



# QUICK REFERENCE GUIDE

## Understanding seed coat color variation in soybeans

There is natural color variation in soybeans caused by environment, genetics and other factors. This guide reviews information about soybean seed coat color variation in general and in Enlist E3<sup>®</sup> soybeans.

### Seed coat color variation is seen in soybeans.

Soybeans naturally come in a range of colors—just like apples, potatoes and other crops with which you are familiar. In general, soybean seed coat color depends on many factors, such as genetics (soybean variety) and environment (temperature, soil type, planting date, moisture during the growing season).

### SOYBEAN GRADING

Key criteria evaluated and reported by the Federal Grain Inspection Service:

- Heat damage
- Total damaged seeds
- Foreign material
- Splits



The Agricultural Marketing Service (AMS) has announced that it is revising the United States Standards for Soybeans by removing soybeans of other colors (SBOC) as an official factor. In addition, AMS is revising the table of Grade Limits and Breakpoints for Soybeans to reflect this change. This rule is effective September 1, 2023. For more information or to see the publication, visit [www.federalregister.gov/d/2023-14856](http://www.federalregister.gov/d/2023-14856).

# Understanding seed coat color variation in Enlist E3<sup>®</sup> soybeans



**In addition to ease of use, exceptional weed control and high yield potential with Enlist E3<sup>®</sup> soybeans, farmers may occasionally see a seed coat color variation.**

**1 Farmers may see the color variation in some Enlist E3<sup>®</sup> soybeans.**

The variation typically appears as a light brown band connecting ends of the hilum and/or light brown shadows on each side of the hilum. It can range from very slight to a darker tint and varies in frequency, geography, growing season (year-to-year) and position on the plant or within pods. The seed color variation is not due to application of herbicides, such as 2,4-D.



**2 Color variation in the seed coat is from natural compounds in soybeans.**

This variation in Enlist E3 soybeans is from natural compounds, specifically a combination of iron and isoflavone in the seed coat. Iron and isoflavones are both naturally present in the seed coats of soybeans – not just Enlist E3 soybeans.

**3 Enlist E3 soybeans are comparable to non-Enlist E3 soybeans in agronomic performance and nutritional composition.**

Enlist E3 soybeans have been studied across years, varieties, geographies, maturities and environments in research and production conditions. Enlist E3 soybeans are comparable to non-Enlist E3 soybeans in nutrition, oil and meal composition and isoflavone and iron levels. The color variation does not impact whole plant appearance, seed germination, or emergence; and it is seen only in the seed coat, not the whole bean.

**Key takeaways:**

- Farmers may see the color variation in some Enlist E3 soybeans.
- The color variation is from naturally occurring substances found in soybeans.
- Enlist E3 soybeans are a much-needed product with strong yield potential and exceptional weed control.

**Based on our years of study and experience, we're confident in the performance and grain quality of Enlist E3<sup>®</sup> soybeans. And when it comes to getting genetics with high yield potential and unparalleled weed control, we think you'll like what you see with Enlist E3 soybeans.**



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