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Salt Excluders in Soybeans

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As harvest is getting closer to completion in parts of the Corn Belt, a lot of eyes are on preparation for the next growing season. It seems like each year, more and more time is spent on seed selection. Between looking over seed guides, plot results, and on farm performance, many farmers have their hands full. When we look at the seed guide some growers might come across the term “salt excluder” and may wonder what it can provide for them and their farming operation.

When it comes to soybeans, there are many things that growers pay close attention to. Trait technology and performance is probably first on the list, followed by disease tolerance, soybean stature, and local agronomics. One term that finds its way on some varieties is Salt Excluder. The salt excluder or chloride excluder becomes very helpful in fields where the soils test high in pH or contain a high amount of salt content. This becomes more common in southern environments where irrigation is used, and the irrigation water is high in salt content. When a soybean variety carries the salt excluder characteristic it does not present any yield drag to the soybean but becomes an added benefit and in some cases is a necessary characteristic.

The salt excluder characteristic in these soybeans helps the plant by secreting the chloride or salt out of the root cells and back into the soil profile which helps the soybean tolerate the high salt content in the field. Excluder soybeans keep most of the chloride out of the xylem stream of the plant where as includer soybeans take it into the plant where it makes its way to the leaves and newest growth of the plant. In areas of high salt content, includer soybean plants can be burned, stunted and lose yield.

When it comes to soybeans that carry the salt excluder characteristic, it is typically seen in the later maturing varieties, since the southern Corn Belt and delta is where the most issues are seen. Other areas across the Midwest with irrigation typically do not have high enough salt exposure to present a problem. In the LG Seeds lineup LGS3777RX, C4615RX, C4845RX and LGS4899RX are all excluders of salts and can help in these unique situations. If you have any questions regarding salt excluder varieties, please contact your local Sales Account Manager or Technical Team Agronomist for localized expertise.

Sources:

<https://www.farmprogress.com/putting-end-salty-soybeans>

<https://agfax.com/2016/10/19/soybeans-new-chloride-exclusion-trait-what-does-it-mean/>

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