USDA

Soybean Visual Reference Images

SB-1.0 BADLY GROUND AND/OR WEATHER DAMAGE

Portion for Analysis: Approximately 125 grams

Soybeans and pieces of soybeans in which the seed coats are discolored to the extent that the area of coverage and intensity is equal to or greater than shown. Soybeans that have a discolored area(s) which does not meet the minimum coverage requirement may be considered damage provided the degree of discoloration is greater than shown and the overall "prorated" appearance meets the minimum coverage and intensity level depicted. For example, when the degree of discoloration is twice that shown, the required area of coverage can be reduced by one half.

NOTE: The discoloration may appear on one or both sides of the soybean. Affected soybeans may also be elongated and/or misshapen.

SB-1.1 WEATHER DAMAGE (GRAY/BLACK)

Portion for Analysis: Approximately 125 grams

SOYBEANS THAT CONTAIN GRAY/BLACK DISCOLORATION ON THE SEED COAT WITH THE AREA OF COVERAGE AND INTENSITY EQUAL TO OR GREATER THAN SHOWN ARE CONSIDERED DAMAGE.

Soybeans that have a discolored area(s) which does not meet the minimum coverage requirement may be considered damage provided the degree of discoloration is greater than shown and the overall "prorated" appearance meets the minimum coverage and intensity level depicted. For example, when the degree of discoloration is twice that shown, the required area of coverage can be reduced by one half.

NOTE: The discoloration may appear on one or both sides of the soybean. DO NOT confuse discolored soybeans with soybeans containing pigmented streaks or blotches that are considered soybeans of other colors. (ILP SB-12.0)

SB-2.0 DAMAGED BY HEAT

Portion for Analysis: Approximately 125 grams

Soybeans and pieces of soybeans which have been damaged by heat and the area of coverage and intensity is equal to or greater than shown. Cross-sectioned or pieces of soybeans that have a discolored area(s) which does not meet the minimum coverage requirement may be considered damage provided the degree of discoloration is greater than shown and the overall "prorated" appearance meets the minimum coverage and intensity level depicted. For example, when the degree of discoloration is twice that shown, the required area of coverage can be reduced by one half.

NOTE: A. CROSS-SECTIONED WHOLE SOYBEAN
1. Only half of the cross-sectioned soybean must meet the ILP.

B. SPLIT SOYBEAN
1. Examine the flat side of the split.
2. Do not cross-section splits and pieces of soybeans.

SB-3.0 GREEN DAMAGE

Portion for Analysis: Approximately 125 grams

Soybeans and pieces of soybeans that are discolored green with an area of coverage and intensity equal to or greater than shown. Cross-sectioned or pieces of soybeans that have a discolored area(s) which does not meet the minimum coverage requirement may be considered damage provided the degree of discoloration is greater than shown and the overall "prorated" appearance meets the minimum coverage and intensity level depicted. For example, when the degree of discoloration is twice that shown, only half of the surface area needs to be discolored.

NOTE: Only half of the cross-sectioned soybean must meet the ILP. Do not cross-section splits and pieces of soybeans. Examine the flat side of the split.

SB-3.2 FROST DAMAGE (WAXY)

Portion for Analysis: Approximately 125 grams

Soybeans and pieces of soybeans which have a glassy, wax-like appearance. The color of affected soybeans may vary provided the color intensity is equal to or greater than shown. Cross-sectioned or pieces of soybeans that have a discolored area(s) which does not meet the minimum coverage requirement may be considered damage provided the degree of discoloration is greater than shown and the overall "prorated" appearance meets the minimum coverage and intensity level depicted. For example, when the degree of discoloration is twice that shown, the required area of coverage can be reduced by one half.

NOTE: Only half of the cross-sectioned soybean must meet the ILP. Do not cross-section splits and pieces of soybeans. Examine the flat side of the split.

SB-5.0 HEAT DAMAGE (MATERIALLY DAMAGED/HEATING)

Portion for Analysis: Approximately 125 grams

Soybeans and pieces of soybeans which are materially discolored and damaged by heat with an area of coverage and intensity equal to or greater than shown. Cross-sectioned or pieces of soybeans that have a discolored area(s) which does not meet the minimum coverage requirement may be considered damage provided the degree of discoloration is greater than shown and the overall "prorated" appearance meets the minimum coverage and intensity level depicted. For example, when the degree of discoloration is twice that shown, the required area of coverage can be reduced by one half.

NOTE: Only half of the cross-sectioned soybean must meet the ILP. Do not cross-section splits and pieces of soybeans. Examine the flat side of the split.

SB-6.0 IMMATURE (WAFER)

Portion for Analysis: Approximately 125 grams

Soybeans and pieces of soybeans which are immature and have a thin, flat, wrinkled, or wafer like appearance. Immature soybeans are considered sound unless otherwise damage.

NOTE: If cross-sectioned wafers do not contain endosperm (meat), they are considered damaged.

SB-7.0 INSECT BORED KERNELS

Portion for Analysis: Approximately 125 grams

Soybeans and pieces of soybeans with obvious weevil bored holes indicating the possible inner presence of insects, insect webbing, or insect refuse.

NOTE: Do not probe into or further expose insect/weevil bored holes. Do not confuse insect exit holes with stress cracks.

SB-8.0 MOLD DAMAGE

Portion for Analysis: Approximately 125 grams

A. INVADED BY MOLD
Soybeans that are discolored, elongated, or misshapen, and contain white or gray mold on the seed coat equal to or greater than combined amounts shown. Seed coats may be split or cracked.

B. SURFACE MOLD GROWTH
Soybeans with little or no apparent deterioration having a milky white or grayish crusty growth caused by downy mildew. Seed coat is not discolored and contains no splits, cracks, or fissures. *SOYBEANS THAT CONTAIN MILDEW ON 50 PERCENT OR MORE OF THE SEED COAT IN SUFFICIENT CONCENTRATION TO MEET OR EXCEED THE MINIMUM SHOWN SHALL BE CONSIDERED DAMAGE.*

NOTE: Soybeans and pieces of soybeans containing mold which penetrates the seed coat, regardless of amount, are damaged.

SB-8.1 MOLD DAMAGE (PINK)

Portion for Analysis: Approximately 125 grams

Soybeans and pieces of soybeans that exhibit a pink discoloration (caused by fungal activity) on the seed coat with an area of coverage and intensity equal to or greater than shown. Soybeans that have a discolored area(s) which does not meet the minimum coverage requirement may be considered damage provided the degree of discoloration is greater than shown and the overall "prorated" appearance meets the minimum coverage and intensity level depicted. For example, when the degree of discoloration is twice that shown, the required area of coverage can be reduced by one half.

NOTE: The pink discoloration may appear on one or both sides of the soybean. DO NOT confuse the pink fungus with pokeberry juice stains, treated, or purple mottled soybeans.

SB-9.0 SPROUT DAMAGE

Portion for Analysis: Approximately 125 grams

Soybeans and pieces of soybeans in which the sprout protrudes from the seed coat equal to or greater than shown are considered damage.

NOTE: On the soybean illustrated, the sprout has emerged from the seed coat and extends toward the upper end of the hilum.

SB-10.0 STINKBUG OR INSECT STUNG KERNELS

Portion for Analysis: Approximately 125 grams

Soybeans or pieces of soybeans which show an indentation or discoloration on the seed coat. To determine the extent of damage, it is generally necessary to cross-section the soybean.

1. The top row contains confirmed stinkbug or insect stung soybeans. THE THIRD KERNEL FROM THE LEFT REPRESENTS THE MINIMUM DISCOLORATION/ DAMAGE REQUIREMENT.

2. The bottom row contains suspected stinkbug or insect stung soybeans.

Splits and pieces of soybeans may be cross-sectioned to determine damage. Cross-section soybean at the suspected area. If a kernel is otherwise damaged, it functions as other damage.

NOTE: Stinkbug damage is one-fourth of the actual damage.

SB-12.0 SOYBEANS OF OTHER COLORS

Portion for Analysis: Approximately 125 grams

Soybeans that have green, black, brown, or bicolored seed coats. Soybeans with green seed coats MUST be green in cross-section. Bicolored soybeans have seed coats of two colors, one of which is brown or black, and the brown or black color must cover at least 50 percent of the seed coat (the Hilum of a soybean is not considered a part of the seed coat for this determination).

Illustration shows, from left to right, the minimum requirement for bicolored soybeans:
KERNEL 1: The required degree of brown discoloration.
KERNEL 2: Yellow soybeans (for comparison purposes only).
KERNEL 3: The required degree of black discoloration.

NOTE: When applicable, soybeans of other colors (SBOC) shall function as damaged or splits when analyzed on the same portion. Like whole soybeans, splits require 50 percent or more coverage to function as SBOC.

SB-13.0 SHRIVELED AND WRINKLED

Portion for Analysis: Approximately 125 grams

Whole, sound soybeans passing through a 10/64” x 3/4” slotted sieve, and remaining on top of a 8/64” round-hole sieve that are wrinkled to the minimum extent shown are considered shriveled and wrinkled.