Iron Deficiency Chlorosis – 2022 Soybean Variety Tolerance Scores

mississippi-crops.com/2022/12/12/iron-deficiency-chlorosis-2022-soybean-variety-tolerance-scores/

Dr. Trent Irby, Extension Soybean Specialist

December 12, 2022

Iron Deficiency Chlorosis (IDC) is an annual challenge for soybean producers in certain areas of our state. This issue is most common for soybean grown in our high pH soils. While there are some alternative management practices that may help producers to overcome this issue, variety selection is likely the most simple and economical option available. With that said, data generated through trials designed to screen soybean varieties for tolerance to IDC may offer producers who deal with this issue an additional point to consider when making variety selection decisions. Through a collaborative effort between MSU Extension and MAFES Variety Testing, a total of 72 maturity group IV and V soybean varieties were screened for tolerance to IDC during the 2022 growing season. MSU Extension and MAFES sincerely appreciate the Mississippi Soybean Promotion Board, cooperating producers, and each of the participating seed companies for supporting these efforts. The below links are to tables summarizing the different soybean variety sets for the maturity ranges and technologies evaluated during 2022. Tables of ratings are also appended below.

MG IV (RM 4.5-4.6) Soybean Variety Response to IDC

MG IV (RM 4.7-4.9) Soybean Variety Response to IDC

MG V Soybean Variety Response to IDC

2022 Soybean Maturity Group IV (MG 4.5 – 4.6) RR2X & XF Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]						Avg. IDC Tolerance Score[2]
Armor	46-F13	5	6	6	6	5	4	5
Asgrow	AG45XF3	5	5	5	6	5	4	5
Delta Grow Seed Co.	DG46X65RR2X/STS	6	5	5	6	6	5	5
Dyna-Gro Seed	S46XF31S	5	5	5	5	4	3	5
Dyna-Gro Seed	S46XS60	5	5	5	5	5	5	5
Great Heart Seed	GT-4677XS	5	5	5	5	5	5	5
Great Heart Seed	GT-4681XFS	5	5	5	5	5	4	5
Innvictis Seed Solutions	A4642XF	5	5	5	6	6	4	5
Innvictis Seed Solutions	A4690XF	5	5	5	5	5	4	5
NK Seeds	45-P9XF	5	6	6	5	6	5	5
Progeny Ag	P 4604XFS	5	6	6	5	6	6	5
Revere	4606XFS	5	6	6	6	5	4	5
Delta Grow Seed Co.	DG46F18	6	7	7	6	6	7	6
Gateway Seed	453RXS	6	6	6	6	6	6	6
Gateway Seed	469XF	6	6	6	7	6	6	6
Innvictis Seed Solutions	A4662XF	6	6	6	6	6	6	6
Progeny Ag	P 4505RXS	6	6	6	6	6	6	6
Progeny Ag	P 4521XFS	6	7	7	7	7	7	6
Revere	4526XF	5	6	6	6	6	5	6
Dyna-Gro Seed	S45XF02	6	7	7	7	7	7	7
Gateway Seed	465RXS	6	7	7	7	7	7	7
MorSoy	MS 4681	7	8	8	7	7	7	7
Beck's	4553XF	7	8	8	8	8	7	8
Innvictis Seed Solutions	A4632XF	7	8	8	8	8	8	8

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible. The six individual columns under this heading present tolerance scores collected at different rating intervals throughout the growing season. All scores are displayed as an average from two locations (Monroe County, MS & Lowndes County, MS), except for the sixth column, which is from Monroe County, MS only.

[2] Overall tolerance score averaged across all rating intervals and locations. ($p < 0.0001$).

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed

2022 Soybean Maturity Group IV (MG 4.7 – 4.9) RR2X & XF Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]						Avg. IDC Tolerance Score[2]
Beck's	4885XF	5	5	5	4	4	4	4
Armor	48-D25	5	5	5	5	5	3	5
Armor	48-F22	5	5	5	5	5	3	5
Asgrow	AG47XF3	5	6	6	5	5	6	5
Asgrow	AG48XF3	5	5	5	5	5	4	5
Dyna-Gro Seed	S48XT90	5	5	5	5	5	3	5
Gateway Seed	471XF	5	6	6	5	6	6	5
Great Heart Seed	GT-4979X	5	5	5	6	5	5	5
Innvictis Seed Solutions	A4950X	5	6	6	6	5	5	5
MorSoy Seed	MS 4846	6	5	5	6	6	4	5
Revere	4795XS	4	5	5	5	5	5	5
Revere	4806XS	5	6	6	5	5	4	5
Revere	4826XF	5	6	6	5	5	5	5
Revere	4925XFS	5	6	6	5	5	6	5
Delta Grow Seed Co.	DG48F33/STS	5	6	6	6	6	6	6
Delta Grow Seed Co.	DG48X45RR2X/STS	6	6	6	6	6	6	6
Dyna-Gro Seed	S47XF23S	6	6	6	6	6	5	6
Dyna-Gro Seed	S48XF61S	6	6	6	7	7	6	6
Dyna-Gro Seed	S49XF82S	6	7	7	6	6	6	6
Dyna-Gro Seed	S49XT70	6	6	6	6	6	5	6
Great Heart Seed	GT-4756XF	5	6	6	6	6	5	6
Great Heart Seed	GT-4762XF	6	7	7	7	7	7	6
Innvictis Seed Solutions	A4742XF	6	6	6	6	6	6	6
Innvictis Seed Solutions	A4850XF	6	7	7	6	6	7	6
Local Seed	LS4727XF	5	7	7	7	7	6	6
MorSoy Seed	MS 4852	6	6	6	6	6	6	6
NK Seeds	47-Z1XF	6	6	6	6	6	7	6
Progeny Ag	P 4806XFS	6	7	7	6	7	6	6
Asgrow	AG49XF3	6	8	8	8	8	8	7
Delta Grow	49XF29/STS	6	7	7	7	7	7	7
Dyna-Gro	S47XF52	6	7	7	7	7	6	7
Great Heart Seed	GT-4828X	7	7	7	8	7	8	7
Progeny Ag	P 4821RX	6	7	7	7	7	7	7

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible. The six individual columns under this heading present tolerance scores collected at different rating intervals throughout the growing season. All scores are displayed as an average from two locations (Monroe County, MS & Lowndes County, MS), except for the sixth column, which is from Monroe County, MS only.

[2] Overall tolerance score averaged across all rating intervals and locations. ($p < 0.0001$).

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed

2022 Soybean Maturity Group V RR2X & XF
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]						Avg. IDC Tolerance Score[2]
NK Seeds	55-T2XF	5	6	6	6	5	4	5
Progeny Ag	P 5252RX	5	6	6	6	6	5	5
Progeny Ag	P 5554RX	5	5	5	6	5	5	5
Revere	LS5614XF	5	5	5	5	4	4	5
Asgrow	AG46XF2	5	6	6	6	6	5	6
Asgrow	AG53XF2	6	7	7	7	7	7	6
Dyna-Gro Seed	S52XT91	5	6	6	6	6	7	6
Revere	LS5386X	6	6	6	7	6	7	6
Revere	LS5588X	5	6	6	6	6	5	6
Delta Grow Seed Co.	DG52F22/STS	6	7	7	8	7	8	7
Delta Grow Seed Co.	DG54F20	6	7	7	7	8	9	7
Great Heart Seed	GT-5214X	6	8	8	7	8	8	7
Innvictis Seed Solutions	A5451XF	6	7	7	7	7	7	7
Progeny Ag	P 5016RXS	6	7	7	7	7	7	7
Revere	LS5029XF	6	7	7	7	7	8	7

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible. The six individual columns under this heading present tolerance scores collected at different rating intervals throughout the growing season. All scores are displayed as an average from two locations (Monroe County, MS & Lowndes County, MS), except for the sixth column, which is from Monroe County, MS only.

[2] Overall tolerance score averaged across all rating intervals and locations. ($p < 0.0001$).

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed

Iron Deficiency Chlorosis – 2021 Soybean Variety Tolerance Ratings

mississippi-crops.com/2021/11/18/iron-deficiency-chlorosis-2021-soybean-variety-tolerance-ratings/

November 18, 2021

Iron Deficiency Chlorosis (IDC) is an annual challenge for soybean producers in certain areas of our state. This issue is most common on soybean grown in our high pH soils. While there are some alternative management practices that may help producers to overcome this issue, variety selection is likely the most simple and economical option currently available. With that said, data generated through trials designed to screen soybean varieties for tolerance to IDC may offer producers who deal with this issue an additional point to consider when making variety selection decisions. Through a collaborative effort between MSU Extension and MAFES Variety Testing, a total of 119 maturity group IV and V soybean varieties were screened for tolerance to IDC during the 2021 growing season. MSU Extension and MAFES sincerely appreciate the Mississippi Soybean Promotion Board and each of the participating seed companies for supporting these efforts. The following links are to each document summarizing the different soybean variety sets for the maturity ranges and technologies evaluated during 2021. Tables are also appended below.

2021 Maturity Group 4.5-4.6 RR2X/XF Soybean Variety Response to IDC

2021 Maturity Group 4.7-4.9 RR2X/XF Soybean Variety Response to IDC

2021 Maturity Group 5.0-5.7 RR2X/XF Soybean Variety Response to IDC

2021 Maturity Group 4.5-4.9 Enlist E3 Soybean Variety Response to IDC

2021 Maturity Group 5.0-5.5 Enlist E3 Soybean Variety Response to IDC

2021 Soybean Maturity Group IV (MG 4.5 – 4.6) RR2X & XF Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score[2]
Innvictis Seed	A4690X	4	4	4	4	4	4
USG	7461XFS	4	4	4	4	4	4
Delta Grow	DG46X65RR2X/STS	5	4	4	4	4	4
Local Seed	LS4606XF	4	4	4	4	4	4
AgriGold	G4615XF	5	4	4	5	4	4
MorSoy	MS 4640XF	5	4	4	4	4	4
Armor	46-D09	5	4	4	4	4	4
Armor	46-F13	5	4	4	4	4	4
Pioneer	P46A86X	5	5	5	4	4	4
Progeny	P 4604 XFS	5	4	4	4	4	4
Dyna-Gro	S46SX60	5	4	4	4	4	5
Dyna-Gro	S46XF31S	5	5	5	4	4	5
Great Heart	GT-4677XS	5	5	5	5	4	5
Innvictis Seed	A4618X	5	5	5	5	4	5
Great Heart	GT-4681XFS	5	5	5	5	5	5
Progeny	P 4505 RXS	5	5	5	5	4	5
Delta Grow	DG46F17/STS	5	5	5	5	5	5
NK	45-P9XF	5	5	5	5	5	5
Local Seed	LS4517XFS	6	5	5	5	5	5
DonMario Seeds	DM 46F62	5	5	5	5	5	5
DonMario Seeds	DM 45X61	5	5	5	5	5	5
MorSoy	MS 4531XF	5	5	5	5	5	5
AgriGold	G4620RX	6	6	6	5	5	5
Asgrow	AG45XF0	6	6	6	6	6	6
Progeny	P 4501 XFS	6	6	6	6	6	6
Progeny	P 4521 XFS	6	6	6	6	6	6
MorSoy	MS 4681 RXT	6	6	6	6	6	6
Asgrow	AG46XF2	6	7	7	7	7	7
Innvictis Seed	A4571XF	7	8	8	8	8	8

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible. The five individual columns under this heading present tolerance scores collected at different rating intervals throughout the growing season. All scores are displayed as an average from two locations (Monroe County, MS & Lowndes County, MS).

[2] Overall tolerance score averaged across all rating intervals and locations. ($p < 0.0001$).

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2021 Soybean Maturity Group IV (MG 4.7 – 4.9) RR2X & XF
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score[2]
Local Seed	LS4795XS	5	4	4	4	4	4
Progeny	P 4970 X	4	4	4	4	4	4
Pioneer	P47A64X	4	4	4	4	4	4
Asgrow	AG48XF0	4	4	4	4	4	4
Local Seed	LS4806XS	5	4	4	4	4	4
Dyna-Gro	S48XT90	5	4	4	4	4	4
Innvictis Seed	A4831XF	5	4	4	4	4	4
Armor	48-D25	5	4	4	5	4	4
Great Heart	GT-4979X	5	4	4	4	4	4
Progeny	P 4806 XFS	4	4	4	4	5	4
Beck's	4885XF	5	4	4	4	4	4
AgriGold	G4820RX	5	4	4	5	5	5
Delta Grow	DG48X45	5	5	5	5	4	5
Progeny	P 4816 RX	4	5	5	5	5	5
NK	S49-F5X	5	5	5	5	5	5
Asgrow	AG47XF0	5	5	5	5	5	5
Beck's	4991X2	5	5	5	5	5	5
Innvictis Seed	A4950X	5	5	5	5	5	5
Innvictis Seed	A4850XF	5	5	5	5	5	5
Dyna-Gro	S49XT70	5	5	5	5	5	5
Armor	48-F22	5	5	5	5	5	5
MorSoy	MS 4850 XT/STS	5	5	5	5	5	5
Local Seed	LS4805XFS	5	5	5	5	5	5
USG	7491XFS	5	5	5	5	5	5
Delta Grow	DG48F20	5	5	5	5	5	5
Great Heart	GT-4828X	5	5	5	5	5	5
AgriGold	G4813XF	5	5	5	6	5	5
Progeny	P 4921 XFS	5	5	5	5	5	5
Great Heart	GT-4841XFS	6	5	5	6	5	5
Asgrow	AG48XF2	5	6	6	6	5	5
Progeny	P 4821 RX	6	6	6	6	6	6
Local Seed	LS4718XF	6	6	6	6	6	6
Great Heart	GT-4750XFS	6	6	6	6	6	6
DonMario Seeds	DM 48F61	5	6	6	6	6	6
Local Seed	LS4919XFS	6	6	6	6	6	6
Delta Grow	DG49F22/STS	6	6	6	6	6	6
USG	7481XF	6	6	6	6	6	6
Progeny	P 4851 RX	6	6	6	6	6	6
Innvictis Seed	A4791XF	6	6	6	6	6	6
Local Seed	LS4707XF	6	6	6	6	6	6
Armor	48-D03	6	7	7	6	7	6
Asgrow	AG47XF2	6	7	7	6	7	6

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible. The five individual columns under this heading present tolerance scores collected at different rating intervals throughout the growing season. All scores are displayed as an average from two locations (Monroe County, MS & Lowndes County, MS).

[2] Overall tolerance score averaged across all rating intervals and locations. ($p < 0.0001$).

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2021 Soybean Maturity Group V RR2X & XF
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score[2]
Pioneer	P53A67X	3	4	4	3	3	3
NK	57-A3XF	4	3	3	3	3	3
NK	S53-F7X	4	4	4	3	3	3
DonMario Seeds	DM 51X61	4	4	4	4	4	4
Innvictis Seed	A5558X	4	4	4	4	4	4
Local Seed	LS5614XF	4	4	4	4	4	4
Dyna-Gro	S56XT99	4	4	4	4	4	4
Delta Grow	DG52X05/STS	4	4	4	4	4	4
Innvictis Seed	A5341XF	4	4	4	4	4	4
Progeny	P 5554 RX	4	4	4	4	4	4
Local Seed	LS5009XS	4	4	4	4	4	4
Asgrow	AG56XF2	4	4	4	5	4	4
Progeny	P 5252 RX	4	5	5	4	4	4
Asgrow	AG55XF0	5	4	4	5	5	5
Local Seed	LS5386X	5	5	5	4	4	5
Dyna-Gro	S52XT91	5	5	5	5	5	5
Local Seed	LS5119XF	5	5	5	5	4	5
Great Heart	GT-5417X	5	5	5	5	5	5
Beck's	5005XF	5	5	5	5	5	5
Asgrow	AG53XF2	5	5	5	5	5	5
Great Heart	GT-5214X	5	6	6	5	6	6
Progeny	P 5425 XF	5	5	5	6	6	6
Innvictis Seed	A5451XF	6	6	6	6	6	6
Local Seed	LS5418XFS	6	6	6	6	6	6
Delta Grow	DG54F20	6	6	6	6	6	6
Progeny	P 5016 RXS	6	6	6	6	6	6
Progeny	P 5003 XF	6	6	6	6	6	6

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible. The five individual columns under this heading present tolerance scores collected at different rating intervals throughout the growing season. All scores are displayed as an average from two locations (Monroe County, MS & Lowndes County, MS).

[2] Overall tolerance score averaged across all rating intervals and locations. ($p < 0.0001$).

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2021 Soybean Maturity Group IV Enlist E3
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score[2]
Progeny	P 4775 E3S	3	3	3	3	3	3
Delta Grow	DG47E20/STS	3	3	3	3	3	3
Dyna-Gro	S46ES91	4	3	3	3	3	3
Delta Grow	DG46E10	5	4	4	4	4	4
Dyna-Gro	S45ES10	5	4	4	4	4	4
Delta Grow	DG48E49/STS	5	4	4	5	4	5
Pioneer	P46T51E	5	5	5	5	5	5
Progeny	P 4541 E3S	6	5	5	5	5	5
DonMario Seeds	DM48E62S	6	5	5	5	5	5
Innvictis Seed	B4681E	6	5	5	6	5	5
Pioneer	P49T62E	5	6	6	5	6	5
Innvictis Seed	B4841E	6	6	6	6	6	6
Progeny	P 4931 E3S	6	6	6	6	6	6
Delta Grow	DG48E59	6	6	6	6	6	6
Delta Grow	DG49E20	6	6	6	6	6	6
Dyna-Gro	S49EN79	6	6	6	7	7	6

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible. The five individual columns under this heading present tolerance scores collected at different rating intervals throughout the growing season. All scores are displayed as an average from two locations (Monroe County, MS & Lowndes County, MS).

[2] Overall tolerance score averaged across all rating intervals and locations. ($p < 0.0001$).

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2021 Soybean Maturity Group V Enlist E3
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score[2]
DonMario Seeds	DM 51E62S	4	4	4	3	3	4
Progeny	P 5121 E3S	4	4	4	4	3	4
Progeny	P 5521 E3S	4	4	4	4	4	4
Innvictis Seed	B5401E	5	4	4	5	5	4
Delta Grow	DG53E30	5	5	5	5	5	5

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible. The five individual columns under this heading present tolerance scores collected at different rating intervals throughout the growing season. All scores are displayed as an average from two locations (Monroe County, MS & Lowndes County, MS).

[2] Overall tolerance score averaged across all rating intervals and locations. ($p = 0.0024$).

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2020 Soybean Maturity Group IV (M.G. 4.5 – 4.6) RR2X
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score[1]
Great Heart Seed	GT-4677XS	3	4	4	4	3	3
Delta Grow	46X65/STS	3	4	4	4	4	4
Credenz	CZ 4570X	4	5	5	5	4	4
Armor	46-D09	4	5	5	5	4	4
Mission	A4618X	4	4	4	6	4	4
Dyna-Gro	S45XS37	4	5	5	5	5	4
Dyna-Gro	S45XS66	4	5	5	5	5	4
Dyna-Gro	S46XS60	3	4	4	4	3	4
Asgrow	AG46X0	3	4	4	4	4	4
Pioneer	P46A86X	3	4	4	5	4	4
Credenz	CZ 4600X	4	5	5	6	5	5
Local Seed	LS4583X	4	6	6	6	5	5
Local Seed	LS4565XS	4	6	6	6	5	5
USG	7461XTS	4	6	6	6	5	5
GDM Seeds	DM 45X61	4	5	5	6	5	5
Asgrow	AG45X8	4	6	6	6	6	5
Asgrow	AG46X6	4	6	6	6	6	5
Great Heart Seed	G4620RX	4	5	5	5	5	5
MorSoy	MS 4616RXT/STS	4	5	5	5	5	5
LG Seeds	LGS4632RX	4	6	6	6	7	6

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible; all scores are displayed as an average from two locations (Monroe County, MS & Lowndes County, MS). (p=>0.0001).

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2020 Soybean Maturity Group IV (M.G. 4.7 – 4.9) RR2X
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score[1]
Delta Grow	48X05	3	4	4	4	4	3
Credenz	CZ 4810X	3	4	4	4	3	3
LG Seeds	LGS4899RX	3	4	4	4	4	3
Dyna-Gro	S48XT90	3	4	4	4	3	3
Progeny	4970RX	3	4	4	4	3	3
Delta Grow	48X45	3	4	4	5	4	4
Local Seed	LS4795XS	3	4	4	4	3	4
Armor	48-D25	3	5	5	4	4	4
Armor	49-D14	4	4	4	5	4	4
NK	S47-Y9X	3	5	5	6	5	4
NK	S49-F5X	4	5	5	5	5	4
Mission	A4950X	4	4	4	4	4	4
GDM Seeds	DM 47X39	4	5	5	5	5	4
GDM Seeds	DM 49X13	4	5	5	5	5	4
Dyna-Gro	S48XT56	3	4	4	5	4	4
Asgrow	AG48X9	4	4	4	5	4	4
AgriGold	G4995RX	3	4	4	4	4	4
Great Heart Seed	GT-4979X	3	4	4	4	4	4
Great Heart Seed	GT-4828X	4	5	5	5	5	4
USG	7480XT	3	5	5	5	5	4
Progeny	4816RX	4	5	5	5	5	4
MorSoy	MS 4846 RXT	4	5	5	5	5	4
Credenz	CZ 4730X	5	6	6	6	5	5
Credenz	CZ 4770X	4	5	5	5	5	5
Local Seed	LS4999X	4	5	5	5	5	5
USG	7496XTS	4	5	5	6	5	5
Mission	A4828X	4	5	5	5	5	5
Dyna-Gro	S47XT20	4	5	5	5	5	5
Dyna-Gro	S49XT70	4	5	5	6	5	5
Pioneer	P48A60X	4	6	6	6	5	5
AgriGold	G4820RX	4	5	5	6	5	5
Great Heart Seed	GT-4833XS	4	6	6	6	6	5
Progeny	4821RX	4	6	6	6	6	5
Taylor Seed	T4880XS	5	6	6	6	5	5
Delta Grow	49X25	4	7	7	7	7	6
Credenz	CZ 4869X	4	6	6	6	6	6
Credenz	CZ 4979X	4	6	6	7	6	6
USG	7489XT	5	7	7	8	7	6
Dyna-Gro	S49XT21	5	6	6	7	6	6
Progeny	4851RX	5	6	6	7	6	6
Taylor Seed	T4990XS	5	7	7	7	7	6
Credenz	CZ 4941X	5	7	7	7	7	7

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible; all scores are displayed as an average from two locations (Monroe County, MS & Lowndes County, MS). (p=>0.0001).

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2020 Soybean Maturity Group V RR2X
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score[1]
NK	S53-F7X	2	3	3	3	2	2
Pioneer	P53A67X	1	2	2	2	1	2
Dyna-Gro	S52XS39	3	4	4	3	2	3
Dyna-Gro	S56XT99	2	4	4	3	3	3
Progeny	5252RX	3	4	4	4	3	3
Progeny	5554RX	3	3	3	4	3	3
Credenz	CZ 5000X	3	5	5	5	4	4
Credenz	CZ 5299X	3	5	5	4	3	4
Local Seed	LS5087X	3	5	5	5	4	4
Local Seed	LS5009XS	4	4	4	4	4	4
Pioneer	P55A49X	3	4	4	4	4	4
MorSoy	MS 5398 RXT	4	4	4	5	5	4
GDM Seeds	DM 51X61	2	4	4	5	4	4
Local Seed	LS5386X	3	5	5	5	5	5
NK	S51-R3XS	4	6	6	6	6	5
Asgrow	AG52X9	4	5	5	6	5	5
Asgrow	AG55X0	3	5	5	6	5	5
Great Heart Seed	GT-5214X	4	5	5	6	6	5
Great Heart Seed	GT-5417X	4	6	6	6	6	5
Credenz	CZ 5251X	5	6	6	6	6	5
Asgrow	AG53X0	4	7	7	7	7	6
Asgrow	AG53X9	5	6	6	6	6	6
Progeny	5016RXS	5	7	7	7	7	6

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible; all scores are displayed as an average from two locations (Monroe County, MS & Lowndes County, MS). (p=>0.0001).

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2020 Soybean Maturity Group IV Enlist E3
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score[1]
Progeny	4775E3S	3	2	2	2	2	3
Go Soy	463E20S	3	4	4	3	3	3
Go Soy	481E19	4	3	3	3	3	3
Delta Grow	48E10	3	4	4	4	4	4
Progeny	4682E3	4	4	4	5	4	4
Delta Grow	47E20/STS	5	4	4	4	5	5
GDM Seeds	DM 48E73	5	4	4	4	2	5
Delta Grow	48E49/STS	5	5	5	5	4	5
Local Seed	ZS4694E3S	5	4	4	5	4	5
USG	7491ETS	5	6	6	6	6	5
Pioneer	P49T62E	5	6	6	6	6	6
MorSoy	MS 4800E	4	6	6	6	6	6
Delta Grow	47E80/STS	5	6	6	7	7	6
Delta Grow	49E00/STS	4	6	6	7	7	6
Go Soy	473E20	5	6	6	7	7	6

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible; all scores are displayed as an average from two locations (Monroe County, MS & Lowndes County, MS). (p=>0.0001).

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2020 Soybean Maturity Group V Enlist E3
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score[1]
Delta Grow	52E15/STS	2	3	3	3	3	3
Local Seed	ZS5098E3S	3	3	3	4	3	3
Delta Grow	51E60	4	5	5	6	6	5
Go Soy	512E21	4	5	5	6	6	5
MorSoy	MS 5110E	4	6	6	5	5	5
Progeny	5211E3	5	7	7	7	7	6

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible; all scores are displayed as an average from two locations (Monroe County, MS & Lowndes County, MS). (p=>0.0001).

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

MISSISSIPPI STATE UNIVERSITY EXTENSION

2019 Soybean Maturity Group IV (M.G. 4.5 – 4.6) RR2X Variety Response to Iron Deficiency Chlorosis

MSPB MISSISSIPPI SOYBEAN PROMOTION BOARD

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score
AgriGold	G4579RX	4	5	5	4	2	4
Pioneer	P46A57BX	4	5	5	3	2	4
Asgrow	AG46X0	4	5	5	4	3	4
MorSoy	MS 4616 RXT STS	5	5	5	4	2	4
Delta Grow	46X65 STS	5	5	5	4	3	4
Dyna-Gro	S46XS60	3	5	5	4	2	4
Great Heart	GT-4677XS	3	5	5	4	3	4
Delta Grow	46X25	5	6	6	5	3	5
Terral	REV 4679X	5	6	6	5	4	5
Local Seed	LS4565XS	5	7	7	5	4	5
Local Seed	LS4583X	6	6	6	5	3	5
Dyna-Gro	S45XS37	5	6	6	4	3	5
Dyna-Gro	S45XS66	5	6	6	4	3	5
Mission Seed	A4618X	5	6	6	4	3	5
AgriGold	G4605RX	5	6	6	5	3	5
Great Heart	GT-4616X	4	6	6	4	3	5
Local Seed	LS4677X	7	8	8	6	4	6
Asgrow	AG45X8	6	7	7	5	4	6
Asgrow	AG46X6	6	6	6	6	5	6
Progeny	P 4620 RXS	7	7	7	5	4	6

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible.

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2019 Soybean Maturity Group IV (M.G. 4.7 – 4.9) RR2X
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score
Don Mario	47X01	4	4	4	3	1	3
AGS	GS47X19	4	5	5	4	2	4
USG	7489XTS	4	6	6	4	3	4
Terral	REV 4927X	4	5	5	3	3	4
Dyna-Gro	S48XT56	3	5	5	4	2	4
MorSoy	MS 4846 RXT STS	5	6	6	4	2	4
Asgrow	AG48X9	4	5	5	4	2	4
NK	S47-Y9X	5	6	6	4	2	4
Great Heart	GT-4979X	5	6	6	4	2	4
Great Heart	GT-4802X	4	5	5	4	1	4
Local Seed	LSX4894X	4	5	5	4	2	4
Delta Grow	48X45	5	5	5	4	3	5
Delta Grow	49X15	5	6	6	5	4	5
AgriGold	G4815RX	5	6	6	4	3	5
LG Seeds	C4845RX	5	6	6	5	3	5
LG Seeds	LGS4899RX	5	6	6	4	3	5
AGS	GS49X19	6	7	7	5	3	5
USG	7470XTS	5	6	6	5	4	5
Pioneer	P48A60X	5	6	6	4	4	5
NK	S49-F5X	5	5	5	5	3	5
Dyna-Gro	S49XT70	6	6	6	5	3	5
Mission Seed	A4950X	5	6	6	4	2	5
Local Seed	LS4798X	5	6	6	4	3	5
Delta Grow	47X95 STS	6	6	6	5	3	5
Don Mario	49J3X	6	7	7	5	4	5
Progeny	P 4799 RXS	6	6	6	5	3	5
Progeny	P 4816 RX	5	6	6	5	3	5
Dyna-Gro	S47XT20	5	6	6	4	3	5
Credenz	CZ 4979X	6	6	6	5	4	5
Great Heart	GT-4764XS	5	6	6	5	2	5
Delta Grow	48X05	5	6	6	4	3	5
LG Seeds	LGS4931RX	6	7	7	6	5	6
USG	7496XTS	7	7	7	6	6	6
Local Seed	LS4889XS	6	7	7	6	4	6
Dyna-Gro	S49XT39	7	7	7	6	5	6
Asgrow	AG47X9	6	7	7	5	4	6
Asgrow	AG49X9	6	7	7	6	5	6
Progeny	P 4821 RX	6	7	7	6	5	6
Terral	REV 4940X	6	7	7	6	6	6
Great Heart	GT-4833XS	5	7	7	5	4	6
Progeny	P 4851 RX	7	8	8	7	6	7
Progeny	P 4999 RX	7	7	7	6	6	7
Credenz	CZ 4869X	7	7	7	7	6	7

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible.

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

MISSISSIPPI STATE UNIVERSITY EXTENSION

2019 Soybean Maturity Group V RR2X
Variety Response to Iron Deficiency Chlorosis

MSPB MISSISSIPPI SOYBEAN PROMOTION BOARD

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score
Dyna-Gro	S52XT08	3	5	5	4	1	3
Dyna-Gro	S54XT17	3	4	4	3	2	3
NK	S53-F7X	4	5	5	3	2	3
Armor	51-D77	4	5	5	4	2	4
Asgrow	AG55X7	4	4	4	4	2	4
Credenz	CZ 5299X	4	5	5	4	4	4
Delta Grow	52X05	4	5	5	4	2	4
Delta Grow	54X25	3	5	5	4	2	4
Dyna-Gro	S52SX39	4	5	5	4	2	4
Dyna-Gro	S56XT99	4	5	5	4	3	4
Great Heart	GT-5528X	4	6	6	4	3	4
Local Seed	LS5087X	5	5	5	4	2	4
Local Seed	LS5588X	5	5	5	4	2	4
Pioneer	P54A54X	5	5	5	4	2	4
Progeny	P 5252 RX	4	5	5	4	3	4
Progeny	P 5688 RX	4	5	5	5	3	4
Terral	REV 5659X	4	5	5	4	2	4
Local Seed	LS5386X	6	5	5	5	3	5
Progeny	P 5554 RX	4	5	5	5	4	5
Armor	52-D71	6	7	7	6	4	6
Progeny	P 5170 RX	6	6	6	6	4	6
AgriGold	G5000RX	7	8	8	7	7	7
Asgrow	AG52X9	7	7	7	7	5	7
NK	S51-R3XS	8	8	8	7	7	7
Progeny	P 5016 RXS	8	7	7	7	6	7
Asgrow	AG53X10	8	8	8	8	7	8
Asgrow	AG53X9	8	8	8	8	8	8

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible.

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

MISSISSIPPI STATE UNIVERSITY EXTENSION

2019 Soybean Maturity Group IV RR / RR2 / Enlist E3
Variety Response to Iron Deficiency Chlorosis

MSPB MISSISSIPPI SOYBEAN PROMOTION BOARD

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score
Delta Grow	DG 48E10	4	4	3	3	3	3
Delta Grow	DG 48E28	4	4	4	3	2	4
Don Mario	48D3E	4	4	5	3	2	4
GoSoy	463E19	4	4	4	4	2	4
USG	7480ET	4	4	4	4	2	4
Delta Grow	DG 46E29 STS	5	5	4	4	3	5
Uni. of Missouri	S14-15138	4	4	6	4	3	5
Delta Grow	DG 47E25	5	5	6	5	3	5
Delta Grow	DG 48E39	7	7	7	6	5	5
Delta Grow	DG 49E29 STS	5	5	5	6	3	5
Delta Grow	DG 47E19	7	7	7	7	5	5
Uni. of Missouri	S14-15146	7	7	8	7	6	5
Petrus Seed	4916 GT	7	7	7	6	5	6
GoSoy	482E18	7	7	6	6	4	6
Delta Grow	DG 48E49 STS	7	7	7	7	6	6

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible.

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2019 Soybean Maturity Group V RR / RR2 / Enlist E3
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance Score
Delta Grow	DG 5585 RR2 STS	3	4	4	3	2	3
Uni. of Missouri	S16-3747RY	4	4	4	3	3	4
Go Soy	50G17	5	5	5	4	3	4
Delta Grow	52E22	7	8	8	8	7	7
Go Soy	512E18	7	8	8	7	7	7
Uni. of Missouri	S14-9017	8	8	8	8	8	8

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible.

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2018 Soybean Maturity Group IV Mid RR / RR2 / RR2X
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance	Yield (bu/A)[2]
Pioneer	P46A16R	3	4	4	5	4	4	58.0
Local Seed	LS4565XS	6	6	6	5	5	5	56.7
Great Heart	GT-4628X	5	4	5	4	9	6	55.9
Delta Grow	DG 4670 RR2	4	5	5	4	4	4	53.1
Asgrow	AG45X8	5	5	5	5	4	5	52.7
Croplan	RX 4500 S	6	5	6	5	5	6	50.8
Progeny	P4620RXS	6	6	7	6	5	6	49.9
AgriGold	G4605RX	5	5	6	5	5	6	49.8
Pioneer	P46A57BX	4	4	4	4	3	4	49.8
Dyna-Gro	S45XS37	6	6	6	5	4	5	48.9
Local Seed	LS4689X	6	6	5	6	4	5	48.5
Local Seed	LS4583X	5	6	6	5	5	5	47.4
Progeny	P4570RXS	5	6	6	6	6	6	46.6
AgriGold	G4579RX	5	6	6	6	5	6	46.0
Great Heart	GT-4685XS	5	6	6	6	5	6	45.8
Dyna-Gro	S45XS66	6	6	6	6	6	6	40.8
Asgrow	AG46X6	5	6	6	7	6	6	40.4
MorSoy	MS 4616 RXT	5	6	5	5	4	5	38.0
Delta Grow	DG 46X25RR2X	5	6	6	5	5	6	34.8
AGS	GS 46X17	7	7	7	7	7	7	33.0
Univ. of Missouri	S14-15146R	6	7	7	7	7	7	24.3
NK	S45-J3X	7	7	7	7	7	7	23.8
Croplan	RX4687S	6	7	7	8	7	7	23.5
Terral	REV 4679X	6	7	7	7	7	7	22.5
Local Seed	LS4677X	7	7	7	7	7	7	22.2
NK	S45-K5X	6	7	7	7	7	7	19.9
Mission Seed	A4637NSXR2	6	7	7	8	7	7	17.1

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible.
[2] Yield was only collected at one location, while tolerance scores were collected at two locations.

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2018 Soybean Maturity Group IV Late RR / RR2 / RR2X
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance	Yield (bu/A) [2]
Great Heart	GT-4979X	4	5	5	5	4	5	55.3
Asgrow	AG48X9	4	5	5	4	3	4	52.9
Terral	REV 4927X	4	5	5	4	3	4	51.8
GoSoy	49G16	4	5	6	6	5	5	48.2
USG	7489XTS	5	6	6	6	5	6	47.6
Delta Grow	DG 4790 RR2	4	5	6	5	5	5	47.3
Progeny	P4757RY	5	5	6	5	5	5	46.3
Progeny	P4799RXS	6	6	6	5	5	6	46.1
Dyna-Gro	S48XT56	4	6	6	6	6	5	43.7
Croplan	RX4825	4	6	6	6	5	5	43.2
NK	S48-R2X	3	4	4	5	4	4	42.7
AgriGold	G4995RX	6	6	6	5	5	5	42.5
Progeny	P4816RX	4	6	6	5	5	5	42.2
Progeny	P4955RX	5	5	6	6	6	6	40.9
MorSoy	MS 4846 RXT	5	6	6	6	5	5	40.8
Great Heart	GT-4833XS	6	6	6	6	6	6	39.9
Local Seed	LS4889XS	6	6	6	7	5	6	38.1
Armor	X47D22	5	5	6	5	5	5	38.1
Pioneer	P48A60X	5	6	6	6	6	6	38.0
Terral	REV 47A98	4	5	6	7	6	5	37.9
Local Seed	LS4966X	5	6	6	6	5	5	37.8
Dyna-Gro	S49XT39	5	5	6	6	6	6	36.6
Asgrow	AG47X9	6	6	6	7	6	6	35.5
Delta Grow	DG 48X45RR2X	5	6	6	6	6	6	34.4
Progeny	P4994RX	6	6	6	7	7	6	33.1
Terral	REV 4857X	6	6	6	6	6	6	29.1
USG	7496XTS	6	6	7	7	7	7	29.0
Univ. of Missouri	S14-15138R	6	6	7	7	6	6	28.9
Local Seed	LS4968XS	6	6	6	6	6	6	26.9
Petrus Seed	4916 GT	6	6	6	6	6	6	25.9
Terral	REV 48A26	5	6	6	7	7	6	24.9
Croplan	RX4927	6	7	7	7	7	7	23.2
Great Heart	GT-4721X	7	7	7	8	8	7	21.5
Asgrow	AG49X9	6	6	7	7	7	7	21.1
Progeny	P4851RX	7	7	7	7	8	7	19.7
Local Seed	LS4988X	6	6	7	7	7	6	19.7
Great Heart	GT-4809X	7	7	7	7	8	7	19.0
AGS	GS 48X18	6	7	7	7	7	7	18.0
Petrus Seed	479 GTS	6	6	7	8	7	7	16.8

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible.
[2] Yield was only collected at one location, while tolerance scores were collected at two locations.

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2018 Soybean Maturity Group V RR / RR2 / RR2X
Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score[1]					Avg. IDC Tolerance	Yield (bu/A)[2]
Dyna-Gro	S52XT08	2	4	4	3	3	3	58.8
Asgrow	AG55X7	3	3	4	4	3	3	56.5
Delta Grow	DG 5170 RR2/ST	4	4	4	3	3	3	53.7
Terral	REV 55A67	4	4	5	4	4	4	53.2
Pioneer	P54A75X	4	5	5	5	5	4	51.1
Progeny	P5226RYS	4	4	5	4	3	4	48.5
GoSoy	50G17	4	4	5	4	4	4	46.5
Delta Grow	DG 52X15	5	5	5	6	5	5	46.4
Progeny	P5279RXS	3	5	6	5	5	5	45.4
Progeny	P5752RY	4	5	5	5	4	5	45.0
Progeny	P5554RX	3	4	5	5	4	4	44.9
Progeny	P5252RX	4	5	5	5	5	5	44.5
AgriGold	G5288RX	5	6	6	6	6	6	43.5
Progeny	P5018RX	4	5	6	5	5	5	39.6
Terral	REV 52A98	4	5	5	5	5	5	38.5
Progeny	P5688RX	3	4	5	6	5	4	38.5
AGS	GS 51X18S	3	4	4	4	3	4	37.6
USG	75B75R	3	3	4	4	4	4	37.4
Dyna-Gro	S56XT99	2	4	5	5	4	4	36.8
Asgrow	AG52X9	6	6	7	6	6	6	34.3
Local Seed	LS5087X	4	5	5	5	5	5	34.1
Great Heart	GT-5324X	3	4	3	4	3	4	30.6
GoSoy	54G16	4	5	4	3	3	4	26.3
Asgrow	AG54X9	6	6	6	6	6	6	23.0
Terral	REV 51A56	5	6	7	7	7	6	22.1
Croplan	RX 5016 S	6	6	6	7	7	6	19.5
Terral	REV 56A58	5	6	7	7	7	6	18.8
AgriGold	G5000RX	5	7	7	7	7	7	18.0
Progeny	P5016RXS	6	6	7	7	7	7	14.8
NK	S50-G9XS	6	7	7	7	7	7	13.6
Asgrow	AG53X9	6	7	7	8	8	7	13.4
Uni. of Missouri	S14-9017R	7	8	8	9	8	8	4.2

[1] Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible.
[2] Yield was only collected at one location, while tolerance scores were collected at two locations.

These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2017 Soybean Maturity Group IV RR / RR2 / RR2X Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score				Avg. IDC Tolerance Score
Asgrow	AG47X6	1	4	4	3	3
Dyna-Gro	S49XS88	4	5	4	4	4
AgriGold	G4990RX	2	6	5	5	5
Terral	REV 48A26	4	6	6	6	5
AGS	GS48R216	5	7	6	8	6
Asgrow	AG48X8	4	5	7	7	6
Pioneer	P48T27X	5	7	5	6	6
USG	7487XTS	5	7	7	8	6
AgriGold	G4835RX	6	7	7	9	7
Delta Grow	DG4790 RR2	6	8	8	8	7
Delta Grow	DG4845 RR2X	6	7	7	7	7
Go Soy	49G16	7	7	7	8	7
Great Heart Seed	GT-4721X	6	7	7	7	7
Great Heart Seed	GT-4817XS	6	7	7	8	7
NK	S48-R2X	6	7	6	8	7
Petrus Seed	PSG 479 GTS	5	7	8	7	7
Progeny	P 4816 RX	6	8	8	8	7
Progeny	P 4996 RXS	5	8	7	8	7
USG	74K95RS	5	8	7	7	7
Croplan	R2C4775	7	8	7	8	8
Delta Grow	DG4825 RR2/STS	7	8	8	8	8
Delta Grow	DG4835 RR2X	6	7	8	9	8
Delta Grow	DG4880 RR	7	8	8	9	8
Delta Grow	DG4970 RR	7	8	9	9	8
Delta Grow	DG4995 RR	7	7	8	9	8
Dyna-Gro	S48XT56	8	7	7	8	8
Great Heart Seed	GT-477CR2	8	8	8	8	8
MorSoy	MS 4846 RXT	7	7	8	9	8
Petrus Seed	PSG 4916 GT	8	7	8	8	8
Progeny	P 4757 RY	7	8	9	9	8
Progeny	P 4851 RX	7	8	8	9	8
Terral	REV 47R34	7	8	8	9	8
USG	7496XTS	7	7	8	9	8
USG	7497XT	7	7	8	8	8
Croplan	RX4825	8	9	9	9	9
Terral	REV 48A76	8	9	9	9	9
Terral	REV 49R94	9	9	9	9	9

Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible. These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2017 Soybean Maturity Group V RR / RR2 / RR2X Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Score				Avg. IDC Tolerance Score
Asgrow	AG51X8	2	3	3	3	3
Great Heart Seed	GT-5324X	2	3	3	5	3
Delta Grow	DG5170 RR2/STS	2	5	4	4	4
Progeny	P 5016 RXS	3	5	4	5	4
Progeny	P 5157 RXS	2	5	5	4	4
Progeny	P 5376 RX	3	5	4	5	4
Terral	REV 56R63	3	5	5	4	4
USG	75B75R	3	4	3	5	4
Asgrow	AG59X7	3	4	5	6	5
Delta Grow	DG5555 RR	4	5	6	6	5
Great Heart Seed	GT-5022XS	4	5	6	6	5
U of A	UA 5414RR	4	5	5	5	5
U of A	UA 5715GT	5	5	5	5	5
Asgrow	AG55X7	5	6	6	6	6
Dyna-Gro	S56XT98	5	7	7	6	6
Go Soy	54G16	4	5	6	6	6
Pioneer	P54A54X	4	6	6	7	6
Pioneer	P55A49X	6	6	6	7	6
Progeny	P 5752 RY	5	6	7	6	6
Terral	REV 50A47	6	6	7	7	6
USG	7547XTS	5	6	6	6	6
Armor	53-D04	6	7	8	8	7
Credenz	CZ 5375 RY	5	7	8	8	7
Dyna-Gro	S56RY84	6	7	8	8	7
MorSoy	MS 5607 RXT	6	7	7	8	7
NK	S52-Y7X	7	8	7	8	7
Progeny	P 5417 RX	6	7	7	7	7
Progeny	P 5688 RX	6	7	7	8	7
Terral	REV 51A56	6	8	8	8	7
USG	7568XT	6	7	7	7	7
AgriGold	G5000RX	7	7	8	9	8
Delta Grow	DG5580 RR2	6	7	8	9	8
Pioneer	P50T56X	7	8	8	8	8
Terral	REV 56A58	8	8	8	9	8

Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible. These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2017 SOYBEAN MATURITY GROUP IV AND V IRON DEFICIENCY CHLOROSIS TRIAL

M.P. Harrison, A.R. Taylor and N.W. Buehring
Northeast Branch Experiment Station,
North Mississippi Research and Extension Center, Verona, MS

ABSTRACT: Fifteen maturity group (MG) IV and ten MG V soybean varieties were evaluated for iron deficiency chlorosis ((IDC) and yield on a Catalpa silty clay loam soil (pH 7.8) at Verona, MS in 2017. Rainfall was 74%, 98%, 127%, 56%, 131%, and 85% of normal for April, May, June, July, August, and September, respectively. Iron deficiency chlorosis rating scores during the growing season indicated significant differences among the varieties and ranged from 2 to 10 for the MG IV and 2 to 8 for the MG V varieties. The rating analysis indicated significant variability among replications and the coefficient of variability (CV) ranged from 20 to 50%. This variability was also reflected in the yield CV's of 41.0 and 30.8% for the MG IV and MG V varieties, respectively. The overall mean yields for MG IV and V were 13.4 and 21.0 bu/acre, respectively. The greatest MG IV and MG V yields were 23.1 and 26.4 bu/acre, respectively. MG IV varieties' yield ranged from 0.2 to 23.1 bu/acre and MG V variety yield ranged from 10.0 to 26.4 bu/acre.

MATERIALS AND METHODS: Two field studies were conducted in 2017 on a Catalpa silty clay loam soil (pH 7.8) at the North Mississippi Research and Extension Center, Verona, MS. Soybean varieties of MG IV and MG V were evaluated in separate studies for yield response to IDC. Both experiments were conducted as a randomized complete block design with five replications. Each plot consisted of two 8-inch-wide twin rows on 38-inch beds that were 20 feet long. A burndown application of Roundup (glyphosate) Power Maxx + Sharpen (saflufenacil) + Asana (esfenvalerate) + methylated seed oil at 32 + 1.5 + 1 + 16 oz product/acre was applied to both studies on 13 April. Both MG IV and MG V soybeans were planted on 17 May.

The whole variety study area received a preemergence application of Dual II Magnum (metolachlor) + Roundup Power Maxx + Tricor (metribuzin) at 20 oz + 32 oz + 0.3 lb product/acre on 3 May. The entire study area also received a postemergence application of Select (clethodim) + FirstRate (chloransulam) + Agridex (crop oil) at 16 + 0.4 + 32 oz product/acre on 9 June. A second postemergence application of Roundup Power Maxx + FirstRate at 24 + 0.4 oz product/acre was made on 28 June. A third postemergence application of Select + Agridex at 16 + 32 oz product/acre was made on 21 August.

Variety maturity date, plant height, lodging, percent shattering, and green stem ratings at harvest were recorded for one replication. The maturity date was recorded when all pods were dry. Plant height of 10 consecutive plants, selected at a random spot from one of the center 2 rows, was measured from the soil surface to the upper most extremity in the first replication of each study. Lodging was rated on a scale of 1 to 5 where: 1 = most plants erect; 2 = all plants leaning slightly or only a few plants down; 3 = all plants leaning moderately or 25 to 50% of plants down; 4 = all plants leaning considerably with 50 to 80% of plants down; and 5 = all plants down. Green stem was rated on a visual scale of 1 to 5 where: 1 = complete absence of measure to 5 = maximum value. Shattering was based on a visual estimate of the percent soybean seeds laying on the soil surface just before harvest. Iron chlorosis was rated on a scale of 1 to10 with 1 being completely tolerant and 10 being completely susceptible.

Both studies were harvested on 12 October when all varieties were mature. The plot harvest combine was equipped with an on-board electronic weight, test weight, and seed moisture recording system. Yield was calculated for the harvested area (6.33 × 20 ft) and adjusted to 13% seed moisture. Variety mean yield and IDC ratings in both studies were separated using Fisher's Protected Least Significant Difference (LSD) at the 5% probability level.

RESULTS AND DISCUSSION: Rainfall during the growing season was 3.86, 4.74, 5.79, 1.99, 4.98, and 3.47 inches for April, May, June, July, August, and September, respectively (Table 1). The monthly rainfall totals during the season ranged from 56% to 131% of normal for July and August, respectively.

Fifteen MG IV varieties were evaluated for yield and IDC (Table 2). There was no lodging or seed shattering (data not shown). Plant height at maturity ranged from 17 to 28 inches. However, green stem ratings indicate NK S45-W9 and NK S47-K5 had the highest green stem ratings (5) of all the varieties in the study.

Maturity dates ranged from 6 October to 10 October. Monthly IDC scores during the growing season ranged from 2 to 10 and were highly variable among each variety's replications. The coefficient of variability (CV) ranged from 20 to 29%. There were large differences in IDC among varieties. Delta Grow DG 4970 was the most sensitive with a rating of 9 to 10 and a yield of 0.2 bu/acre. Dyna-Gro S49XS88 was the most tolerant with a score of 6 on 13 June and 2 in late July and August.

The yields of MG IV varieties ranged from 0.2 to 23.1 bu/acre with an overall mean of 13.4 bu/acre. The highest yielding variety was Dyna-Gro S49XS88 with 23.1 bu/acre. Varieties which were not different in yield from Dyna-Gro S49XS88 were Dyna-Gro S48XT56, REV 45A46, Armor 47-R70, and NK S41-AX1. These varieties' yields ranged from 17.3 to 23.1 bu/acre.

Ten MG V varieties were evaluated for yield and IDC (Table 3). Maturity dates ranged from 6 October to 12 October. There was no seed shattering, green stem, or lodging with these varieties (data not shown). Plant height at maturity ranged from 21 to 27 inches. The MG V varieties were much less sensitive to IDC than were the MG IV varieties. The IDC scores during the growing season ranged from 2 to 7, with 8 of the 10 varieties' yields ranging from 19.6 to 26.4 and were not different. NK S52-Y7X and REV 50A47 yields of 12.4 and 10.0 bu/acre, respectively, were not different but lower than REV 56R63, Croplan R2C 5225-S, Dyna-Gro 52RY75, NK S55-Q3, Dyna-Gro S54XT17, Asgrow AG53X6, NK S52Y2 and Asgrow AG55X7. Of all varieties, REV 56R63 had the greatest yield of 26.4 bu/acre.

Due to the highly variable variety sensitivity to IDC on high-pH prairie clay soils, soybean growers selecting varieties for tolerance to IDC should be diligent in evaluating available information on variety sensitivity to IDC.

Table 1. 2017 Rainfall for Verona, MS.

	Days of Month				
Month	1-10	11-20	21-30	Total	% Normal[1]
	Rainfall (inches)				
April	2.23	0.24	1.39	3.86	74
May	0.40	1.25	3.09	4.74	98
June	2.31	1.62	1.86	5.79	127
July	0.44	1.28	0.27	1.99	56
August	1.66	2.79	0.53	4.98	131
September	2.00	1.47	0.00	3.47	85
Total	9.04	8.65	7.14	24.83	
% Total	36	35	29		

[1]Based on the historical (1974-2015) monthly average rainfall.

Table 2. Maturity group IV iron deficiency chlorosis trial on a Catalpa silty clay loam soil, 2017, Verona, MS.

			Iron Deficiency Chlorosis Score[2]				----- Maturity -----		Green
Brand	Variety	Yield (bu/ac)	June 13	July 12	July 31	Aug 29	Date	Plant ht. (inches)	Stem (1-5)
Dyna-Gro	S49XS88	23.1[1]	6	4	2	2	10/08	28	1
Dyna-Gro	S48XT56	19.7	6	6	5	5	10/10	22	3
Terral	REV 45A46	18.0	5	4	3	4	10/08	28	1
Armor	47-R70	17.4	5	5	4	4	10/08	25	2
NK	S41-AX1	17.3	3	4	3	5	10/07	25	0
Dyna-Gro	43RY95	15.7	6	6	5	5	10/07	23	0
Asgrow	AG46X6	14.1	6	7	6	7	10/09	24	2
NK	48-R2X	13.2	7	7	5	6	10/06	26	0
NK	S45-W9	13.2	6	6	6	7	10/08	18	5
NK	S47-K5	12.5	7	7	6	7	10/08	20	5
Asgrow	AG4632	11.5	8	8	6	6	10/08	27	0
Armor	47-D17	9.7	8	8	7	7	10/08	23	0
Dyna-Gro	S49XS76	8.1	8	8	7	8	10/08	21	0
NK	45-K5X	6.7	8	8	8	8	10/08	17	2
Delta Grow	DG4970	0.2	9	10	10	10	----	----	----
	LSD *P*=0.05	6.9	2	2	2	2			
	Standard Deviation	5.5	1	2	2	1			
	CV	41.0	20	22	29	24			
	Grand Mean	13.4	7	7	5	6			

[1]Shaded values are not different from the greatest value at the 5% probability level.

[2]Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible.

Table 3. Maturity group V iron deficiency chlorosis trial on a Catalpa silty clay loam soil, 2017, Verona, MS.

			Iron Deficiency Chlorosis Score[2]				----- Maturity -----	
Brand	Variety	Yield (bu/ac)	June 13	July 12	July 31	Aug 29	Date	Plant ht. (inches)
Terral	REV 56R63	26.4[1]	4	3	3	3	10/12	27
Croplan	R2C 5225-S	25.2	8	5	4	3	10/10	25
Dyna-Gro	52RY75	24.4	6	4	3	3	10/06	22
NK	S55-Q3	23.8	6	5	3	3	10/10	25
Dyna-Gro	S54XT17	23.2	5	3	3	3	10/10	23
Asgrow	AG53X6	22.8	4	4	2	3	10/09	23
Asgrow	AG55X7	21.9	5	3	3	3	10/09	21
NK	S52Y2	19.6	6	5	4	4	10/09	23
NK	S52-Y7X	12.4	7	6	4	5	10/10	24
Terral	REV 50A47	10.0	7	6	6	6	10/10	23
	LSD *P*=0.05	8.3	2	2	2	2		
	Standard Deviation	6.5	2	2	2	2		
	CV	30.8	32	35	49	47		
	Grand Mean	21.0	6	5	3	4		

[1]Shaded values are not different from the greatest value at the 5% probability level.

[2]Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible.

2016 Soybean Variety Response to Iron Deficiency Chlorosis

Brand	Variety	IDC Tolerance Rating Date & Score						Avg. IDC Tolerance Score	Yield (bu/A)
		7/6	7/13	7/22	7/27	8/6	8/17		
Dyna-Gro	S52RY75	2	2	2	2	2	2	2	46.1
Delta Grow	DG5230RR2Y	7	2	2	3	3	2	3	46.0
Univ. of Arkansas	UA 5414RR	2	1	2	2	2	1	2	43.3
Terral	REV 56R63	4	3	3	3	3	2	3	43.2
Terral	REV 52A94	4	4	3	3	3	2	3	39.3
Croplan	R2C5265	2	2	2	3	3	2	2	39.1
Croplan	R2C5225S	5	5	4	4	3	2	4	38.8
Delta Grow	DG5625RR2Y	5	5	4	4	3	2	4	38.5
Pioneer	P52T50R	3	3	3	3	2	2	3	36.4
NK	S55-Q3	4	5	4	6	4	2	4	36.3
Pioneer	P55T81R	4	4	4	5	3	3	4	35.8
Mycogen	5N523R2	5	4	4	5	4	3	4	35.8
Dyna-Gro	S57RY26	6	5	4	5	4	3	5	35.3
Delta Grow	DG5170RR2Y/STS	5	4	4	5	4	3	4	33.9
Progeny	P 5752 RY	5	4	4	5	4	3	4	33.2
Progeny	P 5226 RYS	5	6	5	5	4	3	5	32.7
NK	S56-M8	5	4	5	6	5	4	5	32.2
Terral	REV 57R21	4	4	4	5	4	3	4	29.7
USG	75B75R	6	5	5	6	5	4	5	28.5
Delta Grow	DG5555RR	5	5	6	6	5	4	5	21.7
Dyna-Gro	S56RY84	7	8	7	7	6	6	7	16.7
Credenz	CZ 5375 RY	6	6	6	7	5	5	6	16.1
Terral	REV 51A56	7	8	8	9	9	8	8	7.4
Progeny	P 5555 RY	7	8	7	7	7	6	7	6.0
Delta Grow	DG5580RR2Y	3	7	8	8	8	7	7	5.6
GoSoy	5214GTS	7	6	7	7	7	7	7	3.7
Armor	55-R68	8	8	8	8	8	7	8	0.9
NK	S58-Z4	7	8	8	8	7	7	8	0.8

Tolerance scores were assigned on a scale of 1 to 10 with 1 being completely tolerant and 10 being completely susceptible. These data are intended to serve as an additional resource for variety selection specifically for soils with a history of problems associated with iron deficiency chlorosis. Consult other sources such as results from Official Variety Trials and Demonstration Programs for detailed information regarding variety performance.

2015 MSU-ES Iron Deficiency Chlorosis (IDC) Variety Screening Demo

Purpose: The purpose of this demonstration was to evaluate soybean varieties for susceptibility/tolerance to iron deficiency chlorosis (IDC).

Procedure: During 2015, 42 commercial, maturity group V soybean varieties were planted on June 15 at a single location in Monroe County. Data collected on these varieties consisted of final plant height and IDC tolerance ratings. IDC ratings were based on a 0 - 5 scale, with 0 being completely tolerant and 5 being completely susceptible.

Results: No variety was completely tolerant to IDC. The following table contains the final plant height (inches) and the IDC tolerance score based on visual observations of each variety.

Soybean variety response to IDC

Variety	Plant Height (in)	IDC Rating (Scale 0 to 5)[1]	Variety	Plant Height (in)	IDC Rating (Scale 0 to 5)[1]
Asgrow AG5233	39	2	Great Heart Seed GH-516CR2	26	3
Asgrow AG5332	26	3	Mycogen 5N501R2	24	3
Asgrow AG5335	22	4	Mycogen 5N522R2	26	4
Asgrow AG5533	21	3	Mycogen 5N550R2	22	4
Asgrow AG5535	18	3	NK S50-J7	22	3
Armor 50-R21	25	4	NK S52-Y2	24	4
Armor 51-R50	21	3	NK S55-Q3	29	3
Croplan R2C5081	28	4	Progeny P 5213 RY	25	3
Delta Grow DG 5625R2Y	23	3	Progeny P 5226 RYS	23	3
Delta Grow DG 5170R2Y	28	4	Progeny P 5333 RY	24	3
Delta Grow DG 5230R2Y	18	3	Progeny P 5555 RY	26	2
Delta Grow DG 5575R2Y	31	3	Progeny P 5610 RY	28	4
Delta Grow DG 5625R2Y	35	3	Schillinger 5220.RC	25	3
Dyna-Gro S52RY75	25	5	Terral REV 51A56	18	3
Delta Grow DG 5575R2Y	32	2	Terral REV 52A94	25	3
Dyna-Gro S56RY84	31	2	Terral REV 54R84	23	3
Dyna-Gro 92RY55	33	3	Terral REV 55R53	27	3
Dyna-Gro S52RY75	30	5	Terral REV 55R63	22	4
Dyna-Gro S56RY84	31	5	Terral REV 55R63	20	3
Dyna-Gro 92RY55	22	4	Univ. of Ark. UA 5414RR	26	3
Dyna-Gro S56RY84	27	3	USG 75J45R	27	4

[1] – IDC tolerance ratings scored on a 0 to 5 scale with 0 being completely tolerant and 5 being completely susceptible

In 2014, Dr. Trent Irby, Mr. Charlie Stokes, and Dr. Dennis Reginelli rated soybean varieties in Monroe and Lowndes Counties for IDC tolerance. Their ratings appear in the below table.

2014 MSU-ES Soybean Variety Screening for Tolerance to Iron Chlorosis

		Monroe County				Lowndes County			
		Planting Date: 5/21				Planting Date: 7/7			
		Rating date				Rating date			
Brand	**Variety**	**7/8**	**7/14**	**7/24**	**Avg.**	**7/24**	**8/5**	**9/16**	**Avg.**
Asgrow	AG4934	1.0	4.0	3.0	**2.7**	2.5	4.5	5.0	**4.0**
Asgrow	AG5233	3.0	4.0	3.0	**3.3**	5.0	5.0	5.0	**5.0**
Asgrow	AG5332	2.0	3.0	2.0	**2.3**	5.0	4.5	5.0	**4.8**
Asgrow	AG5533	1.0	3.0	2.0	**2.0**	5.0	4.0	5.0	**4.7**
Asgrow	AG5632	3.0	4.0	4.0	**3.7**	5.0	5.0	5.0	**5.0**
Credenz	HBK RY5221	1.0	3.0	2.0	**2.0**	4.0	3.0	2.8	**3.3**
Croplan	R2C5081	1.0	3.0	2.0	**2.0**	2.5	3.5	3.0	**3.0**
Dyna-Gro	32RY55	1.0	3.0	2.0	**2.0**	2.5	2.0	2.5	**2.3**
Dyna-Gro	39RY57	2.0	3.0	2.0	**2.3**	4.5	3.5	3.0	**3.7**
NK	S52-Y2	1.0	2.0	2.0	**1.7**	2.0	2.5	3.0	**2.5**
Pioneer	53T73RS	0.0	1.0	1.0	**0.7**	2.5	3.0	2.3	**2.6**
Pioneer	54T94R	1.0	3.0	2.0	**2.0**	4.0	5.0	5.0	**4.7**
Progeny	P 5333 RY	1.0	3.0	2.0	**2.0**	1.0	1.0	2.0	**1.3**
Progeny	P 5555 RY	3.0	4.0	3.0	**3.3**	5.0	4.5	5.0	**4.8**
Terral	REV 55R53	2.0	3.0	2.0	**2.3**	3.5	3.0	5.0	**3.8**
Terral	REV 56R63	1.0	2.0	2.0	**1.7**	1.0	2.5	5.0	**2.8**

Plots were rated by Dr. Trent Irby, Mr. Charlie Stokes, and Dr. Dennis Reginelli using a scale of 0 = completely tolerant to 5 = completely susceptible. **Work supported by MSPB Project No. 57-2014.**