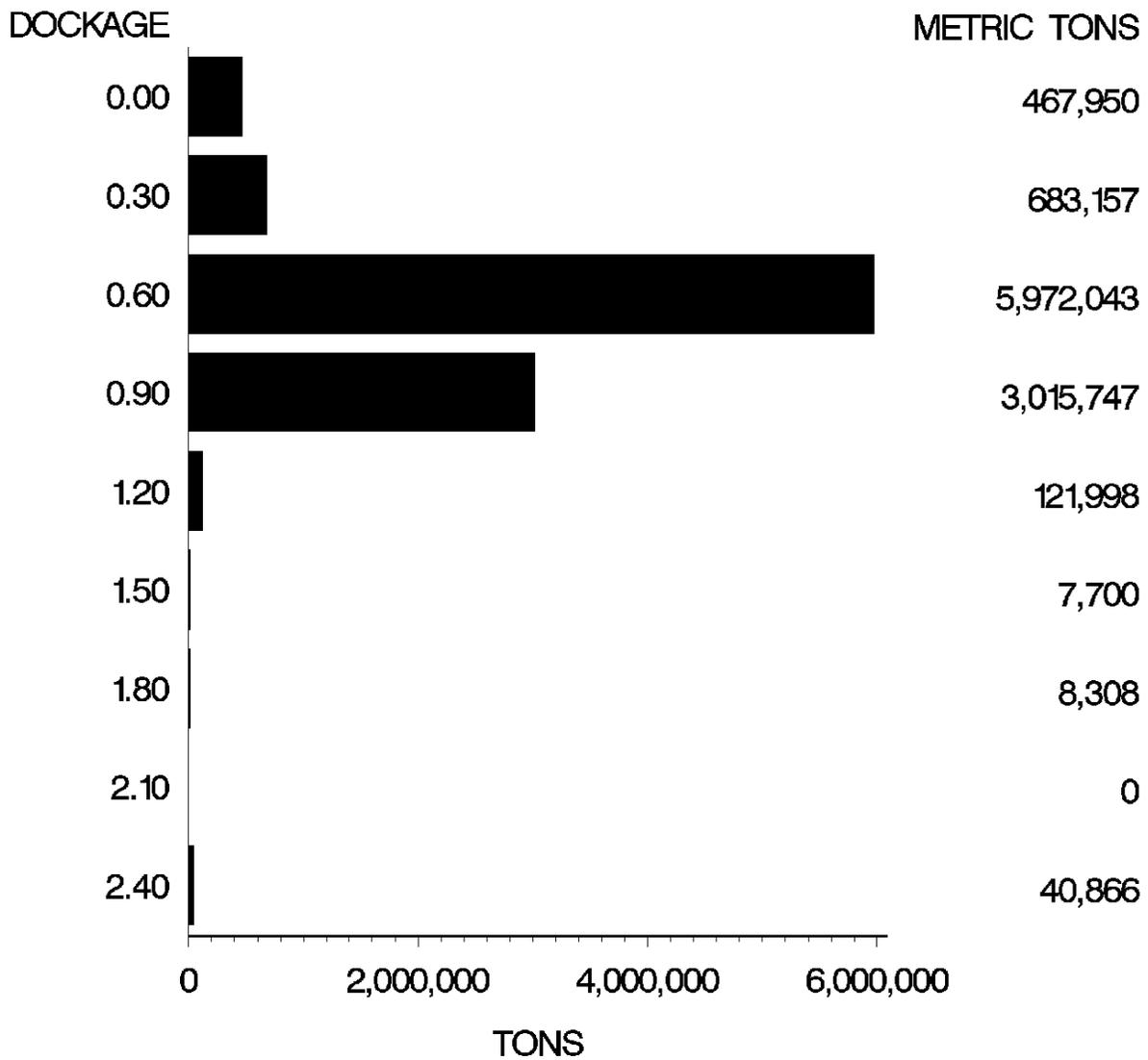


Figure 6. SRW Protein Distribution, All Grades

**U.S. WHEAT EXPORTED, 2013**  
**DISTRIBUTION FOR PROTEIN (12% M) – ALL GRADES**  
**SRW**

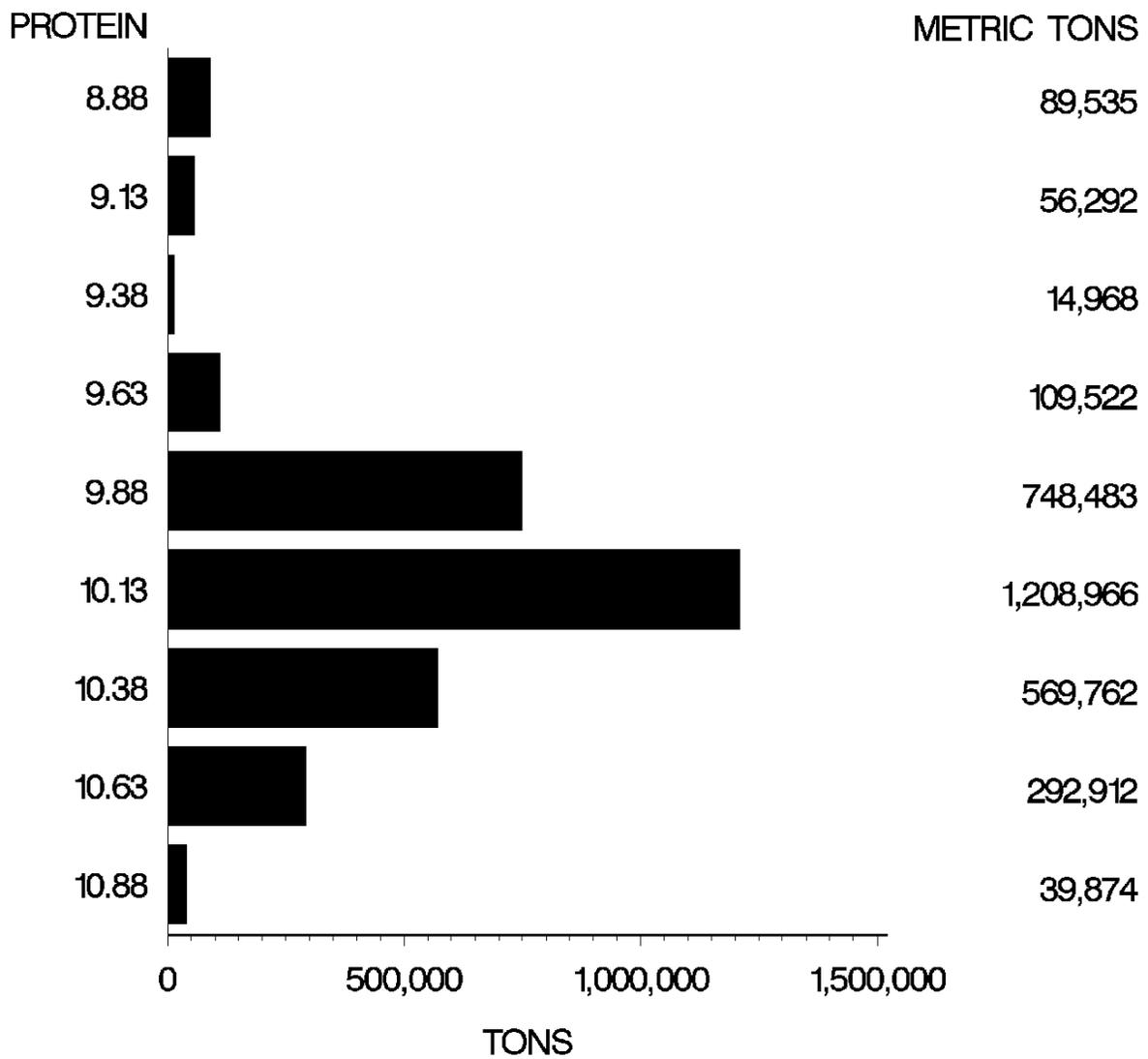


Table 5. Summary of export Durum wheat quality, 2011-2013

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of				No. of				No. of			
			Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	60.0	22	62.6	62.0	63.2	16	62.1	60.9	63.8	22	62.0	61.1	62.7
	U.S. No. 2	58.0	24	60.8	58.5	62.5	39	60.6	59.4	61.7	56	61.1	59.1	63.6
	U.S. No. 3	56.0	16	59.9	59.1	60.8	15	59.9	59.1	60.7	8	60.8	60.2	61.3
	U.S. No. 4	54.0	7	59.4	58.8	60.1	2	59.2	59.2	59.2	--	--	--	--
	U.S. No. 5	51.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	69	60.9	58.5	63.2	72	60.9	59.1	63.8	86	61.3	59.1	63.6
Test Weight (kg/hl)	U.S. No. 1	N/A	22	81.5	80.7	82.3	16	80.9	79.3	83.0	22	80.8	79.5	81.6
	U.S. No. 2	N/A	24	79.2	76.2	81.4	39	78.9	77.4	80.4	56	79.6	77.0	82.8
	U.S. No. 3	N/A	16	78.0	77.0	79.1	15	78.0	77.0	79.0	8	79.2	78.4	79.9
	U.S. No. 4	N/A	7	77.4	76.6	78.3	2	77.2	77.2	77.2	--	--	--	--
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	69	79.4	76.2	82.3	72	79.3	77.0	83.0	86	79.8	77.0	82.8
Moisture	U.S. No. 1	N/A	22	7.0	6.2	8.0	16	7.3	5.9	11.5	22	6.6	6.0	8.2
	U.S. No. 2	N/A	24	12.5	11.6	13.1	39	12	9.7	13	56	11.7	10.6	13.3
	U.S. No. 3	N/A	16	12.8	12.4	13.0	15	12.4	11.9	12.8	8	12.2	11.5	13.3
	U.S. No. 4	N/A	7	12.7	12.6	12.8	2	12.6	12.6	12.6	--	--	--	--
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	69	10.9	6.2	13.1	72	10.5	5.9	13.0	86	10.5	6.0	13.3
Heat-damaged Kernels	U.S. No. 1	0.2	22	0.0	0.0	0.2	16	0.0	0.0	0.0	22	0.0	0.0	0.1
	U.S. No. 2	0.2	24	0.0	0.0	0.1	39	0.0	0.0	0.1	56	0.0	0.0	0.1
	U.S. No. 3	0.5	16	0.0	0.0	0.1	15	0.0	0.0	0.1	8	0.0	0.0	0.0
	U.S. No. 4	1.0	7	0.0	0.0	0.0	2	0.0	0.0	0.0	--	--	--	--
	U.S. No. 5	3.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	69	0.0	0.0	0.2	72	0.0	0.0	0.1	86	0.0	0.0	0.1
Damaged Kernels (Total)	U.S. No. 1	2.0	22	0.4	0.1	0.6	16	0.4	0.1	1.1	22	0.4	0.0	0.8
	U.S. No. 2	4.0	24	1.8	0.1	3.8	39	2.1	0.1	3	56	2.0	0.0	3.3
	U.S. No. 3	7.0	16	4.9	2.2	6.1	15	4.2	1.7	5.4	8	3.4	2.7	4.6
	U.S. No. 4	10.0	7	7.1	5.2	9.4	2	6.9	6.9	6.9	--	--	--	--
	U.S. No. 5	15.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	69	3.0	0.1	9.4	72	2.1	0.1	6.9	86	1.8	0.0	4.6
Foreign Material	U.S. No. 1	0.4	22	0.1	0.0	0.4	16	0.1	0.0	0.4	22	0.1	0.1	0.3
	U.S. No. 2	0.7	24	0.1	0.0	0.3	39	0.1	0.0	0.3	56	0.1	0.0	0.6
	U.S. No. 3	1.3	16	0.2	0.0	0.5	15	0.2	0.1	0.3	8	0.2	0.1	0.2
	U.S. No. 4	3.0	7	0.2	0.1	0.3	2	0.1	0.1	0.1	--	--	--	--
	U.S. No. 5	5.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	69	0.2	0.0	0.5	72	0.1	0.0	0.4	86	0.1	0.0	0.6

Table 5. Summary of export Durum wheat quality, 2011-2013, continued

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of				No. of				No. of			
			Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Shrunken and Broken	U.S. No. 1	3.0	22	0.8	0.4	1.4	16	1.0	0.6	1.5	22	1.0	0.5	1.6
	U.S. No. 2	5.0	24	1.1	0.8	1.9	39	1.6	0.9	2.1	56	1.6	0.5	2.5
	U.S. No. 3	8.0	16	1.4	1.0	1.6	15	1.8	1.5	2.1	8	1.7	1.1	2.0
	U.S. No. 4	12.0	7	1.5	1.1	1.7	2	2.1	2.1	2.1	--	--	--	--
	U.S. No. 5	20.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	69	1.1	0.4	1.9	72	1.5	0.6	2.1	86	1.5	0.5	2.5
Total Defects <sup>1</sup>	U.S. No. 1	3.0	22	1.3	0.6	2.1	16	1.5	0.9	2.6	22	1.6	1.0	2.5
	U.S. No. 2	5.0	24	3.1	1.3	5.0	39	3.8	2.0	4.8	56	3.7	1.3	5.0
	U.S. No. 3	8.0	16	6.5	3.7	7.7	15	6.1	3.5	7.4	8	5.2	4.8	5.9
	U.S. No. 4	12.0	7	8.8	6.9	11.2	2	9.1	9.1	9.1	--	--	--	--
	No Grade	N/A	--	--	--	--	--	--	--	--	5	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	69	4.3	0.6	11.2	72	3.7	0.9	9.1	91	3.1	0.0	5.9
Dockage	U.S. No. 1	N/A	22	0.5	0.4	0.7	16	0.5	0.4	0.7	22	0.6	0.4	0.8
	U.S. No. 2	N/A	24	0.6	0.4	1.0	39	0.7	0.4	1.0	56	0.5	0.2	0.8
	U.S. No. 3	N/A	15	0.6	0.6	0.7	15	0.7	0.3	1.0	8	0.6	0.5	0.7
	U.S. No. 4	N/A	7	0.7	0.6	0.8	2	0.8	0.8	0.8	--	--	--	--
	No Grade	N/A	--	--	--	--	--	--	--	--	5	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	68	0.6	0.4	1.0	72	0.6	0.3	1.0	91	0.5	0.1	0.8
Contrasting Classes	U.S. No. 1	1.0	22	0.1	0.0	0.5	16	0.2	0.0	0.9	22	0.1	0.0	0.8
	U.S. No. 2	2.0	24	0.8	0.0	1.6	39	0.9	0.3	1.8	56	1.1	0.0	1.6
	U.S. No. 3	3.0	16	1.3	0.4	2.4	15	1.3	0.0	1.8	8	1.9	1.4	2.3
	U.S. No. 4	10.0	7	1.6	1.0	2.8	2	1.8	1.8	1.8	--	--	--	--
	U.S. No. 5	10.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	69	0.9	0.0	2.8	72	0.8	0.0	1.8	86	1.0	0.0	2.3
Protein (as is basis)	U.S. No. 1	N/A	20	13.6	12.6	14.1	16	13.9	12.2	14.5	8	13.8	12.9	14.4
	U.S. No. 2	N/A	18	13.4	12.3	15.3	29	14.0	13.3	16.4	8	13.7	13.0	15.0
	U.S. No. 3	N/A	16	13.2	13.0	13.5	15	13.9	13.3	15.4	0	0.0	0.0	0.0
	U.S. No. 4	N/A	7	13.2	13.0	13.5	2	13.5	13.5	13.5	--	--	--	--
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	61	13.4	12.3	15.3	62	13.9	12.2	16.4	16	13.8	12.9	15.0
Protein (12% moisture)	U.S. No. 1	N/A	20	12.9	11.9	13.4	16	13.9	12.2	14.5	8	13.0	12.2	13.5
	U.S. No. 2	N/A	18	13.5	12.4	15.3	29	14.0	13.3	16.4	8	13.6	12.9	14.9
	U.S. No. 3	N/A	16	13.3	13.1	13.6	15	13.9	13.3	15.4	0	0.0	0.0	0.0
	U.S. No. 4	N/A	7	13.4	13.1	13.6	2	13.5	13.5	13.5	--	--	--	--
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	61	13.2	11.9	15.3	62	13.9	12.2	16.4	16	13.2	12.2	14.9

N/A = Does not apply.

-- = No lots reported in this category.

<sup>1</sup>The sum of the component factor averages may not equal the average for this factor due to rounding.

Figure 7. DU Dockage Distribution, All Grades

**U.S. WHEAT EXPORTED, 2013  
DISTRIBUTION FOR DOCKAGE – ALL GRADES  
DU**

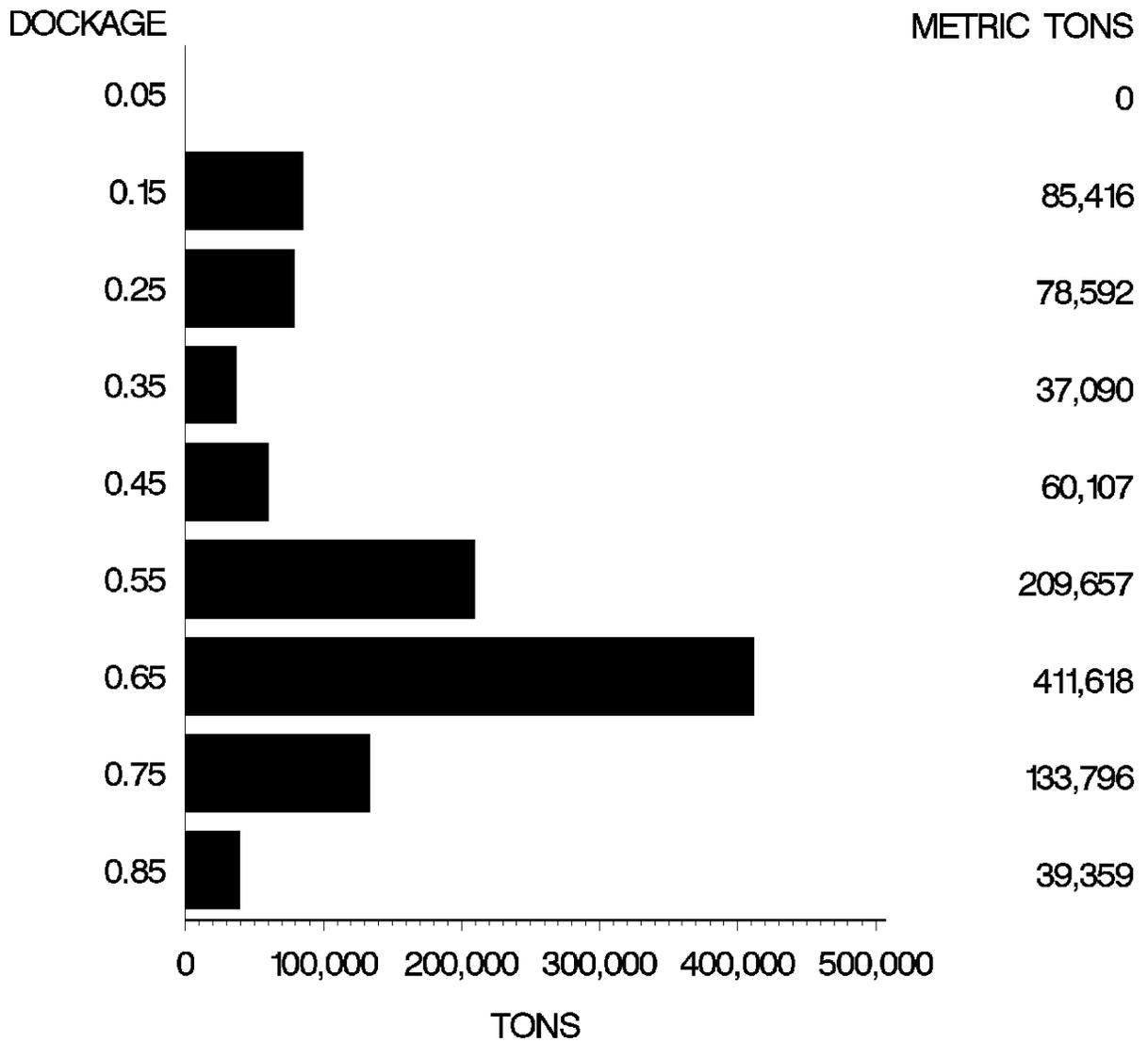


Figure 8. DU Protein Distribution, All Grades

**U.S. WHEAT EXPORTED, 2013**  
**DISTRIBUTION FOR PROTEIN (12% M) – ALL GRADES**  
**DU**

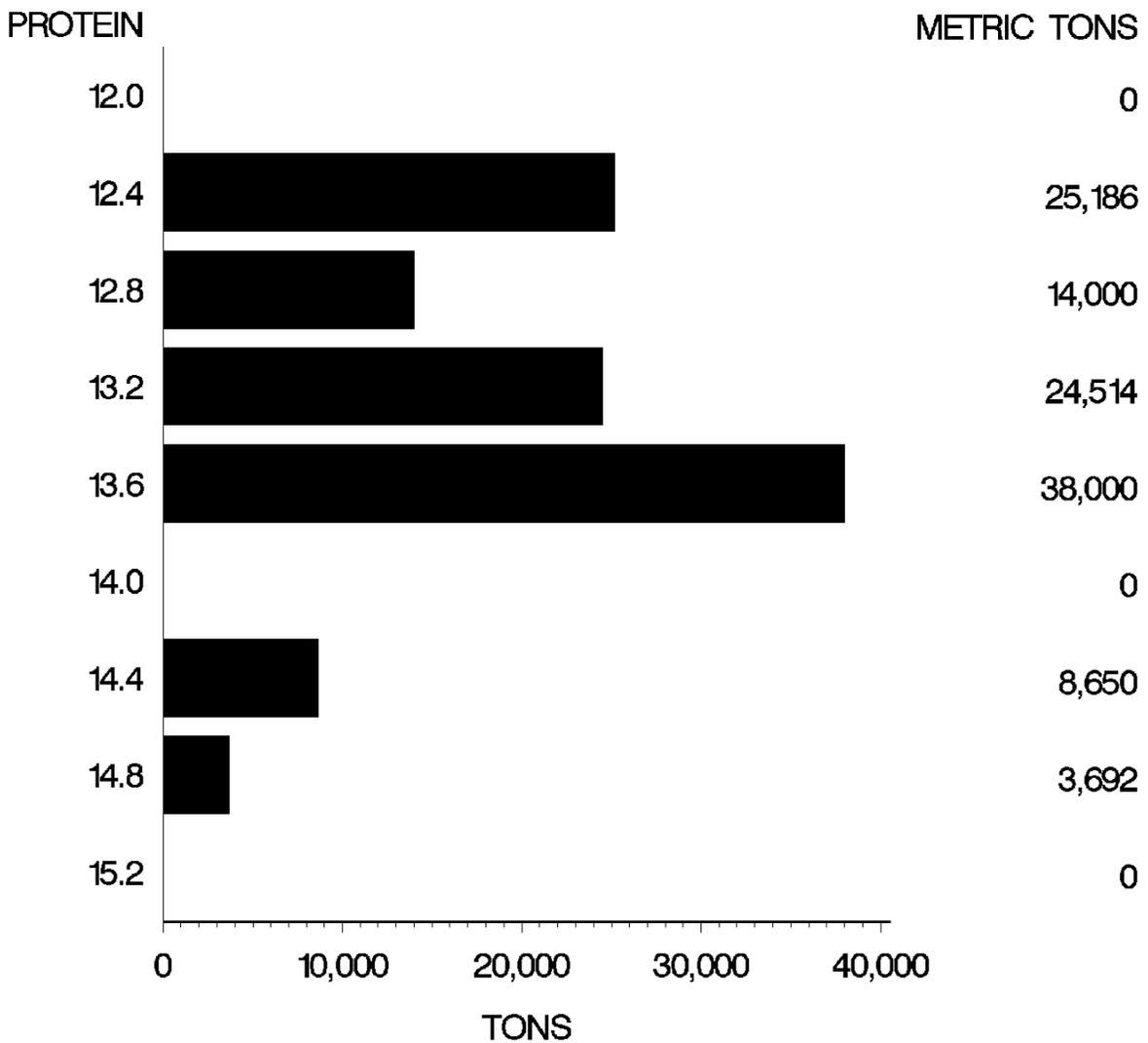


Table 6. Summary of export Soft White wheat quality, 2011-2013

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	60.0	98	61.6	60.1	63.5	130	62	60.1	63.5	97	61.8	60.5	63.2
	U.S. No. 2	58.0	175	61.5	60.1	63.3	255	62.1	60.8	63.6	207	61.8	60.5	63.3
	U.S. No. 3	56.0	--	--	--	--	2	62.1	62.1	62.1	--	--	--	--
	U.S. No. 4	54.0	2	61.8	61.7	61.9	15	61.7	61.2	62.2	4	62.1	62.1	62.1
	U.S. Sample Grade	N/A	3	61.7	60.6	62.7	11	61.9	61.3	62.8	4	62.3	62.1	62.5
	All lots	N/A	278	61.5	60.1	63.5	413	62	60.1	63.6	312	61.8	60.5	63.3
Test Weight (kg/hl)	U.S. No. 1	N/A	98	81.0	79.1	83.5	130	81.5	79.1	83.5	97	81.2	79.5	83.1
	U.S. No. 2	N/A	175	80.9	79.1	83.2	255	81.6	80	83.6	207	81.3	79.5	83.2
	U.S. No. 3	N/A	--	--	--	--	2	81.7	81.7	81.7	--	--	--	--
	U.S. No. 4	N/A	2	81.2	81.1	81.3	15	81.1	80.5	81.7	4	81.6	81.6	81.7
	U.S. Sample Grade	N/A	3	81.1	79.7	82.4	11	81.4	80.6	82.5	4	81.9	81.7	82.2
	All lots	N/A	278	80.9	79.1	83.5	413	81.5	79.1	83.6	312	81.3	79.5	83.2
Moisture	U.S. No. 1	N/A	98	9.9	9.2	11.6	130	9.9	8.9	12.4	97	9.5	8.5	11.5
	U.S. No. 2	N/A	175	9.9	9.2	11.7	255	9.7	8.8	11.1	207	9.3	8.3	11.0
	U.S. No. 3	N/A	--	--	--	--	2	10	10	10	--	--	--	--
	U.S. No. 4	N/A	2	9.9	9.8	10.0	15	9.9	9	10.6	4	9.1	8.9	9.3
	U.S. Sample Grade	N/A	3	9.8	9.6	10.2	11	9.7	9.3	10.1	4	9.0	9.0	9.1
	All lots	N/A	278	9.9	9.2	11.7	413	9.8	8.8	12.4	312	9.3	8.3	11.5
Heat-damaged Kernels	U.S. No. 1	0.2	98	0.0	0.0	0.0	130	0.0	0.0	0.2	97	0.0	0.0	0.0
	U.S. No. 2	0.2	175	0.0	0.0	0.0	255	0.0	0.0	0.0	207	0.0	0.0	0.0
	U.S. No. 3	0.5	--	--	--	--	2	0.0	0.0	0.0	--	--	--	--
	U.S. No. 4	1.0	2	0.0	0.0	0.0	15	0.0	0.0	0.0	4	0.0	0.0	0.0
	U.S. Sample Grade	N/A	3	0.0	0.0	0.0	11	0.0	0.0	0.0	4	0.0	0.0	0.0
	All lots	N/A	278	0.0	0.0	0.0	413	0.0	0.0	0.2	312	0.0	0.0	0.0
Damaged Kernels (Total)	U.S. No. 1	2.0	98	0.1	0.0	0.5	130	0.1	0.0	0.5	97	0.1	0.0	0.7
	U.S. No. 2	4.0	175	0.1	0.0	0.9	255	0.1	0.0	0.4	207	0.1	0.0	0.5
	U.S. No. 3	7.0	--	--	--	--	2	0.1	0.1	0.1	--	--	--	--
	U.S. No. 4	10.0	2	0.0	0.0	0.1	15	0.1	0.0	0.2	4	0.1	0.1	0.2
	U.S. Sample Grade	N/A	3	0.2	0.1	0.3	11	0.2	0.0	0.5	4	0.1	0.1	0.2
	All lots	N/A	278	0.1	0.0	0.9	413	0.1	0.0	0.5	312	0.1	0.0	0.7
Foreign Material	U.S. No. 1	0.4	98	0.1	0.0	0.2	130	0.1	0.0	0.2	97	0.1	0.0	0.2
	U.S. No. 2	0.7	175	0.1	0.0	0.2	255	0.1	0.0	0.2	207	0.1	0.0	0.3
	U.S. No. 3	1.3	--	--	--	--	2	0.1	0.1	0.1	--	--	--	--
	U.S. No. 4	3.0	2	0.1	0.0	0.1	15	0.1	0.0	0.1	4	0.1	0.1	0.1
	U.S. Sample Grade	N/A	3	0.1	0.1	0.1	11	0.1	0.0	0.2	4	0.1	0.1	0.1
	All lots	N/A	278	0.1	0.0	0.2	413	0.1	0.0	0.2	312	0.1	0.0	0.3
Shrunken and Broken	U.S. No. 1	3.0	98	0.9	0.3	2.1	130	0.7	0.3	1.1	97	0.8	0.3	1.2
	U.S. No. 2	5.0	175	0.9	0.4	1.9	255	0.7	0.5	1.6	207	0.8	0.5	1.1
	U.S. No. 3	8.0	--	--	--	--	2	0.6	0.6	0.6	--	--	--	--
	U.S. No. 4	12.0	2	0.7	0.7	0.7	15	0.6	0.5	0.8	4	1.0	0.9	1.0
	U.S. Sample Grade	N/A	3	0.7	0.6	0.8	11	0.7	0.6	0.8	4	0.7	0.6	0.8
	All lots	N/A	278	0.9	0.3	2.1	413	0.7	0.3	1.6	312	0.8	0.3	1.2
Total Defects <sup>1</sup>	U.S. No. 1	3.0	98	1.0	0.3	2.2	130	0.9	0.3	1.3	97	1.0	0.4	1.5
	U.S. No. 2	5.0	175	1.1	0.5	2.1	255	0.9	0.6	1.7	207	1.0	0.6	1.6
	U.S. No. 3	8.0	--	--	--	--	2	0.8	0.8	0.8	--	--	--	--
	U.S. No. 4	12.0	2	0.8	0.8	0.8	15	0.8	0.6	0.9	4	1.2	1.2	1.2
	U.S. Sample Grade	N/A	3	1.0	0.9	1.1	11	1.0	0.7	1.3	4	1.0	0.9	1.0
	All lots	N/A	278	1.1	0.3	2.2	413	0.9	0.3	1.7	312	1.0	0.4	1.6

Table 6. Summary of export Soft White wheat quality, 2011-2013, continued

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Dockage	U.S. No. 1	N/A	98	0.3	0.1	0.5	130	0.3	0.1	1.0	97	0.3	0.1	0.3
	U.S. No. 2	N/A	175	0.4	0.1	0.8	255	0.3	0.1	0.7	207	0.3	0.1	0.9
	U.S. No. 3	N/A	--	--	--	--	2	0.4	0.4	0.4	--	--	--	--
	U.S. No. 4	N/A	2	0.4	0.4	0.4	14	0.4	0.3	0.5	4	0.4	0.4	0.5
	U.S. Sample Grade	N/A	2	0.4	0.4	0.5	9	0.5	0.3	0.8	2	0.5	0.5	0.5
	All lots	N/A	277	0.4	0.1	0.8	410	0.3	0.1	1.0	310	0.3	0.1	0.9
Wheat of	U.S. No. 1	3.0	98	0.3	0.0	0.9	130	0.3	0.0	1.3	97	0.3	0.0	1.1
Other Classes	U.S. No. 2	5.0	175	0.3	0.0	1.9	255	0.3	0.0	1.3	206	0.3	0.0	2.7
	U.S. No. 3	10.0	--	--	--	--	2	0.1	0.1	0.1	--	--	--	--
	U.S. No. 4	10.0	2	0.4	0.3	0.5	15	0.2	0.0	0.5	4	0.6	0.3	0.8
	U.S. Sample Grade	N/A	3	0.2	0.2	0.4	11	0.6	0.1	7.7	4	0.6	0.6	0.7
	All lots	N/A	278	0.3	0.0	1.9	413	0.3	0.0	7.7	311	0.3	0.0	2.7
Contrasting Classes	U.S. No. 1	1.0	98	0.3	0.0	0.9	130	0.3	0.0	0.9	97	0.3	0.0	0.9
	U.S. No. 2	2.0	175	0.3	0.0	1.3	255	0.3	0.0	1.0	207	0.3	0.0	1.1
	U.S. No. 3	3.0	--	--	--	--	2	0.1	0.1	0.1	--	--	--	--
	U.S. No. 4	10.0	2	0.4	0.3	0.5	15	0.2	0.0	0.5	4	0.6	0.3	0.8
	U.S. Sample Grade	N/A	3	0.2	0.2	0.4	11	0.6	0.1	7.7	4	0.6	0.6	0.7
	All lots	N/A	278	0.3	0.0	1.3	413	0.3	0.0	7.7	312	0.3	0.0	1.1
Protein (as is basis)	U.S. No. 1	N/A	98	9.7	8.3	11.7	130	9.6	7.7	10.6	40	9.7	8.1	10.3
	U.S. No. 2	N/A	175	9.8	8.0	10.7	243	9.7	8.6	14.3	72	10.3	9.7	10.7
	U.S. No. 3	N/A	--	--	--	--	2	9.3	9.3	9.3	0	0.0	0.0	0.0
	U.S. No. 4	N/A	--	--	--	--	8	9.3	9.2	10.3	4	10.3	10.2	10.4
	Sample Grade	N/A	--	--	--	--	--	--	--	--	2	10.7	10.7	10.7
	All lots	N/A	273	9.8	8.0	11.7	383	9.7	7.7	14.3	118	10.2	8.1	10.7
Protein (12% moisture)	U.S. No. 1	N/A	98	9.5	8.1	11.5	130	9.4	7.7	10.4	40	9.4	8.1	10
	U.S. No. 2	N/A	175	9.6	8.0	10.5	243	9.5	8.4	14	72	10.0	9.5	10.4
	U.S. No. 3	N/A	--	--	--	--	2	9.1	9.1	9.1	--	--	--	--
	U.S. No. 4	N/A	--	--	--	--	8	9.1	9.0	10	4	9.9	9.9	10.0
	Sample Grade	N/A	--	--	--	--	--	--	--	--	2	10.3	10.3	10.3
	All lots	N/A	273	9.6	8.0	11.5	383	9.4	7.7	14.0	118	9.9	8.1	10.4

N/A = Does not apply.

-- = No lots reported in this category.

<sup>1</sup>The sum of the component factor averages may not equal the average for this factor due to rounding.

Figure 9. SWH Dockage Distribution, All Grades

**U.S. WHEAT EXPORTED, 2013  
DISTRIBUTION FOR DOCKAGE – ALL GRADES  
SWH**

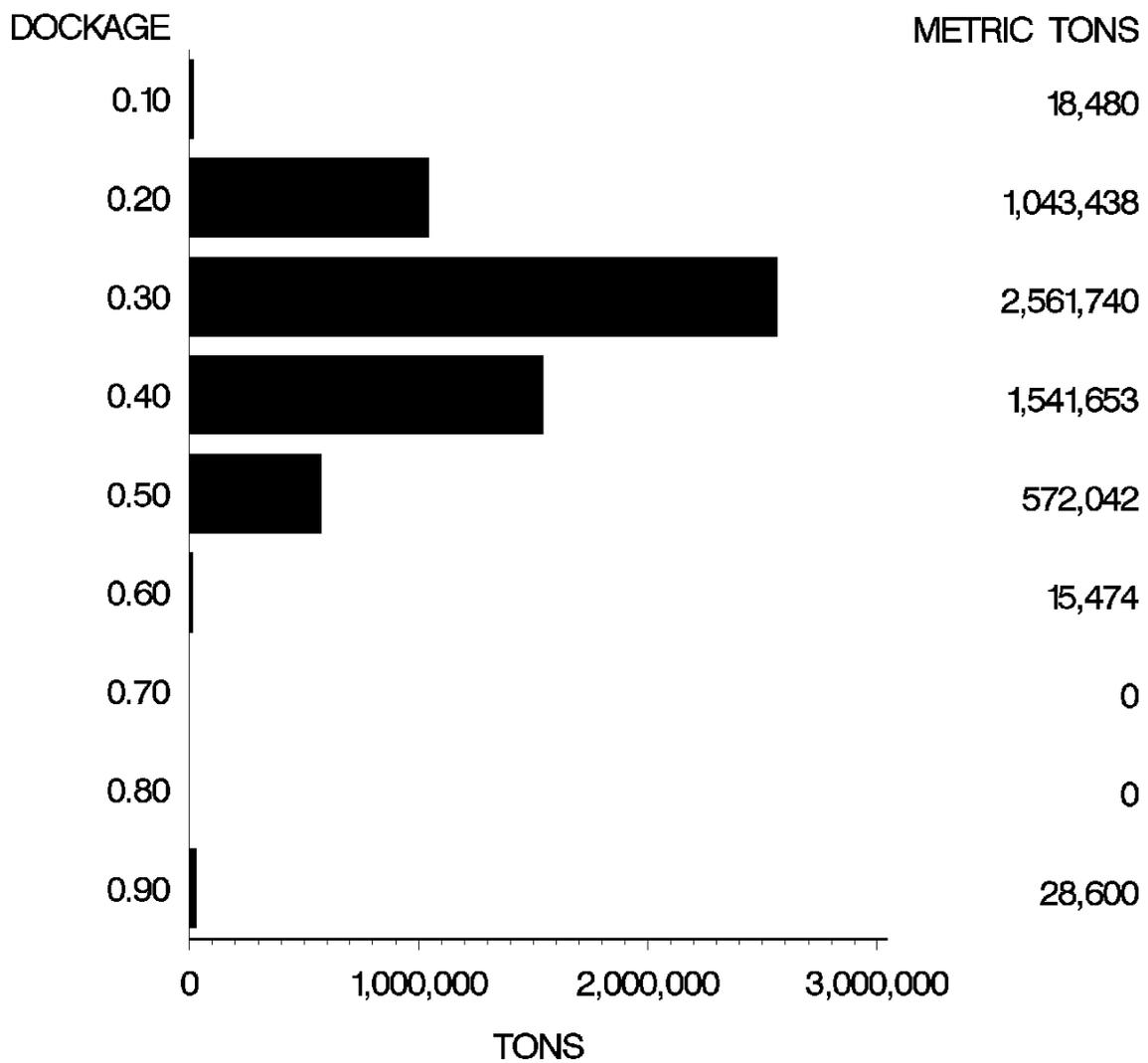


Figure 10. SWH Protein Distribution, All Grades

**U.S. WHEAT EXPORTED, 2013**  
**DISTRIBUTION FOR PROTEIN (12% M) – ALL GRADES**  
**SWH**

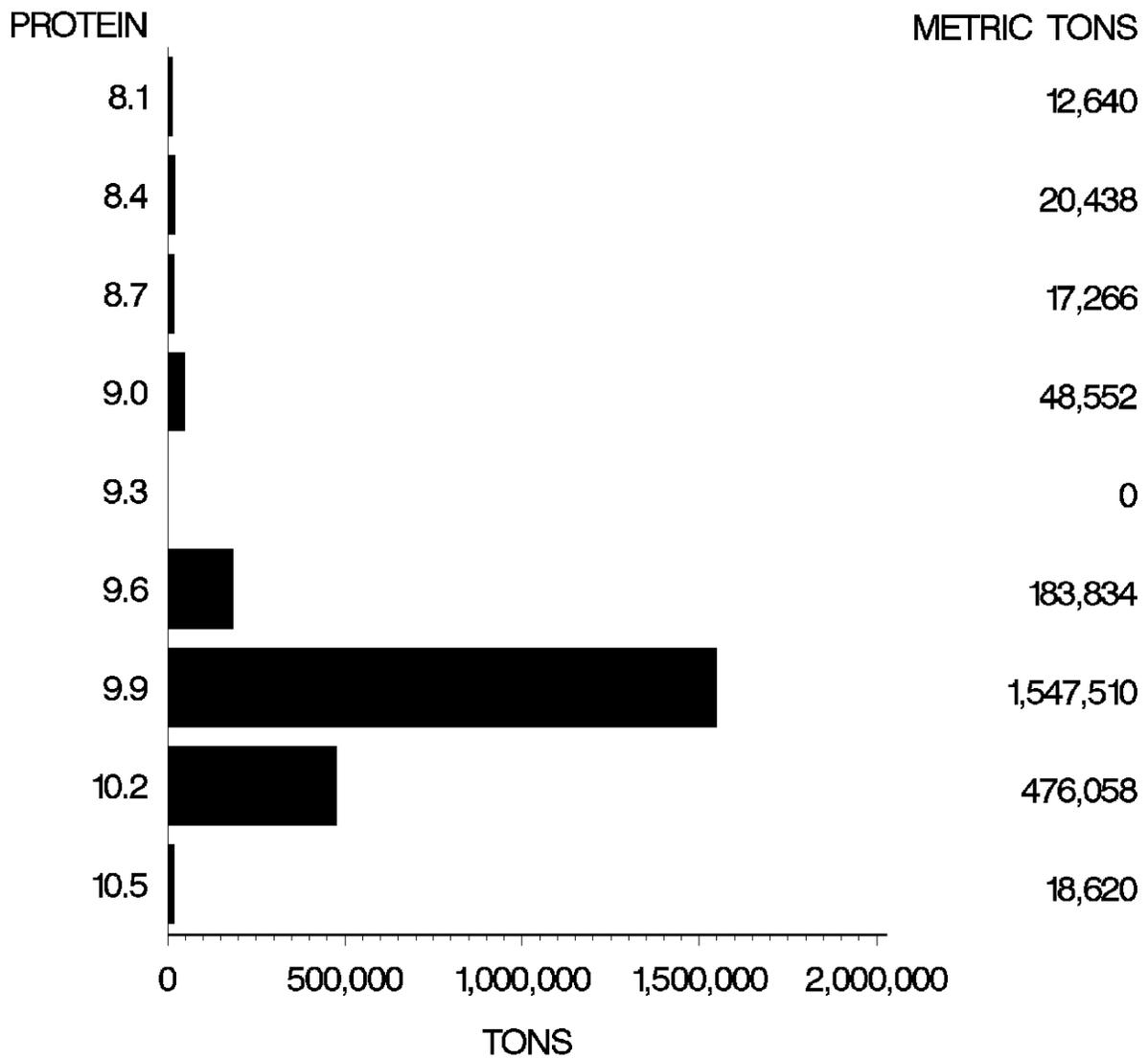


Table 7. Summary of export Hard White wheat quality, 2011-2013

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	60.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	58.0	1	63.2	63.2	63.2	11	62.5	62.2	63.2	--	--	--	--
	U.S. No. 3	56.0	2	61.5	61.5	61.5	3	63.3	63.1	63.5	--	--	--	--
	U.S. No. 4	54.0	11	62.3	61.4	63.0	14	62.5	61.7	63.4	8	62.8	62.3	63.2
	All lots	N/A	14	62.4	61.4	63.2	28	62.6	61.7	63.5	8	62.8	62.3	63.2
Test Weight (kg/hl)	U.S. No. 1	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	1	83.1	83.1	83.1	11	82.1	81.8	83.0	--	--	--	--
	U.S. No. 3	N/A	2	80.9	80.9	80.9	3	83.2	83.0	83.4	--	--	--	--
	U.S. No. 4	N/A	11	82.0	80.7	82.8	14	82.2	81.2	83.4	8	82.5	81.9	83.0
	All lots	N/A	14	82.0	80.7	83.1	28	82.3	81.2	83.4	8	82.5	81.9	83.0
Moisture	U.S. No. 1	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	1	10.5	10.5	10.5	11	10.1	9.9	10.4	--	--	--	--
	U.S. No. 3	N/A	2	10.5	10.5	10.5	3	10.2	10.1	10.3	--	--	--	--
	U.S. No. 4	N/A	11	10.9	10.5	11.2	14	10.3	9.9	10.7	8	10.0	9.8	10.2
	All lots	N/A	14	10.9	10.5	11.2	28	10.2	9.9	10.7	8	10.0	9.8	10.2
Heat-damaged Kernels	U.S. No. 1	0.2	--	0.0	0.0	0.0	--	--	--	--	--	--	--	--
	U.S. No. 2	0.2	1	0.0	0.0	0.0	11	0.0	0.0	0.0	--	--	--	--
	U.S. No. 3	0.5	2	0.0	0.0	0.0	3	0.0	0.0	0.0	--	--	--	--
	U.S. No. 4	1.0	11	0.0	0.0	0.0	14	0.0	0.0	0.0	8	0.0	0.0	0.0
	All lots	N/A	14	0.0	0.0	0.0	28	0.0	0.0	0.0	8	0.0	0.0	0.0
Damaged Kernels (Total)	U.S. No. 1	2.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	4.0	1	0.4	0.4	0.4	11	0.8	0.5	1.2	--	--	--	--
	U.S. No. 3	7.0	2	0.3	0.3	0.3	3	0.6	0.5	0.7	--	--	--	--
	U.S. No. 4	10.0	11	1.0	0.5	1.7	14	1.5	0.6	2.0	8	1.6	0.4	2.4
	All lots	N/A	14	1.0	0.3	1.7	28	1.1	0.5	2.0	8	1.6	0.4	2.4
Foreign Material	U.S. No. 1	0.4	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	0.7	1	0.1	0.1	0.1	11	0.1	0.1	0.2	--	--	--	--
	U.S. No. 3	1.3	2	0.1	0.1	0.1	3	0.2	0.1	0.3	--	--	--	--
	U.S. No. 4	3.0	11	0.4	0.1	0.5	14	0.2	0.1	0.4	8	0.3	0.1	0.6
	All lots	N/A	14	0.3	0.1	0.5	28	0.2	0.1	0.4	8	0.3	0.1	0.6
Shrunken and Broken	U.S. No. 1	3.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	5.0	1	1.4	1.4	1.4	11	1.3	1.2	1.5	--	--	--	--
	U.S. No. 3	8.0	2	1.0	1.0	1.0	3	1.3	1.3	1.4	--	--	--	--
	U.S. No. 4	12.0	11	1.3	0.9	1.6	14	1.4	1.1	1.9	8	1.5	1.3	1.6
	All lots	N/A	14	1.3	0.9	1.6	28	1.3	1.1	1.9	8	1.5	1.3	1.6
Total Defects <sup>1</sup>	U.S. No. 1	3.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	5.0	1	1.9	1.9	1.9	11	2.2	1.9	2.9	--	--	--	--
	U.S. No. 3	8.0	2	1.4	1.4	1.4	3	2.1	1.9	2.3	--	--	--	--
	U.S. No. 4	12.0	11	2.8	1.5	3.7	14	3.1	2.1	3.7	8	3.4	1.8	4.4
	All lots	N/A	14	2.6	1.4	3.7	28	2.6	1.9	3.7	8	3.4	1.8	4.4

Table 7. Summary of export Hard White wheat quality, 2011-2013, continued

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Dockage	U.S. No. 1	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	1	0.7	0.7	0.7	11	0.8	0.5	1.2	--	--	--	--
	U.S. No. 3	N/A	2	0.6	0.6	0.6	3	0.7	0.6	0.8	--	--	--	--
	U.S. No. 4	N/A	11	0.7	0.5	0.8	14	0.7	0.5	1.0	8	0.7	0.6	0.9
	All lots	N/A	14	0.7	0.5	0.8	28	0.8	0.5	1.2	8	0.7	0.6	0.9
Wheat of	U.S. No. 1	3.0	--	--	--	--	--	--	--	--	--	--	--	--
Other Classes	U.S. No. 2	5.0	1	2.6	2.6	2.6	11	1.4	0.9	2.0	--	--	--	--
	U.S. No. 3	10.0	2	2.5	2.5	2.5	3	2.6	2.5	2.8	--	--	--	--
	U.S. No. 4	10.0	11	4.2	2.2	5.4	14	3.6	1.2	4.6	8	3.1	2.6	4.0
	All lots	N/A	14	4.0	2.2	5.4	28	2.5	0.9	4.6	8	3.1	2.6	4.0
Contrasting Classes	U.S. No. 1	1.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	2.0	1	0.0	0.0	0.0	11	1.4	0.9	2.0	--	--	--	--
	U.S. No. 3	3.0	2	2.5	2.5	2.5	3	2.4	2.3	2.5	--	--	--	--
	U.S. No. 4	10.0	11	3.9	0.0	5.4	14	3.6	1.2	4.6	8	3.1	2.6	4.0
	All lots	N/A	14	3.5	0.0	5.4	28	2.5	0.9	4.6	8	3.1	2.6	4.0
Protein (as is basis)	U.S. No. 1	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	1	13.1	13.1	13.1	11	12.9	12.6	13.4	--	--	--	--
	U.S. No. 3	N/A	2	11.4	11.4	11.4	3	12.8	12.6	13.0	--	--	--	--
	U.S. No. 4	N/A	11	12.2	11.8	13.1	14	12.8	12.6	13.2	6	12.8	12.7	13.0
	All lots	N/A	14	12.3	11.4	13.1	28	12.9	12.6	13.4	6	12.8	12.7	13.0
Protein (12% moisture)	U.S. No. 1	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	1	12.9	12.9	12.9	11	12.6	12.3	13.1	--	--	--	--
	U.S. No. 3	N/A	2	11.2	11.2	11.2	3	12.6	12.3	12.8	--	--	--	--
	U.S. No. 4	N/A	11	12.1	11.7	12.9	14	12.6	12.3	13.0	6	12.6	12.4	12.7
	All lots	N/A	14	12.1	11.2	12.9	28	12.6	12.3	13.1	6	12.6	12.4	12.7

N/A = Does not apply.

-- = No lots reported in this category.

<sup>1</sup>The sum of the component factor averages may not equal the average for this factor due to rounding.

Table 8. Summary of export Mixed wheat quality, 2011-2013

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of				No. of				No. of			
			Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	60.0	--	--	--	--	2	61.4	61.4	61.4	--	--	--	--
	U.S. No. 2	58.0	1	62.1	62.1	62.1	--	--	--	--	1	61.7	61.7	61.7
	U.S. No. 4	54.0	--	--	--	--	--	--	--	--	2	60.9	60.9	60.9
	U.S. Sample Grade	N/A	--	--	--	--	13	62.6	62.0	63.4	--	--	--	--
	All lots	N/A	1	62.1	62.1	62.1	15	62.6	61.4	63.4	3	61.0	60.9	61.7
Test Weight (kg/hl)	U.S. No. 1	N/A	--	--	--	--	2	80.7	80.7	80.7	--	--	--	--
	U.S. No. 2	N/A	1	81.7	81.7	81.7	--	--	--	--	1	81.1	81.1	81.1
	U.S. No. 4	54.0	--	--	--	--	--	--	--	--	2	80.0	80.0	80.1
	U.S. Sample Grade	N/A	--	--	--	--	13	82.3	81.5	83.3	--	--	--	--
	All lots	N/A	1	81.7	81.7	81.7	15	82.3	80.7	83.3	3	80.2	80.0	81.1
Moisture	U.S. No. 1	N/A	--	--	--	--	2	11.7	11.7	11.7	--	--	--	--
	U.S. No. 2	N/A	1	12.3	12.3	12.3	--	--	--	--	1	12.3	12.3	12.3
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	2	11.9	11.4	12.0
	U.S. Sample Grade	N/A	--	--	--	--	13	9.8	9.5	10.1	--	--	--	--
	All lots	N/A	1	12.3	12.3	12.3	15	9.8	9.5	11.7	3	12.0	11.4	12.3
Heat-damaged Kernels	U.S. No. 1	0.2	--	--	--	--	2	0.1	0.1	0.1	--	--	--	--
	U.S. No. 2	0.2	1	0.0	0.0	0.0	--	--	--	--	1	0.0	0.0	0.0
	U.S. No. 4	1.0	--	--	--	--	--	--	--	--	2	0.0	0.0	0.0
	U.S. Sample Grade	N/A	--	--	--	--	13	0.0	0.0	0.0	--	--	--	--
	All lots	N/A	1	0.0	0.0	0.0	15	0.0	0.0	0.1	3	0.0	0.0	0.0
Damaged Kernels (Total)	U.S. No. 1	2.0	--	--	--	--	2	0.9	0.9	0.9	--	--	--	--
	U.S. No. 2	4.0	1	1.1	1.1	1.1	--	--	--	--	1	0.9	0.9	0.9
	U.S. No. 4	10.0	--	--	--	--	--	--	--	--	2	0.3	0.3	0.3
	U.S. Sample Grade	N/A	--	--	--	--	13	0.1	0.0	0.4	--	--	--	--
	All lots	N/A	1	1.1	1.1	1.1	15	0.1	0.0	0.9	3	0.4	0.3	0.9
Foreign Material	U.S. No. 1	0.4	--	--	--	--	2	0.1	0.1	0.1	--	--	--	--
	U.S. No. 2	0.7	1	0.2	0.2	0.2	--	--	--	--	1	0.2	0.2	0.2
	U.S. No. 4	3.0	--	--	--	--	--	--	--	--	2	0.1	0.1	0.1
	U.S. Sample Grade	N/A	--	--	--	--	13	0.1	0.0	0.1	--	--	--	--
	All lots	N/A	1	0.2	0.2	0.2	15	0.1	0.0	0.1	3	0.1	0.1	0.2
Shrunken and Broken	U.S. No. 1	3.0	--	--	--	--	2	1.2	1.2	1.2	--	--	--	--
	U.S. No. 2	5.0	1	1.1	1.1	1.1	--	--	--	--	1	1.0	1.0	1.0
	U.S. No. 4	12.0	--	--	--	--	--	--	--	--	2	0.8	0.8	0.9
	U.S. Sample Grade	N/A	--	--	--	--	13	0.8	0.7	1.4	0	0.0	0.0	0.0
	All lots	N/A	1	1.1	1.1	1.1	15	0.9	0.7	1.4	3	0.8	0.8	1.0
Total Defects <sup>1</sup>	U.S. No. 1	3.0	--	--	--	--	2	2.2	2.2	2.2	--	--	--	--
	U.S. No. 2	5.0	1	2.4	2.4	2.4	--	--	--	--	1	2.1	2.1	2.1
	U.S. No. 4	12.0	--	--	--	--	--	--	--	--	2	1.2	1.2	1.3
	U.S. Sample Grade	N/A	--	--	--	--	13	1.1	0.8	1.7	--	--	--	--
	All lots	N/A	1	2.4	2.4	2.4	15	1.1	0.8	2.2	3	1.4	1.2	2.1
Dockage	U.S. No. 1	N/A	--	--	--	--	2	0.5	0.5	0.5	--	--	--	--
	U.S. No. 2	N/A	1	0.9	0.9	0.9	--	--	--	--	1	0.7	0.7	0.7
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	2	0.4	0.3	0.7
	U.S. Sample Grade	N/A	--	--	--	--	13	0.5	0.2	1.5	--	--	--	--
	All lots	N/A	1	0.9	0.9	0.9	15	0.5	0.2	1.5	3	0.4	0.3	0.7
Protein (as is basis)	U.S. No. 1	N/A	--	--	--	--	2	12.0	12.0	12.0	--	--	--	--
	U.S. No. 2	N/A	1	13.4	13.4	13.4	--	--	--	--	--	--	--	--
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	4	9.8	9.5	10.0	--	--	--	--
	All lots	N/A	1	13.4	13.4	13.4	6	9.9	9.5	12.0	--	--	--	--
Protein (12% moisture)	U.S. No. 1	N/A	--	--	--	--	2	12.0	12.0	12.0	--	--	--	--
	U.S. No. 2	N/A	1	13.4	13.4	13.4	--	--	--	--	--	--	--	--
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	4	9.6	9.3	9.8	--	--	--	--
	All lots	N/A	1	13.4	13.4	13.4	6	9.6	9.3	12.0	--	--	--	--

N/A = Does not apply.

-- = No lots reported in this category.

<sup>1</sup>The sum of the component factor averages may not equal the average for this factor due to rounding.

## Corn

### Corn Grades and Grade Requirements

Corn is divided into three classes: Yellow corn, White Corn, and Mixed corn. There are no subclasses of corn. Each class of corn is divided into five U.S. numerical grades and U.S. Sample grade. Special grades are provided to emphasize the qualities or conditions affecting the value of the corn. These special grades are made a part of the grade designation but do not affect the numerical or Sample grade designation.

### U.S. Standards for Corn

Grade:	Min Limits of:	Max Limits of:		
		Damaged Kernels		Broken Corn and Foreign material (percent)
	Test Weight/bu (pounds)	Heat-Damaged kernels (percent)	Damaged kernels total (percent)	
U.S. No. 1	56.0	0.1	3.0	2.0
U.S. No. 2	54.0	0.2	5.0	3.0
U.S. No. 3	52.0	0.5	7.0	4.0
U.S. No. 4	49.0	1.0	10.0	5.0
U.S. No. 5	46.0	3.0	15.0	7.0

### U.S. Sample Grade:

U.S. Sample Grade is corn that:

- (a) Does not meet the requirements for grades U.S. No.1, 2, 3, 4, or 5; or
- (b) Contains stones which have an aggregate weight in excess of 0.1 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 an unknown foreign substance(s) or a commonly recognized harmful or toxic substance(s), 8 or more cockleburs (*Xanthium* spp.) or similar seeds singly or in combination, or animal filth in excess of 0.20 percent in 1,000 grams; or
- (c) Has a musty, sour, or commercially objectionable foreign odor; or
- (d) Is heating or otherwise of distinctly low quality.

## Corn

### Definitions

**Test weight (lb/bu)** is pounds of grain per Winchester bushel (2,150.42 cubic inches) as determined using an approved device. Test weight is determined before the removal of broken corn and foreign material.

**Test weight (kg/hl)** is the metric system equivalent to pounds per bushel. Kilograms per hectoliter are calculated by multiplying pounds per bushel by 1.287.

**Moisture** is the water content of grain as determined by an approved moisture meter. The percentage of moisture in a sample does not affect the numerical grade.

**Broken corn** is all matter that passes readily through a 12/64-inch round-hole sieve and over a 6/64-inch round-hole sieve. The percentage of broken corn by itself does not affect the numerical grade.

**Foreign material** is all matter that passes readily through a 6/64-inch round-hole sieve and all matter other than corn that remains on top of the 12/64-inch round-hole sieve. The percentage of foreign material by itself does not affect the numerical grade.

**Broken corn and foreign material** is all matter that passes readily through a 12/64-inch sieve, and all matter other than corn that remains in the sieved sample.

**Damaged kernels (total)** are kernels and pieces of corn kernels that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, germ-damaged, heat-damaged, insect-bored, mold-damaged, sprout-damaged, or otherwise materially damaged.

**Heat-damaged kernels** are kernels and pieces of corn kernels that are materially discolored by excessive respiration, with dark discoloration extending out of the germ, through the sides, and into the back of the kernel.

**Mixed corn** is corn that does not meet the color requirements for either of the classes Yellow corn or White corn, and which includes White-capped Yellow corn.

**Oil, protein, and starch** percentages in corn are determined by an approved near infrared transmittance (NIRT) instrument calibrated to approved methods. Percent corn oil, protein, or starch is reported on a dry matter basis unless other basis is requested. The level of oil, protein, or starch in a sample does not affect the numerical grade.

Table 9. U.S. Corn Exports: Number of lots and quantity exported by class and grade, 2011-2013

Class	Grade	2011		2012		2013	
		No. of Lots	Metric Tons	No. of Lots	Metric Tons	No. of Lots	Metric Tons
Yellow Corn	U.S. No. 1	93	1,145,134	107	1,326,185	113	1,057,314
	U.S. No. 2	811	19,057,643	970	19,208,843	727	16,411,681
	U.S. No. 3	509	16,323,443	551	15,338,296	194	3,659,967
	U.S. No. 4	4	44,282	--	--	1	16,282
	U.S. No. 5	1	86	--	--	5	63,773
	U.S. Sample Grade	--	--	--	--	1	7,700
	Not Inspected	5	224,504	6	61,846	-	-
	All lots	1,423	36,795,092	1,634	35,935,170	1,041	21,216,717
White Corn	U.S. No. 1	16	167,492	17	408,320	7	176,517
	U.S. No. 2	53	610,079	52	532,162	36	335,498
	U.S. No. 3	3	12,352	9	40,420	4	23,401
	U.S. No. 4	--	--	1	4,595	--	--
	U.S. Sample Grade	1	1,438	1	1,584	--	--
	Not Inspected	--	--	--	--	--	--
	All lots	73	791,361	80	987,081	47	535,416
All Classes	U.S. No. 1	109	1,312,626	124	1,734,505	120	1,233,831
	U.S. No. 2	864	19,667,722	1,022	19,741,005	763	16,747,179
	U.S. No. 3	512	16,335,795	560	15,378,716	198	3,683,368
	U.S. No. 4	4	44,282	1	4,595	1	16,282
	U.S. No. 5	1	86	--	--	5	63,773
	U.S. Sample Grade	1	1,438	1	1,584	1	7,700
	Not Inspected	5	224,504	6	61,846	--	--
	All lots	1,496	37,586,453	1,714	36,922,251	1,088	21,752,133

-- = No lots reported in the category.

Not inspected = These lots were sold without grade designation.

Table 10. Summary of export Yellow Corn quality, 2011-2013

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	56.0	93	57.9	56.1	60.5	107	58.3	56.3	60.7	113	58.8	56.3	61.4
	U.S. No. 2	54.0	811	57.2	54.1	60.0	970	57.6	54.1	68.0	720	57.9	54.0	60.9
	U.S. No. 3	52.0	509	57.0	53.9	60.0	551	57.5	54.6	69.5	191	58.3	53.3	61.4
	U.S. No. 4	49.0	4	56.3	55.6	57.1	--	--	--	--	1	57.3	57.3	57.3
	U.S. No. 5	46.0	1	58.0	58.0	58.0	--	--	--	--	5	57.6	57.3	58.4
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	56.6	56.6	56.6
	All lots	N/A	1,418	57.1	53.9	60.5	1,628	57.6	54.1	69.5	1,031	58.0	53.3	61.4
Test Weight (kg/hl)	U.S. No. 1	N/A	93	74.6	72.2	77.9	107	75.0	72.5	78.1	113	75.7	72.5	79.0
	U.S. No. 2	N/A	811	73.7	69.6	77.2	970	74.1	69.6	87.5	720	74.5	69.5	78.4
	U.S. No. 3	N/A	509	73.3	69.3	77.2	551	74.0	70.3	89.4	191	75.1	68.6	79.0
	U.S. No. 4	N/A	4	72.5	71.6	73.5	--	--	--	--	1	73.8	73.8	73.8
	U.S. No. 5	N/A	1	74.7	74.7	74.7	--	--	--	--	5	74.2	73.8	75.2
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	72.9	72.9	72.9
	All lots	N/A	1,418	73.5	69.3	77.9	1,628	74.1	69.6	89.4	1,031	74.6	68.6	79.0
Moisture	U.S. No. 1	N/A	93	14.0	13.0	14.8	107	14.3	13.5	15.2	113	14.1	13.2	14.8
	U.S. No. 2	N/A	810	14.0	12.9	15.0	970	14.3	13.1	14.9	721	14.2	11.7	15.0
	U.S. No. 3	N/A	509	14.2	12.8	15.2	551	14.3	13.6	14.9	194	14.1	13.1	15.0
	U.S. No. 4	N/A	4	13.9	13.7	14.2	--	--	--	--	1	14.7	14.7	14.7
	U.S. No. 5	N/A	1	14.1	14.1	14.1	--	--	--	--	5	14.6	14.4	14.7
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	14.0	14.0	14.0
	All lots	N/A	1,417	14.1	12.8	15.2	1,628	14.3	13.1	15.2	1,035	14.2	11.7	15.0
Heat-damaged Kernels	U.S. No. 1	0.1	93	0.0	0.0	0.0	107	0.0	0.0	0.0	113	0.0	0.0	0.0
	U.S. No. 2	0.2	811	0.0	0.0	0.2	970	0.0	0.0	0.2	726	0.0	0.0	0.1
	U.S. No. 3	0.5	509	0.0	0.0	0.3	551	0.0	0.0	0.1	194	0.0	0.0	0.1
	U.S. No. 4	1.0	4	0.0	0.0	0.0	--	--	--	--	1	0.0	0.0	0.0
	U.S. No. 5	3.0	1	0.0	0.0	0.0	--	--	--	--	5	0.0	0.0	0.0
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	All lots	N/A	1,418	0.0	0.0	0.3	1,628	0.0	0.0	0.2	1,040	0.0	0.0	0.1

Table 10. Summary of export Yellow Corn quality, 2011-2013, continued

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
<b>Damaged</b>	U.S. No. 1	3.0	93	1.8	0.0	3.0	107	1.8	0.0	3.0	113	1.5	0.5	3.0
<b>Kernels</b>	U.S. No. 2	5.0	811	2.9	0.0	5.0	970	2.0	0.0	5.0	726	1.7	0.1	4.8
<b>(Total)</b>	U.S. No. 3	7.0	509	2.9	0.2	7.0	551	1.8	0.0	6.7	194	1.8	0.1	6.4
	U.S. No. 4	10.0	4	1.9	1.3	2.5	--	--	--	--	1	1.3	1.3	1.3
	U.S. No. 5	15.0	1	0.5	0.5	0.5	--	--	--	--	5	2.0	1.5	2.2
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	6.3	6.3	6.3
	All lots	N/A	1,418	2.9	0.0	7.0	1,628	1.9	0.0	6.7	1,040	1.7	0.1	6.4
<b>Broken Corn</b>	U.S. No. 1	2.0	93	1.7	0.8	2.0	107	1.8	0.8	2.0	113	1.7	0.9	2.0
<b>and Foreign</b>	U.S. No. 2	3.0	811	2.7	0.8	3.0	970	2.7	0.9	3.0	723	2.7	0.5	3.0
<b>Material</b>	U.S. No. 3	4.0	509	3.3	0.7	4.0	551	3.4	1.0	4.0	194	3.1	0.7	4.0
	U.S. No. 4	5.0	4	4.2	3.8	4.5	--	--	--	--	1	4.4	4.4	4.4
	U.S. No. 5	7.0	1	5.3	5.3	5.3	--	--	--	--	5	5.5	5.2	7.0
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	32.9	32.9	32.9
	All lots	N/A	1,418	2.9	0.7	5.3	1,628	3.0	0.8	4.0	1,037	2.7	0.5	32.9
<b>Broken Corn</b>	U.S. No. 1	N/A	9	1.5	1.0	1.6	11	1.4	1.3	1.5	4	1.4	0.5	1.5
	U.S. No. 2	N/A	86	2.0	0.7	3.0	80	2.1	1.5	2.8	112	1.9	0.6	2.4
	U.S. No. 3	N/A	3	3.5	2.5	3.9	--	--	--	--	--	--	--	--
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	1	1.7	1.7	1.7
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	3	2.1	2.0	2.2
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	98	2.0	0.7	3.9	91	2.0	1.3	2.8	120	1.9	0.5	2.4
<b>Foreign</b>	U.S. No. 1	N/A	9	0.5	0.4	0.7	11	0.5	0.4	0.7	4	0.5	0.4	1.4
<b>Material</b>	U.S. No. 2	N/A	82	0.8	0.2	1.2	78	0.7	0.3	1.1	120	0.9	0.2	2.7
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	1	3.5	3.5	3.5
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	1	2.7	2.7	2.7
	U.S. No. 5	N/A	--	--	--	--	--	--	--	--	3	3.3	3.0	3.6
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	91	0.7	0.2	1.2	89	0.7	0.3	1.1	129	0.9	0.2	3.6

N/A = Does not apply.

-- = No lots reported in this category.

Table 11. Summary of export White Corn quality, 2011-2013

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	56.0	16	59.4	58.3	60.7	17	59.9	59.1	60.8	7	60.2	59.5	60.9
	U.S. No. 2	54.0	53	59.4	58.0	60.8	52	59.6	58.3	61.0	36	280.0	58.5	59.5
	U.S. No. 3	52.0	3	59.8	59.5	60.2	9	59.7	58.0	60.1	4	59.5	59.0	60.5
	U.S. No. 4	49.0	--	--	--	--	1	58.5	58.5	58.5	0	0.0	0.0	0.0
	U.S. Sample Grade	N/A	1	59.6	59.6	59.6	1	59.8	59.8	59.8	0	0.0	0.0	0.0
	All lots	N/A	73	59.4	58.0	60.8	80	59.7	58.0	61.0	47	198.0	58.5	60.9
Test Weight (kg/hl)	U.S. No. 1	N/A	16	76.4	75.1	78.1	17	77.1	76.1	78.2	7	77.5	76.5	78.4
	U.S. No. 2	N/A	53	76.5	74.7	78.3	52	76.8	75.0	78.5	36	360.0	75.3	76.7
	U.S. No. 3	N/A	3	77.0	76.6	77.5	9	76.8	74.7	77.3	4	76.6	76.2	77.8
	U.S. No. 4	N/A	--	--	--	--	1	75.3	75.3	75.3	--	--	--	--
	U.S. Sample Grade	N/A	1	76.7	76.7	76.7	1	77.0	77.0	77.0	--	--	--	--
	All lots	N/A	73	76.5	74.7	78.3	80	76.9	74.7	78.5	47	255	75.3	78.4
Moisture	U.S. No. 1	N/A	16	13.6	13.0	14.6	17	14.2	13.4	14.5	7	13.4	12.8	13.7
	U.S. No. 2	N/A	53	13.6	12.7	14.6	52	14.0	12.2	14.5	35	13.8	10.6	14.5
	U.S. No. 3	N/A	3	13.4	13.1	13.7	9	14.2	13.5	14.4	4	13.7	13.2	14.1
	U.S. No. 4	N/A	--	--	--	--	1	13.9	13.9	13.9	--	--	--	--
	U.S. Sample Grade	N/A	1	13.5	13.5	13.5	1	13.8	13.8	13.8	--	--	--	--
	All lots	N/A	73	13.6	12.7	14.6	80	14.1	12.2	14.5	46	13.7	10.6	14.5
Heat-damaged Kernels	U.S. No. 1	0.1	16	0.0	0.0	0.0	17	0.0	0.0	0.0	7	--	--	--
	U.S. No. 2	0.2	53	0.0	0.0	0.1	52	0.0	0.0	0.0	36	--	--	--
	U.S. No. 3	0.5	3	0.0	0.0	0.0	9	0.0	0.0	0.0	4	--	--	--
	U.S. No. 4	1.0	--	--	--	--	1	0.0	0.0	0.0	0	--	--	--
	U.S. Sample Grade	N/A	1	0.0	0.0	0.0	1	0.0	0.0	0.0	0	--	--	--
	All lots	N/A	73	0.0	0.0	0.1	80	0.0	0.0	0.0	47	--	--	--

Table 11. Summary of export White Corn quality, 2011-2013, continued

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
<b>Damaged Kernels (Total)</b>	U.S. No. 1	3.0	16	1.1	0.6	1.7	17	0.8	0.6	2.2	7	0.9	0.5	1.8
	U.S. No. 2	5.0	53	1.6	0.3	4.1	52	1.7	0.5	4.9	36	1.5	0.5	5
	U.S. No. 3	7.0	3	1.4	1.2	1.5	9	3.2	0.7	6.4	4	1.1	0.9	1.9
	U.S. No. 4	10.0	--	--	--	--	1	1.3	1.3	1.3	--	--	--	--
	U.S. Sample Grade	N/A	1	2.5	2.5	2.5	1	1.7	1.7	1.7	--	--	--	--
	<b>All lots</b>	N/A	73	1.5	0.3	4.1	80	1.4	0.5	6.4	47	1.3	0.5	5
<b>Broken Corn and Foreign Material</b>	U.S. No. 1	2.0	16	1.8	1.4	2.0	17	1.7	1.5	1.9	7	1.7	1.2	2
	U.S. No. 2	3.0	53	2.3	0.5	3.0	52	2.5	0.9	3.0	36	2.3	1.3	3
	U.S. No. 3	4.0	3	2.8	1.6	3.6	9	2.9	1.8	3.5	3	2.3	2.2	3.1
	U.S. No. 4	5.0	--	--	--	--	1	4.1	4.1	4.1	--	--	--	--
	U.S. Sample Grade	N/A	1	2.5	2.5	2.5	1	2.9	2.9	2.9	--	--	--	--
	<b>All lots</b>	N/A	73	2.2	0.5	3.6	80	2.2	0.9	4.1	46	2.1	1.2	3.1
<b>Broken Corn</b>	U.S. No. 1	N/A	1	1.2	1.2	1.2	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	10	1.7	1.1	2.1	9	1.8	1.3	2.3	14	2.0	1.6	2.4
	U.S. No. 3	N/A	--	--	--	--	1	2.3	2.3	2.3	--	--	--	--
	U.S. No. 4	N/A	--	--	--	--	1	3.2	3.2	3.2	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	1	1.8	1.8	1.8	--	--	--	--
	<b>All lots</b>	N/A	11	1.6	1.1	2.1	12	1.9	1.3	3.2	14	2.0	1.6	2.4
<b>Foreign Material</b>	U.S. No. 1	N/A	1	0.4	0.4	0.4	--	--	--	--	--	--	--	--
	U.S. No. 2	N/A	10	0.7	0.5	0.9	9	0.6	0.4	0.9	14	0.7	0.5	1.0
	U.S. No. 3	N/A	--	--	--	--	1	0.8	0.8	0.8	1	0.8	0.8	0.8
	U.S. No. 4	N/A	--	--	--	--	1	0.9	0.9	0.9	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	1	1.1	1.1	1.1	--	--	--	--
	<b>All lots</b>	N/A	11	0.6	0.4	0.9	12	0.6	0.4	1.1	15	0.7	0.5	1.0

N/A = Does not apply.

-- = No lots reported in this category.

Figure 11. Corn BCFM Distribution, Grade 2

### U.S. CORN EXPORTED, 2013 DISTRIBUTION FOR BCFM – GRADE 2

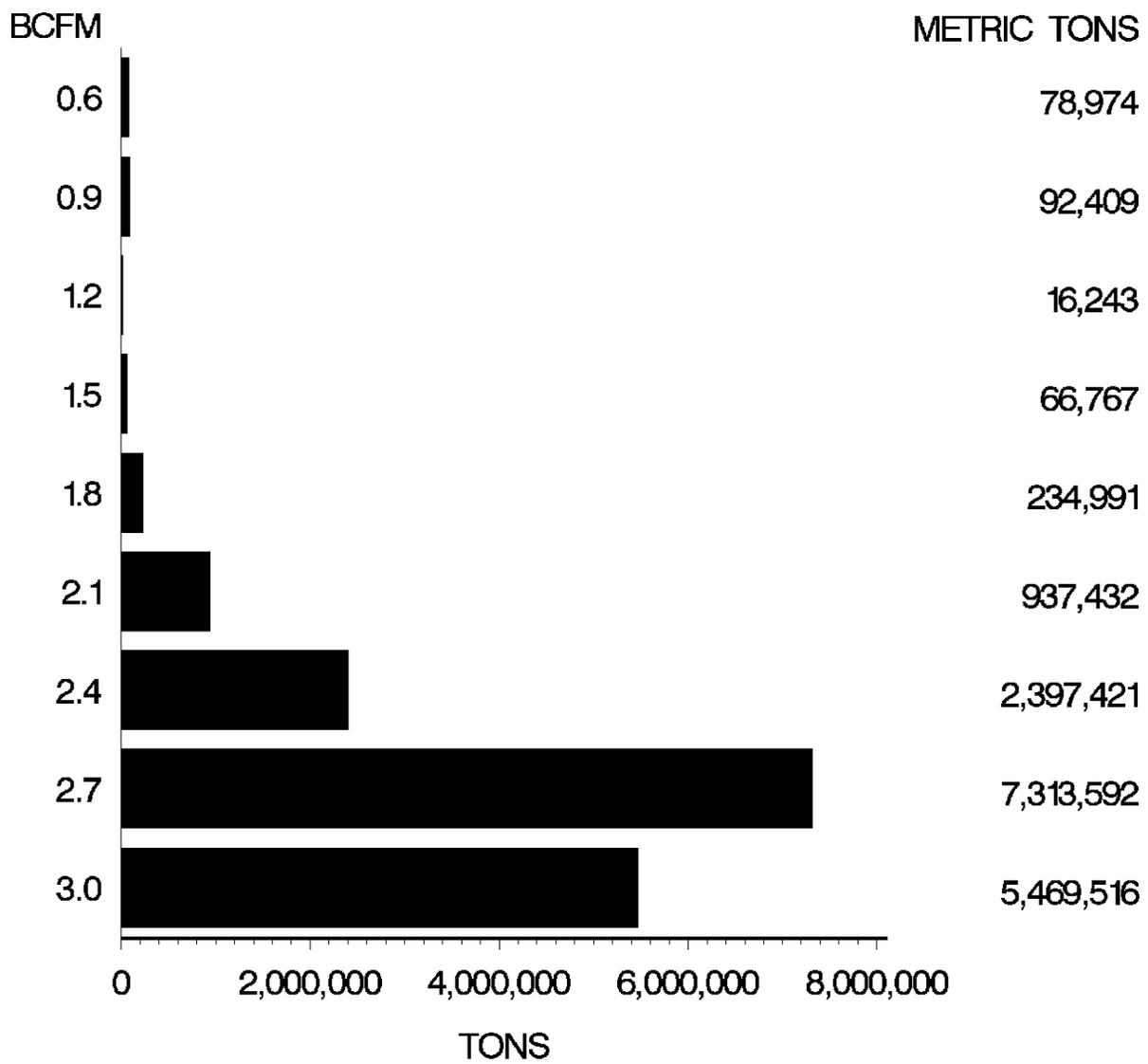
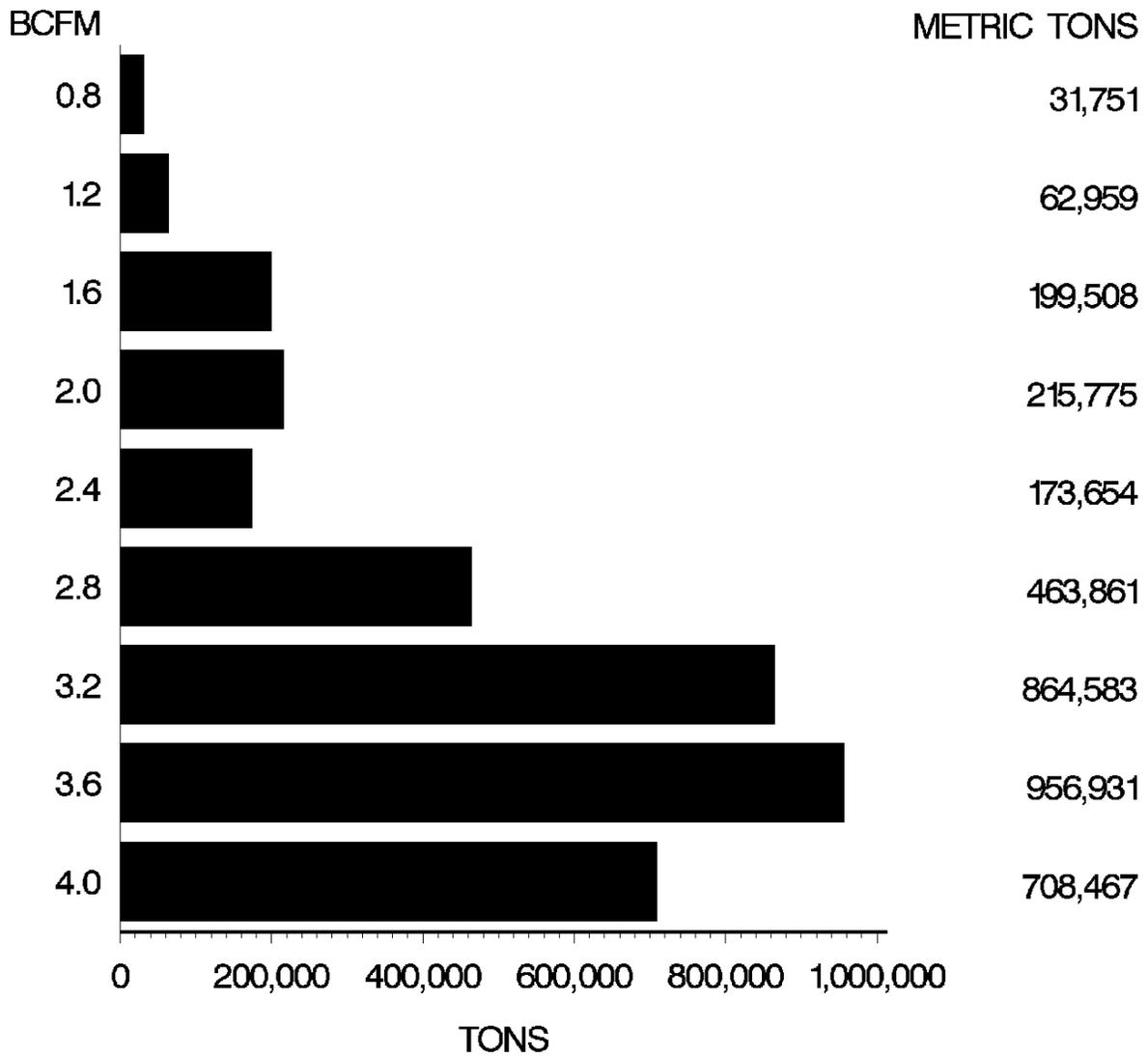


Figure 12. Corn BCFM Distribution, Grade 3

### U.S. CORN EXPORTED, 2013 DISTRIBUTION FOR BCFM – GRADE 3



## Soybeans

### Soybean Grades and Grade Requirements

There are two classes of soybeans: Yellow soybeans and Mixed soybeans. There are no soybean subclasses. The class Yellow soybeans is the class most commonly exported by the U.S. market. Each class is divided into four U.S. numerical grades and U.S. Sample grade.

Special grades are provided to emphasize special qualities or conditions affecting the value of the soybeans. These special grades are a part of the grade designation but do not affect the numerical or Sample grade designation.

### U.S. Standards for Soybeans

Grade:	Max Limits of:				
	Damaged Kernels		Foreign Material (percent)	Splits (percent)	Soybeans of other colors <sup>1/</sup> (percent)
	Heat (part of total) (percent)	Total (percent)			
U.S. No. 1	0.2	2.0	1.0	10.0	1.0
U.S. No. 2	0.5	3.0	2.0	20.0	2.0
U.S. No. 3	1.0	5.0	3.0	30.0	5.0
U.S. No. 4	3.0	8.0	5.0	40.0	10.0

#### U.S. Sample Grade:

U.S. Sample grade shall be soybeans which:

- (a) Do not meet the requirements for U.S. Nos. 1, 2, 3, or 4; or
- (b) Contains 4 or more stones which have an aggregate weight in excess of 0.1 percent of the sample weight, 1 or more pieces of broken glass, 3 or more crotalaria seeds, 2 or more castor beans, 4 or more particles of an unknown foreign substance(s) or a commonly recognized harmful or toxic foreign substance(s), 10 or more rodent pellets, bird droppings, or an equivalent quantity of other animal filth in 1,000 grams of soybeans; or
- (c) Contains 11 or more pieces, in any combination, of animal filth, castor beans, crotalaria seeds, glass, stones, or unknown foreign substances.
- (d) Have a musty, sour, or commercially objectionable foreign odor (except garlic odor); or
- (e) Are heating or otherwise of distinctly low quality.

---

<sup>1/</sup> Disregard for Mixed Soybeans.

## Soybeans

### Definitions

**Test weight (lb/bu)** is pounds of grain per Winchester bushel determined by an approved device and is recorded to the nearest tenth pound for soybeans.

**Test weight (kg/hl)** is the metric system equivalent to pounds per bushel. Kilograms per hectoliter are calculated by multiplying pounds per bushel by 1.287.

**Moisture** is the water content of grain as determined by an approved electronic moisture meter. The percentage of moisture in a sample does not affect the numerical grade.

**Splits** are soybeans with more than one-fourth of the bean removed and which are not damaged.

**Damaged kernels** are soybeans and pieces of soybeans which are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, heat-damaged, insect-bored, mold-damaged, sprout damaged, stinkbug-stung, or otherwise materially damaged.

**Heat-damaged kernels** are soybeans and pieces of soybeans which are materially discolored and damaged by heat.

**Foreign material** is all matter, including soybeans and pieces of soybeans that will pass readily through an 8/64-inch sieve and all matter other than soybeans remaining on the sieve after sieving.

**Soybeans of other colors** are soybeans which have green, black, brown, or bicolored seed coats. Before September 9, 1985, this factor was called “brown, black, and/or bicolored soybeans in yellow or green soybeans.”

**Mixed soybeans** is a combination of classes of soybeans which does not meet the minimum requirements of the class Yellow soybeans.

**Protein and oil** percentages in soybeans are determined by an approved near infrared transmittance (NIRT) instrument calibrated to approved methods. Percent protein and oil is reported on a 13 percent moisture basis unless another basis is requested. The level of protein and oil in a sample does not affect the numerical grade.

*Table 12. U.S. Soybean Exports: Number of lots and quantity exported by grade, 2011-2013*

Grade	2011		2012		2013	
	No. of Lots	Metric Tons	No. of Lots	Metric Tons	No. of Lots	Metric Tons
U.S. No. 1	11	178,456	41	612,745	41	757,754
U.S. No. 2	793	29,277,552	1,361	53,699,243	1,056	42,488,373
U.S. No. 3	4	31,463	4	32,123	4	48,134
U.S. No. 4	--	--	--	--	1	1,390
No Grade	--	--	--	--	3	199,263
U.S. Sample Grade	--	--	3	226,179	1	66,003
Not Inspected	2	24,288	2	130,984	2	5,346
All lots	810	29,511,759	1,411	54,701,274	1,108	43,566,263

-- = No lots reported in the category.

Not inspected = These lots were sold without grade designation.

Table 13. Summary of export Soybean quality, 2011-2013

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of				No. of				No. of			
			Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	N/A	11	56.3	55.8	57.1	40	56.3	55.6	57.3	37	56.2	55.3	56.8
	U.S. No. 2	N/A	759	56.1	53.4	58.5	1,286	55.9	46.4	57.7	984	55.8	12.6	59.1
	U.S. No. 3	N/A	4	57.2	56.6	57.8	4	56.4	54.5	58.1	3	56.6	56.1	56.8
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	1	55.8	55.8	55.8
	U.S. Sample Grade	N/A	--	--	--	--	3	55.8	55.8	55.8	1	55.8	55.8	55.8
	All lots	N/A	774	56.1	53.4	58.5	1,333	55.9	46.4	58.1	1,026	55.8	12.6	59.1
Test Weight (kg/hl)	U.S. No. 1	N/A	11	72.5	71.8	73.5	40	72.5	71.6	73.8	37	72.4	71.2	73.1
	U.S. No. 2	N/A	759	72.2	68.7	75.3	1,286	72.0	59.8	74.3	984	71.8	16.2	76.1
	U.S. No. 3	N/A	4	73.7	72.9	74.4	4	72.6	70.2	74.8	3	72.9	72.3	73.1
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	1	71.8	71.8	71.8
	U.S. Sample Grade	N/A	--	--	--	--	3	71.8	71.8	71.8	1	71.8	71.8	71.8
	All lots	N/A	774	72.2	68.7	75.3	1,333	72.0	59.8	74.8	1,026	71.8	16.2	76.1
Moisture	U.S. No. 1	N/A	11	10.7	9.8	12.3	40	11.0	9.6	12.7	41	11.9	10.8	13.3
	U.S. No. 2	N/A	793	10.8	8.6	13.9	1,360	10.8	8.6	13.9	1,052	11.8	1.5	14.0
	U.S. No. 3	N/A	4	10.7	10.5	10.8	4	11.3	10.2	12.7	4	12.6	10.1	14.0
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	1	12.4	12.4	12.4
	U.S. Sample Grade	N/A	--	--	--	--	3	10.7	10.7	10.7	--	--	--	--
	All lots	N/A	808	10.8	8.6	13.9	1,407	10.8	8.6	13.9	1,098	11.8	1.5	14.0
Heat-damaged Kernels	U.S. No. 1	0.2	11	0.0	0.0	0.0	41	0.0	0.0	0.0	41	0.0	0.0	0.1
	U.S. No. 2	0.5	793	0.1	0.0	0.5	1,361	0.0	0.0	0.5	1,054	0.0	0.0	0.5
	U.S. No. 3	1.0	4	0.0	0.0	0.0	4	0.1	0.0	0.3	4	--	--	--
	U.S. No. 4	3.0	--	--	--	--	--	--	--	--	1	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	3	0.1	0.1	0.1	1	0.3	0.3	0.3
	All lots	N/A	808	0.1	0.0	0.5	1,409	0.0	0.0	0.5	1,101	0.0	0.0	0.5
Damaged Kernels (Total)	U.S. No. 1	2.0	11	0.5	0.2	0.8	41	0.5	0.0	1.0	41	0.5	0.0	1.2
	U.S. No. 2	3.0	793	0.8	0.0	3.0	1,361	0.8	0.0	3.0	1,054	0.7	0.0	3.0
	U.S. No. 3	5.0	4	0.2	0.1	0.3	4	2.2	0.7	3.9	4	0.3	0.1	0.4
	U.S. No. 4	8.0	--	--	--	--	--	--	--	--	1	0.3	0.3	0.3
	U.S. Sample Grade	N/A	--	--	--	--	3	0.7	0.7	0.7	1	1.3	1.3	1.3
	All lots	N/A	808	0.8	0.0	3.0	1,409	0.8	0.0	3.9	1,101	0.7	0.0	3.0

Table 13. Summary of export Soybean quality, 2011-2013, continued

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of				No. of				No. of			
			Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Foreign	U.S. No. 1	1.0	11	0.9	0.5	1.0	41	0.9	0.0	1.0	41	0.8	0.1	1.0
Material	U.S. No. 2	2.0	793	1.5	0.0	2.0	1,361	1.5	0.0	2.0	1,053	1.3	0.4	2.0
	U.S. No. 3	3.0	4	1.5	1.3	1.7	4	0.9	0.6	1.5	4	1.6	0.4	2.1
	U.S. No. 4	5.0	--	--	--	--	--	--	--	--	1	3.9	3.9	3.9
	U.S. Sample Grade	N/A	--	--	--	--	3	1.9	1.9	1.9	1	2.0	2.0	2.0
	All lots	N/A	808	1.5	0.0	2.0	1,409	1.5	0.0	2.0	1,100	1.3	0.1	3.9
Splits	U.S. No. 1	10.0	11	7.5	3.4	9.7	41	7.2	0.0	9.5	41	5.9	0.0	9.0
	U.S. No. 2	20.0	793	8.0	0.0	19.6	1,361	9.1	0.0	18.9	1,052	8.0	0.0	18.4
	U.S. No. 3	30.0	4	8.1	5.4	11.5	4	5.5	3.8	6.1	4	10.5	5.2	12.1
	U.S. No. 4	40.0	--	--	--	--	--	--	--	--	1	9.0	9.0	9.0
	U.S. Sample Grade	N/A	--	--	--	--	3	11.0	11.0	11.0	1	9.1	9.1	9.1
All lots	N/A	808	8.0	0.0	19.6	1,409	9.1	0.0	18.9	1,099	8.0	0.0	18.4	
Soybeans of Other Colors	U.S. No. 1	1.0	11	0.0	0.0	0.0	41	0.0	0.0	0.1	41	0.7	0.0	7.0
	U.S. No. 2	2.0	793	0.0	0.0	0.5	1,361	0.0	0.0	0.2	1,049	0.0	0.0	5.7
	U.S. No. 3	5.0	4	0.0	0.0	0.1	4	0.1	0.0	0.1	4	--	--	--
	U.S. No. 4	10.0	--	--	--	--	--	--	--	--	1	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	3	0.0	0.0	0.0	1	--	--	--
All lots	N/A	808	0.0	0.0	0.5	1,409	0.0	0.0	0.2	1,096	0.0	0.0	7.0	
Protein (adjusted to 13% moisture)	U.S. No. 1	N/A	8	35.6	34.9	36.8	35	34.4	33.2	35.5	14	34.7	34.3	38.9
	U.S. No. 2	N/A	411	34.6	33.1	40.2	622	34.2	33.0	38.3	188	34.2	33.6	38.0
	U.S. No. 3	N/A	--	--	--	--	2	35.0	34.9	35.4	--	--	--	--
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	3	33.8	33.8	33.8	--	--	--	--
All lots	N/A	419	34.6	33.1	40.2	662	34.2	33.0	38.3	202	34.2	33.6	38.9	
Oil (adjusted to 13% moisture)	U.S. No. 1	N/A	8	18.9	18.5	19.3	35	18.7	18.1	19.6	14	19.3	17.4	20.0
	U.S. No. 2	N/A	414	18.8	16.1	20.2	640	18.9	16.2	20.5	203	19.2	17.2	19.6
	U.S. No. 3	N/A	--	--	--	--	2	19.5	19.5	19.6	--	--	--	--
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	3	18.9	18.9	18.9	--	--	--	--
All lots	N/A	422	18.8	16.1	20.2	680	18.9	16.2	20.5	217	19.2	17.2	20.0	

N/A = Does not apply.

-- = No lots reported in this category.

Figure 13. Soybean FM Distribution, Grade 2

### U.S. SOYBEANS EXPORTED, 2013 DISTRIBUTION FOR FM – GRADE 2

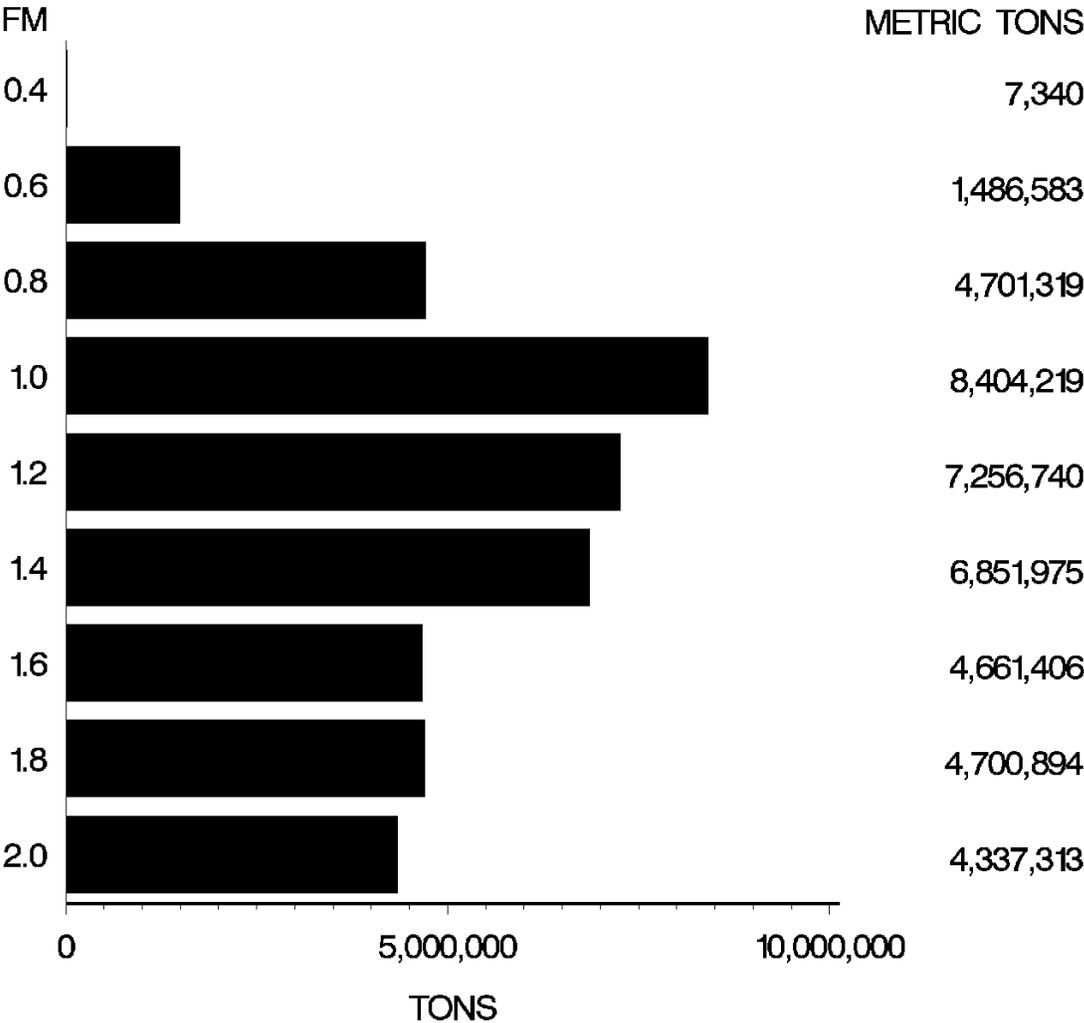


Figure 14. Soybean Protein Distribution, All Grades

### U.S. SOYBEANS EXPORTED, 2013 DISTRIBUTION FOR PROTEIN (13% M) – ALL GRADES

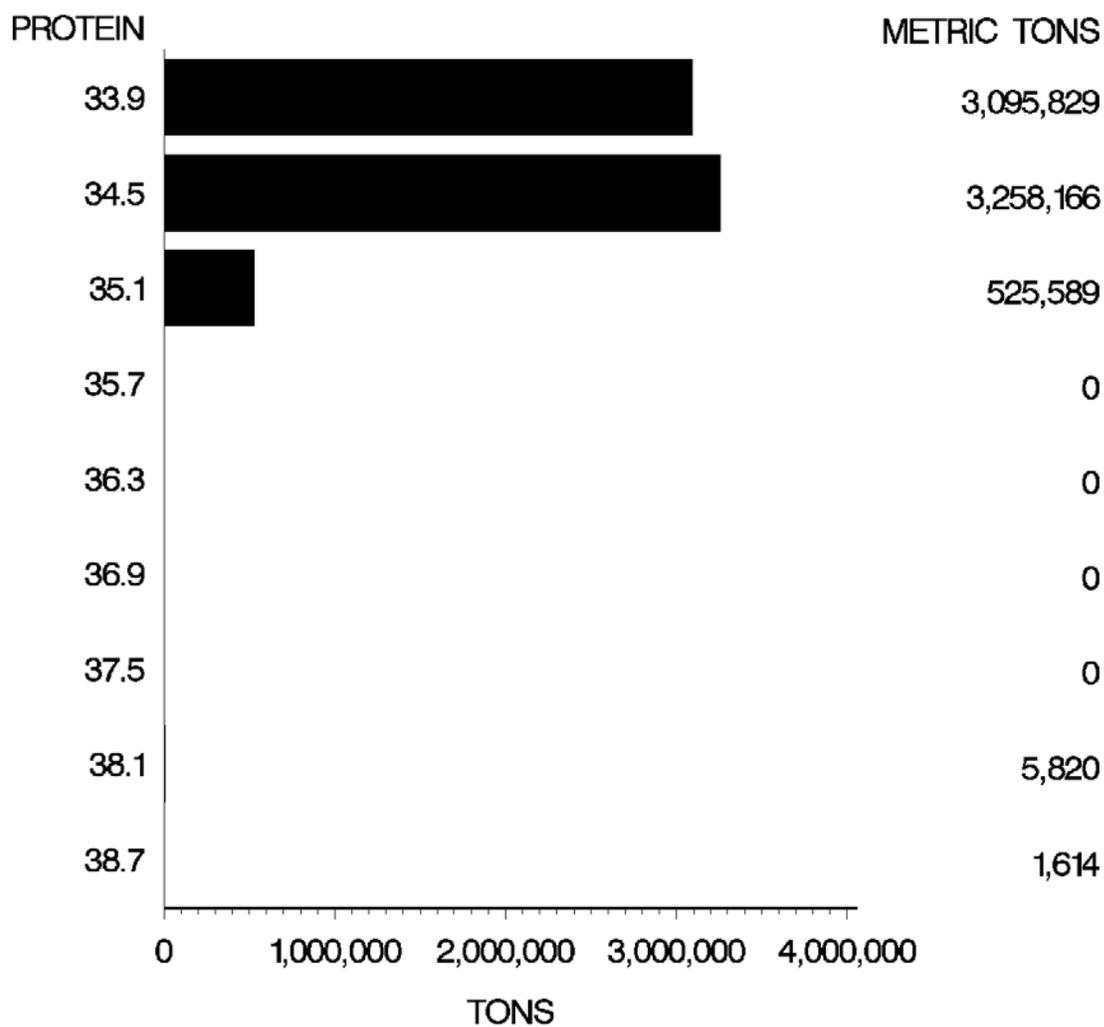
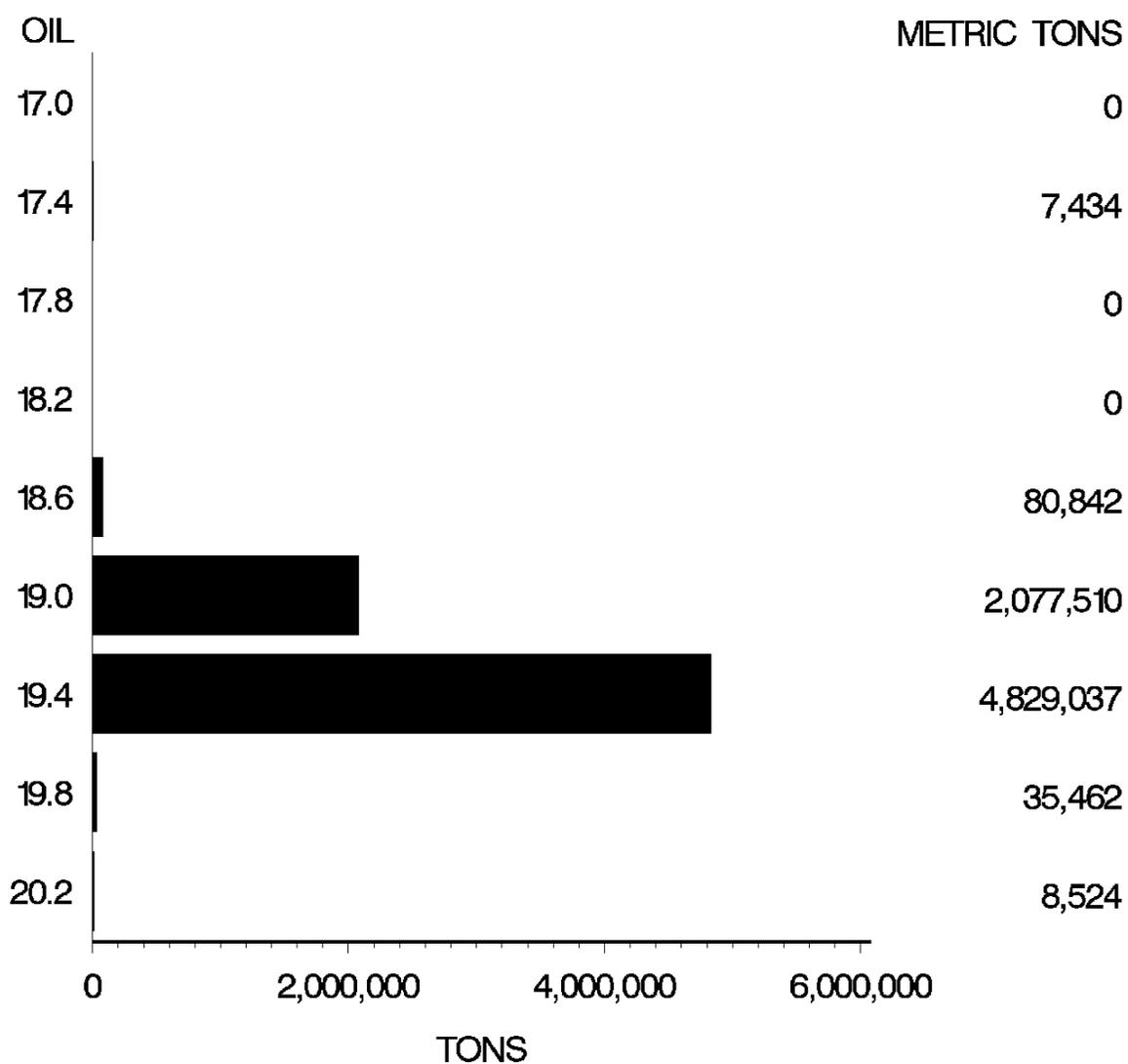


Figure 15. Soybean Oil Distribution, All Grades

### U.S. SOYBEANS EXPORTED, 2013 DISTRIBUTION FOR OIL (13% M) – ALL GRADES



## Other Grain Exports

### Sorghum

#### Sorghum Grades and Grade Requirements

Sorghum is divided into four classes: Sorghum, Tannin sorghum, White sorghum, and Mixed sorghum. There are no subclasses in sorghum. Each class is divided into four numerical grades and U.S. Sample grade. Special grades are provided to emphasize special qualities or conditions affecting the value of sorghum. Special grades are added to and made a part of the grade designation. They do not affect the numerical or Sample grade designation.

#### U.S. Standards for Sorghum

Grade:	Min Limits of:	Max Limits of:			
	Test weight per bushel (pounds)	Damaged Kernels		Broken kernels and foreign material	
		Heat (percent)	Total (percent)	Foreign material (percent)	Total (percent)
U.S. No. 1	57.0	0.2	2.0	1.0	3.0
U.S. No. 2	55.0	0.5	5.0	2.0	6.0
U.S. No. 3 <sup>1/</sup>	53.0	1.0	10.0	3.0	8.0
U.S. No. 4	51.0	3.0	15.0	4.0	10.0

#### U.S. Sample Grade:

U.S. Sample grade shall be sorghum which:

- (a) Do not meet the requirements for U.S. Nos. 1, 2, 3, or 4; or
- (b) Contains 8 or more 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 an unknown foreign substance(s) or a commonly recognized harmful or toxic substance(s), 8 or more cockleburs (*Xanthium* spp.) or similar seeds singly or in combination, 10 or more rodent pellets, bird droppings, or equivalent quantity of other animal filth; or
- (c) Have a musty, sour, or commercially objectionable foreign odor (except smut odor); or
- (d) Is badly weathered, heating, or otherwise of distinctly low quality.

---

<sup>1/</sup> Sorghum which is distinctly discolored shall not grade any higher than U.S. No. 3.

## Sorghum

### Definitions

**Test weight (lb/bu)** is pounds of grain per Winchester bushel (2.150.42 cubic inches) as determined using an approved device before the removal of dockage.

**Test weight (kg/hl)** is the metric system equivalent to pounds per bushel. Kilograms per hectoliter are calculated by multiplying pounds per bushel by 1.287.

**Heat-damaged kernels** are kernels, pieces of sorghum kernels, and other grains that are materially discolored and damaged by heat.

**Damaged kernels** are kernels, pieces of sorghum kernels, and other grains that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, germ-damaged, heat-damaged, insect-bored, mold-damaged, sprout-damaged, or otherwise materially damaged.

**Foreign material** is all matter except sorghum, which passes over the number 6 riddle and all matter other than sorghum that remains on the top of the 5/64 triangular-hole sieve.

**Broken kernels** are all matter which passes through a 5/64 triangular-hole sieve and over a 2.5/64 round-hole sieve.

**Broken kernels and foreign material** consists of the combination of broken kernels and foreign material.

**Dockage** is all matter other than sorghum that can be removed from the original sample by use of an approved device. Also, underdeveloped, shriveled, and small pieces of sorghum kernels removed in properly separating the material other than sorghum.

**Moisture** is the water content of grain as determined by an approved moisture meter. The percentage of moisture in a sample does not affect the numerical grade.

**Mixed sorghum** is a sorghum which does not meet the minimum requirements for any of the classes of sorghum, Tannin sorghum or White sorghum.

Table 14. U.S. Sorghum Exports: Number of lots and quantity exported by class and grade, 2011-2013

Class	Grade	2011		2012		2013	
		No. of Lots	Metric Tons	No. of Lots	Metric Tons	No. of Lots	Metric Tons
Sorghum	U.S. No. 2	127	2,054,787	96	1,451,366	112	2,145,862
	U.S. No. 3	9	387,853	--	--	2	10,689
	U.S. No. 4	--	--	--	--	--	--
	U.S. Sample Grade	--	--	--	--	--	--
	Not Inspected	--	--	--	--	--	--
	All lots	136	2,442,640	96	1,451,366	114	2,156,551
All Classes	U.S. No. 2	127	2,054,787	96	1,451,366	112	2,145,862
	U.S. No. 3	9	387,853	--	--	2	10,689
	U.S. No. 4	--	--	--	--	--	--
	U.S. Sample Grade	--	--	--	--	--	--
	Not Inspected	--	--	--	--	--	--
	All lots	136	2,442,640	96	1,451,366	114	2,156,551

-- = No lots reported in the category.

Not inspected = These lots were sold without grade designation.

Table 15. Summary of export Sorghum quality, 2011-2013

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of				No. of				No. of			
			Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 2	55.0	127	58.6	56.9	60.2	95	58.1	56.4	59.5	111	58.5	56.9	60.0
	U.S. No. 3	53.0	9	57.5	56.4	58.0	--	--	--	--	2	55.5	55.4	55.7
	U.S. No. 4	51.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	136	58.4	56.4	60.2	95	58.1	56.4	59.5	113	58.5	55.4	60.0
Test Weight (kg/hl)	U.S. No. 2	N/A	127	75.5	73.2	77.5	95	74.8	72.6	76.6	111	75.3	73.3	77.2
	U.S. No. 3	N/A	9	74.0	72.6	74.6	--	--	--	--	2	71.4	71.3	71.7
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	136	75.2	72.6	77.5	95	74.8	72.6	76.6	113	75.3	71.3	77.2
Moisture	U.S. No. 2	N/A	127	13.1	11.9	14.0	95	13.3	12.6	14.0	110	13.3	11.8	14.0
	U.S. No. 3	N/A	9	12.5	12.1	12.7	--	--	--	--	2	13.7	13.7	13.8
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	136	13.0	11.9	14.0	95	13.3	12.6	14.0	112	13.3	11.8	14.0
Heat-damaged Kernels	U.S. No. 2	0.5	127	0.0	0.0	0.2	96	0.0	0.0	0.1	112	0.0	0.0	0.0
	U.S. No. 3	1.0	9	0.0	0.0	0.0	--	--	--	--	2	0.0	0.0	0.0
	U.S. No. 4	3.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	136	0.0	0.0	0.2	96	0.0	0.0	0.1	114	0.0	0.0	0.0
Damaged Kernels (Total)	U.S. No. 2	5.0	127	1.8	0.2	5.0	96	1.5	0.0	4.0	112	1.1	0.3	2.7
	U.S. No. 3	10.0	9	7.0	4.6	9.6	--	--	--	--	2	0.2	0.2	0.3
	U.S. No. 4	15.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	136	2.7	0.2	9.6	96	1.5	0.0	4.0	114	1.1	0.2	2.7

Table 15. Summary of export Sorghum quality, 2011-2013, continued

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of				No. of				No. of			
			Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Broken Kernels and Foreign Material	U.S. No. 2	6.0	127	2.7	0.0	4.7	96	2.7	0.0	4.3	111	2.3	0.0	4.1
	U.S. No. 3	8.0	9	3.2	2.6	4.3	--	--	--	--	2	2.7	2.7	2.8
	U.S. No. 4	10.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	136	2.8	0.0	4.7	96	2.7	0.0	4.3	113	2.3	0.0	4.1
Broken Kernels	U.S. No. 2	N/A	1	1.1	1.1	1.1	7	1.3	0.9	2.0	33	1.5	0.7	2.3
	U.S. No. 3	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	1	1.1	1.1	1.1	7	1.3	0.9	2.0	33	1.5	0.7	2.3
Foreign Material	U.S. No. 2	2.0	127	0.9	0.0	2.0	96	0.9	0.0	2.2	112	0.9	0.0	1.8
	U.S. No. 3	3.0	9	1.0	0.6	1.9	--	--	--	--	2	1.5	1.2	1.7
	U.S. No. 4	4.0	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	136	0.9	0.0	2.0	96	0.9	0.0	2.2	114	0.9	0.0	1.8
Dockage	U.S. No. 2	N/A	105	0.2	0.1	0.7	79	0.2	0.1	0.7	98	0.1	0.1	0.3
	U.S. No. 3	N/A	9	0.2	0.2	0.3	--	--	--	--	2	0.1	0.1	0.1
	U.S. No. 4	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	--	--	--	--
	All lots	N/A	114	0.2	0.1	0.7	79	0.2	0.1	0.7	100	0.1	0.1	0.3

N/A = Does not apply.

-- = No lots reported in this category.

Figure 16. Sorghum BNFM Distribution, Grade 2

### U.S. SORGHUM EXPORTED, 2013 DISTRIBUTION FOR BNFM – GRADE 2

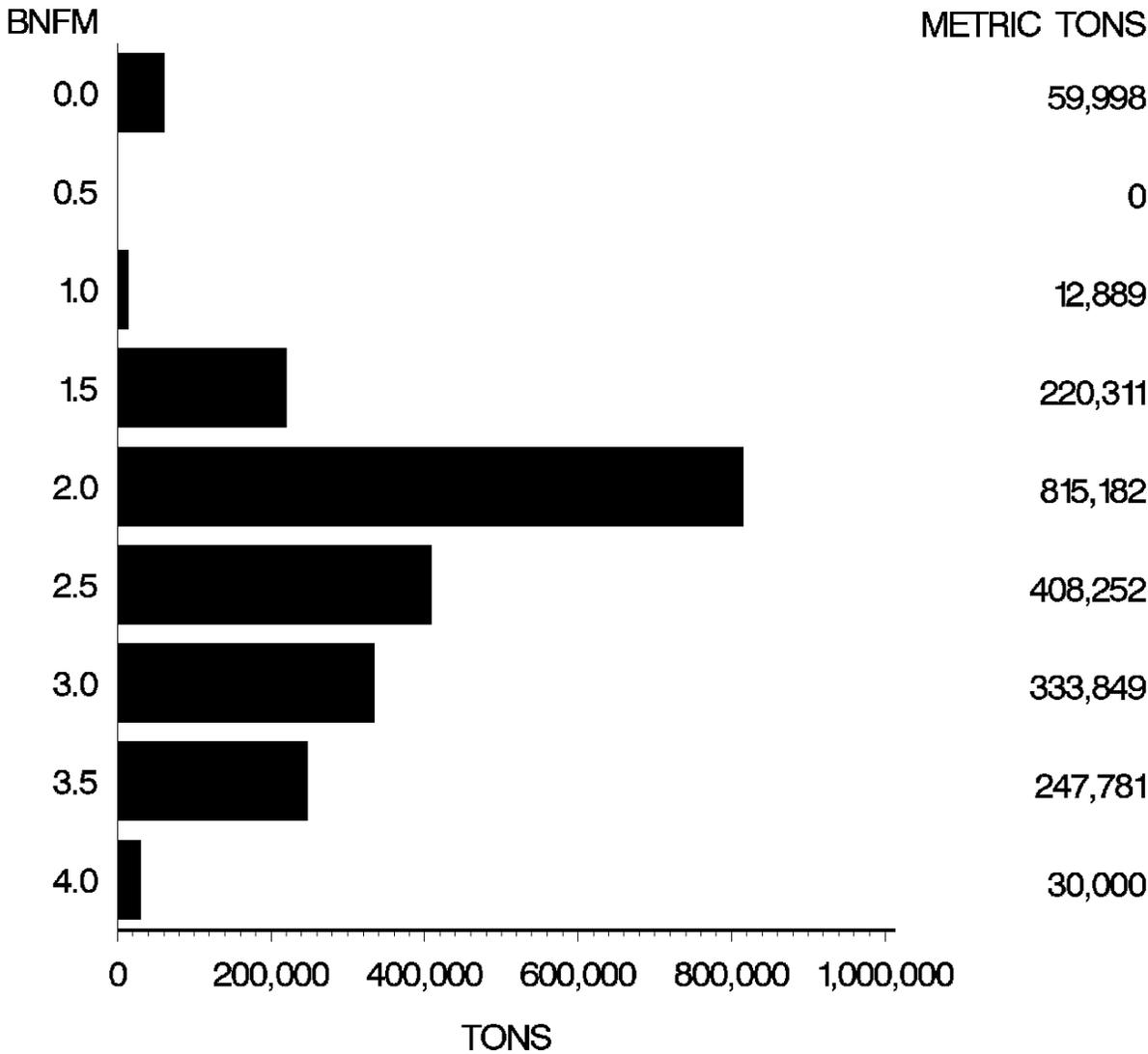
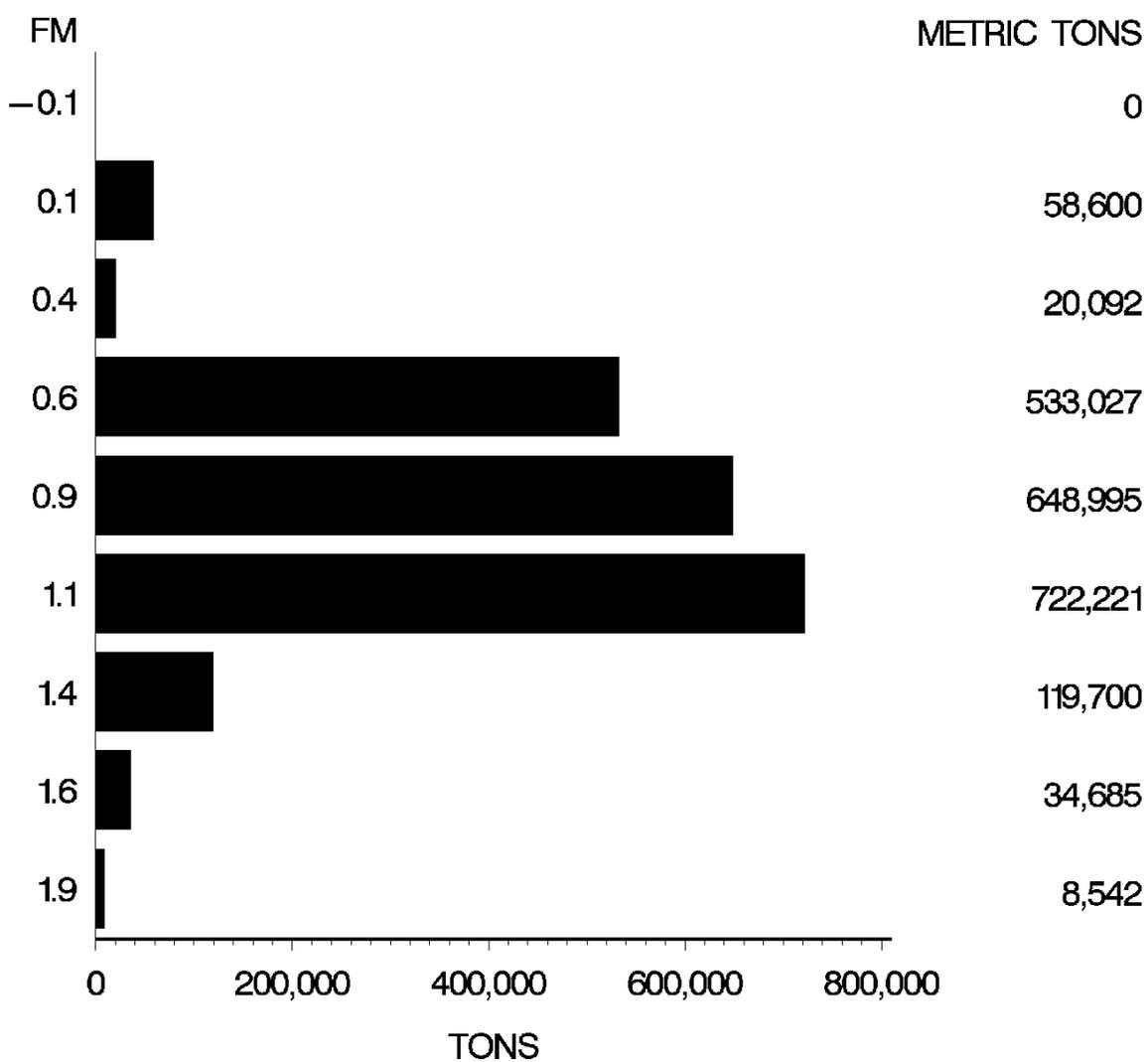


Figure 17. Sorghum FM Distribution, Grade 2

### U.S. SORGHUM EXPORTED, 2013 DISTRIBUTION FOR FM – GRADE 2



## Barley

### Barley Grades and Grade Requirements

Barley is divided into two classes: Malting Barley and Barley. The class Malting Barley is divided into three subclasses: Six-Rowed Malting Barley, Six-Rowed Blue Malting Barley, and Two-Rowed Malting Barley. The class Barley is divided into three subclasses: Six Rowed Barley, Two-Rowed Barley, and Barley. The applicant for service may request either the malting standards or barley standards for malting types.

#### Grades and grade requirements for Six-rowed Malting barley and Six-rowed Blue Malting barley

Grade	Minimum Limits of:			Maximum Limits of -				
	Test weight per bushel (pounds)	Suitable malting type (percent)	Sound barley <u>1/</u> (percent)	Damaged kernels <u>1/</u> (percent)	Foreign material (percent)	Other grains (percent)	Skinned and broken kernels (percent)	Thin Barley <u>2/</u> (percent)
U.S. No. 1	47.0	95.0	97.0	2.0	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	43.0	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/ Using a 5.5/64 x 3/4 slotted-hole sieve.

NOTE: Malting barley shall not be infested, blighted, ergoty, garlicky, smutty, or contain any special grades. Upon request, malting barley varieties may be inspected and graded in accordance with standards established for the class Barley.

#### Grades and grade requirements for Two-rowed Malting barley

Grade	Minimum Limits of:			Maximum Limits of -			
	Test weight per bushel (pounds)	Suitable malting type (percent)	Sound barley <u>1/</u> (percent)	Wild Oats (percent)	Foreign material (percent)	Skinned and broken kernels (percent)	Thin Barley <u>2/</u> (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/ Using a 5.5/64 x 3/4 slotted-hole sieve.

NOTE: Malting barley shall not be infested, blighted, ergoty, garlicky, smutty, or contain any special grades. Upon request, malting barley varieties may be inspected and graded in accordance with standards established for the class Barley.

Two-rowed barley that does not meet the requirements for U.S. Nos. 1, 2, 3, or 4 Malting shall be graded under the Barley standards.

### Grades and grade requirements for Barley

Grade	Minimum Limits of:		Maximum Limits of -				
	Test weight per bushel (pounds)	Sound barley (percent)	Damaged kernels <sup>1/</sup> (percent)	Heat damaged kernels (percent)	Foreign material (percent)	Broken kernels (percent)	Thin Barley <sup>2/</sup> (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:

U.S. Sample Grade is wheat that:

- (a) Does not meet the requirements for grades U.S. No. 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 an unknown foreign substance(s) or a 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/ Injured-by-frost kernels and injured-by-mold kernels are not considered damaged kernels or considered against sound barley.
  - 2/ Using a 5.5/64 x 3/4 slotted-hole sieve.

## Barley

### Definitions

**Test weight (lb/bu)** is pounds of grain per Winchester bushel as determined using an approved device on a dockage-free barley sample.

**Test weight (kg/hl)** is the metric system equivalent to pounds per bushel. Kilograms per hectoliter are calculated by multiplying pounds per bushel by 1.287.

**Heat-damaged kernels** are kernels and pieces of barley kernels, other grains, and wild oats that are materially discolored and damaged by heat.

**Damaged kernels** are kernels, pieces of barley kernels, other grains, and wild oats that are badly ground-damaged, badly weather-damaged, diseased, frost-damaged, germ-damaged, heat-damaged, injured-by-heat, insect-bored, mold-damaged, sprout-damaged, or otherwise materially damaged.

**Foreign material** is all matter other than barley, other grains, and wild oats that remains in the sample after removal of dockage.

**Skinned and broken kernels** are barley kernels that have one-third or more of the hull removed, or that the hull is loose or missing over the germ, or broken kernels, or whole kernels that have a part or all of the germ missing.

**Dockage** is all matter other than barley that can be removed from the original sample by use of an approved device. Also, underdeveloped, shriveled, and small pieces of barley kernels removed by properly separating the material other than barley and that cannot be recovered by properly rescreening or re-cleaning.

**Moisture** is the water content of grain as determined by an approved moisture meter. The percentage of moisture in a sample does not affect the numerical grade.

**Suitable malting type** are varieties of malting barley that are recommended by the American Malting Barley Association and any other proprietary malting type(s) used by the malting and brewing industries.

**Sound barley** is kernels and pieces of barley kernels that are not damaged.

**Thin barley** is: Six-rowed Malting barley that passes through a 5/64 x 3/4 slotted-hole sieve and Two-rowed Malting barley that passes through a 5.5/64 x 3/4 slotted-hole sieve; Six-rowed barley, Two-rowed barley, or Barley that passes through a 5/64 x 3/4 slotted-hole sieve.

*Table 16. U.S. Barley Exports: Number of lots and quantity exported by grade, 2011-2013*

Grade	2011		2012		2013	
	No. of Lots	Metric Tons	No. of Lots	Metric Tons	No. of Lots	Metric Tons
U.S. No. 2	4	112,919	5	174,591	7	81,224
All lots	4	112,919	5	174,591	7	81,224

Table 17. Summary of export Barley quality, 2011-2013

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of			Lots	No. of			Lots	No. of			Lots
			Lots	Avg.	Low		High	Lots	Avg.		Low	High	Lots	
Test Weight (lb/bu)	U.S. No. 2	45.0	4	50.0	49.7	50.6	5	52.3	50.5	56.4	7	53.2	48.3	56.9
	All lots	N/A	4	50.0	49.7	50.6	5	52.3	50.5	56.4	7	53.2	48.3	56.9
Test Weight (kg/hl)	U.S. No. 2	N/A	4	64.4	64.0	65.1	5	67.4	65.0	72.6	7	68.5	62.1	73.2
	All lots	N/A	4	64.4	64.0	65.1	5	67.4	65.0	72.6	7	68.5	62.1	73.2
Moisture	U.S. No. 2	N/A	4	12.7	12.4	12.8	5	12.4	9.9	13.5	7	10.8	9.5	13.4
	All lots	N/A	4	12.7	12.4	12.8	5	12.4	9.9	13.5	7	10.8	9.5	13.4
Heat-damaged Kernels	U.S. No. 2	0.3	4	0.0	0.0	0.0	5	0.0	0.0	0.0	7	0.0	0.0	0.0
	All lots	N/A	4	0.0	0.0	0.0	5	0.0	0.0	0.0	7	0.0	0.0	0.0
Damaged Kernels (Total)	U.S. No. 2	4.0	4	1.5	0.9	2.0	5	0.9	0.0	1.4	7	0.4	0.0	1.6
	All lots	N/A	4	1.5	0.9	2.0	5	0.9	0.0	1.4	7	0.4	0.0	1.6
Foreign Material	U.S. No. 2	2.0	4	0.2	0.1	0.2	5	0.1	0.0	0.1	7	0.1	0.0	0.1
	All lots	N/A	4	0.2	0.1	0.2	5	0.1	0.0	0.1	7	0.1	0.0	0.1
Sound Barley	U.S. No. 2	94.0	4	97.9	97.3	98.5	5	97.9	97.5	99.2	7	98.2	97.2	99.0
	All lots	N/A	4	97.9	97.3	98.5	5	97.9	97.5	99.2	7	98.2	97.2	99.0
Thin Barley	U.S. No. 2	15.0	4	6.1	5.2	6.4	5	2.9	2.0	3.2	7	3.3	1.4	6.0
	All lots	N/A	4	6.1	5.2	6.4	5	2.9	2.0	3.2	7	3.3	1.4	6.0
Broken Kernels	U.S. No. 2	8.0	4	0.0	0.0	0.0	5	0.0	0.0	0.0	7	0.6	0.0	1.3
	All lots	N/A	4	0.0	0.0	0.0	5	0.0	0.0	0.0	7	0.6	0.0	1.3
Dockage	U.S. No. 2	N/A	2	1.3	1.1	1.8	5	1.1	0.5	1.4	7	0.6	0.3	0.7
	All lots	N/A	2	1.3	1.1	1.8	5	1.1	0.5	1.4	7	0.6	0.3	0.7

N/A = Does not apply.

## Canola

### Canola Grades and Grade Requirements

There are no classes of canola. Canola is divided into three numerical grades and U.S. Sample grade. Special grades are provided to emphasize special qualities or conditions affecting the value, and are added to and made a part of the grade designation. They do not affect the numerical or sample grade designation.

#### U.S. Standards for Canola

Grade	Maximum percent limits of:								Maximum count limits of:			
	Damaged Kernels			Conspicuous Admixture					Inconspicuous admixture	Other Material		
	Heat Damage (percent)	Distinctly green (percent)	Total (percent)	Ergot (percent)	Sclerotinia (percent)	Stones (percent)	Total (percent)	Animal filth		Glass	Unknown foreign substances	
U.S. No. 1	0.1	2.0	3.0	0.05	0.05	0.05	1.0	5.0	3	0	1	
U.S. No. 2	0.5	6.0	10.0	0.05	0.10	0.05	1.5	5.0	3	0	1	
U.S. No. 3	2.0	20.0	20.0	0.05	0.15	0.05	2.0	5.0	3	0	1	

#### U.S. Sample Grade:

U.S. Sample Grade is canola that:

- (a) Does not meet the requirements for U.S. Nos. 1, 2, or 3; or
- (b) Has a musty, sour, or commercially objectionable foreign odor; or
- (c) Is heating or otherwise of distinctly low quality.

## Canola

### Definitions

**Conspicuous admixture** is all matter other than canola including, but not limited to, ergot, sclerotinia, and stones, which is conspicuous and readily distinguishable from canola and which remains in the sample after the removal of machine separated dockage. Conspicuous admixture is added to machine separated dockage in the computation of total dockage.

**Damaged kernels** are canola and pieces of canola that are heat-damaged, sprout-damaged, mold-damaged, distinctly green-damaged, frost-damaged, rime-damaged, or otherwise materially damaged.

**Distinctly green kernels** are canola and pieces of canola which, after being crushed, exhibit a distinctly green color.

**Dockage** is all matter other than canola that can be removed from the original sample by use of an approved device according to procedures described in FGIS instructions, as well as underdeveloped, shriveled, and small pieces of canola kernels that cannot be recovered by properly screening or re-cleaning. Machine separated dockage is added to conspicuous admixture in the computation of total dockage.

**Ergot** is sclerotia of the fungus, *Claviceps* species, which are associated with some seeds other than canola where the fungal organism has replaced the seed.

**Heat-damaged kernels** are canola and pieces of canola which, after being crushed, exhibit that they are discolored and damaged by heat.

**Inconspicuous admixture** is any seed which is difficult to distinguish from canola. This includes, but is not limited to, common wild mustard (*Brassica kaber* and *B. juncea*), domestic brown mustard (*Brassica juncea*), yellow mustard (*B. hirta*), and seed other than the mustard group.

**Sclerotia** are dark colored or black resting bodies of the *Sclerotinia* and *Claviceps*.

**Sclerotinia** is the genus name which includes the fungus *Sclerotinia sclerotiorum* which produces sclerotia. Canola is only infrequently infected, and the sclerotia, unlike sclerotia of ergot, are usually associated with the stem of the plants.

Table 18. U.S. Canola Exports: Number of lots and quantity exported by grade, 2011-2013

Grade	2011		2012		2013	
	No. of Lots	Metric Tons	No. of Lots	Metric Tons	No. of Lots	Metric Tons
U.S. No. 1	1	21,455	3	59,461	--	--
U.S. No. 2	--	--	1	19,698	--	--
U.S. Sample Grade	--	--	--	--	1	21,497
All lots	1	21,455	4	79,159	1	21,497

-- = No lots reported in this category.

Table 19. Summary of export Canola quality, 2011-2013

Factor	Grade	Grade Limit	2011				2012				2013			
			No. of				No. of				No. of			
			Lots	Avg.	Low	High	Lots	Avg.	Low	High	Lots	Avg.	Low	High
Dockage	U.S. No. 1	N/A	1	2.8	2.8	2.8	3	3.5	3.4	3.7	--	--	--	--
	U.S. No. 2	N/A	--	--	--	--	1	3.3	3.3	3.3	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	2.5	2.5	2.5
	All lots	N/A	1	2.8	2.8	2.8	4	3.5	3.3	3.7	1	2.5	2.5	2.5
Moisture	U.S. No. 1	N/A	1	7.2	7.2	7.2	3	6.2	5.9	6.3	--	--	--	--
	U.S. No. 2	N/A	--	--	--	--	1	7.5	7.5	7.5	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	7.7	7.7	7.7
	All lots	N/A	1	7.2	7.2	7.2	4	6.5	5.9	7.5	1	7.7	7.7	7.7
Heat-damaged Kernels	U.S. No. 1	0.1	1	0.0	0.0	0.0	3	0.0	0.0	0.0	--	--	--	--
	U.S. No. 2	0.5	--	--	--	--	1	0.0	0.0	0.0	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	All lots	N/A	1	0.0	0.0	0.0	4	0.0	0.0	0.0	1	0.0	0.0	0.0
Distinctly green Kernels	U.S. No. 1	2.0	1	0.4	0.4	0.4	3	0.6	0.5	0.7	--	--	--	--
	U.S. No. 2	6.0	--	--	--	--	1	0.9	0.9	0.9	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	0.3	0.3	0.3
	All lots	N/A	1	0.4	0.4	0.4	4	0.7	0.5	0.9	1	0.3	0.3	0.3
Total Damaged Kernels	U.S. No. 1	3.0	1	0.5	0.5	0.5	3	0.6	0.5	0.7	--	--	--	--
	U.S. No. 2	10.0	--	--	--	--	1	1.0	1.0	1.0	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	0.3	0.3	0.3
	All lots	N/A	1	0.5	0.5	0.5	4	0.7	0.5	1.0	1	0.3	0.3	0.3
Ergot	U.S. No. 1	0.05	1	0.0	0.0	0.0	3	0.0	0.0	0.0	--	--	--	--
	U.S. No. 2	0.05	--	--	--	--	1	0.0	0.0	0.0	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	All lots	N/A	1	0.0	0.0	0.0	4	0.0	0.0	0.0	1	0.0	0.0	0.0
Sclerotinia	U.S. No. 1	0.05	1	0.0	0.0	0.0	3	0.0	0.0	0.0	--	--	--	--
	U.S. No. 2	0.10	--	--	--	--	1	0.0	0.0	0.0	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	All lots	N/A	1	0.0	0.0	0.0	4	0.0	0.0	0.0	1	0.0	0.0	0.0
Stones	U.S. No. 1	0.05	1	0.0	0.0	0.0	3	0.0	0.0	0.0	--	--	--	--
	U.S. No. 2	0.05	--	--	--	--	1	0.0	0.0	0.0	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	All lots	N/A	1	0.0	0.0	0.0	4	0.0	0.0	0.0	1	0.0	0.0	0.0
Total Conspicuous Admixture	U.S. No. 1	1.0	1	0.1	0.1	0.1	3	0.1	0.1	0.2	--	--	--	--
	U.S. No. 2	1.5	--	--	--	--	1	0.1	0.1	0.1	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	0.1	0.1	0.1
	All lots	N/A	1	0.1	0.1	0.1	4	0.1	0.1	0.2	1	0.1	0.1	0.1
Inconspicuous Admixture	U.S. No. 1	5.0	1	0.0	0.0	0.0	3	0.0	0.0	0.0	--	--	--	--
	U.S. No. 2	5.0	--	--	--	--	1	0.0	0.0	0.0	--	--	--	--
	U.S. Sample Grade	N/A	--	--	--	--	--	--	--	--	1	0.0	0.0	0.0
	All lots	N/A	1	0.0	0.0	0.0	4	0.0	0.0	0.0	1	0.0	0.0	0.0

N/A = Does not apply.

-- = No lots reported in this category.

## Flaxseed

### Flaxseed Grades and Grade Requirements

There are no classes of flaxseed. Flaxseed is divided into two numerical grades and U.S. Sample grade. Other determinations not specifically provided for under the general provisions are made on the basis of the grain when free from dockage, except the determination of odor is made on either the basis of the grain as a whole or the grain when free from dockage.

### U.S. Standards for Flaxseed

Grade:	Minimum Test Weight per bushel (pounds)	Max Limits of damaged kernels:	
		Heat-Damaged kernels (percent)	Damaged kernels total (percent)
U.S. No. 1	49.0	0.2	10.0
U.S. No. 2	47.0	0.5	15.0

U.S. Sample Grade:

U.S. Sample Grade is flaxseed that:

- (a) Does not meet the requirements for the grades U.S. Nos. 1 or 2; or
- (b) Contains 8 or more 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 an unknown foreign substance(s) or a commonly recognized harmful or toxic substance(s), 10 or more rodent pellets, bird dropping, or equivalent quantity of other animal filth per 1-1/8 to 1-1/4 quarts of flaxseed; 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.

### Definitions

**Flaxseed.** Grain that, before the removal of dockage, consists of 50 percent or more of common flaxseed (*Linum usitatissimum* L.) and not more than 20 percent of other grains for which standards have been established under the United States Grain Standards Act and which, after the removal of dockage, contains 50 percent or more of whole flaxseed.

**Damaged kernels.** Kernels and pieces of flaxseed kernels that are badly ground damaged, badly weather-damaged, diseased, frost-damaged, germ-damaged, heat damaged, insect-bored, mold-damaged, sprout-damaged, or otherwise materially damaged.

**Dockage.** All matter other than flaxseed that can be removed from the original sample by use of an approved device according to procedures prescribed in FGIS instructions. Also, underdeveloped, shriveled, and small pieces of flaxseed kernels removed in properly separating the material other than flaxseed and that cannot be recovered by properly rescreening or re-cleaning.

**Heat-damaged kernels.** Kernels and pieces of flaxseed kernels that are materially discolored and damaged by heat.

**Other grains.** Barley, corn, cultivated buckwheat, einkorn, emmer, guar, hull-less barley, non-grain sorghum, oats, Polish wheat, popcorn, poulard wheat, rice, rye, safflower, sorghum, soybeans, spelt, sunflower seed, sweet corn, triticale, wheat, and wild oats.

Table 20. U.S. Flaxseed Exports: Number of lots and quantity exported by grade, 2010-2012

Grade	2010		2011		2012	
	No. of Lots	Metric Tons	No. of Lots	Metric Tons	No. of Lots	Metric Tons
U.S. No. 1	3	46,550	1	10,507	1	10,593
All lots	3	46,550	1	10,507	1	10,593

Table 21. Summary of export Flaxseed quality, 2010-2012

Factor	Grade	Grade Limit	2010				2011				2012			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
Test Weight (lb/bu)	U.S. No. 1	49.0	3	49.8	49.6	50.2	1	49.3	49.3	49.3	1	50.7	50.7	50.7
	All lots	N/A	3	49.8	49.6	50.2	1	49.3	49.3	49.3	1	50.7	50.7	50.7
Test Weight (kg/hl)	U.S. No. 1	N/A	3	64.2	63.9	64.6	1	63.5	63.5	63.5	1	65.2	65.2	65.2
	All lots	N/A	3	64.2	63.9	64.6	1	63.5	63.5	63.5	1	65.2	65.2	65.2
Moisture	U.S. No. 1	N/A	3	7.5	7.4	7.8	1	7.5	7.5	7.5	1	6.5	6.5	6.5
	All lots	N/A	3	7.5	7.4	7.8	1	7.5	7.5	7.5	1	6.5	6.5	6.5
Heat-damaged kernels	U.S. No. 1	0.2	3	0.0	0.0	0.0	1	0.0	0.0	0.0	1	0.0	0.0	0.0
	All lots	N/A	3	0.0	0.0	0.0	1	0.0	0.0	0.0	1	0.0	0.0	0.0
Damaged Flaxseed (Total)	U.S. No. 1	10.0	3	0.0	0.0	0.1	1	0.1	0.1	0.1	1	0.0	0.0	0.0
	All lots	N/A	3	0.0	0.0	0.1	1	0.1	0.1	0.1	1	0.0	0.0	0.0
Dockage	U.S. No. 1	N/A	3	4.6	4.3	5.1	1	4.0	4.0	4.0	1	6.2	6.2	6.2
	All lots	N/A	3	4.6	4.3	5.1	1	4.0	4.0	4.0	1	6.2	6.2	6.2

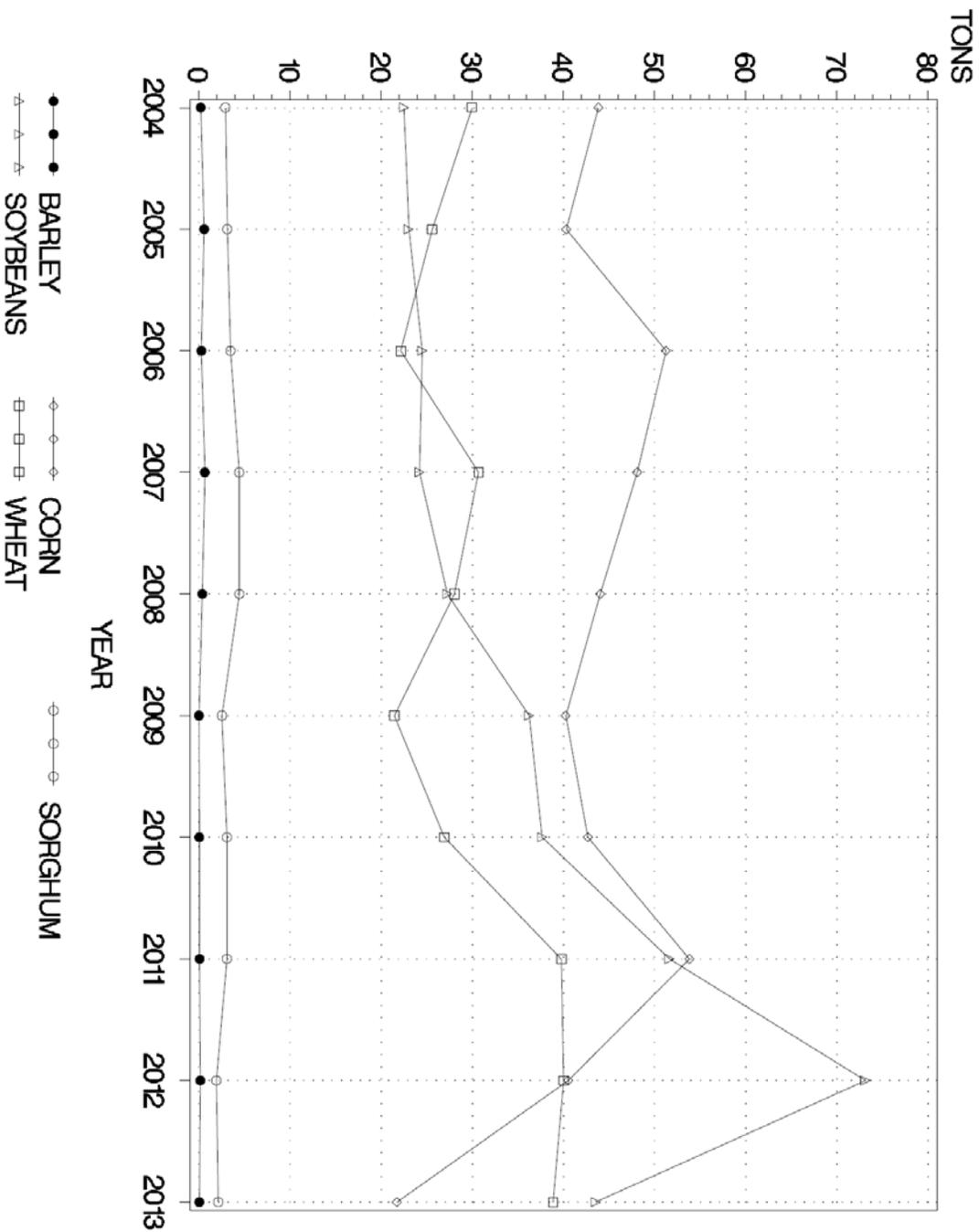
N/A = Does not apply.

## Appendix

U.S. Grain Quantity Exported, 2004-2013.....	62
U.S. Grain Exported, 2004-2013, Average Dockage by Grain.....	63
U.S. Wheat Exported, 2004-2013, Average Dockage by Class.....	64
U.S. Wheat Exported, 2004-2013, Average Dockage by Destination Country.....	65
U.S. Wheat Exported, 2004-2013, Average Protein (12% Moisture) by Class.....	66
U.S. Soybeans Exported, 2004-2013, Average Protein and Oil (13% Moisture).....	67
U.S. Grains Exported, 2004-2013, Average FM, BNF, and BCFM.....	68

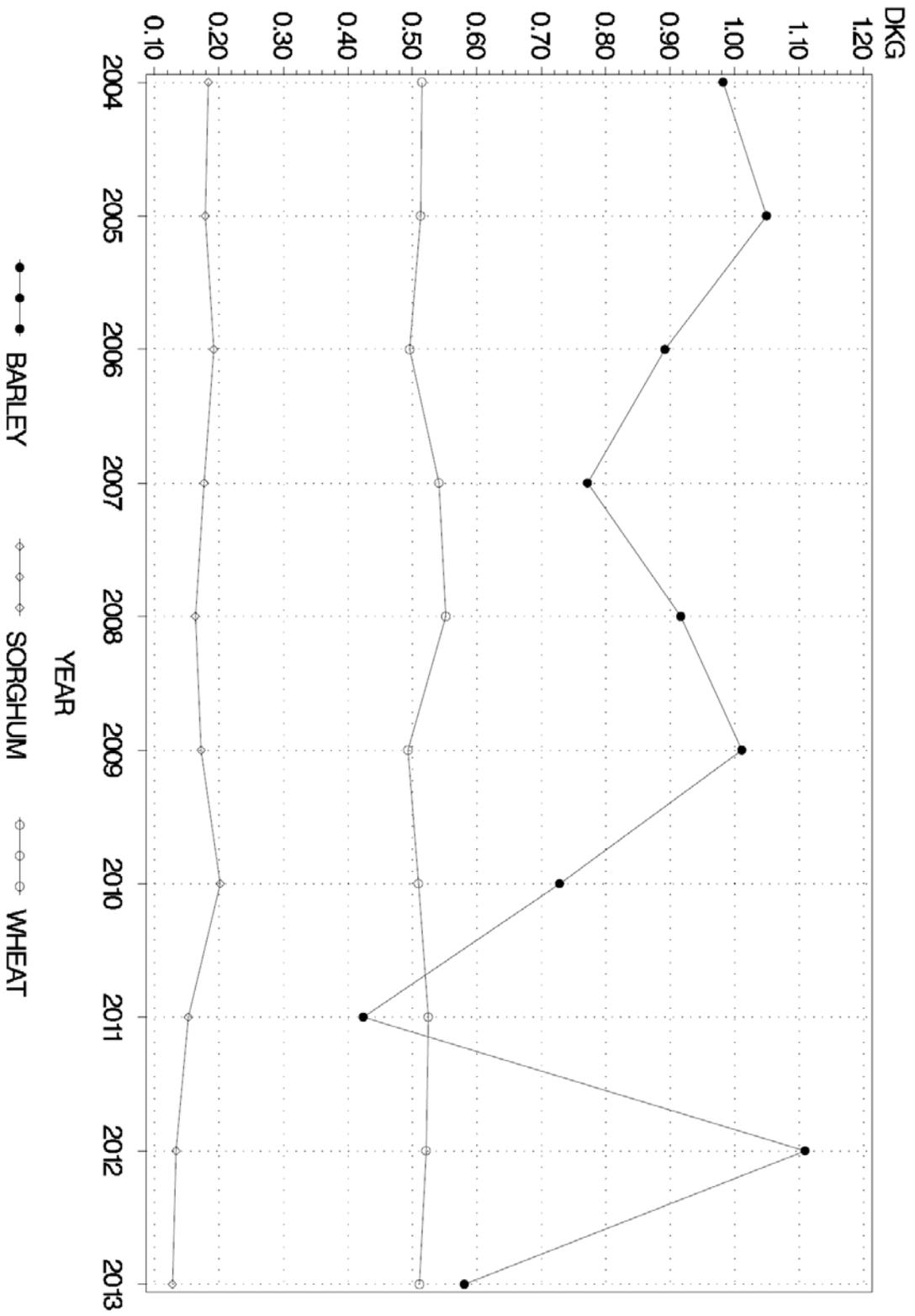
# U.S. GRAIN QUANTITY EXPORTED, 2004—2013

## METRIC TONS IN MILLIONS



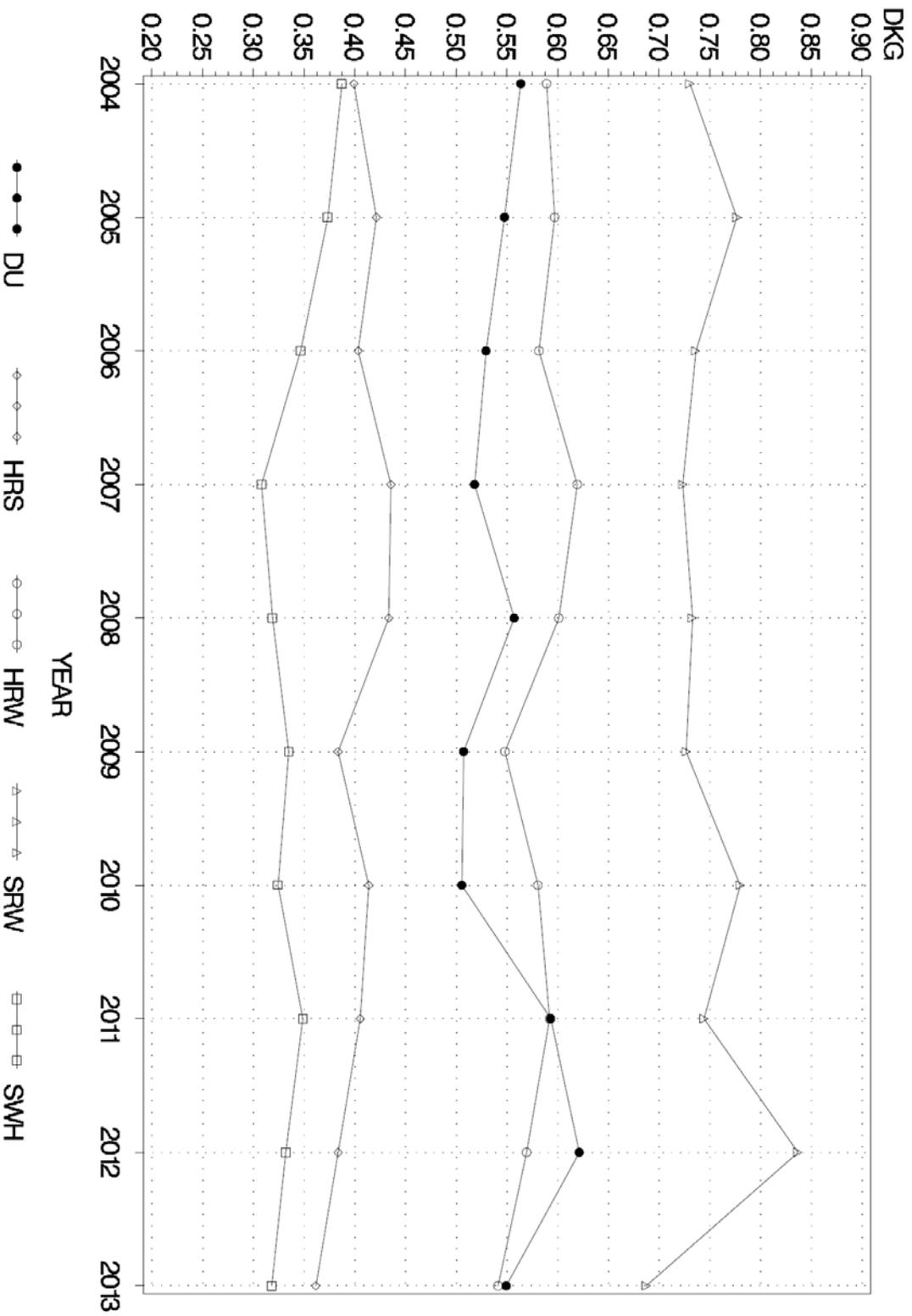
## U.S. GRAIN EXPORTED, 2004—2013

### AVG DOCKAGE BY GRAIN



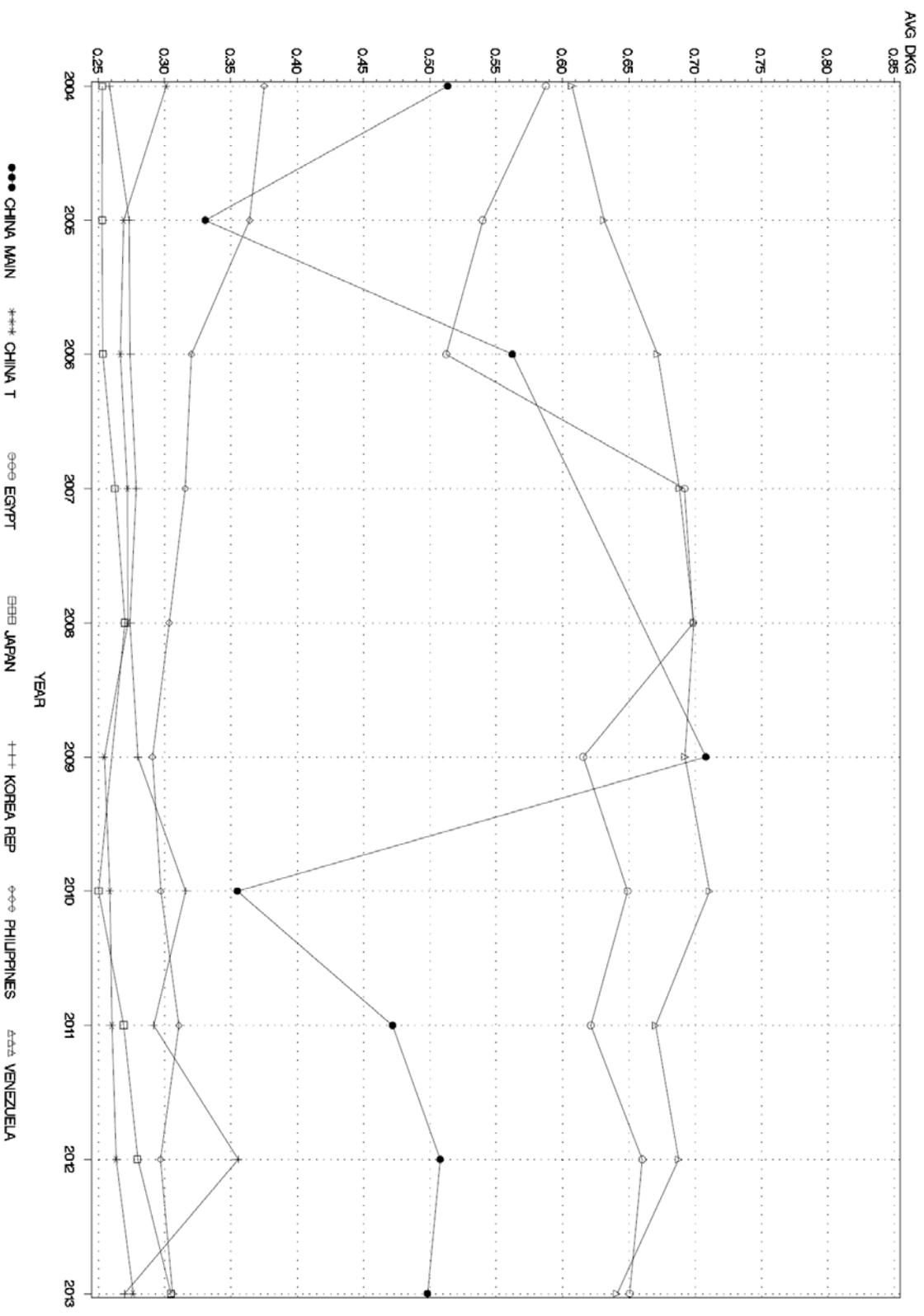
## U.S. WHEAT EXPORTED, 2004–2013

### AVG DOCKAGE BY CLASS



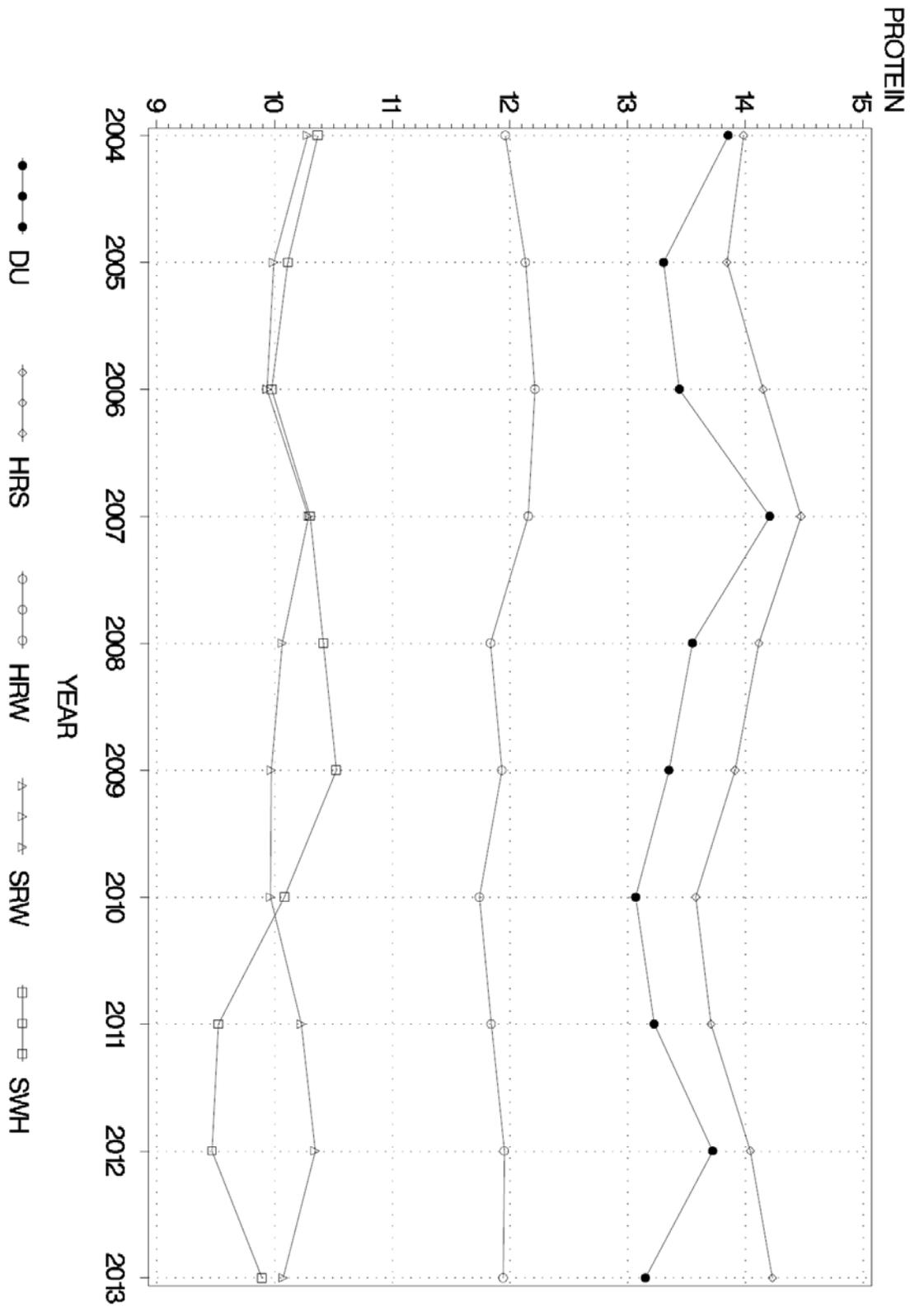
# U.S. WHEAT EXPORTED, 2004—2013

## AVG DOCKAGE BY DESTINATION COUNTRY



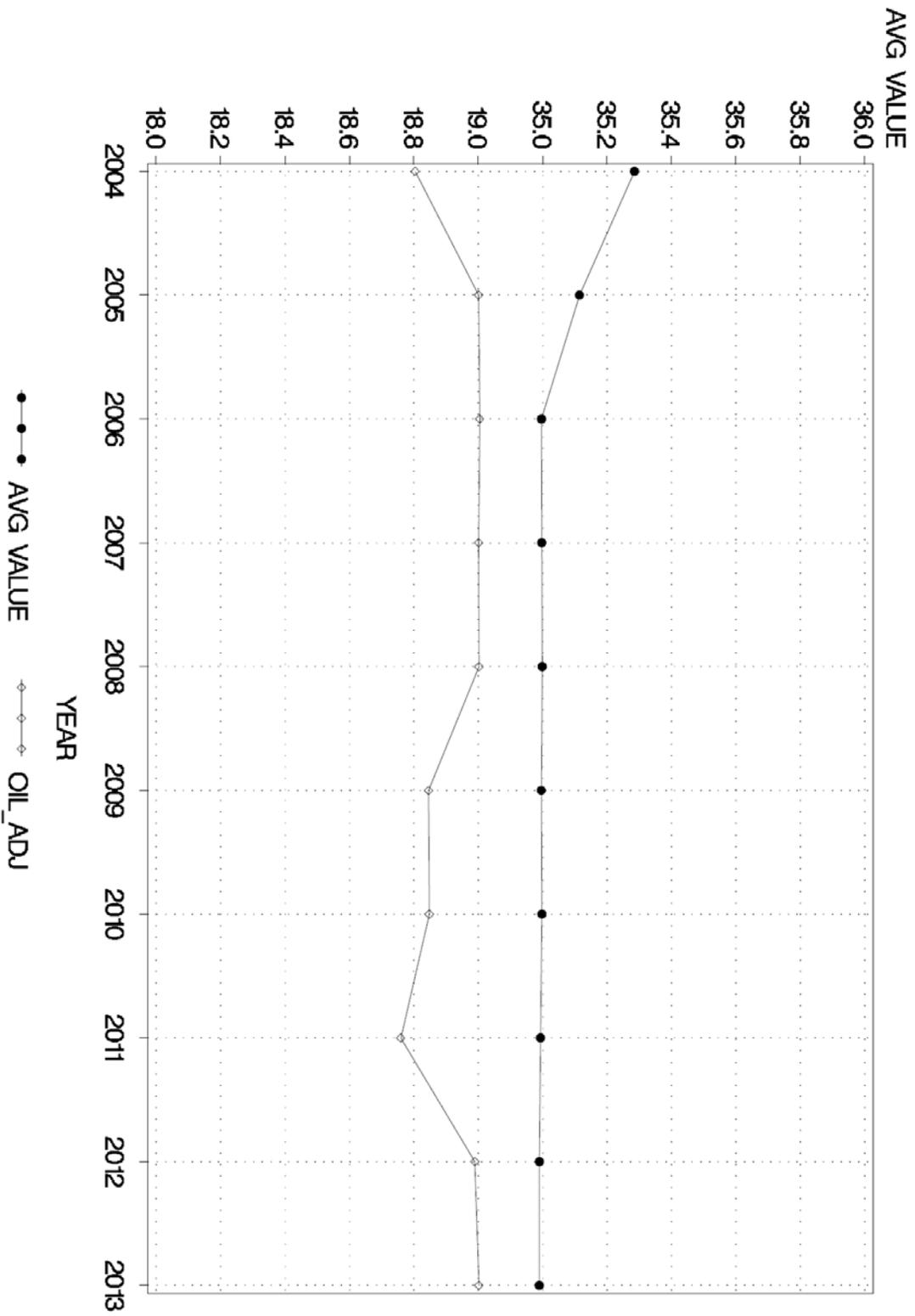
## U.S. WHEAT EXPORTED, 2004—2013

### AVG PROTEIN(12% M) BY CLASS



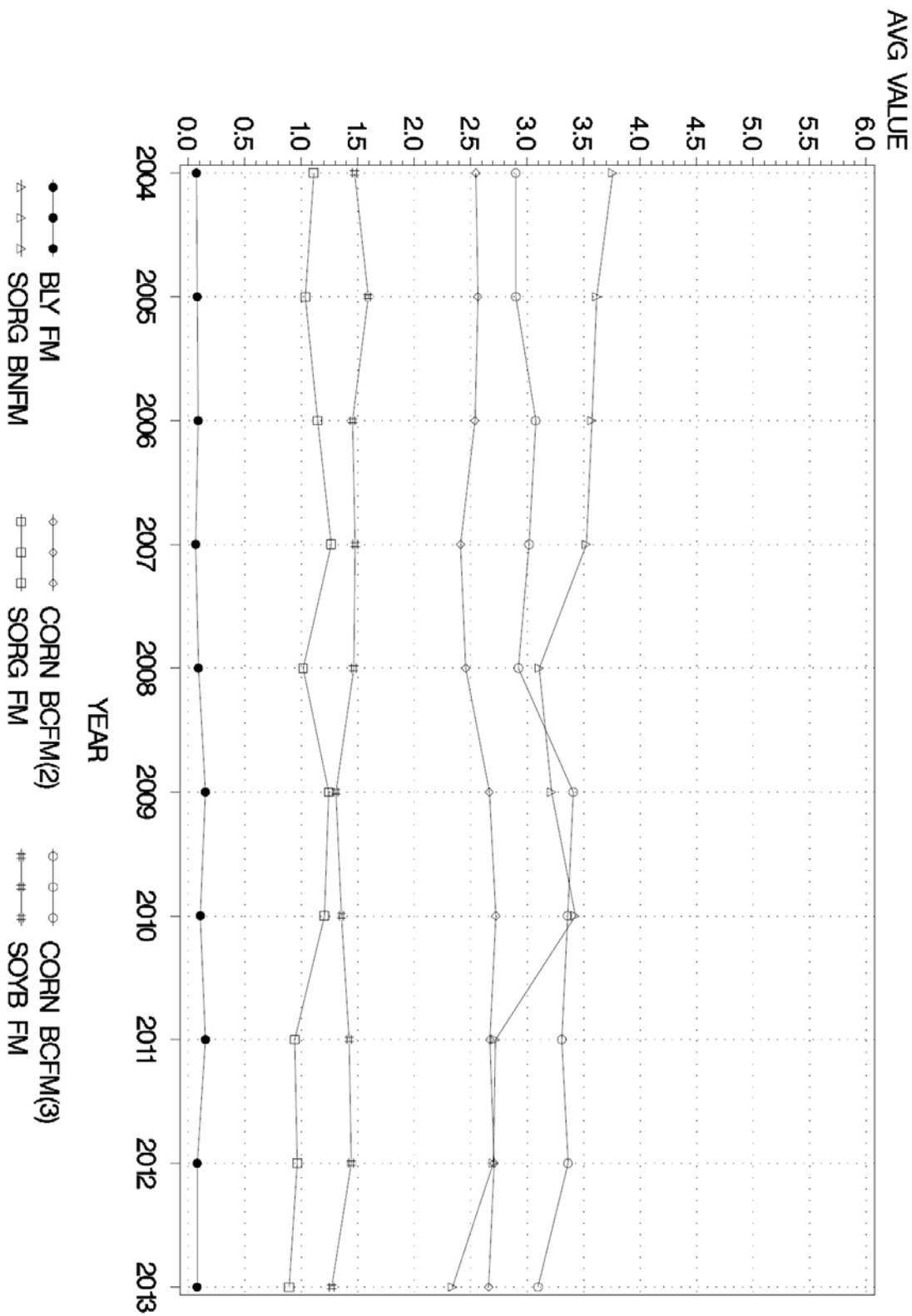
## U.S. SOYBEANS EXPORTED, 2004—2013

### AVG PROTEIN AND OIL (13% M)



## U.S. GRAINS EXPORTED, 2004–2013

### AVG FM BNFM BCFM



The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.