

Understanding Soybean Discount Schedules

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Every elevator that receives soybeans has a discount schedule. Discount schedules are important because they communicate how and when various shrink factors and discounts are applied at delivery. Discount schedules vary from elevator to elevator and can be somewhat confusing. This article lists and explains the major shrink and discount factors pertaining to soybeans and provides examples of shrink and discount calculations.

Test weight

Test weight is a measure of density (mass/volume) and is measured in pounds per bushel. The standard test weight of 60 pounds per bushel is always used to convert the scale weight of soybean loads to the number of bushels contained in the load. This is true even if the actual test weight of the load is lower than 60 pounds per bushel. Therefore, test weight does not impact the number of saleable bushels harvested from a defined area (acre or field). However, most grain buyers will begin discounting soybean loads when the test weight falls below 54 pounds per bushel. Discounts are applied to the gross weight of the load before shrink factors are applied. The only advantage of having test weights higher than 54 pounds per bushel is that the beans will take up less volume in storage and during transportation.

Moisture

Grain moisture is an important factor when selling soybeans. Soybean producers are paid based on the gross weight of the load they deliver minus the moisture shrink when grain moisture levels exceed 13 percent. Most grain buyers use a moisture shrink factor of 0.7 or 0.8 percent for each half percent of moisture above 13 percent to convert gross weight to dry weight. They will also assess a drying charge on loads having grain moisture levels above 13 percent. A common drying charge is \$0.025 per bushel for each half point of moisture above 13 percent.

Foreign material

The weight of soybean loads is also reduced to account for foreign material (FM) in soybeans. Just as with moisture shrink, grain buyers shrink or reduce the gross weight of the load based on the actual FM found in the sample. Although U.S. number 1 yellow soybeans allow for 1 percent FM and U.S. number 2 yellow soybeans allow for 2 percent FM, there are many companies that will allow only a half percent and some will shrink for any FM above 0 percent. Some elevators also assess an FM discount in addition to the FM weight deduction or shrink. The FM discounts range from \$0.01 to \$0.05 for each 1 percent of FM found in the sample above 1 percent. The discount typically increases as the amount of FM in the sample increases.

Damaged (total)

Damaged seed includes heat damage, frost damage, immature seed, mold damage, insect damage and sprout damage. Producers are allowed up to 2 percent damaged beans before damage discounts apply. Damage discounts range from \$0.02 to \$0.05 for each 1 percent above 2 percent. The discount typically increases as the amount of damage in the sample increases.

Heat damaged

Heat damage (black or dark brown soybeans) can occur when wet soybeans are dried at too high of a drying temperature (greater than 130 degrees Fahrenheit). However, most heat damage occurs when soybeans are placed into storage at moisture levels that are too high for safe storage and hot pockets develop in the grain mass. Heat damage is included in the damage (total) category and producers are not charged twice for this type of damage.

Splits

Beans are counted as splits whenever a quarter of the seed is missing. Producers are generally allowed up to 20 percent splits at delivery without being discounted. However, some grain buyers begin discounting when split beans exceed 10 percent. The discount for splits ranges from \$0.01 to \$0.05 for each 5 percent increase in split beans and increases as the percentage of splits in the sample increases.

EXAMPLE

This example demonstrates how the shrink, discounts and net payment or settlement are calculated for a load of soybeans weighing 55,000 pounds having the following grain quality factors and a market price of \$9.25 per bushel:

14.5 percent moisture
4 percent FM
55 pounds per bushel test weight
3 percent damaged beans
10 percent splits

EXAMPLE SOYBEAN DISCOUNT SCHEDULE

Moisture shrink

14.5 percent – 13 percent = 1.5 percent moisture above 13 percent
1.5 percent ÷ 0.5 percent = 3
3 x 0.7 percent = 2.1 percent
55,000 x 0.021 = 1,155 pounds of moisture shrink

Foreign material shrink

4 percent FM in the load – 1 percent FM allowed = 3 percent FM shrink on the load
55,000 x 0.03 = 1,650 pounds of FM shrink on the load

Saleable or marketable bushels

[gross weight – (moisture + FM shrink)] ÷ 60
55,000 pounds - (1,155 pounds + 1,650 pounds) = 52,195 pounds
52,195 ÷ 60 = 870 dry marketable bushels

Gross payment without applicable discounts and drying charges

870 bushels x \$9.25 per bushel = \$8,047.50

Drying charge

14.5 percent – 13 percent = 1.5 percent moisture above 13 percent
1.5 percent ÷ 0.5 percent = 3
3 x \$0.025 per each 0.5 percent per bushel = \$0.075 per gross or wet bushel
55,000 ÷ 60 = 917 gross or wet bushels
917 gross bushels x \$0.075 per bushel drying charge = \$69.00

Test weight discount

No test weight discount applied to the load

Damage discount

3 percent damage in the load - 2 percent allowed damage = 1 percent of the gross

1 percent damage over allowed x \$0.03 per bushel for each 1 percent damage = \$0.03 per bushel

917 gross bushels x \$0.03 per bushel = \$27.51

Discount for splits

No discount for split beans applied to the load

NET PAYMENT/SETTLEMENT ON THE LOAD

Gross payment – (drying charges + discounts)

\$8,047.50 – (\$69.00 + \$27.51) = \$7,950.99 net payment before checkoff deduction

SOURCE: Central Farm Service