



# QUICK FACTS FOR PRODUCERS

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## Sampling Grain

Obtaining a representative sample by following the correct sampling procedures is the essential part of the inspection process and critical to the accuracy of the final inspection results.

### Sampling devices that a producer may encounter

Hand Probe    Pelican    Mechanical Probe    Truck Tailgate Sampler

## Moisture

*It is an essential measure of grain's storability and value.  
It is determined on all grain at the time of inspection.*

Determine moisture on the sample as a whole (i.e., before the removal of dockage and/or foreign material). Any device that has been tested and approved by the local State weights and measures agency may be used.

## Test Weight (TW)

*It is the weight of the volume of grain that is required to fill a Winchester bushel. Since TW can increase as a moisture content decreases, measure it as quickly as possible after grain is sampled.*

For the following grains determine TW **before** the removal of dockage and/or foreign material:

**Corn**    **Mixed Grain**  
**Oats**    **Sorghum**    **Soybeans**

For the following grains determine TW **after** the removal of dockage and/or foreign material:

**Barley**    **Canola**    **Flaxseed**    **Rye**  
**Sunflower Seed**    **Triticale**    **Wheat**

## Dockage

*Material other than the predominant grain that can be easily removed with either a mechanical dockage tester or appropriate size hand sieve.*

**Barley:** 5/64" triangular-hole sieve.

**Canola, Mustard Seed, Rapeseed:** .064" x 3/8" oblong-hole sieve on top of a 3/64" x 3/8" oblong-hole sieve.

**Safflower Seed:** .089" inscribed circle triangle-hole sieve on top of a 4.5 / 64" round-hole sieve.

**Sorghum:** 2.5 / 64" round-hole sieve.

**Wheat, Rye, Triticale:** 12/64" round-hole top of 5/64" or 4.5 / 64" round-hole sieve.

## Foreign Material (FM)

**Corn:** All matter that passes readily through a 12/64" sieve and all matter other than corn that remains in the sample after sieving.

**Soybeans:** All matter that passes through an 8/64" round-hole sieve, and all matter other than soybeans that remains in the sample after sieving.

**Sorghum:** All matter, other than dockage that passes through a 5/64" triangular-hole sieve (i.e., broken kernels) and all matter other than sorghum that remains in the sample after sieving (i.e., FM).

**Wheat:** All matter other than wheat that remains in the sample after the removal of dockage and shrunken and broken kernels.

See other definitions of FM in the Practical Procedures for Grain Handlers Handbook

## Protein

*Protein can be determined on Wheat, Barley, Soybeans, and Corn.*

### Basis of Determination

<b>Wheat</b>	After the removal of dockage
<b>Barley</b>	After the removal of dockage
<b>Soybeans</b>	After the removal of Foreign Material
<b>Corn</b>	After the removal of Broken Corn and Foreign Material

Corn				
Grade	Minimum Limits -	Maximum Limits of -		
	Test Weight per bushel (pounds)	Heat-Damaged Kernels (percent)	Damaged Kernels Total (percent)	Broken Corn and Foreign Material (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

Sorghum					
Grade	Minimum Limits -	Maximum Limits of -			
	Test Weight per bushel (pounds)	Damaged Kernels		Broken Kernels and Foreign Material	
		Heat (percent)	Total (percent)	Foreign Material (part of total) (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	53.0	1.0	10.0	3.0	8.0
U.S. No. 4	51.0	3.0	15.0	4.0	10.0

Soybeans					
Grade	Maximum Limits of -				
	Damaged Kernels		Foreign Material (percent)	Splits (percent)	Soybeans of Other Colors (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

Wheat									
Grade	Minimum Limits -		Maximum Limits of -						
	Test Weight per bushel (pounds)		Damaged Kernels		Foreign material (percent)	Shrunken and broken kernels (percent)	Defects (percent)	Wheat of other classes	
	Hard Red Spring Wheat or White Club Wheat (pounds)	All other classes and subclasses (pounds)	Heat damage (part of total) (percent)	Total (percent)				Contrasting Classes (percent)	Total (percent)
	U.S. No. 1	58.0	60.0	0.2	2.0	0.4	3.0	3.0	1.0
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