



HOEGEMEYER HIGH PH STUDY

High soil pH is a common problem here in the Western Corn Belt. At Hoegemeyer, we are committed to providing you products that can tolerate these stressful conditions. High pH soils cause a symptom known as Iron Deficiency Chlorosis (IDC). Several nutrients become harder for the plant to extract from the soil at a pH above 7.5 including phosphorus, zinc, iron, and manganese. This may cause stunting, yellowing, interveinal chlorosis, and even plant death in some hybrids. Decreasing soil pH through management practices is very difficult and typically not economical, so what should a producer do?

The best management practice is usually to plant a hybrid with good tolerance to high soil pH. Starting in 2014, we ramped up our research from one small trial to two large trials at locations with these high pH soil types (Table 1). We conducted 2 trials in 2014 screening over 50 hybrid families at each location to attempt to find the most pH tolerant products on the market (Photo 1). During the 2016 growing season we repeated this same trial with over 70 entries at 2 locations. Yield was taken at both locations and averaged to find the most tolerant products that will work on your farm (Table 2). If you have any questions related to pH tolerant hybrids feel free to contact your local Hoegemeyer DSM or agronomist.

| LOCATION | AVERAGE PH OF SITE BY YEAR | | | |
|------------------|----------------------------|------|------|------|
| | 2014 | 2015 | 2016 | 2017 |
| McCook, NE | 8.2 | | | |
| North Bend, NE | 8.2 | 8.0 | 8.1 | 8.1 |
| North Platte, NE | | 8.3 | 8.5 | 8.4 |

Table 1. Average soil pH at our testing locations in 2014-2017.



Hoegemeyer product HPT® brand 8359 3000GT™ in a High pH environment (4).

Hoegemeyer product HPT® brand 8408 AM™ in a High pH environment (6).

| MATURITY | HIGHLY SUITABLE (RATING 6 OR BETTER) | SUITABLE (RATING 5) |
|----------|---|---|
| 90 | | 6072 Family |
| 96 | | 6695 Family |
| 97 | | 6798 Family / 6703 Family |
| 98 | 6813 Family | |
| 100 | 7088 Family | 7061 Family |
| 101 | 7102 Family | 7166 Family |
| 102 | | 7209 Family / 7224 Family / 7278 Family |
| 103 | | 7422 Family / 7480 Family |
| 105 | | 7541 Family / 7557 Family |
| 106 | 7644 Family / 7606 Family | |
| 107 | | 7771 Family |
| 108 | | 7876 Family / 7818 Family / 7886 Family |
| 109 | 7998 Family / 7946 Family | 7900 Family |
| 110 | 8049 Family / 8091 Family | 8066 Family |
| 111 | 8122 Family | 8175 Family |
| 112 | 8217 Family / 8255 Family | 8294 Family / 8363 Family |
| 113 | 8326 Family | 8382 Family / 8345 Family / 8691 Family |
| 114 | 8408 Family / 8414 Family / 8469 Family | 8498 Family |
| 115 | 8388 Family | 8529 Family / 8556 Family |
| 116 | | 8652 Family |
| 117 | | 8741 Family |
| 119 | | 8912 Family |

Table 2. Hoegemeyer products with above average tolerance to High pH soils.



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AM-R - Optimum® AcreMax® Insect Protection system with YGCB, HX1, RR2. Contains a single-bag integrated refuge solution for above-ground insects. Do not spray with Liberty®. Not all seeds in the bag are tolerant to Liberty herbicide. In EPA-designated cotton growing counties, a 20% separate corn borer refuge must be planted with Optimum AcreMax 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 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.



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.



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.



Seed products with the LibertyLink® (LL) trait are resistant to the herbicide glufosinate ammonium, an alternative to glyphosate in corn, and combine high-yielding genetics with the powerful, non-selective, postemergent weed control of Liberty® herbicide for optimum yield and excellent weed control.

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