



These Pioneer® brand products have been characterized for the **Dry-Grind Ethanol market** within North America. These **High Total Fermentables (HTF)** corn products deliver **higher levels of fermentable starch**, which offer dry-grind ethanol plants grain with above average ethanol production potential. Please check with your local authorized Pioneer sales professional for availability of specific products from this list in your local area.

HIGH TOTAL FERMENTABLE (HTF) PRODUCTS

| Pioneer® Hybrid/Brand™ | Technology Segment | CRM |
|------------------------|--------------------|-----|
| 39N95AM1™ | AM,LL,RR2 | 89 |
| 38H03AM1™ | AM1,LL,RR2 | 92 |
| 38H06 | RR2 | |
| P9284AM™ | AM,LL,RR2 | 92 |
| P9284R | RR2 | |
| 38M58 | HX1,LL,RR2 | 94 |
| P9519AM™ | AM,LL,RR2 | 95 |
| P9526AM™ | AM,LL,RR2 | 95 |
| P9526AMXT™ | AMXT,LL,RR2 | |
| P9526AMX™ | AMX,LL,RR2 | 96 |
| P9630AMX™ | AMX,LL,RR2 | |
| P9675 | HX1,LL,RR2 | 96 |
| P9675AMXT™ | AMXT,LL,RR2 | |
| P9675AMX™ | AMX,LL,RR2 | 96 |
| P9675R | RR2 | |
| P9690AM™ | AM,LL,RR2 | 96 |
| P9690HR | HX1,LL,RR2 | |
| P9690R | RR2 | 97 |
| 37D02 | RR2 | |
| 38A55 | RR2 | 97 |
| 38A56 | RR2 | |
| 38A57 | HX1,LL,RR2 | 97 |
| P9748HR | HX1,LL,RR2 | |
| P9807AM™ | AM,LL,RR2 | 98 |
| P9807HR | HX1,LL,RR2 | |
| P9807R | RR2 | 98 |
| P9834AMXT™ | AMX,LL,RR2 | |
| P9855HR | HX1,LL,RR2 | 98 |
| P9855R | RR2 | |
| 37K11 | HX1,LL,RR2 | 99 |
| P9910AM1™ | AM1,LL,RR2 | 99 |
| P9910AMRW™ | AMRW,LL,RR2 | |
| P9910AMX™ | AMX,LL,RR2 | 99 |
| P9910HR | HX1,LL,RR2 | |
| P9910R | RR2 | 99 |
| P9917 | | |
| P9917AMXT™ | AMX,LL,RR2 | 99 |
| P9917R | RR2 | |
| P9917XR | HXX,LL,RR2 | 99 |
| P9973AMXT™ | AMX,LL,RR2 | |
| P9973R | RR2 | 100 |
| 38H72 | HXX,LL,RR2 | |
| P0062AMXT™ | AMX,LL,RR2 | 100 |
| P0094AM™ | AM,LL,RR2 | 100 |
| P0094AMXT™ | AMX,LL,RR2 | |

| Pioneer® Hybrid/Brand™ | Technology Segment | CRM |
|------------------------|--------------------|-----|
| P0125HR | HX1,LL,RR2 | 100 |
| P0115AM1™ | AM1,LL,RR2 | 101 |
| P0193AM™ | AM,LL,RR2 | 101 |
| P0193AMX™ | AMX,LL,RR2 | |
| P0210AM™ | AM,LL,RR2 | 102 |
| P0210AMX™ | AMX,LL,RR2 | |
| P0210HR | HX1,LL,RR2 | 102 |
| P0210R | RR2 | |
| P0216AM™ | AM,LL,RR2 | 102 |
| P0216HR | HX1,LL,RR2 | |
| P0231AM1™ | AM1,LL,RR2 | 102 |
| P0231HR | HX1,LL,RR2 | |
| P0242AMXT™* | AMXT,LL,RR2 | 102 |
| P0255AMXT™ | AMXT,LL,RR2 | 102 |
| P0297AM1™ | AM1,LL,RR2 | 102 |
| P0297AMXT™ | AMXT,LL,RR2 | |
| P0297AMX™ | AMX,LL,RR2 | 103 |
| P0313AM1™ | AM1,LL,RR2 | |
| P0339AMT™* | AMT,LL,RR2 | 103 |
| P0339AMXT™* | AMXT,LL,RR2 | |
| P0365AM™ | AM,LL,RR2 | 103 |
| P0407AMXT™ | AMXT,LL,RR2 | 104 |
| P0413AM1™ | AM1,LL,RR2 | 104 |
| P0413E | | |
| P0413R | RR2 | 104 |
| P0413XR | HXX,LL,RR2 | |
| P0448 | | 104 |
| P0448AM1™ | AM1,LL,RR2 | |
| P0448AMRW™ | AMRW,LL,RR2 | 104 |
| P0448AMX™ | AMX,LL,RR2 | |
| P0448E | | 104 |
| P0448EHR | HX1,LL,RR2 | |
| P0448HR | HX1,LL,RR2 | 104 |
| P0448R | RR2 | |
| P0453AM™ | AM,LL,RR2 | 104 |
| P0453HR | HX1,LL,RR2 | |
| P0461AMRW-R™ | AMRW,RR2 | 104 |
| P0461AMX™ | AMX,LL,RR2 | |
| P0461EXR | HXX,LL,RR2 | 104 |
| P0461R | RR2 | |
| P0463AM1™ | AM1,LL,RR2 | 104 |
| P0474AM1™ | AM1,LL,RR2 | 104 |
| P0474AM™ | AM,LL,RR2 | |

| Pioneer® Hybrid/Brand™ | Technology Segment | CRM |
|------------------------|--------------------|-----|
| P0496* | | 104 |
| P0496AMXT™ | AMX,LL,RR2 | |
| 35F37 | RR2 | 105 |
| 35F38 | | |
| 35F44 | HXX,LL,RR2 | 105 |
| 35F48AM1™ | AM1,LL,RR2 | |
| 35F49AMRW™ | AMRW,LL,RR2 | 105 |
| 35F50AM™ | AM,LL,RR2 | |
| P0528AMXT™ | AMX,LL,RR2 | 105 |
| P0533AM1™ | AM1,LL,RR2 | 105 |
| P0533EXR | HXX,LL,RR2 | |
| P0533HR | HX1,LL,RR2 | 105 |
| P0589* | | |
| P0589AMT™* | AMT,LL,RR2 | 105 |
| P0589AMXT™* | AM,LL,RR2 | |
| P0589R | RR2 | 105 |
| P0591AM1™ | AM1,LL,RR2 | |
| P0591AMX™ | AMX,LL,RR2 | 105 |
| P0591HR | HX1,LL,RR2 | |
| P0591XR | HXX,LL,RR2 | 106 |
| 35K01 | RR2 | |
| 35K02 | | 106 |
| 35K08 | | |
| 35K09AM1™ | AM1,LL,RR2 | 106 |
| P0604* | | |
| P0604AM™ | AM,LL,RR2 | 106 |
| P0621HR | HX1,LL,RR2 | |
| P0621R | RR2 | 106 |
| P0636AM1™ | AM1,LL,RR2 | |
| P0636AM™ | AM,LL,RR2 | 106 |
| P0636AMXT™ | AMX,LL,RR2 | |
| P0636E* | | 106 |
| P0636EHR* | HX1,LL,RR2 | |
| P0636ER | RR2 | 107 |
| P0636HR | HX1,LL,RR2 | |
| P0652AMXT™ | AMX,LL,RR2 | 106 |
| 35H42 | HX1,LL,RR2 | 107 |
| 35H46 | YGCB,HX1,LL,RR2 | |
| P0751AM1™ | AM1,LL,RR2 | 107 |
| P0751XR | HXX,LL,RR2 | |
| P0760* | | 107 |
| P0760AMXT™* | AMXT,LL,RR2 | |
| P0801AM™* | AM,LL,RR2 | 108 |
| P0801AMXT™* | AMXT,LL,RR2 | |

| Pioneer® Hybrid/Brand™ | Technology Segment | CRM |
|------------------------|--------------------|-----|
| P0805AM™* | AM,LL,RR2 | 108 |
| P0825AMXT™* | AMXT,LL,RR2 | 108 |
| P0825R | RR2 | |
| P0832AM1™ | AM1,LL,RR2 | 108 |
| P0832AMX™ | AMX,LL,RR2 | |
| P0832E | | 108 |
| P0832ER | RR2 | |
| P0832EXR | HXX,LL,RR2 | 108 |
| P0832R | RR2 | |
| P0843AM™* | AM,LL,RR2 | 108 |
| P0858AMX™ | AMX,LL,RR2 | 108 |
| P0876AM™ | AM,LL,RR2 | 108 |
| P0876CHR | RW,HX1,LL,RR2 | |
| P0876HR | HX1,LL,RR2 | 108 |
| P0876R | RR2 | |
| P0891AM1™ | AM1,LL,RR2 | 108 |
| P0912HR | HX1,LL,RR2 | 109 |
| P0912R | RR2 | |
| P0916EHR | HX1,LL,RR2 | 109 |
| P0921AMXT™* | AMXT,LL,RR2 | 109 |
| P0928 | | 109 |
| P0945AMX™ | AMX,LL,RR2 | 109 |
| P0965 | | 109 |
| P0965AM1™ | AM1,LL,RR2 | |
| P0965R | RR2 | 109 |
| P0970AMXT™ | AMXT,LL,RR2 | |
| P0970AMX™ | AMX,LL,RR2 | 109 |
| P0987 | | |
| P0987AM™ | AM,LL,RR2 | 109 |
| P0987AMX™ | AMX,LL,RR2 | |
| P0987R | RR2 | 109 |
| P0993* | | |
| P0993AM1™ | AM1,LL,RR2 | 109 |
| P0993HR | HX1,LL,RR2 | |
| 34F06 | | 110 |
| 34F07 | HX1,LL,RR2 | |
| P1018AM1™ | AM1,LL,RR2 | 110 |
| P1018AM™ | AM,LL,RR2 | |
| P1018AMXT™ | AMX,LL,RR2 | 110 |
| P1018E | | |
| P1018EHR | HX1,LL,RR2 | 110 |
| P1018HR | HX1,LL,RR2 | |
| P1023AM™ | AM,LL,RR2 | 110 |
| P1023AMXT™ | AMX,LL,RR2 | |
| P1023E | | 110 |

| Pioneer® Hybrid/Brand™ | Technology Segment | CRM |
|------------------------|--------------------|-----|
| 33P84 | HX1,LL,RR2 | 111 |
| 33W80 | RR2 | 111 |
| 33W88AM1™ | AM1,LL,RR2 | |
| P1105* | | 111 |
| P1105AM1™ | AM,LL,RR2 | |
| P1105AMXT™ | AMX,LL,RR2 | 111 |
| P1105R | RR2 | |
| P1105YHR | YGCB,HX1,LL,RR2 | 111 |
| P1142AMXT™ | AMX,LL,RR2 | |
| P1151* | | 111 |
| P1151AM1™ | AM1,LL,RR2 | |
| P1151AM™ | AM,LL,RR2 | 111 |
| P1151AMXT™ | AMX,LL,RR2 | |
| P1151HR | HX1,LL,RR2 | 111 |
| P1151R | RR2 | |
| P1168AMXT™ | AMX,LL,RR2 | 111 |
| P1173AM™ | AM,LL,RR2 | 111 |
| P1173CHR | RW,HX1,LL,RR2 | |
| P1215AM1™ | AM1,LL,RR2 | 112 |
| P1221AMXT™ | AMXT,LL,RR2 | 112 |
| P1221AMX™ | AMX,LL,RR2 | |
| P1266* | | 112 |
| P1266AM™ | AM,LL,RR2 | |
| P1271AMT™* | AMT,LL,RR2 | 112 |
| P1271AM™* | AM,LL,RR2 | |
| P1281HR | HX1,LL,RR2 | 112 |
| 33B54 | YGCB,RR2 | 113 |
| 33N58 | HX1,LL,RR2 | 113 |
| 33Z74 | HXX,LL,RR2 | 113 |
| P1303HR | HX1,LL,RR2 | 113 |
| P1311AM™* | AM,LL,RR2 | 113 |
| P1311AMXT™* | AMXT,LL,RR2 | |
| P1311YHR* | YGCB,HX1,LL,RR2 | 113 |
| P1324HR | HX1,LL,RR2 | |
| P1360 | | 113 |
| P1360AM™ | AM,LL,RR2 | |
| P1360CHR | RW,HX1,LL,RR2 | 113 |
| P1360E | | |
| P1360HR | HX1,LL,RR2 | 113 |
| P1365AMXT™ | AMX,LL,RR2 | |

| Pioneer® Hybrid/Brand™ | Technology Segment | CRM |
|------------------------|--------------------|-----|
| P1395 | | |
| P1395AM1™ | AM1,LL,RR2 | |
| P1395AMRW™ | AMRW,LL,RR2 | |
| P1395AM™ | AM,LL,RR2 | 113 |
| P1395HR | HX1,LL,RR2 | |
| P1395R | RR2 | |
| P1395XR | HXX,LL,RR2 | |
| 33F83 | YGCB,HX1,LL,RR2 | 114 |
| 33F85 | RR2 | |
| 33G60 | HX1,LL,RR2 | 114 |
| P1412HR | HX1,LL,RR2 | 114 |
| P1443AM™* | AM,LL,RR2 | 114 |
| P1443YHR* | YGCB,HX1,LL,RR2 | |
| P1456HR | HX1,LL,RR2 | 114 |
| 32T16 | | |
| 33D42 | RW,HX1,LL,RR2 | |
| 33D46 | HX1,LL,RR2 | 115 |
| 33D47 | RR2 | |
| 33D49 | HX1,LL,RR2 | |
| 33D53AM™ | AM,LL,RR2 | |
| 32T82 | RR2 | 115 |
| 32T84 | HX1,LL,RR2 | |
| 33Y74 | | |
| 33Y75 | HX1,LL,RR2 | 115 |
| 33Y77AM1™ | AM1,LL,RR2 | |
| P1508CHR | RW,HX1,LL,RR2 | 115 |
| P1508YHR | YGCB,HX1,LL,RR2 | |
| P1522 | | 115 |
| P1522AM™ | AM,LL,RR2 | |
| P1582CHR* | RW,HX1,LL,RR2 | 115 |
| P1602* | | |
| P1602AM™ | AM,LL,RR2 | |
| P1602AMX™ | AMX,LL,RR2 | 116 |
| P1602R | RR2 | |
| P1602YHR | YGCB,HX1,LL,RR2 | |
| P1602YXR | YGCB,HXX,LL,RR2 | |
| P1646AM™ | AM,LL,RR2 | 116 |
| P1646YHR | YGCB,HX1,LL,RR2 | |
| P1685YHR | YGCB,HX1,LL,RR2 | 116 |
| P1690 | | |
| P1690AM™ | AM,LL,RR2 | |
| P1690CHR | RW,HX1,LL,RR2 | 116 |
| P1690HR | HX1,LL,RR2 | |
| P1690R | RR2 | |
| P1690YHR | YGCB,HX1,LL,RR2 | |
| 32B09 | RR2 | |
| 32B10 | | |
| 32B11 | HX1,LL | 117 |
| 32B16 | HX1,LL,RR2 | |
| P1739R* | RR2 | 117 |
| P1739YHR | YGCB,HX1,LL,RR2 | |
| P1745BVT | AVBL,CB,LL,GT | 117 |
| P1745HR | HX1,LL,RR2 | |
| P1751AM™* | AMT,LL,RR2 | 117 |
| P1751AM™* | AM,LL,RR2 | |
| P1768AMX™ | AMX,LL,RR2 | 117 |
| 32B34 | HX1,LL,RR2 | 118 |

| Pioneer® Hybrid/Brand™ | Technology Segment | CRM |
|------------------------|--------------------|-----|
| P1883AM™ | AM,LL,RR2 | |
| P1883R | RR2 | 118 |
| P1883YHR | YGCB,HX1,LL,RR2 | |
| 31G65 | RR2 | |
| 31G70 | HXX,LL,RR2 | 119 |
| 31G71 | HX1,LL,RR2 | |
| P2023BVT | AVBL,CB,LL,GT | 120 |
| P2088AM™ | AM,LL,RR2 | |
| P2088AMX™ | AMX,LL,RR2 | |
| P2088R | RR2 | |
| P2088YHR | YGCB,HX1,LL,RR2 | 120 |
| P2088YXR | YGCB,HXX,LL,RR2 | |
| P2089AM™ | AM,LL,RR2 | |
| P2089YHR | YGCB,HX1,LL,RR2 | |



*NEW

**All Pioneer products are hybrids unless designated with AM1, AM, AMRW, AMT, AMX and AMXT, in which case they are brands.

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

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.

TECHNOLOGY SEGMENT:

AM1 - Optimum® AcreMax® I 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.

AMT - Optimum® AcreMax® TRlsect® 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 TRlsect 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.

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, HX1, LL, RR2 (Optimum® TRlsect®) - 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.

Herculex® 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® and Agrisure Viptera® are registered trademarks 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.

CRM (Comparative Relative Maturity): There is not an industry standard for maturity ratings so comparing product maturity and harvest moisture ratings between companies is usually difficult. Use the CRM rating to compare Pioneer brand products with competitive products of a similar maturity and harvest moisture. CRM ratings, and harvest moieties, for products within a family may vary slightly, depending upon the level of insect (ECB and CRW) infestation. Conventional and straight products 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.



PIONEER® brand products are provided subject to the terms and conditions of purchase which are part of the labeling and purchase documents. ®, TM, SM Trademarks and service marks of DuPont, Pioneer or their respective owners. © 2015 PHIL. 15-2006 HTF