Z SERIES SOYBEANS

PIONEER®

# P29Z61E™

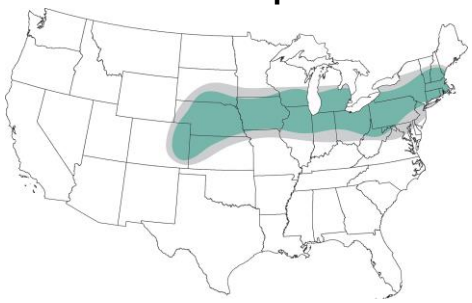
Enlist E3® SOYBEANS

## RELATIVE MATURITY: 2.9

## MANAGEMENT INSIGHTS:

* Excellent harvest standability and above average height allow placement on a wide range of soils
* 1K gene for phytophthora along with very good phytophthora field tolerance
* Widely adapted, but has shown better performance placed mid to southern side of RM zone
* Above average White Mold tolerance, strong SDS tolerance and iron deficiency chlorosis

## Area of Adaptation



## Suitability and Placement Guide

Highly Suitable | Suitable | Manage Appropriately | Poor Suitability

- Delayed or Late Harvest
- Drought Prone Soils
- Early Planting/Cold Soils
- High Yield Environments
- Fields Prone to Lodging
- Irrigation
- Poorly Drained Soils
- SCN-Prone Environments
- SDS-Prone Environments
- White Mold-Prone Environments
- No-Till/Reduced Till/High Residue
- High pH Soils/Soils Prone to Iron Chlorosis

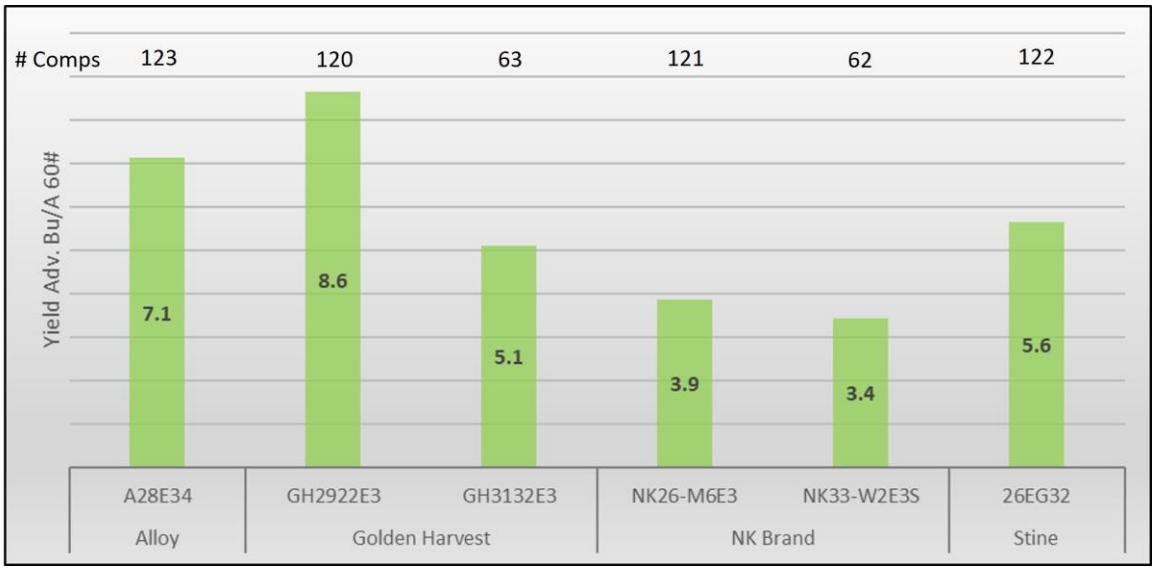
| | | Trait Score |
|---|---|---|
| Agronomics | Field Emergence | 8 |
| | Canopy Width | 5** |
| | Harvest Standability | 8 |
| | Plant Height for Maturity | 6 |
| | Rimsulfuron Tolerance | ++ |
| | Metribuzin Tolerance | TOL |
| | Sulfentrazone/Saflufenacil Tol. | TOL |
| Disease and Nematode Pests | Phytophthora Field Tolerance | 7** |
| | Phytophthora Resistance Gene | 1K |
| | Iron Chlorosis | 6 |
| | White Mold | 5 |
| | Sudden Death Syndrome | 7** |
| | Stem Canker | RES |
| | Frogeye Leaf Spot | 3** |
| | Charcoal Rot | 5 |
| | Brown Stem Rot | MT |
| | SCN Resistance Source | PI88788 |

**RATINGS: 9** = Excellent; **1** = Poor; Blank = Insufficient Data or variety not tested for that particular trait. Ratings denoted with a double asterisk (**) reflect preliminary data subject to change when additional data becomes available.

# P29Z61 E™

# Field Experience Summary

Pioneer Trials 2024




2023 trial data is based on an average of 2023 IMPACT™ trial comparisons made in U.S. through November 7, 2023 and 2024 trial data is based on an average of 2024 IMPACT™ trial comparisons made in U.S. through January 3, 2025. Comparisons are against any number of products of the indicated competitor brand, unless otherwise stated, and within +/- .3 RM of the competitive brand. Product responses are variable and subject to any number of environmental, disease and pest pressures. Individual results may vary.

Ratings denoted with a double asterisk (**) reflect preliminary data subject to change when additional data becomes available.

All Pioneer products denoted with ™ are brand names.

**IMPORTANT:** Product responses are variable and subject to any number of environmental, disease and pest pressures. Please use this information as only part of your product positioning decision. Individual results may vary.

Trait ratings provide key information useful in selection and management of Pioneer® brand products in your area. Scores are based on testing through 2024 harvest and were the latest available at time of printing. Some scores may change after 2025 harvest. Information and ratings are based on average performance across area of adaptation under normal conditions, over a wide range of both climate and soil types and may not predict future results. Refer to www.pioneer.com or contact a Pioneer sales professional for the latest and most complete listing of traits and scores for each Pioneer brand product and for product placement and management suggestions specific to your operation and local conditions.

**NUMERIC RATINGS: 9 =** Excellent; **1 =** Poor; Blank = Insufficient Data or variety not tested for that particular trait.

**RELATIVE MATURITY:** Shows the relative maturity group rating, with the digits preceding the decimal representing the general maturity group, and the digit following the decimal showing relative maturity within the group on a scale of 0 to 9, with 0 early and 9 late. For example, a soybean product with a relative maturity rating of 1.8 would be a late product in Group 1 maturity.

**TECHNOLOGY SEGMENT:**

Always follow stewardship practices in accordance with the Product Use Guide (PUG) or other product-specific stewardship requirements including grain marketing and pesticide label directions. **Varieties with BOLT® technology** provide excellent plant-back flexibility for soybeans following application of sulfonylurea (SU) herbicides such as LeadOff® or Basis® Blend as a component of a burndown program or for double-crop soybeans following SU herbicides such as Finesse® applied to wheat the previous fall.

Always follow grain marketing, stewardship practices and pesticide label directions. **Varieties with the Glyphosate Tolerant trait** (including those designated by the letter "R" in the product number) contain genes that confer tolerance to glyphosate herbicides. Glyphosate herbicides will kill crops that are not tolerant to glyphosate.

**Varieties with the STS® trait** are tolerant to certain sulfonylurea (SU) herbicides. This technology allows post-emergent applications of Synchrony® XP and Classic® herbicides without crop injury or stress (see herbicide product labels). NOTE: A soybean variety with a herbicide tolerant trait does not confer tolerance to all herbicides. Spraying herbicides not labeled for a specific soybean variety will result in severe plant injury or plant death. Always read and follow herbicide label directions and precautions for use.

**Varieties with the LibertyLink® (LL) gene** are resistant to glufosinate herbicide.
LibertyLink® and the Water Droplet Design are registered trademarks of BASF.

**DO NOT APPLY DICAMBA HERBICIDE IN-CROP TO SOYBEANS WITH Roundup Ready 2 Xtend® (RR2X) technology unless you use a dicamba herbicide product that is specifically labeled for that use in the location where you intend to make the application. IT IS A VIOLATION OF FEDERAL AND STATE LAW TO MAKE AN IN-CROP APPLICATION OF ANY DICAMBA HERBICIDE PRODUCT ON SOYBEANS WITH Roundup Ready 2 Xtend® technology, OR ANY OTHER PESTICIDE APPLICATION, UNLESS THE PRODUCT LABELING SPECIFICALLY AUTHORIZES THE USE. Contact the U.S. EPA and your state pesticide regulatory agency with any questions about the approval status of dicamba herbicide products for in-crop use with soybeans with Roundup Ready 2 Xtend® technology. ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.** Soybeans with Roundup Ready 2 Xtend® technology contain genes that confer tolerance to glyphosate and dicamba. Glyphosate herbicides will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Roundup Ready 2 Xtend® is a registered trademark of Monsanto Technology LLC used under license.

**Varieties with Enlist E3® technology (E3):** The transgenic soybean event in Enlist E3® soybeans is jointly developed and owned by Corteva Agriscience and M.S. Technologies L.L.C.

Following burndown, Enlist Duo® and Enlist One® herbicides with Colex-D® technology are the only herbicides containing 2,4-D that are authorized for preemergence and postemergence use with Enlist® crops. Consult Enlist® herbicide labels for weed species controlled. Enlist Duo and Enlist One herbicides are not registered for use or sale in all states and counties; are not registered in AK, CA, CT, HI, ID, MA, ME, MT, NH, NV, OR, RI, UT, VT, WA and WY; and have additional subcounty restrictions in AL, GA, TN and TX, while existing county restrictions still remain in FL. All users must check "Bulletins Live! Two" no earlier than six months before using Enlist One or Enlist Duo. To obtain "Bulletins," consult epa.gov/espp/, call 1-844-447-3813, or email ESPP@epa.gov. You must use the "Bulletin" valid for the month and state and county in which Enlist One or Enlist Duo are being applied. Contact your state pesticide regulatory agency if you have questions about the registration status of Enlist® herbicides in your area. ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. IT IS A VIOLATION OF FEDERAL AND STATE LAW TO USE ANY PESTICIDE PRODUCT OTHER THAN IN ACCORDANCE WITH ITS LABELING. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED FOR SUCH USE IN THE STATE OF APPLICATION. USE OF PESTICIDE PRODUCTS, INCLUDING, WITHOUT LIMITATION, 2,4-D-CONTAINING PRODUCTS NOT AUTHORIZED FOR USE WITH ENLIST CROPS, MAY RESULT IN OFF-TARGET DAMAGE TO SENSITIVE CROPS/AREAS AND/OR SUSCEPTIBLE PLANTS, IN ADDITION TO CIVIL AND/OR CRIMINAL PENALTIES. Additional product-specific stewardship requirements for Enlist crops, including the Enlist Product Use Guide, can be found at www.traitstewardship.com.

**Plenish® (P) high oleic soybeans** have an enhanced oil profile and are produced and channeled under contract to specific grain markets. Growers should refer to the Pioneer Product Use Guide on www.pioneer.com/us/stewardship for more information.

**(-)** = Variety does not contain a herbicide resistant gene.

**FIELD EMERGENCE:** Rating based on speed and strength of emergence in sub-optimal temperatures. **1-3** = Below Average; **4-6** = Average; **7-9** = Excellent.

**PHYTOPHTHORA RESISTANCE GENE:**
(-) = No specific gene for resistance.
Rps1^^ = Contains Rps1c or Rps1k Phytophthora resistance.
Rps 1a = Provides resistance to races 1, 2, 10, 11, 13-18, 24, 26, 27, 31, 32, 36, 38, 48, 50-52, 54-55.
Rps 1c = Provides resistance to races 1-3, 6-11, 13, 15, 17, 21, 23, 24, 26, 28-30, 32, 34, 36, 38, 41, 42, 44, 48, 50, 52, 54, 55.
Rps 1k = Provides resistance to races 1-11, 13-15, 17, 18, 21-24, 26, 36-38, 42-44, 46-55.
Rps 6 = Provides resistance to races 1-4, 10, 12, 14-16, 18-21, 25, 28, 33-35, 38-48, 52-54.
Rps 3a = Resistant to races 1-5, 8-9, 11, 13-14, 16, 18, 23, 25, 28-29, 31-35, 39-41, 43-45, 47-52, 54.
Rps 3c = Resistant to races 1-4, 10-16, 18-36, 38-54.

**PHYTOPHTHORA FIELD TOLERANCE:** Products with high tolerance scores have demonstrated an ability to thrive in the presence of Phytophthora races to which they lack specific resistance. In some products, tolerance is expressed only after the early seedling growth stage, making such products susceptible to damping off during emergence and early seed growth.

**BROWN STEM ROT: HT** = Highly Tolerant; **MT** = Moderately Tolerant; **MS** = Moderately Susceptible.

**WHITE MOLD:** Scores based on Pioneer research observations of comparative white mold tolerance among various soybean products across multiple locations and years. All products are capable of developing white mold symptoms under severe infestations. To our knowledge, there are no totally resistant products in the industry. However, differences exist in the ability of products to tolerate white mold (i.e., the rate at which the infection develops and the extent of damage it causes). These scores reflect those differences.

**SCN RESISTANCE SOURCE:** There are three sources of genetic resistance to SCN currently deployed in the marketplace: PI88788; PI548402 (also known as Peking); PI437654 (also known as Hartwig); **R** = Resistant to SCN but the source of that resistance is not yet identified. PI88788 provides good to excellent resistance to race 3 and average to excellent resistance to race 14. Peking provides very good to excellent resistance to races 1, 3, and 5. Peking^ provides excellent resistance to race 3 and below average to average resistance to race 5.

**SOYBEAN CYST NEMATODE [SCN]:** Resistance to each of the major SCN races is scored on a 1-9 scale. **9** = Excellent resistance; **8-7** = Very good resistance; **6** = Good resistance; **5** = Average resistance; **4** = Below average resistance; **3-2** = Susceptible; **1** = Highly susceptible; to the specific race indicated.

**CHARCOAL ROT:** A fungal disease that is enhanced by hot and dry conditions, especially during reproductive growth stages. Scores based on Pioneer research observations of the comparative ability to tolerate infection from the charcoal rot pathogen among various soybean products.

**STEM CANKER GENE: RES** = provides resistance. SUS = no specific gene for resistance.

**CERCOSPORA:** A fungal disease that is enhanced by wet periods followed by hot and dry conditions, especially during reproductive growth stages. Scores based on Pioneer research observations of the comparative ability to tolerate infection from the *Cercospora kikuchii* pathogen among various soybean products.

**CHLORIDE SENSITIVITY**: All soybeans take in chloride ($Cl^-$), a water-soluble salt, via the plants' roots. Chloride moves freely within damp or wet soils. This can be an issue in soils with higher levels of $Cl^-$ by allowing harmful concentrations of $Cl^-$ to accumulate in the tops of plants, or the "growing point," which can lead to a condition known as "chlorosis" and result in injury to soybean plants by stunting the plant's growth.

- **EXC** - Excluder varieties have the ability to identify and exclude $Cl^-$, inhibiting the movement of $Cl^-$into the growing point and reducing the likelihood of stunting due to chlorosis.
- **INT** - Intermediate varieties translocate $Cl^-$, slowing the rate at which $Cl^-$ reaches the growing point of the plant. Intermediate varieties are less susceptible to chlorosis and its effects than Includer varieties and are more susceptible to the effects of chlorosis than Excluder varieties.
- **INC** - Includer varieties readily translocate $Cl^-$ to the growing point of the plant, increasing the risk of stunting due to chlorosis.

**CANOPY WIDTH: 9** = Extremely bushy; **1** = Very narrow.

**PLANT HEIGHT FOR MATURITY: 9** = Tall; **1** = Short.

**PLANT HABIT: IND** = INDETERMINATE-type soybeans grown in Group 00-4 regions. These plants typically continue to grow as they flower, resulting in a longer pod fill time. You may find nearly mature seeds at the bottom of a plant that is still flowering at the top. **DET** = DETERMINATE soybeans grown in Group 5 and later maturities. These plants typically stop growing once they begin to flower, and all flowering occurs within a more defined timeframe.

**FLOOD TOLERANCE:** Tolerance to standing water or saturated soils which are typically found at the low end of surface irrigated fields or in the low-lying areas of fields after a heavy rain event. The score is a measure of the variety's potential to continue normal growth and photosynthesis when placed under those environmental conditions for up to one week.

**% PROTEIN AT 13% MOISTURE:** Compare data within table only. Values can vary widely by growing season and region.

**% OIL AT 13% MOISTURE:** Compare data within table only. Values can vary widely by growing season and region.

**FLOWER COLOR: P** = Purple; **W** = White.

**PUBESCENCE COLOR: T** = Tawny; **G** = Gray; **L** = Light tawny; **M** = Mixed.

**HILA COLOR: BL** = Black; **BR** = Brown; **TN** = Tan; **G** = Gray; **IB** = Imperfect black; **BF** = Buff; **Y** = Yellow (Clear); **M** = Mixed.

**POD COLOR: BR** = Brown; **TN** = Tan.

**Note:** U.S. patents, Plant Variety Protection Act (PVPA) applications and certificates, or other limitations on use may be used to protect Pioneer brand soybean products from unauthorized growing, selling or use of the seed. These protections help assure that growers will continue to have access to new and improved products through the research efforts of plant scientists in the years ahead.

The purpose of this guide is to assist you in managing herbicide programs with Pioneer® brand soybeans. Pioneer uses molecular markers, lab, and/or field testing to evaluate soybean variety tolerance to several herbicides.

- Research has shown good correlation between molecular markers and varietal response to **preplant or pre-emergence applications** of the PPO herbicides sulfentrazone and saflufenacil, but low correlation with response to the PPO herbicide flumioxazin (e.g. Afforia®, Enlite®, Envive®, Trivence®, Surveil® and Valor®) when the herbicides are used at normal field rates.
- Research has also shown good correlation between lab assays and field tolerance to preplant and preemergence applications of metribuzin.
- Research has also shown good correlation between molecular markers and tolerance to preplant or preemergence applications of rimsulfuron.

**Please note that these ratings are not correlated with tolerance to exposure or application of these herbicides after soybean emergence.** Metribuzin, rimsulfuron, and all PPO herbicides can injure soybeans when applied after emergence. Crop injury can also occur when metribuzin or PPO-treated soils are splashed onto soybean stems, cotyledons, or foliage.

Challenging environments such as heavy rainfall during seed germination or seedling emergence; sandy soils, soils low in organic matter or high pH soils; or during periods of excessively cold, hot, dry or wet weather can result in higher herbicide activity or reduced crop tolerance. In such cases, crop injury may occur on varieties rated as having acceptable tolerance to the herbicide. University research indicates herbicides within an herbicide class may vary in their degree of crop selectivity. The potential for herbicide injury may also be impacted by the labeled herbicide rate used and the method or timing of application.

Herbicides that contain **Sulfentrazone and Saflufenacil** include Spartan® brands, Authority® brands, Sonic®, Optill®, Optill® PRO, Sharpen® and Verdict®. **Always read and follow herbicide label directions.**

Herbicides that contain **Metribuzin** include Canopy® Blend herbicide, Trivence® herbicide, Sencor®, Axiom®, Boundary®, Domain® and Authority® MTZ. **Always read and follow herbicide label directions.**

**The following herbicide sensitivity ratings are for sulfentrazone, saflufenacil, and metribuzin:**

**TOL.** Available research and/or field observations suggest this herbicide is unlikely to result in material crop injury to this particular variety under normal circumstances.
**MOD.** Available research and/or field observations suggest this herbicide may exhibit crop injury to this particular variety in challenging environments.
**SUS.** Available research and/or field observations suggest this herbicide has a high potential for crop injury to this variety.
**BLANK.** Additional testing is needed to evaluate this variety.

Herbicides that contain **Rimsulfuron** include LeadOff® and Basis® Blend. **Always read and follow herbicide label directions.**

**The following herbicide sensitivity ratings are for rimsulfuron:**

**++++ Varieties with BOLT® technology.** Growers may apply LeadOff® or Basis® Blend herbicides 0 days or more prior to planting this particular variety.
**+++ Varieties with the STS® gene.** This particular variety has a shorter plant-back interval for LeadOff® and Basis® Blend herbicides. See product labels for details on plant-back intervals.
**++ High degree of rimsulfuron tolerance.** Available research and/or field observations suggest these herbicides are unlikely to result in material crop injury to this particular variety under normal circumstances. See product labels for details on plant-back intervals.
**+ Low degree of rimsulfuron tolerance.** Available research and/or field observations suggest these herbicides have a high potential for crop injury to this particular variety. Do not plant this particular variety into rimsulfuron-treated fields within 10 months of application if soil is excessively cold or wet or if soil pH exceeds 6.5. Soil temperature should be >50° F and trending warmer. See product labels for details on plant-back intervals.
**BLANK Insufficient Data.** Additional testing is needed to evaluate this variety.

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