



# HIGH pH RESEARCH

High soil pH is a common problem 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 grower do?

LOCATION	AVERAGE pH OF SITE BY YEAR				
	2017	2018	2019	2020	2021
North Bend, NE	8.1	8.0			
Alda, NE			8.1	8.1	8.1

The best management practice is usually to plant a hybrid proven to have good tolerance to high soil pH. We began screening each of our corn products for high pH tolerance in 2014 and we've continued to add to our data set each year. The table above shows the soil pH levels in our trials in recent years. Please refer to the table below for a list of corn hybrids that we have found to demonstrate good suitability on high pH soils. If you have any questions related to pH tolerant hybrids, please contact your Hoegemeyer DSM or Agronomist.

Maturity	Highly Suitable (Rating: 6 or Better)	Suitable (Rating: 5)
85		5515 Family
97		6775 Family
98	6813 & 6850 Families	
100	7027 & 7088 Families	
102		7209 & 7224 Families
103		7322 Family
104	7402 Family	7434 Family
105		7523 Family
106	7692 Family	7653 Family
107		7772 Family
108	7869 & 7886 Families	7818 Family
109	7921, 7946 & 7990 Families	7900 & 7955 Families
110	8084 Family	8052, 8066 & 8073 Families
111	8140 & 8188 Families	8104 & 8175 Families
112	8233 & 8255 Families	8217, 8268 & 8296 Families
113	8338 & 8382 Families	8348 & 8371 Families
114		8414, 8447 & 8490 Families
115		8511, 8529 & 8560 Families
116		8637 Family
117		8707 & 8750 Families

IMPORTANT: Characteristic scores provide key information useful in selecting and managing products in your area. Information and ratings are based on comparisons with other products sold by Hoegemeyer.

Information and scores are assigned by Hoegemeyer and are based on period-of-years testing through 2021 harvest, and were the latest available at time of printing. Some scores may change after 2022 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. 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.



**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.



**Leptra** - Optimum® AcreMax® Leptra® products with AVBL, 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 Leptra 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, a Bt trait, 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®)** - Qrome® products are approved for cultivation in the U.S. and Canada. They have also received approval in a number of importing countries, most recently China. For additional information about the status of regulatory authorizations, visit <http://www.biotradestatus.com/>



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**HX1** - Contains the Herculex® I Insect Protection gene which provides protection against European corn borer, southwestern corn borer, black cutworm, fall armyworm, lesser corn stalk borer, southern corn stalk borer, and sugarcane borer; and suppresses corn earworm.



**LL** - Liberty®, LibertyLink® and the Water Droplet Design are registered trademarks of BASF.



**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. Roundup Ready® is a registered trademark used under license from Monsanto Company.



Optimum® AQUAmax® 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 hybrids may exhibit reduced yield under water and heat stress. Individual results may vary.



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



The transgenic soybean event in Enlist E3® soybeans is jointly developed and owned by Corteva Agriscience and M.S. Technologies L.L.C. Enlist Duo® and Enlist One® herbicides are not registered for sale or use in all states or counties. Contact your state pesticide regulatory agency to determine if a product is registered for sale or use in your area. Enlist Duo and Enlist One are the only 2,4-D products authorized for use with Enlist crops. Consult Enlist herbicide labels for weed species controlled. Always read and follow label directions.



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**DO NOT APPLY DICAMBA HERBICIDE IN-CROP TO SOYBEANS WITH Roundup Ready 2 Xtend® technology unless you use a dicamba herbicide product that is specifically labeled for that use in the location where you intend to make the application. IT IS A VIOLATION OF FEDERAL AND STATE LAW TO MAKE AN IN-CROP APPLICATION OF ANY DICAMBA HERBICIDE PRODUCT ON SOYBEANS WITH Roundup Ready 2 Xtend® technology, OR ANY OTHER PESTICIDE APPLICATION, UNLESS THE PRODUCT LABELING SPECIFICALLY AUTHORIZES THE USE.** Contact the U.S. EPA and your state pesticide regulatory agency with any questions about the approval status of dicamba herbicide products for in-crop use with soybeans with Roundup Ready 2 Xtend® technology. ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.

Soybeans with Roundup Ready 2 Xtend® technology contain genes that confer tolerance to glyphosate and dicamba. Glyphosate herbicides will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba.

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



herbicide tolerant trait

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