

## Export 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	Minimum test weight per bushel (pounds)	Maximum limits of -				
		Damaged kernels		Foreign Material (percent)	Splits (percent)	Soybeans of other colors <sup>1</sup> (percent)
		Heat-damaged kernels (percent)	Total damaged kernels (percent)			
U.S. No. 1	56.0	0.2	2.0	1.0	10.0	1.0
U.S. No. 2	54.0	0.5	3.0	2.0	20.0	2.0
U.S. No. 3	52.0	1.0	5.0	3.0	30.0	5.0
U.S. No. 4	49.0	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) Contain 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, 11 or more pieces of animal filth, castor beans, crotalaria seeds, glass, stones, or unknown foreign substance in combination, per 1,000 grams of soybeans; or
- (c) Have a musty, sour, or commercially objectionable foreign odor (except garlic odor); or
- (d) Are heating or otherwise of distinctly low quality.

<sup>1</sup> Does not apply to Mixed soybeans.

## Soybeans

### Definitions

**Test weight (lb/bu)** is pounds of grain per Winchester bushel determined by an approved device before the removal of 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 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 a 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 class and grade, 1997-99**

Grade	1997		1998		1999	
	Number of Lots	Metric Tons	Number of Lots	Metric Tons	Number of Lots	Metric Tons
U.S. No. 1	92	1,478,716	74	1,103,571	101	1,698,092
U.S. No. 2	1,026	23,024,639	813	17,924,040	887	20,145,315
U.S. No. 3	4	48,801	14	205,157	3	26,215
U.S. No. 4	1	735	--	--	--	--
U.S. Sample Grade	3	2,116	1	13,086	1	2,878
Not inspected	3	7,416	1	1,271	--	--
All lots	1,129	24,562,423	903	19,247,125	992	21,872,500

Not inspected = These lots were sold without grade designation.

**Table 13. Summary of export Soybean quality, 1997-99**

Factor	Grade	Grade Limit	1997				1998				1999			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
<b>Test Weight (lb/bu)</b>	<b>U.S. No. 1</b>	56.0	92	56.6	56.0	58.4	74	56.5	56.0	57.8	101	56.3	56.0	58.6
	<b>U.S. No. 2</b>	54.0	1,026	56.4	54.0	59.7	813	56.0	54.0	59.3	887	55.9	54.0	58.2
	<b>U.S. No. 3</b>	52.0	4	55.0	54.7	56.3	14	54.6	53.6	55.4	3	54.4	53.7	54.6
	<b>U.S. No. 4</b>	49.0	1	55.4	55.4	55.4	--	--	--	--	--	--	--	--
	<b>U.S. Sample Grade</b>	N/A	3	56.5	56.2	56.7	1	55.6	55.6	55.6	1	55.7	55.7	55.7
	<b>All lots</b>	N/A	1,126	56.4	54.0	59.7	902	56.0	53.6	59.3	992	55.9	53.7	58.6
<b>Test Weight (kg/hl)</b>	<b>U.S. No. 1</b>	N/A	92	72.9	72.1	75.2	74	72.8	72.1	74.5	101	72.5	72.1	75.4
	<b>U.S. No. 2</b>	N/A	1,026	72.6	69.5	76.9	813	72.0	69.5	76.4	887	72.0	69.5	74.9
	<b>U.S. No. 3</b>	N/A	4	70.8	70.4	72.4	14	70.3	69.0	71.3	3	70.0	69.2	70.2
	<b>U.S. No. 4</b>	N/A	1	71.3	71.3	71.3	--	--	--	--	--	--	--	--
	<b>U.S. Sample Grade</b>	N/A	3	72.7	72.4	73.0	1	71.5	71.5	71.5	1	71.6	71.6	71.6
	<b>All lots</b>	N/A	1,126	72.6	69.5	76.9	902	72.1	69.0	76.4	992	72.0	69.2	75.4
<b>Moisture</b>	<b>U.S. No. 1</b>	N/A	92	12.4	11.0	14.0	74	11.9	10.6	13.7	101	12.1	10.7	13.3
	<b>U.S. No. 2</b>	N/A	1,026	12.6	10.3	14.3	813	12.3	0.0	14.0	887	12.0	0.0	13.4
	<b>U.S. No. 3</b>	N/A	4	11.0	10.7	14.6	14	11.0	10.6	13.1	3	11.6	11.5	12.0
	<b>U.S. No. 4</b>	N/A	1	13.9	13.9	13.9	--	--	--	--	--	--	--	--
	<b>U.S. Sample Grade</b>	N/A	3	12.6	12.5	13.3	1	12.2	12.2	12.2	1	12.3	12.3	12.3
	<b>All lots</b>	N/A	1,126	12.6	10.3	14.6	902	12.2	0.0	14.0	992	12.0	0.0	13.4
<b>Heat-damaged Kernels</b>	<b>U.S. No. 1</b>	0.2	92	0.0	0.0	0.1	74	0.0	0.0	0.2	101	0.0	0.0	0.1
	<b>U.S. No. 2</b>	0.5	1,026	0.1	0.0	0.4	813	0.1	0.0	0.5	887	0.1	0.0	0.5
	<b>U.S. No. 3</b>	1.0	4	0.0	0.0	0.0	14	0.0	0.0	0.1	3	0.0	0.0	0.3
	<b>U.S. No. 4</b>	3.0	1	1.6	1.6	1.6	--	--	--	--	--	--	--	--
	<b>U.S. Sample Grade</b>	N/A	3	0.0	0.0	0.0	1	0.1	0.1	0.1	1	0.1	0.1	0.1
	<b>All lots</b>	N/A	1,126	0.0	0.0	1.6	902	0.1	0.0	0.5	992	0.1	0.0	0.5
<b>Damaged Kernels (Total)</b>	<b>U.S. No. 1</b>	2.0	92	0.5	0.0	0.9	74	0.5	0.0	1.1	101	0.6	0.0	0.9
	<b>U.S. No. 2</b>	3.0	1,026	0.8	0.0	2.3	813	1.1	0.0	2.9	887	1.0	0.0	2.8
	<b>U.S. No. 3</b>	5.0	4	0.5	0.3	0.6	14	0.7	0.3	1.8	3	0.6	0.5	1.8
	<b>U.S. No. 4</b>	8.0	1	2.7	2.7	2.7	--	--	--	--	--	--	--	--
	<b>U.S. Sample Grade</b>	N/A	3	0.7	0.3	0.7	1	3.6	3.6	3.6	1	0.7	0.7	0.7
	<b>All lots</b>	N/A	1,126	0.8	0.0	2.7	902	1.0	0.0	3.6	992	0.9	0.0	2.8

continued

**Table 13. Summary of export Soybean quality, 1997-99-Continued**

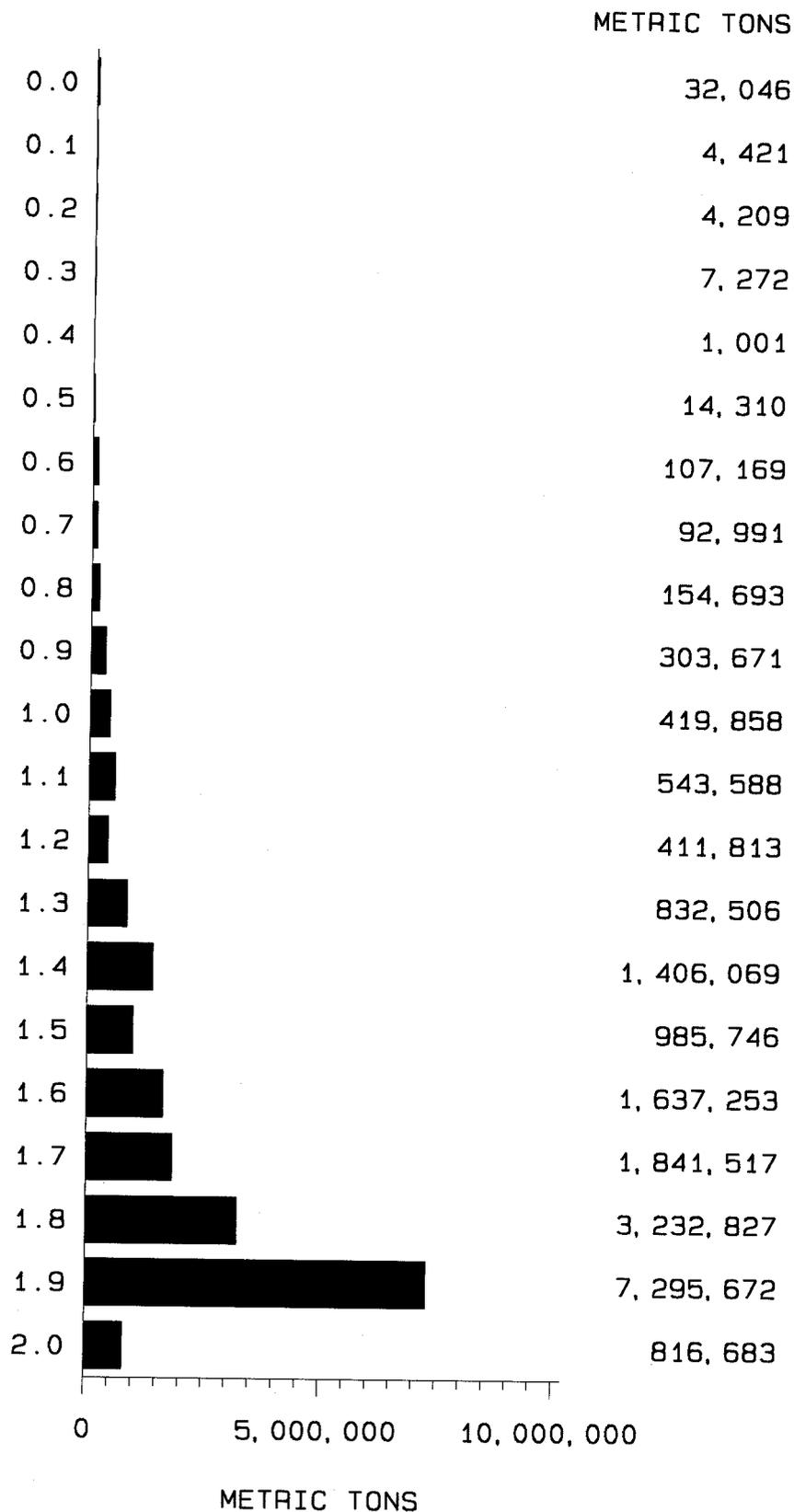
Factor	Grade	Grade Limit	1997				1998				1999			
			No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High	No. of Lots	Avg.	Low	High
<b>Foreign Material</b>	<b>U.S. No. 1</b>	1.0	92	0.8	0.0	1.0	74	0.8	0.1	1.0	101	0.8	0.1	1.0
	<b>U.S. No. 2</b>	2.0	1,026	1.6	0.0	2.0	813	1.7	0.0	2.0	887	1.7	0.0	2.0
	<b>U.S. No. 3</b>	3.0	4	1.6	1.3	1.8	14	2.0	1.8	2.6	3	1.6	1.0	1.9
	<b>U.S. No. 4</b>	5.0	1	1.1	1.1	1.1	--	--	--	--	--	--	--	--
	<b>U.S. Sample Grade</b>	N/A	3	0.8	0.3	0.8	1	1.9	1.9	1.9	1	0.9	0.9	0.9
	<b>All lots</b>	N/A	1,126	1.6	0.0	2.0	902	1.6	0.0	2.6	992	1.6	0.0	2.0
<b>Splits</b>	<b>U.S. No. 1</b>	10.0	92	5.7	0.2	9.5	74	7.2	0.4	9.5	101	6.9	0.3	9.8
	<b>U.S. No. 2</b>	20.0	1,026	6.7	0.7	19.2	813	8.4	0.0	19.9	887	8.2	0.0	19.8
	<b>U.S. No. 3</b>	30.0	4	21.7	9.2	24.0	14	22.7	4.9	27.8	3	20.3	16.1	25.4
	<b>U.S. No. 4</b>	40.0	1	6.3	6.3	6.3	--	--	--	--	--	--	--	--
	<b>U.S. Sample Grade</b>	N/A	3	4.9	4.5	5.5	1	4.8	4.8	4.8	1	6.7	6.7	6.7
	<b>All lots</b>	N/A	1,126	6.6	0.2	24.0	902	8.5	0.0	27.8	992	8.1	0.0	25.4
<b>Soybeans of Other Colors</b>	<b>U.S. No. 1</b>	1.0	92	0.0	0.0	0.9	74	0.0	0.0	0.6	101	0.0	0.0	0.5
	<b>U.S. No. 2</b>	2.0	1,026	0.1	0.0	1.3	813	0.0	0.0	0.7	887	0.0	0.0	0.9
	<b>U.S. No. 3</b>	5.0	4	0.1	0.0	0.1	14	0.1	0.0	0.5	3	0.0	0.0	0.1
	<b>U.S. No. 4</b>	10.0	1	0.0	0.0	0.0	--	--	--	--	--	--	--	--
	<b>U.S. Sample Grade</b>	N/A	3	0.0	0.0	0.0	1	0.0	0.0	0.0	1	0.0	0.0	0.0
	<b>All lots</b>	N/A	1,126	0.1	0.0	1.3	902	0.0	0.0	0.7	992	0.0	0.0	0.9
<b>Protein (adjusted to 13% moisture)</b>	<b>U.S. No. 1</b>	N/A	80	35.3	33.8	38.1	57	35.5	33.9	38.6	82	35.5	34.2	38.8
	<b>U.S. No. 2</b>	N/A	573	35.3	34.0	37.6	521	35.5	33.7	38.2	537	35.3	32.6	37.8
	<b>U.S. No. 3</b>	N/A	1	38.0	38.0	38.0	--	--	--	--	--	--	--	--
	<b>U.S. No. 4</b>	N/A	1	35.1	35.1	35.1	--	--	--	--	--	--	--	--
	<b>U.S. Sample Grade</b>	N/A	2	35.0	34.1	35.2	1	35.6	35.6	35.6	--	--	--	--
	<b>All lots</b>	N/A	657	35.3	33.8	38.1	579	35.5	33.7	38.6	619	35.3	32.6	38.8
<b>Oil (adjusted to 13% moisture)</b>	<b>U.S. No. 1</b>	N/A	80	18.3	16.3	19.3	57	18.6	16.5	19.7	82	18.7	16.3	19.3
	<b>U.S. No. 2</b>	N/A	575	18.4	16.4	20.4	521	18.8	16.9	35.3	542	18.8	17.8	20.2
	<b>U.S. No. 3</b>	N/A	1	17.5	17.5	17.5	--	--	--	--	--	--	--	--
	<b>U.S. No. 4</b>	N/A	1	19.0	19.0	19.0	--	--	--	--	--	--	--	--
	<b>U.S. Sample Grade</b>	N/A	2	18.5	18.4	18.9	1	19.5	19.5	19.5	--	--	--	--
	<b>All lots</b>	N/A	659	18.4	16.3	20.4	579	18.8	16.5	35.3	624	18.8	16.3	20.2

N/A=Does not apply.

--=No lots reported in this category.

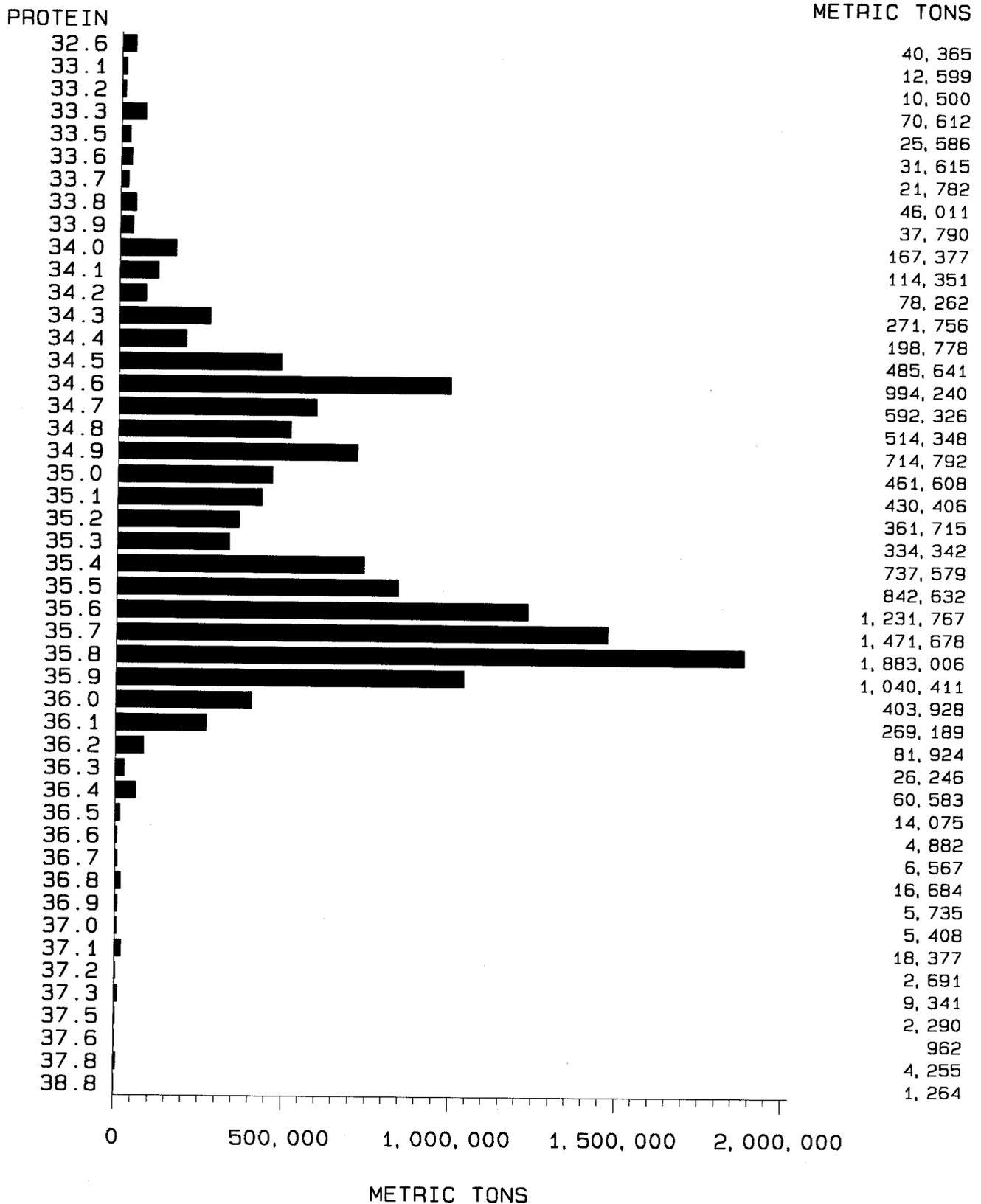
# U.S. SOYBEANS EXPORTED, 1999

## DISTRIBUTION FOR FM – GRADE 2



# U.S. SOYBEANS EXPORTED, 1999

## DISTRIBUTION FOR PROTEIN (13% M) – ALL GRADES



# U.S. SOYBEANS EXPORTED, 1999

## DISTRIBUTION FOR OIL (13% M) – ALL GRADES

