



Soybean Seed Guide

Arkansas City, Arkansas (71630)

Choose Products	Product Name	Relative Maturity	Technology Segment	Harvest Standability	Field Emergence	Phytoph. Resist. Gene	Phytoph. Field Tol.	Iron Def. Chlorosis	Sudden Death Syndrome	SCN Resistance Source	Charcoal Rot	So. Root-Knot Nematode	Stem Canker Gene	Frogeye Leaf Spot	Chloride Sensitivity	Canopy Width	Plant Height For Maturity	Plant Habit	Flood Tolerance	Flower Color	Pubescence Color	Pod Color
✓	P37A18E	3.7	E3	8	6	1k	5**	3	7	PI88788	6**	-	7	5**	Int	6**	3	Ind	4	W	L	BR
✓	P42A84E	4.2	E3	7	7	-	4**	5	6	PI88788	6**	3**	6	7**	Exc	4**	6	Ind	4	W	L	BR
✓	P45A81E, *	4.5	E3	7	7	-	4**	3	5**	PI88788	7	1	-	5**	Int	5**	3	Ind	-	P	L	TN
✓	P48A14E	4.8	E3	6	6	-	5**	2	6**	PI88788	7**	3	6	3**	Exc	4**	5	Ind	4	P	L	BR

4 products in this guide

See subsequent pages for complete definitions and disclaimers related to the product descriptions and ratings. All scores of integrated refuge products are based upon the major component. Pioneer® brand products are provided subject to the terms and conditions of purchase which are part of the labeling and purchase documents. ®,TM,SM Trademarks and service marks of Dow AgroSciences, DuPont or Pioneer, and their affiliated companies or their respective owners. 2020 Corteva.



Key Statistics



RELATIVE MATURITY **TECHNOLOGY**
3.7 **SEGMENT**
E3

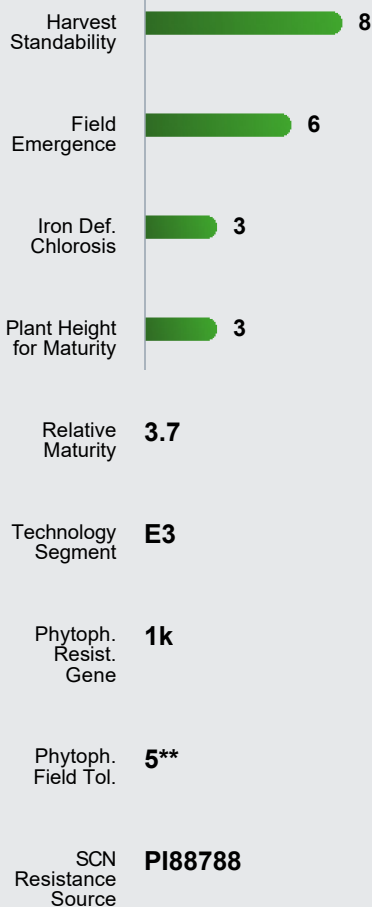
Management Comments

- An exciting new 3.7 RM variety with yield leader potential
- Shorter statured variety with excellent harvest standability
- 1k phytophthora gene with very good stem canker resistance
- Strong SDS resistance
- Position on well drained irrigated or dryland sandy and silt loam soil types
- Highly suited for narrow row spacings (30' or less)

Characteristic Scores

Disease Scores

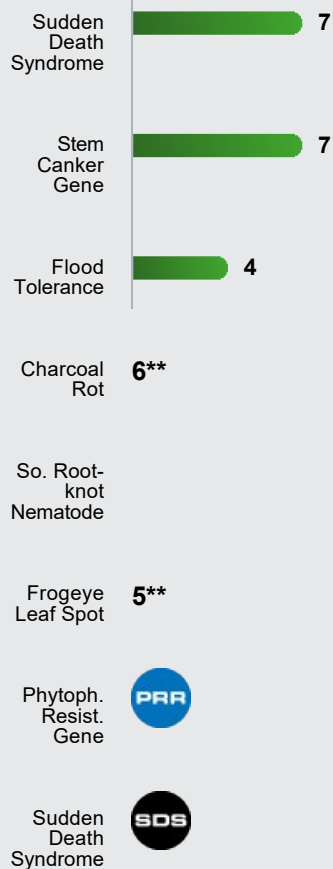
Product Ratings



Characteristic Scores

Disease Scores

Product Ratings



Trait Score Ratings:

9 = Excellent; 1 = Poor.
Canopy Width: 9 = Extremely Bushy;
1 = Very Narrow.
Plant Height: 9 = Tall; 1 = Short.
Blank = Insufficient Data.

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

Suitability Ratings

Full-Season Irrigated	Full-Season Dryland	ESPS - April 1-15
Highly Suitable	Highly Suitable	Poor Suitability
ESPS - April 15-30	Double Crop	Wide Rows
Suitable	Poor Suitability	Poor Suitability
Heavy Poorly Drained Soils	Silt Loam Soils	Sandy Soils
Poor Suitability	Highly Suitable	Highly Suitable

More Information

Refuge	
Market Segments	

Positioned for**RELATIVE MATURITY**

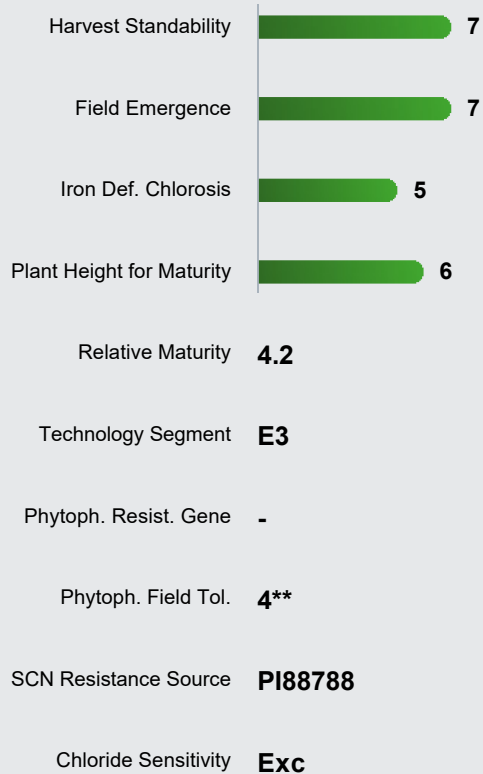
4.2

**TECHNOLOGY
SEGMENT**

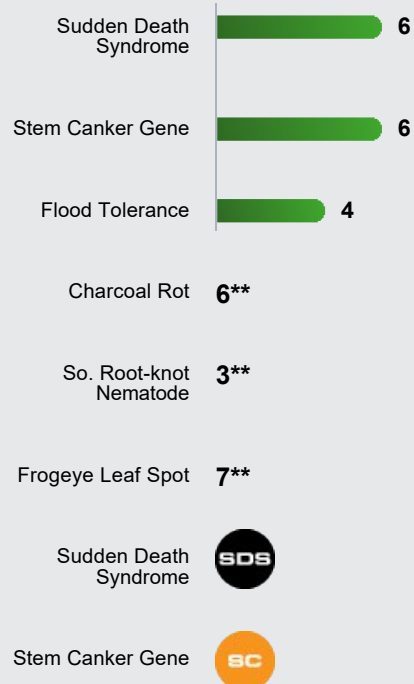
E3

Management Comments

- Widely-adapted Enlist E3® product with very good tolerance to frogeye leaf spot.
- Good tolerance to charcoal rot combined with more height allows good adaption to challenging environments.
- Above average sudden death syndrome tolerance.
- Highly suitable for all environments including irrigation, dryland and doublecrop acres.

Characteristic Scores**Disease Scores****Product Ratings****Trait Score Ratings:**

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Suitability Ratings

Stress Environments



Manage Appropriately

Irrigation



Highly Suitable

Full-Season



Suitable

Productive Dryland



Highly Suitable

Wide Rows



Manage Appropriately

Early Planting



Highly Suitable

Double Crop



Suitable

Poorly Drained Soils



Manage Appropriately

Mixed to Heavy Soils



Suitable

Mixed to Light Soils



Highly Suitable

Lodge Prone Soils



Suitable

Positioned for



RELATIVE MATURITY

4.5

TECHNOLOGY
SEGMENT

E3

Management Comments

- Offensive/versatile mid-Group IV variety with a solid agronomic trait package.
- Top end yield potential with very good harvest standability and charcoal rot tolerance.
- Suitable for irrigation and dryland acres.
- Intermediate for Chloride.

Characteristic Scores

Disease Scores

Product Ratings

Harvest Standability	7
Field Emergence	7
Iron Def. Chlorosis	3
Plant Height for Maturity	3
Relative Maturity	4.5
Technology Segment	E3
Phytoph. Resist. Gene	-
Phytoph. Field Tol.	4**
SCN Resistance Source	PI88788
Chloride Sensitivity	Int

Trait Score Ratings:

9 = Excellent; 1 = Poor.

Characteristic Scores

Disease Scores

Product Ratings

Charcoal Rot	7
So. Root-knot Nematode	1
Sudden Death Syndrome	5**
Stem Canker Gene	
Frogeye Leaf Spot	5**
Flood Tolerance	

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Suitability Ratings



Positioned for



RELATIVE MATURITY

4.8

TECHNOLOGY

SEGMENT

E3

Management Comments

- High yield potential and widely-adapted Enlist E3® product.
- Very good tolerance to charcoal rot.
- Taller plant type with moderate canopy width.
- Salt excluder.
- May require foliar fungicide to control frogeye leaf spot.

Characteristic Scores

Disease Scores

Product Ratings

Harvest Standability	6
Field Emergence	6
Iron Def. Chlorosis	2
Plant Height for Maturity	5
Relative Maturity	4.8
Technology Segment	E3
Phytoph. Resist. Gene	-
Phytoph. Field Tol.	5**
SCN Resistance Source	PI88788
Chloride Sensitivity	Exc

Trait Score Ratings:

9 = Excellent; 1 = Poor.

Characteristic Scores

Disease Scores

Product Ratings

So. Root-knot Nematode	3
Stem Canker Gene	6
Flood Tolerance	4
Sudden Death Syndrome	6**
Charcoal Rot	7**
Frogeye Leaf Spot	3**
Stem Canker Gene	SC

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Suitability Ratings



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 2018 harvest and were the latest available at time of printing. Some scores may change after 2019 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/products/soybeans 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

* **Introductory product. Quantities may be limited.**

? New Product.

** All Pioneer products are varieties unless designated with LL, in which case **some** are brands.

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.

Components of LumiGEN? technologies for soybeans are applied at a Corteva Agriscience?, Agriculture Division of DowDuPont production facility, or by an independent sales representative of Corteva Agriscience or its affiliates. Not all sales representatives offer treatment services, and costs and other charges may vary. See your sales representative for details. Seed applied technologies exclusive to Corteva Agriscience and its affiliates.

TECHNOLOGY SEGMENT:

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NUMERIC RATINGS

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RELATIVE MATURITY

Shows the relative maturity group rating, with the first digit representing the general maturity group, and the second digit 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 17 would be a mid-late product in Group 1 maturity

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^{AA} = Contains Rps1c or Rps1k Phytophthora resistance.

Rps 1a = Provides resistance to races 1, 2, 10, 11, 13-18, 24, 26, 27, 31, 32 & 36.

Rps 1c = Provides resistance to races 1-3, 6-11, 13, 15, 17, 21, 23, 24, 26, 28-30, 32, 34, 36.

Rps 1k = Provides resistance to races 1-11, 13-15, 17, 18, 21-24, 26, 36, 37.

Rps 6 = Provides resistance to races 1-4, 10, 12, 14-16, 18-21, 25, 28, 33-35.

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 MARKER PREDICTED

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.

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.

APHID ANTIBIOSIS

A type of resistance that measures the plant's ability to naturally reduce the rate of growth, survival and reproduction of soybean aphids on soybean plants. Antibiosis is measured by comparing the rate of aphid reproduction on different products. Since no products currently on the market offer complete resistance to aphids, growers should use these antibiosis ratings as a pest management tool (not a product selection tool) to help determine field scouting and insecticide application priorities. ?E? = exceptional, ?AA? = above average, ?A? = average and ?BA? = below average antibiosis ratings. For example, products with exceptional ratings display much lower aphid reproduction compared to products with average and below average ratings.

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

?9? = provides resistance. **?5?** = provides moderate resistance. **?1?** = 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

This score tracks the ability of the soybean product screened for this trait to be able to grow and have normal yields in soils that have high levels of chloride salts.

CANOPY WIDTH

9 = Extremely bushy; **1** = Very narrow.

SHATTERING

9 = Excellent tolerance to shattering; **1** = Poor tolerance to shattering.

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.

SEED SIZE RANGE

Expressed in seeds per pound under normal growing conditions. Range is calculated over multiple years and locations. Since seed size may vary by growing season and region, check the 'seeds/pound' information printed on the bag.

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.

SEED COAT LUSTER

S = Shiny; **D** = Dull; **I** = Intermediate.

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.