

PIONEER® BRAND PRODUCTS	CRM	Technology Segment	Hybrid Family	Market Segment	Drought Tol.	Root Strength	Stalk Strength	Mid-Season Brittle Stalk	Stress Emergence	High Residue Suitability	Plant Ht.	Ear Ht.	Staygreen	Grain Drydown	Test Wt.	Goss's Wilt	Gray Leaf Spot	No. Leaf Blight	Head Smut	Anthr. Stalk Rot	Fus. Ear Rot	Gibberella Ear Rot	Diplodia Ear Rot
P0339AM	103	AM, LL, RR2	P0339	AQ, HES, HTF	9	8	6	5	6	HS	3	4	6	6	5	8	5	6	4	5	5	4	4
P0339AMT	103	AMT, LL, RR2	P0339	AQ, HES, HTF	9	8	6	5	6	HS	3	4	6	6	5	8	5	6	4	5	5	4	4
P0339R *	103	RR2	P0339	AQ, HES, HTF	9	8	6	5	6	HS	3	4	6	6	5	8	5	6	4	5	5	4	4
P0589	105		P0589	AQ, HAE, HTF	9	8	5	6	7	HS	4	5	6	6	5	6	5	4	6	4	4	3	5
P0589AM	105	AM, LL, RR2	P0589	AQ, HAE, HTF	9	8	5	6	7	HS	4	5	6	6	5	6	5	4	6	4	4	3	5
P0589AMXT	105	AMXT, LL, RR2	P0589	AQ, HAE, HTF	9	8	5	6	7	HS	4	5	6	6	5	6	5	4	6	4	4	3	5
P0589R	105	RR2	P0589	AQ, HAE, HTF	9	8	5	6	7	HS	4	5	6	6	5	6	5	4	6	4	4	3	5
P0657AM *	106	AM, LL, RR2	P0657	AQ, HAE	9	7	4	6	5	S	5	5	6	4	6	7	4	5	1	3	6	5	4
P0707AMXT *	107	AMXT, LL, RR2	P0707	YFC, HAE, HTF, HES	8	8	4	5	5	S	5	4	5	3	6	6	4	5	1	4		4	4
P0805AM	108	AM, LL, RR2	P0805	YFC, HAE, HTF, HES	8	5	7	7	5	S	6	5	6	5	7	6	4	5	1	4	6		5
P0801AMXT	108	AMXT, LL, RR2	P0801	HTF, HES	6	6	7	7	6	HS	7	5	8	8	5	7	5	6	3	6	4		4
P0987AM	109	AM, LL, RR2	P0987	YFC, HAE, HTF, HES	7	6	5	6	5	S	4	6	7	5	6	7	5	4	6	3	3	5	6
P1197AM	111	AM, LL, RR2	P1197	HTF, HES	7	5	8	5	5	S	6	6	8	7	5	6	5	6	6	6	6	5	5

20 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.

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P1197AMT	111	AMT, LL, RR2	P1197	HTF, HES	7	5	8	5	5	S	6	6	8	7	5	6	5	6	5	6	6	5	5
P1138AM *	111	AM, LL, RR2	P1138	HTF, HES	8	8	5	6	5	S	7	7	5	6	6	6	4	5	5	4	6		5
P1379AM *	113	AM, LL, RR2	P1379	HTF, HES	7	5	8	7	6	S	6	5	7	6	6	6	5	6	6	4			5
P1370Q *	113	Q, LL, RR2	P1370	HTF	7	4	5	7	5	S	7	6	5	8	4	7	4	4	2	4	6		5
P1366AMXT *	113	AMXT, LL, RR2	P1366	HTF, HES	7	7	5	7	5	S	5	7	7	5	5	6	4	6	6	5			4
P1828AM *	118	AM, LL, RR2	P1828	HTF	8	5	8	5	5	S	8	8	8	7	6	6	4	4	1	5	5		6
P2089AM	120	AM, LL, RR2	P2088	HTF	7	4	8	7	4	S	8	6	8	7	6	7	6	5	2	5	4		5

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Corn Grain:

P0339AM (AM,LL,RR2)

Additional Products in this Family: P0339AMT (AMT,LL,RR2) | P0339AM (AM,LL,RR2) | P0339R* (RR2) | P0339Q* (Q,LL,RR2)



PIONEER GrowingPoint



CRM:103

Silk CRM: 101

GDUs to Silk: 1260

GDUs to Phy. Mat.: 2420

Positioning For:



MANAGEMENT COMMENTS

- Well suited for both dryland and irrigated acres.
- Above average on Gray leaf spot, Northern corn leaf blight, and Fusarium ear rot resistance.
- Shorter plant stature and strong emergence makes it a good option for reduced tillage applications.



REFUGE

Integrated Refuge

- 95% (YGCB, HX1, LL, RR2)
- 5% (LL, RR2)

MARKET SEGMENTS

AQ: Optimum® AQUAmax(TM) hybrids for water-limited environments

HES: High Extractable Starch

HTF: High Total Fermentables (Dry-Grind Ethanol)

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Highly Suitable

SUITABILITY

High Residue Highly Suitable

Late Harvest Highly Suitable

Corn After Corn Highly Suitable

SOILS

Early Planting/Cold Soils Highly Suitable

Coarse Textured Soils Poor Suitability

Drought Prone Soils Highly Suitable

Poorly Drained Soils Highly Suitable

High pH Soils Suitable

CHARACTERISTIC SCORES

Drought Tol. 9

Stalk Strength 6

Root Strength 8

Stress Emergence 6

Staygreen 6

Mid-Season Brittle Stalk 5

Plant Ht. 3

Ear Ht. 4

Test Wt. 5

Grain Drydown 6

DISEASE SCORES

Gray Leaf Spot 5

Goss's Wilt 8

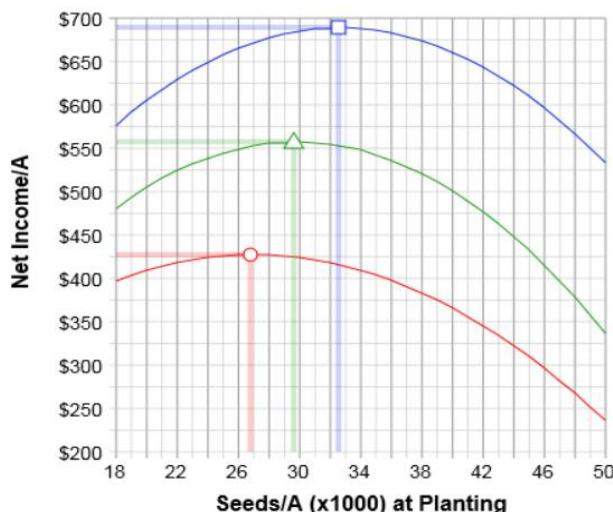
Anthr. Stalk Rot 5

Head Smut 4

TRAIT SCORE RATINGS: 9 = Excellent; 1 = Poor; Blank = Insufficient Data.

ESTIMATED SEEDING RATE

Contact your Pioneer sales professional for additional information. Planting rate estimates provided for informational purposes only. Information here is provided for a hybrid family and not individual products. Product performance is variable and depends on many factors, such as soil type, management practices, environmental stress, disease, and pest pressure. Individual results may vary. Planting rate and seeding costs have been increased by 5% to account for early season stand loss.



P0339	
Grain Price:	\$3.50
Seed Cost:	\$3.50
Years Tested:	2015
Locations:	186

Optimum Planting Rate*			
	Yield Goal	Seed Rate/A	Net Income/A
○	150	26,800	\$430
△	190	29,700	\$560
□	230	32,600	\$690

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11BD Updated as of 01/2017

AQ - Optimum® AQUAmax® product. Product performance in water-limited environments is variable and depends on many factors such as the severity and timing of moisture deficiency, heat stress, soil type, management practices and environmental stress as well as disease and pest pressures. All products may exhibit reduced yield under water and heat stress. Individual results may vary.

AMT - Optimum® AcreMax® TRIsect® Insect Protection System with RW,YGCB,HX1,LL,RR2. Contains a single-bag refuge solution for above and below ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® I genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax TRIsect products. Herculex® I Insect Protection technology by Dow AgroSciences and Pioneer Hi-Bred. Herculex® and the HX logo are registered trademarks of Dow AgroSciences LLC. YieldGard®, the YieldGard Corn Borer Design and Roundup Ready® are registered trademarks used under license from Monsanto Company. Liberty®, LibertyLink® and the Water Droplet Design are trademarks of Bayer. Agrisure® is a registered trademark of, and used under license from, a Syngenta Group Company. Agrisure® technology incorporated into these seeds is commercialized under a license from Syngenta Crop Protection AG.

* NEW

AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton growing counties, a 20% separate refuge must be planted with Optimum AcreMax products.

IMPORTANT: Trait rating scores provide key information useful in selection and management of Pioneer® brand products in your area. Information and ratings are based on comparisons with other Pioneer brand products, not competitive products. Information and scores are assigned by DuPont Pioneer Research Managers. Scores are based on period-of-years testing through 2015 harvest and were the latest available at time of printing. Some scores may change after 2015 harvest. Scores represent an average of performance data across areas of adaptation, multiple growing conditions, and a wide range of both climate and soil types, and may not predict future results. All products within a hybrid family receive the same score unless observations indicate a significant difference. Individual product responses are variable and subject to a variety of environmental, disease and pest pressures. Please use this information as only one component of your product positioning decision. Refer to www.pioneer.com/products 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.



TECHNOLOGY SEGMENT: AM1 - Optimum® AcreMax® 1 Insect Protection System with an integrated corn rootworm refuge solution includes HXX, LL, RR2. Optimum AcreMax 1 products contain the LibertyLink® gene and can be sprayed with Liberty® herbicide. The required corn borer refuge can be planted up to half a mile away. AMRW - Optimum® AcreMax® RW Rootworm Protection system with a single-bag integrated corn rootworm refuge solution includes HXRW, LL, RR2. AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax products. AMX - Optimum® AcreMax® Xtra Insect Protection system with YGCB, HXX, LL, RR2. Contains a single-bag integrated refuge solution for above- and below-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax Xtra products. AMXT (Optimum® AcreMax® XTreme) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax XTreme products. Q (Qrome(TM)) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Qrome products. Qrome products are approved for cultivation in the U.S. and Canada and have also received import approval in a number of importing countries. DuPont Pioneer continues to pursue additional import approvals for Qrome products, including in China, in accordance with Excellence Through Stewardship Product Launch Guidance. YGCB,HX1,LL,RR2 (Optimum® Intrasect®) - Contains the YieldGard® Corn Borer gene and Herculex® I gene for resistance to corn borer. YGCB,HXX,LL,RR2 (Optimum® Intrasect® Xtra) - Contains the YieldGard® Corn Borer gene and the Herculex XTRA genes for resistance to corn borer and corn rootworm. RW,YGCB,HXX,LL,RR2 (Optimum® Intrasect® XTreme) - Contains the Agrisure® RW trait, the YieldGard Corn Borer gene, and the Herculex® XTRA genes for resistance to corn borer and corn rootworm. Optimum Intrasect XTreme will be the major component of Optimum AcreMax XTreme. RW,YGCB,HX1,LL,RR2 (Optimum® Intrasect® TRIsect®) - Contains the Agrisure® RW trait for resistance to rootworm, the YieldGard® Corn Borer gene, and the Herculex® I genes for resistance to above ground pests. Optimum Intrasect TRIsect is the major component of Optimum AcreMax TRIsect. AMT - Optimum® AcreMax® TRIsect® Insect Protection System with RW,YGCB,HX1,LL,RR2. Contains a single-bag refuge solution for above and below ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® I genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax TRIsect products. RW,HX1,LL,RR2 (Optimum® TRIsect®) - Contains the Herculex I gene for above-ground pests and the Agrisure® RW trait for resistance to corn rootworm. AVBL,YGCB,HX1,LL,RR2 (Optimum® Leptra®) - Contains the Agrisure Viptera® trait, the YieldGard Corn Borer gene, the Herculex® I gene, the LibertyLink® gene, and the Roundup Ready® Corn 2 trait. HX1 - Contains the Herculex® I Insect Protection gene which provides protection against European corn borer, southwestern corn borer, black cutworm, fall armyworm, western bean cutworm, lesser corn stalk borer, southern corn stalk borer, and sugarcane borer; and suppresses corn earworm. HXRW - The Herculex® RW insect protection trait contains proteins that provide enhanced resistance against western corn rootworm, northern corn rootworm and Mexican corn rootworm. HXX - Herculex® XTRA contains the Herculex I and Herculex RW genes. YGCB - The YieldGard® Corn Borer gene offers a high level of resistance to European corn borer, southwestern corn borer and southern cornstalk borer; moderate resistance to corn earworm and common stalk borer; and above average resistance to fall armyworm. LL - Contains the LibertyLink® gene for resistance to Liberty® herbicide. RR2 - Contains the Roundup Ready® Corn 2 trait that provides crop safety for over-the-top applications of labeled glyphosate herbicides when applied according to label directions. AVBL,CB,LL,GT - Contains the Agrisure Viptera® 3110 trait stack: Agrisure Viptera®, Agrisure® CB and Agrisure® GT traits

Corn Grain:

P0339AMT (AMT,LL,RR2)

Additional Products in this Family: P0339AMT (AMT,LL,RR2) | P0339AM (AM,LL,RR2) | P0339R* (RR2) | P0339Q* (Q,LL,RR2)



PIONEER GrowingPoint



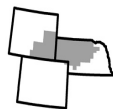
CRM:103

Silk CRM: 101

GDUs to Silk: 1260

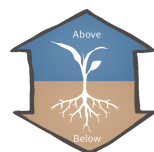
GDUs to Phy. Mat.: 2420

Positioning For:



MANAGEMENT COMMENTS

- Well suited for both dryland and irrigated acres.
- Above average on Gray leaf spot, Northern corn leaf blight, and Fusarium ear rot resistance.
- Shorter plant stature and strong emergence makes it a good option for reduced tillage applications.



REFUGE

Integrated Refuge

- 90% (RW, YGCB, HX1, LL, RR2)
- 10% (LL, RR2)

MARKET SEGMENTS

AQ: Optimum® AQUAmax(TM) hybrids for water-limited environments

HES: High Extractable Starch

HTF: High Total Fermentables (Dry-Grind Ethanol)

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Highly Suitable

SUITABILITY

High Residue Highly Suitable

Late Harvest Highly Suitable

Corn After Corn Highly Suitable

SOILS

Early Planting/Cold Soils Highly Suitable

Coarse Textured Soils Poor Suitability

Drought Prone Soils Highly Suitable

Poorly Drained Soils Highly Suitable

High pH Soils Suitable

CHARACTERISTIC SCORES

Drought Tol. 9

Stalk Strength 6

Root Strength 8

Stress Emergence 6

Staygreen 6

Mid-Season Brittle Stalk 5

Plant Ht. 3

Ear Ht. 4

Test Wt. 5

Grain Drydown 6

DISEASE SCORES

Gray Leaf Spot 5

Goss's Wilt 8

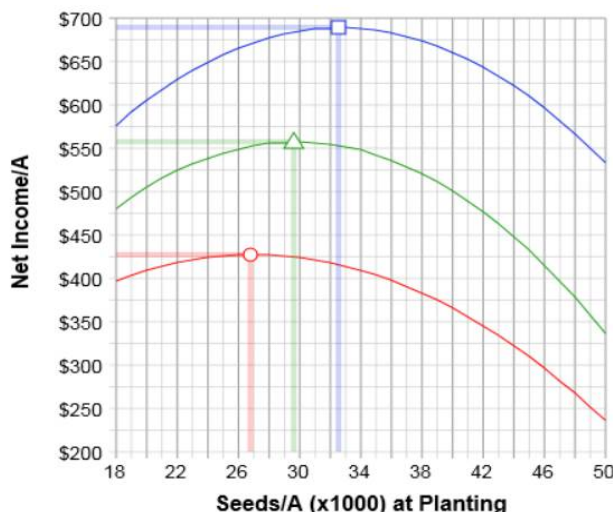
Anthr. Stalk Rot 5

Head Smut 4

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ESTIMATED SEEDING RATE

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P0339	
Grain Price:	\$3.50
Seed Cost:	\$3.50
Years Tested:	2015
Locations:	186

Optimum Planting Rate*			
	Yield Goal	Seed Rate/A	Net Income/A
○	150	26,800	\$430
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Corn Grain:

P0339R* (RR2)

Additional Products in this Family: P0339AMT (AMT,LL,RR2) |
P0339AM (AM,LL,RR2) | P0339R* (RR2) | P0339Q* (Q,LL,RR2)



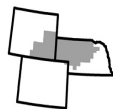
CRM:103

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Ear Ht. 4

Test Wt. 5

Grain Drydown 6

DISEASE SCORES

Gray Leaf Spot 5

Goss's Wilt 8

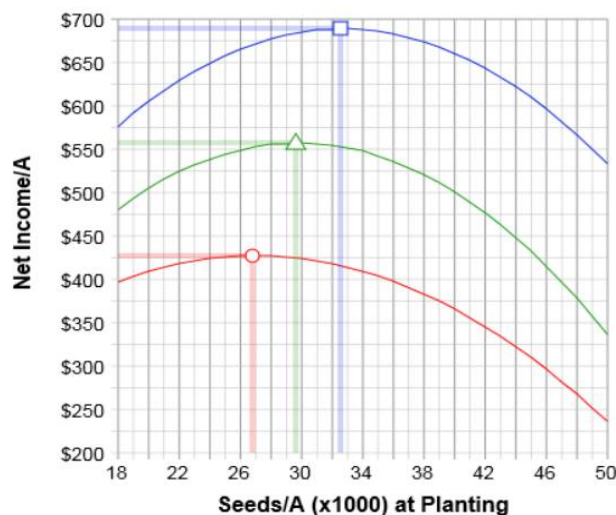
Anthr. Stalk Rot 5

Head Smut 4

TRAIT SCORE RATINGS: 9 = Excellent; 1 = Poor; Blank = Insufficient Data.

ESTIMATED SEEDING RATE

Contact your Pioneer sales professional for additional information. Planting rate estimates provided for informational purposes only. Information here is provided for a hybrid family and not individual products. Product performance is variable and depends on many factors, such as soil type, management practices, environmental stress, disease, and pest pressure. Individual results may vary. Planting rate and seeding costs have been increased by 5% to account for early season stand loss.



P0339	
Grain Price:	\$3.50
Seed Cost:	\$3.50
Years Tested:	2015
Locations:	186

Optimum Planting Rate*			
	Yield Goal	Seed Rate/A	Net Income/A
○	150	26,800	\$430
△	190	29,700	\$560
□	230	32,600	\$690

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11BD Updated as of 01/2017

AQ - Optimum® AQUAmax® product. Product performance in water-limited environments is variable and depends on many factors such as the severity and timing of moisture deficiency, heat stress, soil type, management practices and environmental stress as well as disease and pest pressures. All products may exhibit reduced yield under water and heat stress. Individual results may vary.

AMT - Optimum® AcreMax® TRIsect® Insect Protection System with RW,YGCB,HX1,LL,RR2. Contains a single-bag refuge solution for above and below ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® I genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax TRIsect products. Herculex® I Insect Protection technology by Dow AgroSciences and Pioneer Hi-Bred. Herculex® and the HX logo are registered trademarks of Dow AgroSciences LLC. YieldGard®, the YieldGard Corn Borer Design and Roundup Ready® are registered trademarks used under license from Monsanto Company. Liberty®, LibertyLink® and the Water Droplet Design are trademarks of Bayer. Agrisure® is a registered trademark of, and used under license from, a Syngenta Group Company. Agrisure® technology incorporated into these seeds is commercialized under a license from Syngenta Crop Protection AG.

* NEW

AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton growing counties, a 20% separate refuge must be planted with Optimum AcreMax products.

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Corn Grain:

P0589

Additional Products in this Family: P0589AM (AM,LL,RR2) | P0589AMT (AMT,LL,RR2) | P0589 | P0589R (RR2) | P0589AMXT (AMXT,LL,RR2)



PIONEER
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PIONEER

CRM:105

Silk CRM: 105

GDUs to Silk: 1310

GDUs to Phy. Mat.: 2600

Positioning For:



MANAGEMENT COMMENTS

- Superior performance in drought prone and high yield environments.
- Solid disease package that offers above average Grey Leaf Spot and Northern Corn Leaf Blight resistance.
- Position with care in fields with a history of Fusarium and Gibberella ear rot.

MARKET SEGMENTS

AQ: Optimum® AQUAmax(TM) hybrids for water-limited environments

HAE: High Available Energy (Monogastric Feed)

HTF: High Total Fermentables (Dry-Grind Ethanol)

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Suitable

SUITABILITY

High Residue Highly Suitable
Late Harvest Suitable
Corn After Corn Suitable

SOILS

Early Planting/Cold Soils Highly Suitable
Coarse Textured Soils Suitable
Drought Prone Soils Highly Suitable
Poorly Drained Soils Suitable
High pH Soils Suitable

CHARACTERISTIC SCORES

Drought Tol.	9
Stalk Strength	5
Root Strength	8
Stress Emergence	7
Staygreen	6
Mid-Season Brittle Stalk	6
Plant Ht.	4
Ear Ht.	5
Test Wt.	5
Grain Drydown	6

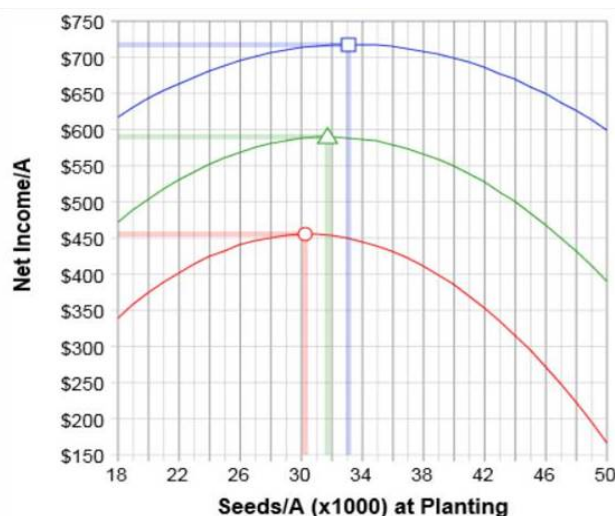
DISEASE SCORES

Gray Leaf Spot	5
Goss's Wilt	6
Anthr. Stalk Rot	4
Head Smut	6

TRAIT SCORE RATINGS: 9 = Excellent; 1 = Poor; Blank = Insufficient Data.

ESTIMATED SEEDING RATE

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P0589			
Grain Price:		\$3.50	
Seed Cost:		\$3.50	
Years Tested:		2015, 2016	
Locations:		293	
		Optimum Planting Rate*	
	Yield Goal	Seed Rate/A	Net Income/A
	160	30,300	\$450
	200	31,800	\$590
	240	33,100	\$720

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11BD Updated as of 01/2017

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Corn Grain:

P0589AM (AM,LL,RR2)

Additional Products in this Family: P0589AM (AM,LL,RR2) | P0589AMT (AMT,LL,RR2) | P0589 | P0589R (RR2) | P0589AMXT (AMXT,LL,RR2)



PIONEER
GrowingPoint



CRM:105

Silk CRM: 105

GDUs to Silk: 1310

GDUs to Phy. Mat.: 2600

Positioning For:



MANAGEMENT COMMENTS

- Superior performance in drought prone and high yield environments.
- Solid disease package that offers above average Grey Leaf Spot and Northern Corn Leaf Blight resistance.
- Position with care in fields with a history of Fusarium and Gibberella ear rot.



REFUGE

Integrated Refuge

- 95% (YGCB, HX1, LL, RR2)
- 5% (LL, RR2)

MARKET SEGMENTS

AQ: Optimum® AQUAmax(TM) hybrids for water-limited environments

HAE: High Available Energy (Monogastric Feed)

HTF: High Total Fermentables (Dry-Grind Ethanol)

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Suitable

SUITABILITY

High Residue Highly Suitable
Late Harvest Suitable
Corn After Corn Suitable

SOILS

Early Planting/Cold Soils Highly Suitable
Coarse Textured Soils Suitable
Drought Prone Soils Highly Suitable
Poorly Drained Soils Suitable
High pH Soils Suitable

CHARACTERISTIC SCORES

Drought Tol.	9
Stalk Strength	5
Root Strength	8
Stress Emergence	7
Staygreen	6
Mid-Season Brittle Stalk	6
Plant Ht.	4
Ear Ht.	5
Test Wt.	5
Grain Drydown	6

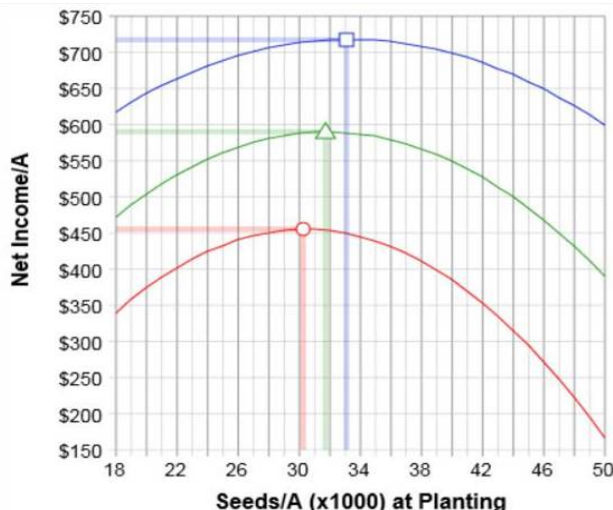
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P0589	
Grain Price:	\$3.50
Seed Cost:	\$3.50
Years Tested:	2015, 2016
Locations:	293

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11BD Updated as of 01/2017

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Corn Grain:

P0589AMXT (AMXT,LL,RR2)

Additional Products in this Family: P0589AM (AM,LL,RR2) | P0589AMT (AMT,LL,RR2) | P0589 | P0589R (RR2) | P0589AMXT (AMXT,LL,RR2)



PIONEER GrowingPoint



CRM:105

Silk CRM: 105

GDUs to Silk: 1310

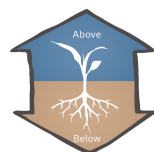
GDUs to Phy. Mat.: 2600

Positioning For:



MANAGEMENT COMMENTS

- Superior performance in drought prone and high yield environments.
- Solid disease package that offers above average Grey Leaf Spot and Northern Corn Leaf Blight resistance.
- Position with care in fields with a history of Fusarium and Gibberella ear rot.



REFUGE

Integrated Refuge

- 95% (RW, YGCB, HXX, LL, RR2)
- 5% (LL, RR2)

MARKET SEGMENTS

AQ: Optimum® AQUAmax(TM) hybrids for water-limited environments

HAE: High Available Energy (Monogastric Feed)

HTF: High Total Fermentables (Dry-Grind Ethanol)

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Suitable

SUITABILITY

High Residue Highly Suitable
Late Harvest Suitable
Corn After Corn Suitable

SOILS

Early Planting/Cold Soils Highly Suitable
Coarse Textured Soils Suitable
Drought Prone Soils Highly Suitable
Poorly Drained Soils Suitable
High pH Soils Suitable

CHARACTERISTIC SCORES

Drought Tol.	9
Stalk Strength	5
Root Strength	8
Stress Emergence	7
Staygreen	6
Mid-Season Brittle Stalk	6
Plant Ht.	4
Ear Ht.	5
Test Wt.	5
Grain Drydown	6

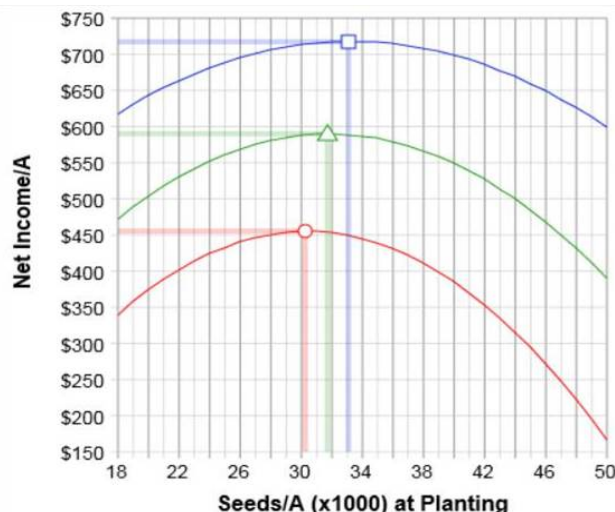
DISEASE SCORES

Gray Leaf Spot	5
Goss's Wilt	6
Anthr. Stalk Rot	4
Head Smut	6

TRAIT SCORE RATINGS: 9 = Excellent; 1 = Poor; Blank = Insufficient Data.

ESTIMATED SEEDING RATE

Contact your Pioneer sales professional for additional information. Planting rate estimates provided for informational purposes only. Information here is provided for a hybrid family and not individual products. Product performance is variable and depends on many factors, such as soil type, management practices, environmental stress, disease, and pest pressure. Individual results may vary. Planting rate and seeding costs have been increased by 5% to account for early season stand loss.



P0589	
Grain Price:	\$3.50
Seed Cost:	\$3.50
Years Tested:	2015, 2016
Locations:	293

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11BD Updated as of 01/2017

AQ - Optimum® AQUAmax® product. Product performance in water-limited environments is variable and depends on many factors such as the severity and timing of moisture deficiency, heat stress, soil type, management practices and environmental stress as well as disease and pest pressures. All products may exhibit reduced yield under water and heat stress. Individual results may vary.

AMT - Optimum® AcreMax® TRIsect® Insect Protection System with RW,YGCB,HX1,LL,RR2. Contains a single-bag refuge solution for above and below ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® I genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax TRIsect products. Herculex® I Insect Protection technology by Dow AgroSciences and Pioneer Hi-Bred. Herculex® and the HX logo are registered trademarks of Dow AgroSciences LLC. YieldGard®, the YieldGard Corn Borer Design and Roundup Ready® are registered trademarks used under license from Monsanto Company. Liberty®, LibertyLink® and the Water Droplet Design are trademarks of Bayer. Agrisure® is a registered trademark of, and used under license from, a Syngenta Group Company. Agrisure® technology incorporated into these seeds is commercialized under a license from Syngenta Crop Protection AG.

AMXT (Optimum® AcreMax® XTreme) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate refuge must be planted with Optimum AcreMax XTreme products.

AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton growing counties, a 20% separate refuge must be planted with Optimum AcreMax products.

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TECHNOLOGY SEGMENT: AM1 - Optimum® AcreMax® 1 Insect Protection System with an integrated corn rootworm refuge solution includes HXX, LL, RR2. Optimum AcreMax 1 products contain the LibertyLink® gene and can be sprayed with Liberty® herbicide. The required corn borer refuge can be planted up to half a mile away. AMRW - Optimum® AcreMax® RW Rootworm Protection system with a single-bag integrated corn rootworm refuge solution includes HXRW, LL, RR2. AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax products. AMX - Optimum® AcreMax® Xtra Insect Protection system with YGCB, HXX, LL, RR2. Contains a single-bag integrated refuge solution for above- and below-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax Xtra products. AMXT (Optimum® AcreMax® XTreme) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax XTreme products. Q (Qrome(TM)) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Qrome products. Qrome products are approved for cultivation in the U.S. and Canada and have also received import approval in a number of importing countries. DuPont Pioneer continues to pursue additional import approvals for Qrome products, including in China, in accordance with Excellence Through Stewardship Product Launch Guidance. YGCB,HX1,LL,RR2 (Optimum® Intrasect®) - Contains the YieldGard® Corn Borer gene and Herculex® I gene for resistance to corn borer. YGCB,HXX,LL,RR2 (Optimum® Intrasect® Xtra) - Contains the YieldGard® Corn Borer gene and the Herculex XTRA genes for resistance to corn borer and corn rootworm. RW,YGCB,HXX,LL,RR2 (Optimum® Intrasect® XTreme) - Contains the Agrisure® RW trait, the YieldGard Corn Borer gene, and the Herculex® XTRA genes for resistance to corn borer and corn rootworm. Optimum Intrasect XTreme will be the major component of Optimum AcreMax XTreme. RW,YGCB,HX1,LL,RR2 (Optimum® Intrasect® TRIsect®) - Contains the Agrisure® RW trait for resistance to rootworm, the YieldGard® Corn Borer gene, and the Herculex® I genes for resistance to above ground pests. Optimum Intrasect TRIsect is the major component of Optimum AcreMax TRIsect. AMT - Optimum® AcreMax® TRIsect® Insect Protection System with RW,YGCB,HX1,LL,RR2. Contains a single-bag refuge solution for above and below ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® I genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax TRIsect products. RW,HX1,LL,RR2 (Optimum® TRIsect®) - Contains the Herculex I gene for above-ground pests and the Agrisure® RW trait for resistance to corn rootworm. AVBL,YGCB,HX1,LL,RR2 (Optimum® Leptra®) - Contains the Agrisure Viptera® trait, the YieldGard Corn Borer gene, the Herculex® I gene, the LibertyLink® gene, and the Roundup Ready® Corn 2 trait. HX1 - Contains the Herculex® I Insect Protection gene which provides protection against European corn borer, southwestern corn borer, black cutworm, fall armyworm, western bean cutworm, lesser corn stalk borer, southern corn stalk borer, and sugarcane borer; and suppresses corn earworm. HXRW - The Herculex® RW insect protection trait contains proteins that provide enhanced resistance against western corn rootworm, northern corn rootworm and Mexican corn rootworm. HXX - Herculex® XTRA contains the Herculex I and Herculex RW genes. YGCB - The YieldGard® Corn Borer gene offers a high level of resistance to European corn borer, southwestern corn borer and southern cornstalk borer; moderate resistance to corn earworm and common stalk borer; and above average resistance to fall armyworm. LL - Contains the LibertyLink® gene for resistance to Liberty® herbicide. RR2 - Contains the Roundup Ready® Corn 2 trait that provides crop safety for over-the-top

Corn Grain:

P0589R (RR2)

Additional Products in this Family: P0589AM (AM,LL,RR2) | P0589AMT (AMT,LL,RR2) | P0589 | P0589R (RR2) | P0589AMXT (AMXT,LL,RR2)



PIONEER
GrowingPoint



PIONEER

CRM:105

Silk CRM: 105

GDUs to Silk: 1310

GDUs to Phy. Mat.: 2600

Positioning For:



MANAGEMENT COMMENTS

- Superior performance in drought prone and high yield environments.
- Solid disease package that offers above average Grey Leaf Spot and Northern Corn Leaf Blight resistance.
- Position with care in fields with a history of Fusarium and Gibberella ear rot.

MARKET SEGMENTS

AQ: Optimum® AQUAmax(TM) hybrids for water-limited environments

HAE: High Available Energy (Monogastric Feed)

HTF: High Total Fermentables (Dry-Grind Ethanol)

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Suitable

SUITABILITY

High Residue Highly Suitable
Late Harvest Suitable
Corn After Corn Suitable

SOILS

Early Planting/Cold Soils Highly Suitable
Coarse Textured Soils Suitable
Drought Prone Soils Highly Suitable
Poorly Drained Soils Suitable
High pH Soils Suitable

CHARACTERISTIC SCORES

Drought Tol.	9
Stalk Strength	5
Root Strength	8
Stress Emergence	7
Staygreen	6
Mid-Season Brittle Stalk	6
Plant Ht.	4
Ear Ht.	5
Test Wt.	5
Grain Drydown	6

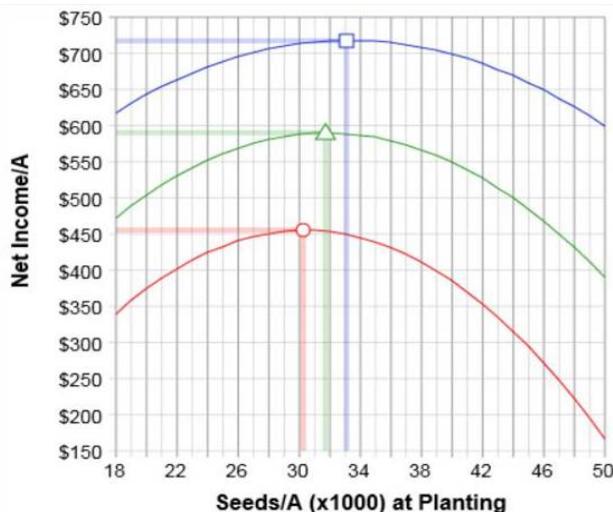
DISEASE SCORES

Gray Leaf Spot	5
Goss's Wilt	6
Anthr. Stalk Rot	4
Head Smut	6

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ESTIMATED SEEDING RATE

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P0589			
Grain Price:	\$3.50		
Seed Cost:	\$3.50		
Years Tested:	2015, 2016		
Locations:	293		
Optimum Planting Rate*			
	Yield Goal	Seed Rate/A	Net Income/A
	160	30,300	\$450
	200	31,800	\$590
	240	33,100	\$720

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11BD Updated as of 01/2017

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Corn Grain:

P0657AM* (AM,LL,RR2)

Additional Products in this Family: P0657AMXT* (AMXT,LL,RR2) |

P0657AM* (AM,LL,RR2)



PIONEER
GrowingPoint



CRM:106

Silk CRM: 104

GDUs to Silk: 1300

GDUs to Phy. Mat.: 2500

Positioning For:



MANAGEMENT COMMENTS

- Optimum AQUAmax product offering yield stability.
- Very good tolerance to Goss's wilt.
- Above average brittle and strong roots.
- Responds to higher populations.
- Monitor late season stalk quality.



REFUGE

Integrated Refuge

- 95% (YGCB, HX1, LL, RR2)
- 5% (LL, RR2)

MARKET SEGMENTS

HAE: High Available Energy (Monogastric Feed)

AQ: Optimum® AQUAmax(TM) hybrids for water-limited environments

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Highly Suitable

SUITABILITY

High Residue Suitable
Late Harvest Manage Appropriately
Corn After Corn Suitable

SOILS

Early Planting/Cold Soils Suitable
Coarse Textured Soils Suitable
Drought Prone Soils Highly Suitable
Poorly Drained Soils Suitable
High pH Soils Insufficient Data

CHARACTERISTIC SCORES

Drought Tol.	9
Stalk Strength	4
Root Strength	7
Stress Emergence	5
Staygreen	6
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Plant Ht.	5
Ear Ht.	5
Test Wt.	6
Grain Drydown	4

DISEASE SCORES

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Goss's Wilt	7
Anthr. Stalk Rot	3
Head Smut	1

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11BD Updated as of 01/2017

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* NEW

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Corn Grain:

P0707AMXT* (AMXT,LL,RR2)



PIONEER
GrowingPoint™



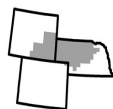
CRM:107

Silk CRM: 103

GDUs to Silk: 1280

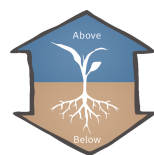
GDUs to Phy. Mat.: 2580

Positioning For:



MANAGEMENT COMMENTS

- Excellent drought tolerance and root strength with this YFC platform.
- Average stature plant type with outstanding root strength.
- Above average Northern leaf blight and Goss's wilt tolerance.
- Monitor late season plant health and consider early harvest.



REFUGE

Integrated Refuge

- 95% (RW, YGCB, HXX, LL, RR2)
- 5% (LL, RR2)

MARKET SEGMENTS

HAE: High Available Energy (Monogastric Feed)

YFC: Yellow food corn

HTF: High Total Fermentables (Dry-Grind Ethanol)

HES: High Extractable Starch

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Suitable

SUITABILITY

High Residue Suitable

Late Harvest Suitable

Corn After Corn Suitable

SOILS

Early Planting/Cold Soils Suitable

Coarse Textured Soils Suitable

Drought Prone Soils Highly Suitable

Poorly Drained Soils Suitable

High pH Soils Insufficient Data

CHARACTERISTIC SCORES

Drought Tol.	8
Stalk Strength	4
Root Strength	8
Stress Emergence	5
Staygreen	5
Mid-Season Brittle Stalk	5
Plant Ht.	5
Ear Ht.	4
Test Wt.	6
Grain Drydown	3

DISEASE SCORES

Gray Leaf Spot	4
Goss's Wilt	6
Anthr. Stalk Rot	4
Head Smut	1

TRAIT SCORE RATINGS: 9 = Excellent; 1 = Poor; Blank = Insufficient Data.

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11BD Updated as of 01/2017

* NEW

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TECHNOLOGY SEGMENT: AM1 - Optimum® AcreMax® 1 Insect Protection System with an integrated corn rootworm refuge solution includes HXX, LL, RR2. Optimum AcreMax 1 products contain the LibertyLink® gene and can be sprayed with Liberty® herbicide. The required corn borer refuge can be planted up to half a mile away. AMRW - Optimum® AcreMax® RW Rootworm Protection system with a single-bag integrated corn rootworm refuge solution includes HXRW, LL, RR2. AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax products. AMX - Optimum® AcreMax® Xtra Insect Protection system with YGCB, HXX, LL, RR2. Contains a single-bag integrated refuge solution for above- and below-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax Xtra products. AMXT (Optimum® AcreMax® XTreme) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax XTreme products. Q (Qrome(TM)) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Qrome products. Qrome products are approved for cultivation in the U.S. and Canada and have also received import approval in a number of importing countries. DuPont Pioneer continues to pursue additional import approvals for Qrome products, including in China, in accordance with Excellence Through Stewardship Product Launch Guidance. YGCB,HX1,LL,RR2 (Optimum® Intrasect®) - Contains the YieldGard® Corn Borer gene and Herculex® I gene for resistance to corn borer. YGCB,HXX,LL,RR2 (Optimum® Intrasect® Xtra) - Contains the YieldGard® Corn Borer gene and the Herculex XTRA genes for resistance to corn borer and corn rootworm. RW,YGCB,HXX,LL,RR2 (Optimum® Intrasect® XTreme) - Contains the Agrisure® RW trait, the YieldGard Corn Borer gene, and the Herculex® XTRA genes for resistance to corn borer and corn rootworm. Optimum Intrasect XTreme will be the major component of Optimum AcreMax XTtreme. RW,YGCB,HX1,LL,RR2 (Optimum® Intrasect® TRIssect®) - Contains the Agrisure® RW trait for resistance to rootworm, the YieldGard® Corn Borer gene, and the Herculex® I genes for resistance to above ground pests. Optimum Intrasect TRIssect is the major component of Optimum AcreMax TRIssect. AMT - Optimum® AcreMax® TRIssect® Insect Protection System with RW,YGCB,HX1,LL,RR2. Contains a single-bag refuge solution for above and below ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® I genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax TRIssect products. RW,HX1,LL,RR2 (Optimum® TRIssect®) - Contains the Herculex I gene for above-ground pests and the Agrisure® RW trait for resistance to corn rootworm. AVBL,YGCB,HX1,LL,RR2 (Optimum® Leptra®) - Contains the Agrisure Viptera® trait, the YieldGard Corn Borer gene, the Herculex® I gene, the LibertyLink® gene, and the Roundup Ready® Corn 2 trait. HX1 - Contains the Herculex® I Insect Protection gene which provides protection against European corn borer, southwestern corn borer, black cutworm, fall armyworm, western bean cutworm, lesser corn stalk borer, southern corn stalk borer, and sugarcane borer; and suppresses corn earworm. HXRW - The Herculex® RW insect protection trait contains proteins that provide enhanced resistance against western corn rootworm, northern corn rootworm and Mexican corn rootworm. HXX - Herculex® XTRA contains the Herculex I and Herculex RW genes. YGCB - The YieldGard® Corn Borer gene offers a high level of resistance to European corn borer, southwestern corn borer and southern cornstalk borer; moderate resistance to corn earworm and common stalk borer; and above average resistance to fall armyworm. LL - Contains the LibertyLink® gene for resistance to Liberty® herbicide. RR2 - Contains the Roundup Ready® Corn 2 trait that provides crop safety for over-the-top applications of labeled glyphosate herbicides when applied according to label directions. AVBL,CB,LL,GT - Contains the Agrisure Viptera® 3110 trait stack: Agrisure Viptera®, Agrisure® CB and Agrisure® GT traits.

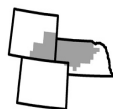
Corn Grain:
P0805AM (AM,LL,RR2)



CRM:108

Silk CRM: 104
 GDUs to Silk: 1300
 GDUs to Phy. Mat.: 2470

Positioning For:



MANAGEMENT COMMENTS

- Excellent yield stability under dryland conditions to more favorable environments.
- Very good grain quality and test weight.
- Responds well to higher seeding rates.
- Favorable option for fields with known Goss's wilt pressure.
- Consider fungicide applications in fields with a known history of severe Grey Leaf Spot pressure.



REFUGE

Integrated Refuge

- 95% (YGCB, HX1, LL, RR2)
- 5% (LL, RR2)

MARKET SEGMENTS

YFC: Yellow food corn
 HAE: High Available Energy (Monogastric Feed)
 HTF: High Total Fermentables (Dry-Grind Ethanol)

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Suitable

SUITABILITY

High Residue Suitable
 Late Harvest Suitable
 Corn After Corn Suitable

SOILS

Early Planting/Cold Soils Suitable
 Coarse Textured Soils Highly Suitable
 Drought Prone Soils Highly Suitable
 Poorly Drained Soils Suitable
 High pH Soils Suitable

CHARACTERISTIC SCORES

Drought Tol.	8
Stalk Strength	7
Root Strength	5
Stress Emergence	5
Staygreen	6
Mid-Season Brittle Stalk	7
Plant Ht.	6
Ear Ht.	5
Test Wt.	7
Grain Drydown	5

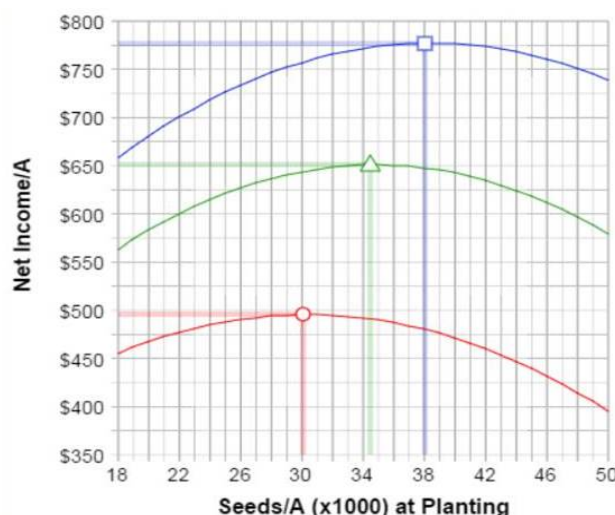
DISEASE SCORES

Gray Leaf Spot	4
Goss's Wilt	6
Anthr. Stalk Rot	4
Head Smut	1

TRAIT SCORE RATINGS: 9 = Excellent; 1 = Poor; Blank = Insufficient Data.

ESTIMATED SEEDING RATE

Contact your Pioneer sales professional for additional information. Planting rate estimates provided for informational purposes only. Information here is provided for a hybrid family and not individual products. Product performance is variable and depends on many factors, such as soil type, management practices, environmental stress, disease, and pest pressure. Individual results may vary. Planting rate and seeding costs have been increased by 5% to account for early season stand loss.



P0805	
Grain Price:	\$3.50
Seed Cost:	\$3.50
Years Tested:	2015, 2016
Locations:	42

Optimum Planting Rate*		
Yield Goal	Seed Rate/A	Net Income/A
170	30,100	\$490
220	34,500	\$650
260	38,100	\$780

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 11BD Updated as of 01/2017

AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton growing counties, a 20% separate refuge must be planted with Optimum AcreMax products.

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TECHNOLOGY SEGMENT: AM1 - Optimum® AcreMax® 1 Insect Protection System with an integrated corn rootworm refuge solution includes HXX, LL, RR2. Optimum AcreMax 1 products contain the LibertyLink® gene and can be sprayed with Liberty® herbicide. The required corn borer refuge can be planted up to half a mile away. AMRW - Optimum® AcreMax® RW Rootworm Protection system with a single-bag integrated corn rootworm refuge solution includes HXRW, LL, RR2. AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax products. AMX - Optimum® AcreMax® Xtra Insect Protection system with YGCB, HXX, LL, RR2. Contains a single-bag integrated refuge solution for above- and below-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax Xtra products. AMXT (Optimum® AcreMax® XTreme) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax XTreme products. Q (Qrome(TM)) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Qrome products. Qrome products are approved for cultivation in the U.S. and Canada and have also received import approval in a number of importing countries. DuPont Pioneer continues to pursue additional import approvals for Qrome products, including in China, in accordance with Excellence Through Stewardship Product Launch Guidance. YGCB,HX1,LL,RR2 (Optimum® Intrasect®) - Contains the YieldGard® Corn Borer gene and Herculex® I gene for resistance to corn borer. YGCB,HXX,LL,RR2 (Optimum® Intrasect® Xtra) - Contains the YieldGard® Corn Borer gene and the Herculex XTRA genes for resistance to corn borer and corn rootworm. RW,YGCB,HXX,LL,RR2 (Optimum® Intrasect® XTreme) - Contains the Agrisure® RW trait, the YieldGard Corn Borer gene, and the Herculex® XTRA genes for resistance to corn borer and corn rootworm. Optimum Intrasect XTreme will be the major component of Optimum AcreMax XTreme. RW,YGCB,HX1,LL,RR2 (Optimum® Intrasect® TRIsect®) - Contains the Agrisure® RW trait for resistance to rootworm, the YieldGard® Corn Borer gene, and the Herculex® I genes for resistance to above ground pests. Optimum Intrasect TRIsect is the major component of Optimum AcreMax TRIsect. AMT - Optimum® AcreMax® TRIsect® Insect Protection System with RW,YGCB,HX1,LL,RR2. Contains a single-bag refuge solution for above and below ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® I genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax TRIsect products. RW,HX1,LL,RR2 (Optimum® TRIsect®) - Contains the Herculex I gene for above-ground pests and the Agrisure® RW trait for resistance to corn rootworm. AVBL,YGCB,HX1,LL,RR2 (Optimum® Leptra®) - Contains the Agrisure Viptera® trait, the YieldGard Corn Borer gene, the Herculex® I gene, the LibertyLink® gene, and the Roundup Ready® Corn 2 trait. HX1 - Contains the Herculex® I Insect Protection gene which provides protection against European corn borer, southwestern corn borer, black cutworm, fall armyworm, western bean cutworm, lesser corn stalk borer, southern corn stalk borer, and sugarcane borer; and suppresses corn earworm. HXRW - The Herculex® RW insect protection trait contains proteins that provide enhanced resistance against western corn rootworm, northern corn rootworm and Mexican corn rootworm. HXX - Herculex® XTRA contains the Herculex I and Herculex RW genes. YGCB - The YieldGard® Corn Borer gene offers a high level of resistance to European corn borer, southwestern corn borer and southern cornstalk borer; moderate resistance to corn earworm and common stalk borer; and above average resistance to fall armyworm. LL - Contains the LibertyLink® gene for resistance to Liberty® herbicide. RR2 - Contains the Roundup Ready® Corn 2 trait that provides crop safety for over-the-top applications of labeled glyphosate herbicides when applied according to label directions. AVBL,CB,LL,GT - Contains the Agrisure Viptera® 3110 trait stack: Agrisure Viptera®, Agrisure® CB and Agrisure® GT traits.

Corn Grain:

P0801AMXT (AMXT,LL,RR2)

Additional Products in this Family: P0801AM (AM,LL,RR2) | P0801AMXT (AMXT,LL,RR2)



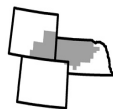
CRM:108

Silk CRM: 109

GDUs to Silk: 1360

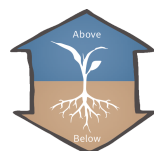
GDUs to Phy. Mat.: 2730

Positioning For:



MANAGEMENT COMMENTS

- Platform shows best performance in better dryland or irrigated environments.
- Yield leader in the 108 CRM class providing above average stalk and root strength allows for later harvest timing.
- Favorable option for fields with known Goss's wilt pressure.
- Good ear flex, performs best at moderate seeding rates.



REFUGE

Integrated Refuge

- 95% (RW, YGCB, HXX, LL, RR2)
- 5% (LL, RR2)

MARKET SEGMENTS

HTF: High Total Fermentables (Dry-Grind Ethanol)

HES: High Extractable Starch

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Highly Suitable

SUITABILITY

High Residue Highly Suitable

Late Harvest Highly Suitable

Corn After Corn Highly Suitable

SOILS

Early Planting/Cold Soils Highly Suitable

Coarse Textured Soils Suitable

Drought Prone Soils Poor Suitability

Poorly Drained Soils Highly Suitable

High pH Soils Suitable

CHARACTERISTIC SCORES

Drought Tol. 6

Stalk Strength 7

Root Strength 6

Stress Emergence 6

Staygreen 8

Mid-Season Brittle Stalk 7

Plant Ht. 7

Ear Ht. 5

Test Wt. 5

Grain Drydown 8

DISEASE SCORES

Gray Leaf Spot 5

Goss's Wilt 7

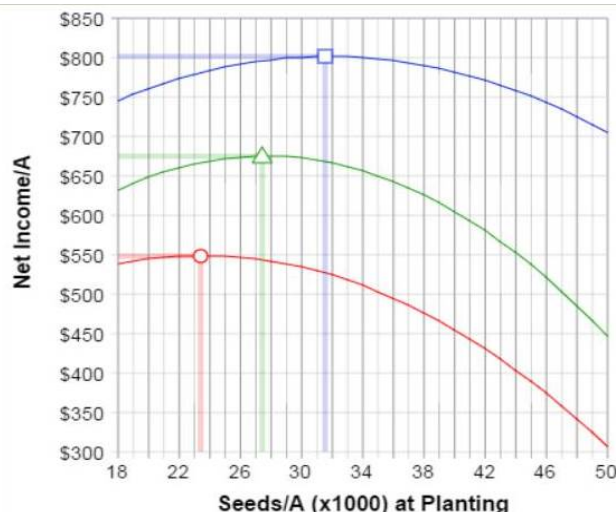
Anthr. Stalk Rot 6

Head Smut 3

TRAIT SCORE RATINGS: 9 = Excellent; 1 = Poor; Blank = Insufficient Data.

ESTIMATED SEEDING RATE

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P0801	
Grain Price:	\$3.50
Seed Cost:	\$3.50
Years Tested:	2015, 2016
Locations:	24

Optimum Planting Rate*		
Yield Goal	Seed Rate/A	Net Income/A
180	23,400	\$550
220	27,500	\$670
260	31,600	\$800

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Corn Grain:

P0987AM (AM,LL,RR2)

Additional Products in this Family: P0987XR (HXX,LL,RR2) | P0987AM (AM,LL,RR2) | P0987AMX (AMX,LL,RR2)



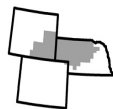
CRM:109

Silk CRM: 108

GDUs to Silk: 1340

GDUs to Phy. Mat.: 2630

Positioning For:



MANAGEMENT COMMENTS

- Strong yield potential across a wide range of environments.
- Provides good grain quality and test weight.
- Shorter plant stature makes this hybrid well suited for those interested in less plant residue and for reduced tillage applications.
- Manage with care in areas with a history of Fusarium ear rot.



REFUGE

Integrated Refuge

- 95% (YGCB, HX1, LL, RR2)
- 5% (LL, RR2)

MARKET SEGMENTS

YFC: Yellow food corn

HAE: High Available Energy (Monogastric Feed)

HTF: High Total Fermentables (Dry-Grind Ethanol)

HES: High Extractable Starch

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Highly Suitable

SUITABILITY

High Residue Suitable
Late Harvest Highly Suitable
Corn After Corn Highly Suitable

SOILS

Early Planting/Cold Soils Suitable
Coarse Textured Soils Suitable
Drought Prone Soils Suitable
Poorly Drained Soils Suitable
High pH Soils Highly Suitable

CHARACTERISTIC SCORES

Grain Drydown	5
Stalk Strength	5
Root Strength	6
Stress Emergence	5
Staygreen	7
Drought Tol.	7
Ear Flex	6
Test Wt.	6
Mid-Season Brittle Stalk	6
Plant Ht.	4

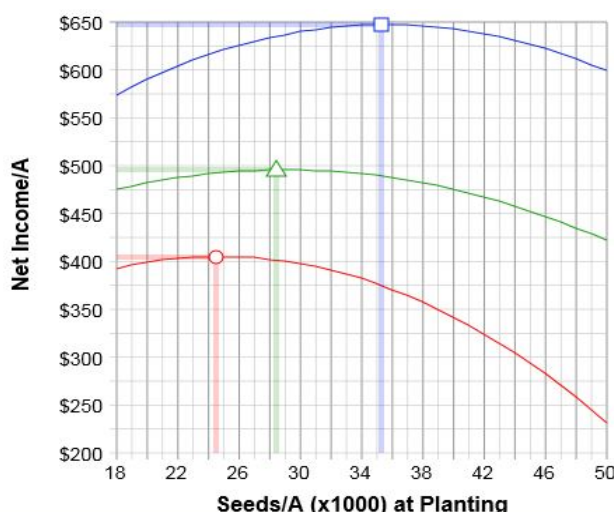
DISEASE SCORES




Gray Leaf Spot	5
Goss's Wilt	7
Anthr. Stalk Rot	4
Head Smut	6

TRAIT SCORE RATINGS: 9 = Excellent; 1 = Poor; Blank = Insufficient Data.

ESTIMATED SEEDING RATE

Contact your Pioneer sales professional for additional information. Planting rate estimates provided for informational purposes only. Information here is provided for a hybrid family and not individual products. Product performance is variable and depends on many factors, such as soil type, management practices, environmental stress, disease, and pest pressure. Individual results may vary. Planting rate and seeding costs have been increased by 5% to account for early season stand loss.



P0987			
Grain Price:		\$3.50	
Seed Cost:		\$3.50	
Years Tested:		2012, 2013	
Locations:		48	
		Optimum Planting Rate*	
	Yield Goal	Seed Rate/A	Net Income/A
	140	24,500	\$400
	170	28,500	\$500
	220	35,300	\$650

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11BD Updated as of 09/2016

AMX - Optimum® AcreMax® Xtra Insect Protection system with YGCB, HXX, LL, RR2. Contains a single-bag integrated refuge solution for above- and below-ground insects. In EPA-designated cotton growing counties, a 20% separate refuge must be planted with Optimum AcreMax Xtra products.

AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton growing counties, a 20% separate refuge must be planted with Optimum AcreMax products.

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TECHNOLOGY SEGMENT: AM1 - Optimum® AcreMax® 1 Insect Protection System with an integrated corn rootworm refuge solution includes HXX, LL, RR2. Optimum AcreMax 1 products contain the LibertyLink® gene and can be sprayed with Liberty® herbicide. The required corn borer refuge can be planted up to half a mile away. AMRW - Optimum® AcreMax® RW Rootworm Protection system with a single-bag integrated corn rootworm refuge solution includes HXRW, LL, RR2. AMRW-R - Optimum® AcreMax® RW Rootworm Protection system with a single-bag integrated corn rootworm refuge solution includes HXRW, RR2. Do not spray with Liberty®. Not all seeds in the bag are tolerant to Liberty herbicide. AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax products. AMX - Optimum® AcreMax® Xtra Insect Protection system with YGCB, HXX, LL, RR2. Contains a single-bag integrated refuge solution for above- and below-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax Xtra products. AMXT (Optimum® AcreMax® XTreme) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the YieldGuard® Corn Borer gene, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax XTreme products. YGCB,HX1,LL,RR2 (Optimum® Intrasect®) - Contains the YieldGuard® Corn Borer gene and Herculex® I gene for resistance to corn borer. YGCB,HXX,LL,RR2 (Optimum® Intrasect® Xtra) - Contains the YieldGuard® Corn Borer gene and the Herculex XTRA genes for resistance to corn borer and corn rootworm. RW,YGCB,HXX,LL,RR2 (Optimum® Intrasect® XTreme) - Contains the Agrisure® RW trait, the YieldGuard Corn Borer gene, and the Herculex® XTRA genes for resistance to corn borer and corn rootworm. Optimum Intrasect XTreme will be the major component of Optimum AcreMax XTreme. RW,YGCB,HX1,LL,RR2 (Optimum® Intrasect® TRIssect®) - Contains the Agrisure® RW trait for resistance to rootworm, the YieldGuard® Corn Borer gene, and the Herculex® I genes for resistance to above ground pests. Optimum Intrasect TRIssect is the major component of Optimum AcreMax TRIssect. AMT - Optimum® AcreMax® TRIssect® Insect Protection System with RW,YGCB,HX1,LL,RR2. Contains a single-bag refuge solution for above and below ground insects. The major component contains the Agrisure® RW trait, the YieldGuard® Corn Borer gene, and the Herculex® I genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax TRIssect products. RW,HX1,LL,RR2 (Optimum® TRIssect®) - Contains the Herculex I gene for above-ground pests and the Agrisure® RW trait for resistance to corn rootworm. AVBL,YGCB,HX1,LL,RR2 (Optimum® Leptra®) - Contains the Agrisure Viptera® trait, the YieldGuard Corn Borer gene, the Herculex® I gene, the LibertyLink® gene, and the Roundup Ready® Corn 2 trait. HX1 - Contains the Herculex® I Insect Protection gene which provides protection against European corn borer, southwestern corn borer, black cutworm, fall armyworm, western bean cutworm, lesser corn stalk borer, southern corn stalk borer, and sugarcane borer; and suppresses corn earworm. HXRW - The Herculex® RW insect protection trait contains proteins that provide enhanced resistance against western corn rootworm, northern corn rootworm and Mexican corn rootworm. HXX - Herculex® XTRA contains the Herculex I and Herculex RW genes. YGCB - The YieldGuard® Corn Borer gene offers a high level of resistance to European corn borer, southwestern corn borer and southern cornstalk borer; moderate resistance to corn earworm and common stalk borer; and above average resistance to fall armyworm. LL - Contains the LibertyLink® gene for resistance to Liberty® herbicide. RR2 - Contains the Roundup Ready® Corn 2 trait that provides crop safety for over-the-top applications of labeled glyphosate herbicides when applied according to label directions. AVBL,CB,LL,GT - Contains the Agrisure Viptera® 3110 trait stack: Agrisure Viptera®, Agrisure® CB and Agrisure® GT traits.

Corn Grain:

P1197AM (AM,LL,RR2)

Additional Products in this Family: P1197AM (AM,LL,RR2) | P1197* | P1197AMT (AMT,LL,RR2)



PIONEER GrowingPoint



CRM:111

Silk CRM: 113

GDUs to Silk: 1400

GDUs to Phy. Mat.: 2730

Positioning For:



MANAGEMENT COMMENTS

- Industry leading yield performance with adaptability for a wide range of yield environments.
- Dependable stalk and root strength and outstanding late season plant health.
- Acceptable option for fields with known Goss's wilt pressure.



REFUGE

Integrated Refuge

- 95% (YGCB, HX1, LL, RR2)
- 5% (LL, RR2)

MARKET SEGMENTS

HTF: High Total Fermentables (Dry-Grind Ethanol)

HES: High Extractable Starch

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Suitable

SUITABILITY

High Residue Suitable
Late Harvest Highly Suitable
Corn After Corn Highly Suitable

SOILS

Early Planting/Cold Soils Suitable
Coarse Textured Soils Highly Suitable
Drought Prone Soils Suitable
Poorly Drained Soils Highly Suitable
High pH Soils Suitable

CHARACTERISTIC SCORES

Drought Tol.	7
Stalk Strength	8
Root Strength	5
Stress Emergence	5
Staygreen	8
Mid-Season Brittle Stalk	5
Plant Ht.	6
Ear Ht.	6
Test Wt.	5
Grain Drydown	7

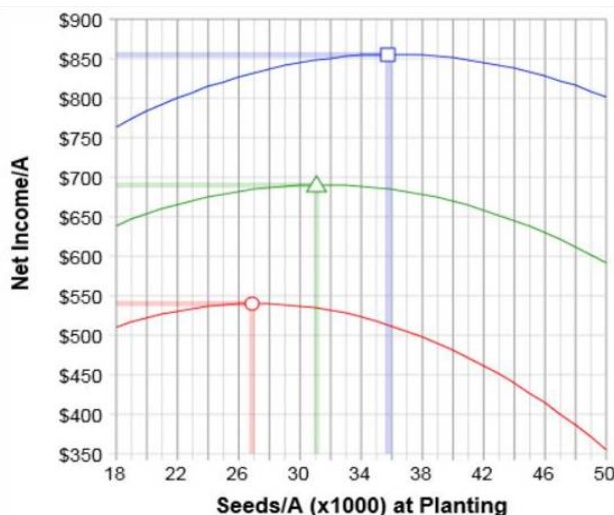
DISEASE SCORES




Gray Leaf Spot	5
Goss's Wilt	6
Anthr. Stalk Rot	6
Head Smut	6

TRAIT SCORE RATINGS: 9 = Excellent; 1 = Poor; Blank = Insufficient Data.

ESTIMATED SEEDING RATE

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P1197			
Grain Price:		\$3.50	
Seed Cost:		\$3.50	
Years Tested:		2014, 2015, 2016	
Locations:		55	
		Optimum Planting Rate*	
	Yield Goal	Seed Rate/A	Net Income/A
	180	26,900	\$540
	230	31,100	\$690
	280	35,800	\$850

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11BD Updated as of 01/2017

AMT - Optimum® AcreMax® TRIsect® Insect Protection System with RW,YGCB,HX1,LL,RR2. Contains a single-bag refuge solution for above and below ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® I genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax TRIsect products. Herculex® I Insect Protection technology by Dow AgroSciences and Pioneer Hi-Bred. Herculex® and the HX logo are registered trademarks of Dow AgroSciences LLC. YieldGard®, the YieldGard Corn Borer Design and Roundup Ready® are registered trademarks used under license from Monsanto Company. Liberty®, LibertyLink® and the Water Droplet Design are trademarks of Bayer. Agrisure® is a registered trademark of, and used under license from, a Syngenta Group Company. Agrisure® technology incorporated into these seeds is commercialized under a license from Syngenta Crop Protection AG.

* NEW

AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton growing counties, a 20% separate refuge must be planted with Optimum AcreMax products.

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Corn Grain:

P1197AMT (AMT,LL,RR2)

Additional Products in this Family: P1197AM (AM,LL,RR2) | P1197* | P1197AMT (AMT,LL,RR2)



PIONEER GrowingPoint



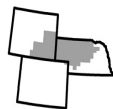
CRM:111

Silk CRM: 113

GDUs to Silk: 1400

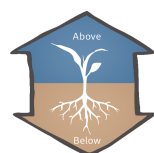
GDUs to Phy. Mat.: 2730

Positioning For:



MANAGEMENT COMMENTS

- Industry leading yield performance with adaptability for a wide range of yield environments.
- Dependable stalk and root strength and outstanding late season plant health.
- Acceptable option for fields with known Goss's wilt pressure.



REFUGE

Integrated Refuge

- 90% (RW, YGCB, HX1, LL, RR2)
- 10% (LL, RR2)

MARKET SEGMENTS

HTF: High Total Fermentables (Dry-Grind Ethanol)

HES: High Extractable Starch

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Suitable

SUITABILITY

High Residue Suitable
Late Harvest Highly Suitable
Corn After Corn Highly Suitable

SOILS

Early Planting/Cold Soils Suitable
Coarse Textured Soils Highly Suitable
Drought Prone Soils Suitable
Poorly Drained Soils Highly Suitable
High pH Soils Suitable

CHARACTERISTIC SCORES

Drought Tol.	7
Stalk Strength	8
Root Strength	5
Stress Emergence	5
Staygreen	8
Mid-Season Brittle Stalk	5
Plant Ht.	6
Ear Ht.	6
Test Wt.	5
Grain Drydown	7

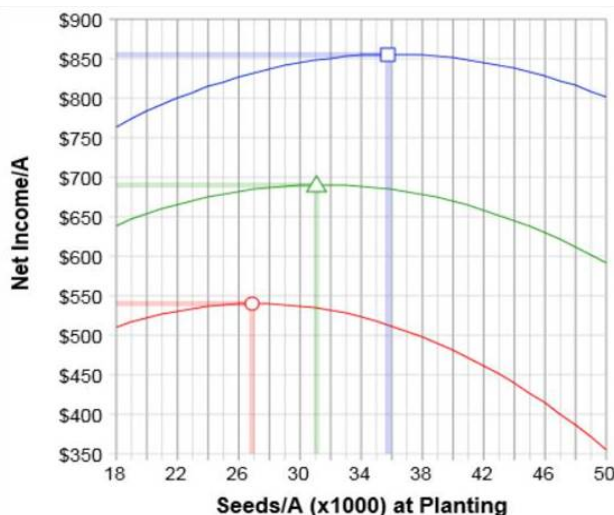
DISEASE SCORES




Gray Leaf Spot	5
Goss's Wilt	6
Anthr. Stalk Rot	6
Head Smut	5

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ESTIMATED SEEDING RATE

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P1197			
Grain Price:		\$3.50	
Seed Cost:		\$3.50	
Years Tested:		2014, 2015, 2016	
Locations:		55	
		Optimum Planting Rate*	
	Yield Goal	Seed Rate/A	Net Income/A
	180	26,900	\$540
	230	31,100	\$690
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11BD Updated as of 01/2017

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Corn Grain:

P1138AM* (AM,LL,RR2)

Additional Products in this Family: P1138AM* (AM,LL,RR2) | P1138Q*~ (Q,LL,RR2)



CRM:111

Silk CRM: 111

GDUs to Silk: 1380

GDUs to Phy. Mat.: 2730

Positioning For:



MANAGEMENT COMMENTS

- Excellent drought tolerance and above average mid-season brittle tolerance.
- Dual purpose silage choice with impressive tonnage .
- Good option for fields with known Goss's wilt pressure.
- Superior root strength with above average test weight.
- Responds to increased seeding rates.



REFUGE

Integrated Refuge

- 95% (YGCB, HX1, LL, RR2)
- 5% (LL, RR2)

MARKET SEGMENTS

HTF: High Total Fermentables (Dry-Grind Ethanol)

HES: High Extractable Starch

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Suitable

SUITABILITY

High Residue Suitable

Late Harvest Suitable

Corn After Corn Suitable

SOILS

Early Planting/Cold Soils Suitable

Coarse Textured Soils Highly Suitable

Drought Prone Soils Highly Suitable

Poorly Drained Soils Suitable

High pH Soils Insufficient Data

CHARACTERISTIC SCORES

Drought Tol. 8

Stalk Strength 5

Root Strength 8

Stress Emergence 5

Staygreen 5

Mid-Season Brittle Stalk 6

Plant Ht. 7

Ear Ht. 7

Test Wt. 6

Grain Drydown 6

DISEASE SCORES

Gray Leaf Spot 4

Goss's Wilt 6

Anthr. Stalk Rot 4

Head Smut 5

TRAIT SCORE RATINGS: 9 = Excellent; 1 = Poor; Blank = Insufficient Data.

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11BD Updated as of 01/2017

~ New Product. Not Available for sale until 2016 orders and invoicing are available. Quantities may be limited.

* NEW

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Corn Grain:

P1379AM* (AM,LL,RR2)



PIONEER
GrowingPoint™



CRM:113

Silk CRM: 111

GDUs to Silk: 1380

GDUs to Phy. Mat.: 2700

Positioning For:



MANAGEMENT COMMENTS

- Best performance observed under more favorable dryland to fully irrigated acres.
- Strong agronomics including mid-season brittle stalk resistance and impressive stalk strength.
- Good option for fields with known Goss's wilt pressure.
- Responds to increased seeding rates.



REFUGE

Integrated Refuge

- 95% (YGCB, HX1, LL, RR2)
- 5% (LL, RR2)

MARKET SEGMENTS

HTF: High Total Fermentables (Dry-Grind Ethanol)

HES: High Extractable Starch

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Suitable

SUITABILITY

High Residue Suitable

Late Harvest Suitable

Corn After Corn Suitable

SOILS

Early Planting/Cold Soils Highly Suitable

Coarse Textured Soils Highly Suitable

Drought Prone Soils Suitable

Poorly Drained Soils Suitable

High pH Soils Insufficient Data

CHARACTERISTIC SCORES

Drought Tol.	7
Stalk Strength	8
Root Strength	5
Stress Emergence	6
Staygreen	7
Mid-Season Brittle Stalk	7
Plant Ht.	6
Ear Ht.	5
Test Wt.	6
Grain Drydown	6

DISEASE SCORES

Gray Leaf Spot	5
Goss's Wilt	6
Anthr. Stalk Rot	4
Head Smut	6

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11BD Updated as of 01/2017

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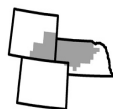
CRM:113

Silk CRM: 115

GDUs to Silk: 1430

GDUs to Phy. Mat.: 2700

Positioning For:



MANAGEMENT COMMENTS

- Best performance observed under more favorable dryland to fully irrigated acres.
- Strong agronomics including mid-season brittle stalk resistance and acceptable stress emergence.
- Moderately tall plant stature makes this platform a good choice for high yielding, quality silage.
- Solid option for fields with known Gosss wilt pressure.

MARKET SEGMENTS

HTF: High Total Fermentables (Dry-Grind Ethanol)

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Highly Suitable

SUITABILITY

High Residue Suitable

Late Harvest Suitable

Corn After Corn Suitable

SOILS

Early Planting/Cold Soils Suitable

Coarse Textured Soils Highly Suitable

Drought Prone Soils Suitable

Poorly Drained Soils Suitable

High pH Soils Insufficient Data

CHARACTERISTIC SCORES

Drought Tol.	7
Stalk Strength	5
Root Strength	4
Stress Emergence	5
Staygreen	5
Mid-Season Brittle Stalk	7
Plant Ht.	7
Ear Ht.	6
Test Wt.	4
Grain Drydown	8

DISEASE SCORES

Gray Leaf Spot	4
Goss' s Wilt	7
Anthrac. Stalk Rot	4
Head Smut	2

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Corn Grain:

P1366AMXT* (AMXT,LL,RR2)



PIONEER
GrowingPoint™



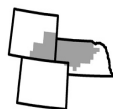
CRM:113

Silk CRM: 111

GDUs to Silk: 1380

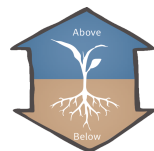
GDUs to Phy. Mat.: 2760

Positioning For:



MANAGEMENT COMMENTS

- Platform provides industry leading yield for maturity with strong drought tolerance and brittle resistance.
- Moderate plant stature with strong root.
- Suitable for a wide range of yield environments.
- Above average Northern leaf blight and Goss's wilt tolerance.
- Good ear flex, performs best at moderate seeding rates.



REFUGE

Integrated Refuge

- 95% (RW, YGCB, HXX, LL, RR2)
- 5% (LL, RR2)

MARKET SEGMENTS

HTF: High Total Fermentables (Dry-Grind Ethanol)

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Insufficient Data

SUITABILITY

High Residue Insufficient Data

Late Harvest Insufficient Data

Corn After Corn Insufficient Data

SOILS

Early Planting/Cold Soils Insufficient Data

Coarse Textured Soils Insufficient Data

Drought Prone Soils Insufficient Data

Poorly Drained Soils Insufficient Data

High pH Soils Insufficient Data

CHARACTERISTIC SCORES

Drought Tol.	7
Stalk Strength	5
Root Strength	7
Stress Emergence	5
Staygreen	7
Mid-Season Brittle Stalk	7
Plant Ht.	5
Ear Ht.	7
Test Wt.	5
Grain Drydown	5

DISEASE SCORES

Gray Leaf Spot	4
Goss's Wilt	6
Anthr. Stalk Rot	5
Head Smut	6

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TECHNOLOGY SEGMENT: AM1 - Optimum® AcreMax® 1 Insect Protection System with an integrated corn rootworm refuge solution includes HXX, LL, RR2. Optimum AcreMax 1 products contain the LibertyLink® gene and can be sprayed with Liberty® herbicide. The required corn borer refuge can be planted up to half a mile away. AMRW - Optimum® AcreMax® RW Rootworm Protection system with a single-bag integrated corn rootworm refuge solution includes HXRW, LL, RR2. AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax products. AMX - Optimum® AcreMax® Xtra Insect Protection system with YGCB, HXX, LL, RR2. Contains a single-bag integrated refuge solution for above- and below-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax Xtra products. AMXT (Optimum® AcreMax® XTreme) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax XTreme products. Q (Qrome(TM)) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Qrome products. Qrome products are approved for cultivation in the U.S. and Canada and have also received import approval in a number of importing countries. DuPont Pioneer continues to pursue additional import approvals for Qrome products, including in China, in accordance with Excellence Through Stewardship Product Launch Guidance. YGCB,HX1,LL,RR2 (Optimum® Intrasect®) - Contains the YieldGard® Corn Borer gene and Herculex® I gene for resistance to corn borer. YGCB,HXX,LL,RR2 (Optimum® Intrasect® Xtra) - Contains the YieldGard® Corn Borer gene and the Herculex XTRA genes for resistance to corn borer and corn rootworm. RW,YGCB,HXX,LL,RR2 (Optimum® Intrasect® XTreme) - Contains the Agrisure® RW trait, the YieldGard Corn Borer gene, and the Herculex® XTRA genes for resistance to corn borer and corn rootworm. Optimum Intrasect XTreme will be the major component of Optimum AcreMax XTreme. RW,YGCB,HX1,LL,RR2 (Optimum® Intrasect® TRIsect®) - Contains the Agrisure® RW trait for resistance to rootworm, the YieldGard® Corn Borer gene, and the Herculex® I genes for resistance to above ground pests. Optimum Intrasect TRIsect is the major component of Optimum AcreMax TRIsect. AMT - Optimum® AcreMax® TRIsect® Insect Protection System with RW,YGCB,HX1,LL,RR2. Contains a single-bag refuge solution for above and below ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® I genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax TRIsect products. RW,HX1,LL,RR2 (Optimum® TRIsect®) - Contains the Herculex I gene for above-ground pests and the Agrisure® RW trait for resistance to corn rootworm. AVBL,YGCB,HX1,LL,RR2 (Optimum® Leptra®) - Contains the Agrisure Viptera® trait, the YieldGard Corn Borer gene, the Herculex® I gene, the LibertyLink® gene, and the Roundup Ready® Corn 2 trait. HX1 - Contains the Herculex® I Insect Protection gene which provides protection against European corn borer, southwestern corn borer, black cutworm, fall armyworm, western bean cutworm, lesser corn stalk borer, southern corn stalk borer, and sugarcane borer; and suppresses corn earworm. HXRW - The Herculex® RW insect protection trait contains proteins that provide enhanced resistance against western corn rootworm, northern corn rootworm and Mexican corn rootworm. HXX - Herculex® XTRA contains the Herculex I and Herculex RW genes. YGCB - The YieldGard® Corn Borer gene offers a high level of resistance to European corn borer, southwestern corn borer and southern cornstalk borer; moderate resistance to corn earworm and common stalk borer; and above average resistance to fall armyworm. LL - Contains the LibertyLink® gene for resistance to Liberty® herbicide. RR2 - Contains the Roundup Ready® Corn 2 trait that provides crop safety for over-the-top applications of labeled glyphosate herbicides when applied according to label directions. AVBL,CB,LL,GT - Contains the Agrisure Viptera® 3110 trait stack: Agrisure Viptera®, Agrisure® CB and Agrisure® GT traits.

Corn Grain:

P1828AM* (AM,LL,RR2)

Additional Products in this Family: P1828AM* (AM,LL,RR2) | P1828Q* (Q,LL,RR2)



CRM:118

Silk CRM: 114

GDUs to Silk: 1420

GDUs to Phy. Mat.: 2780

Positioning For:



MANAGEMENT COMMENTS

- Exceptional yield and drought tolerance with this early silking platform.
- Excellent tonnage yield and silage quality makes this platform a good dual purpose silage choice including strong staygreen.
- Acceptable brittle stalk resistance with above average roots and excellent stalks.



REFUGE

Integrated Refuge

- 95% (YGCB, HX1, LL, RR2)
- 5% (LL, RR2)

MARKET SEGMENTS

HTF: High Total Fermentables (Dry-Grind Ethanol)

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Suitable

SUITABILITY

High Residue Suitable
Late Harvest Highly Suitable
Corn After Corn Suitable

SOILS

Early Planting/Cold Soils Suitable
Coarse Textured Soils Highly Suitable
Drought Prone Soils Highly Suitable
Poorly Drained Soils Suitable
High pH Soils Insufficient Data

CHARACTERISTIC SCORES

Drought Tol.	8
Stalk Strength	8
Root Strength	5
Stress Emergence	5
Staygreen	8
Mid-Season Brittle Stalk	5
Plant Ht.	8
Ear Ht.	8
Test Wt.	6
Grain Drydown	7

DISEASE SCORES

Gray Leaf Spot	4
Goss's Wilt	6
Anthr. Stalk Rot	5
Head Smut	1

TRAIT SCORE RATINGS: 9 = Excellent; 1 = Poor; Blank = Insufficient Data.

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11BD Updated as of 01/2017

* NEW

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TECHNOLOGY SEGMENT: AM1 - Optimum® AcreMax® 1 Insect Protection System with an integrated corn rootworm refuge solution includes HXX, LL, RR2. Optimum AcreMax 1 products contain the LibertyLink® gene and can be sprayed with Liberty® herbicide. The required corn borer refuge can be planted up to half a mile away. AMRW - Optimum® AcreMax® RW Rootworm Protection system with a single-bag integrated corn rootworm refuge solution includes HXRW, LL, RR2. AM - Optimum® AcreMax® Insect Protection system with YGCB, HX1, LL, RR2. Contains a single-bag integrated refuge solution for above-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax products. AMX - Optimum® AcreMax® Xtra Insect Protection system with YGCB, HXX, LL, RR2. Contains a single-bag integrated refuge solution for above- and below-ground insects. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax Xtra products. AMXT (Optimum® AcreMax® XTreme) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax XTreme products. Q (Qrome(TM)) - Contains a single-bag integrated refuge solution for above- and below-ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® XTRA genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Qrome products. Qrome products are approved for cultivation in the U.S. and Canada and have also received import approval in a number of importing countries. DuPont Pioneer continues to pursue additional import approvals for Qrome products, including in China, in accordance with Excellence Through Stewardship Product Launch Guidance. YGCB,HX1,LL,RR2 (Optimum® Intrasect®) - Contains the YieldGard® Corn Borer gene and Herculex® I gene for resistance to corn borer. YGCB,HXX,LL,RR2 (Optimum® Intrasect® Xtra) - Contains the YieldGard® Corn Borer gene and the Herculex XTRA genes for resistance to corn borer and corn rootworm. RW,YGCB,HXX,LL,RR2 (Optimum® Intrasect® XTreme) - Contains the Agrisure® RW trait, the YieldGard Corn Borer gene, and the Herculex® XTRA genes for resistance to corn borer and corn rootworm. Optimum Intrasect XTreme will be the major component of Optimum AcreMax XTreme. RW,YGCB,HX1,LL,RR2 (Optimum® Intrasect® TRIsect®) - Contains the Agrisure® RW trait for resistance to rootworm, the YieldGard® Corn Borer gene, and the Herculex® I genes for resistance to above ground pests. Optimum Intrasect TRIsect is the major component of Optimum AcreMax TRIsect. AMT - Optimum® AcreMax® TRIsect® Insect Protection System with RW,YGCB,HX1,LL,RR2. Contains a single-bag refuge solution for above and below ground insects. The major component contains the Agrisure® RW trait, the YieldGard® Corn Borer gene, and the Herculex® I genes. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax TRIsect products. RW,HX1,LL,RR2 (Optimum® TRIsect®) - Contains the Herculex I gene for above-ground pests and the Agrisure® RW trait for resistance to corn rootworm. AVBL,YGCB,HX1,LL,RR2 (Optimum® Leptra®) - Contains the Agrisure Viptera® trait, the YieldGard Corn Borer gene, the Herculex® I gene, the LibertyLink® gene, and the Roundup Ready® Corn 2 trait. HX1 - Contains the Herculex® I Insect Protection gene which provides protection against European corn borer, southwestern corn borer, black cutworm, fall armyworm, western bean cutworm, lesser corn stalk borer, southern corn stalk borer, and sugarcane borer; and suppresses corn earworm. HXRW - The Herculex® RW insect protection trait contains proteins that provide enhanced resistance against western corn rootworm, northern corn rootworm and Mexican corn rootworm. HXX - Herculex® XTRA contains the Herculex I and Herculex RW genes. YGCB - The YieldGard® Corn Borer gene offers a high level of resistance to European corn borer, southwestern corn borer and southern cornstalk borer; moderate resistance to corn earworm and common stalk borer; and above average resistance to fall armyworm. LL - Contains the LibertyLink® gene for resistance to Liberty® herbicide. RR2 - Contains the Roundup Ready® Corn 2 trait that provides crop safety for over-the-top applications of labeled glyphosate herbicides when applied according to label directions. AVBL,CB,LL,GT - Contains the Agrisure Viptera® 3110 trait stack: Agrisure Viptera®, Agrisure® CB and Agrisure® GT traits.

Corn Grain:

P2089AM (AM,LL,RR2)

Additional Products in this Family: P2088AM (AM,LL,RR2) | P2088AMX (AMX,LL,RR2) | P2089AM (AM,LL,RR2)



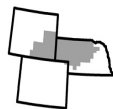
CRM:120

Silk CRM: 117

GDUs to Silk: 1450

GDUs to Phy. Mat.: 2910

Positioning For:



MANAGEMENT COMMENTS

- High yielding dual purpose hybrid for grain or silage.
- Demonstrates ear flex under lower seeding rates.
- Position with care in fields with a known history of head smut and Fusarium ear rot
- Planting into warmer soil conditions is recommended



REFUGE

Integrated Refuge

- 95% (YGCB, HX1, LL, RR2)
- 5% (LL, RR2)

MARKET SEGMENTS

HTF: High Total Fermentables (Dry-Grind Ethanol)

SUITABILITY RATINGS

KEY ENVIRONMENTS

Goss's Prone Fields Highly Suitable

SUITABILITY

High Residue Suitable
Late Harvest Highly Suitable
Corn After Corn Highly Suitable

SOILS

Early Planting/Cold Soils Poor Suitability
Coarse Textured Soils Suitable
Drought Prone Soils Suitable
Poorly Drained Soils Poor Suitability
High pH Soils Manage Appropriately

CHARACTERISTIC SCORES

Grain Drydown	7
Stalk Strength	8
Root Strength	4
Stress Emergence	4
Staygreen	8
Drought Tol.	7
Ear Flex	8
Test Wt.	6
Mid-Season Brittle Stalk	7
Plant Ht.	8

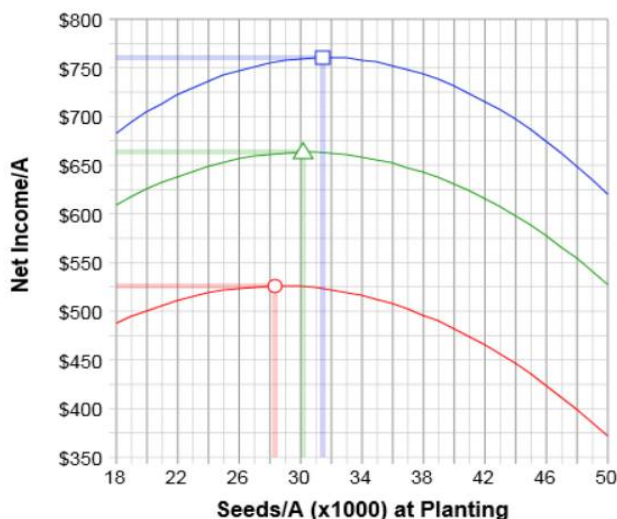
DISEASE SCORES

Gray Leaf Spot	6
Goss's Wilt	7
Anthr. Stalk Rot	5
Head Smut	2

TRAIT SCORE RATINGS: 9 = Excellent; 1 = Poor; Blank = Insufficient Data.

ESTIMATED SEEDING RATE

Contact your Pioneer sales professional for additional information. Planting rate estimates provided for informational purposes only. Information here is provided for a hybrid family and not individual products. Product performance is variable and depends on many factors, such as soil type, management practices, environmental stress, disease, and pest pressure. Individual results may vary. Planting rate and seeding costs have been increased by 5% to account for early season stand loss.



P2088	
Grain Price:	\$3.50
Seed Cost:	\$3.50
Years Tested:	2011, 2012, 2013, 2014, 2015
Locations:	75

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11BD Updated as of 09/2016

AMX - Optimum® AcreMax® Xtra Insect Protection system with YGCB, HXX, LL, RR2. Contains a single-bag integrated refuge solution for above- and below-ground insects. In EPA-designated cotton growing counties, a 20% separate refuge must be planted with Optimum AcreMax Xtra products.

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**All scores of integrated refuge products are based upon the major component.
***All Pioneer products are hybrids unless designated with AM1, AM, AMRW, AMT, AMX and AMXT, in which case they are brands.

RATINGS 9 = Outstanding; 1 = Poor; Blank = Insufficient Data.

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RATINGS 9 = Outstanding; 1 = Poor; **PAA** = Predicts Above Average; **PA** = Predicts Average; **PBA** = Predicts Below Average; Blank = Insufficient Data.

WHITE AND WAXY CORN RATINGS: Based on comparisons with other Pioneer brand hybrids, not competitive hybrids. Trait ratings for white and waxy hybrids reflect comparison with non-modified yellow hybrids of a similar maturity.

HYBRID FAMILY: Hybrid family identifies hybrids that have the same base genetics. Manage hybrids within the same family similarly.

MARKET SEGMENT: Designations indicate product is also suitable for the following market: **HAE** - High Available Energy (Pork & Poultry Feed); **HTF** - High Total Fermentables (Dry-Grind Ethanol); **HES** - High Extractable Starch (Wet Milling); **WX** - Waxy; **WH** - White food corn; **YFC** - Yellow food corn; **AQ** - Optimum® AQUAmax® product.

CRM (Comparative Relative Maturity): There is not an industry standard for maturity ratings so comparing hybrid maturity and harvest moisture ratings between companies is usually difficult. Use the CRM rating to compare Pioneer hybrids with competitive hybrids of a similar maturity and harvest moisture. CRM ratings, and harvest moistures, for hybrids within a family may vary slightly, depending upon the level of insect (ECB and CRW) infestation. Conventional and straight hybrids with the RR2 gene within a family will usually be 1-2 CRMs earlier than indicated, when insect infestations are moderate to heavy. One CRM difference is about ½ point of moisture difference at harvest.

PHYSIOLOGICAL CRM: Measures differences in maturity to zero milklane stage. To help decide if a new hybrid fits your area's growing season, compare its physiological CRM to a hybrid that you plant or one that is successfully used in your area.

GDUs TO PHYSIOLOGICAL MATURITY: Measures differences in growing degree units (GDUs) required to zero milklane stage. To help decide if a new hybrid fits your area's growing season, compare its GDUs to physiological maturity to a hybrid that you plant or one that is successfully used in your area.

GRAIN DRYDOWN: Compares hybrids of similar maturity for rate of moisture loss during grain drydown. A higher score indicates faster drydown. A lower score indicates slower drydown, or a wider opportunity for silage and high-moisture corn harvest.

STRESS EMERGENCE:	All hybrids are expected to establish normal stands under average soil conditions. Stress emergence is a measure of the genetic ability or potential to emerge in the stressful environmental conditions of cold, wet soils or short periods of severe low temperatures, relative to other Pioneer hybrids. Ratings of 7-9 indicate very good potential to establish normal stands under such conditions; a rating of 5-6 indicates average potential to establish normal stands under moderate stress conditions; and ratings of 1-4 indicate the hybrid has below average potential to establish normal stands under stress and should not be used if severe cold conditions are expected immediately after planting. Stress emergence is not a rating for seedling disease susceptibility, early growth or speed of emergence.
DROUGHT TOLERANCE:	Drought tolerance is a complex trait, determined by a platform's ability to maintain yield in limited-moisture environments. A higher score indicates the potential for higher yields vs. other platforms of similar maturity in limited-moisture environments.
HIGH RESIDUE SUITABILITY:	HS - Highly Suitable; S - Suitable; MA - Manage Appropriately; X - Poorly Suited. Suitability rating based on field observations and a weighted calculation of gray leaf spot, stress emergence, anthracnose stalk rot, northern corn leaf blight, and Diplodia ear rot scores. High Residue Suitability ratings may vary by environment and geography.
EAR FLEX:	Score reflects the ability of a hybrid to flex ear size as plant density is reduced, or as growing conditions improve.
TEST WEIGHT:	Higher score indicates heavier test weight.
PLANT HEIGHT:	9 = Very Tall; 1 = Short.
EAR HEIGHT:	9 = High; 1 = Low.
MID-SEASON BRITTLE STALK:	Ratings determined by frequency and severity of stalk snapping at lower to middle stalk internodes from conditions usually favored by rapid or optimum growth. Relative response of hybrids can be affected by planting date, stage of growth, rate of growth, wind severity and other variables. Scores derived from both natural observations and artificial evaluation immediately prior to tasseling. NOTE: Scores do not reflect snapping enhanced by or due to herbicide interaction. The use of growth regulator herbicides such as 2,4-D and dicamba can increase the brittle snap potential of corn hybrids. Hybrids with lower brittle stalk ratings will require more caution and have a higher risk associated with the use of growth regulator herbicides. Early application, proper rates and application methods, along with both hybrid and herbicide selection can help reduce this risk. BRITTLE STALK PRECAUTION: In areas with higher potential for brittle stalk breakage, growers must balance the risk of planting hybrids with brittle stalk ratings of less than 4 against the overall performance of more resistant hybrids with higher ratings. All hybrids have a period of susceptibility to brittle stalk. Hybrids with below average ratings may have a longer period of susceptibility, or may experience more severe breakage relative to hybrids with higher scores during period of susceptibility. + For Pioneer® brand hybrid 33M52, Southern rust score based upon resistance conferred by the Rpp9 gene.
DISEASE PRECAUTION:	Grower should balance hybrid yield potential, hybrid maturity and cultural practice selection against their anticipated risk of a specific disease and need for resistance. In high disease-risk conditions, consider planting hybrids with at least moderate resistance ratings of 4 or higher to help reduce risk. When susceptible hybrids with disease ratings of 1 to 3 are planted in conditions of high disease pressure, the grower assumes a higher level of risk. If conditions are severe, even hybrids rated as resistant can be adversely affected. Independent of yield reduction, diseases can predispose plants to secondary diseases such as stalk rots. This requires individual field and hybrid monitoring for stalk stability and timely harvest when warranted.
DISEASE & PEST RATINGS:	8-9 = Highly Resistant; 6-7 = Resistant; 4-5 = Moderately Resistant; 1-3 = Susceptible; Blank = Insufficient Data.
GRAY LEAF SPOT PRECAUTION:	Avoid planting hybrids with a lower gray leaf spot (GLS) rating in continuous corn fields that have a history of GLS infection, unless tillage operations that bury significant amounts of corn residue and inoculum are practiced.
FOLIAR FUNGICIDE RESPONSE - GLS:	Probability of positive yield response to foliar fungicide applications when significant levels of Gray Leaf Spot (GLS) leaf disease is present. HP - High Probability; MP - Moderate Probability; LP - Low Probability. Probabilities based upon product disease scores. Because of the unlimited number of growing environments, cropping practices, and foliar fungicide active ingredients combinations possible, DuPont Pioneer makes no warranty regarding this foliar fungicide crop response information.
NORTHERN LEAF BLIGHT CAUTION:	In conditions where northern leaf blight (NLB) risk is high, growers should consider planting only hybrids with at least moderate NLB resistance ratings of 4 or higher.
FOLIAR FUNGICIDE RESPONSE - NLB:	Probability of positive yield response to foliar fungicide applications when significant levels of Northern Leaf Blight (NLB) leaf disease is present. HP - High Probability; MP - Moderate Probability; LP - Low Probability. Probabilities based upon product disease scores. Because of the unlimited number of growing environments, cropping practices, and foliar fungicide active ingredients combinations possible, DuPont Pioneer makes no warranty regarding this foliar fungicide crop response information.
FUSARIUM EAR ROT CAUTION:	Ratings based upon visual symptoms at harvest. If Fusarium ear rot has caused significant damage in the past, growers should consider planting only hybrids with at least moderate Fusarium ear rot ratings of 5 or higher.
GIBBERELLA EAR ROT CAUTION:	Ratings based upon visual symptoms at harvest. If Gibberella ear rot has caused significant damage in the past, growers should consider planting only hybrids with at least moderate Gibberella ear rot ratings of 5 or higher.
DIPLODIA EAR ROT CAUTION:	Ratings based upon visual symptoms at harvest. If Diplodia ear rot has caused significant damage in the past, growers should consider planting only hybrids with a Diplodia ear rot rating of 4 or higher.
EYESPOT:	Degree of resistance to the disease under natural infestation. Data is limited by the number of observations, but it should provide a general ranking of resistance.