

# 2023 Cotton Agronomic Update

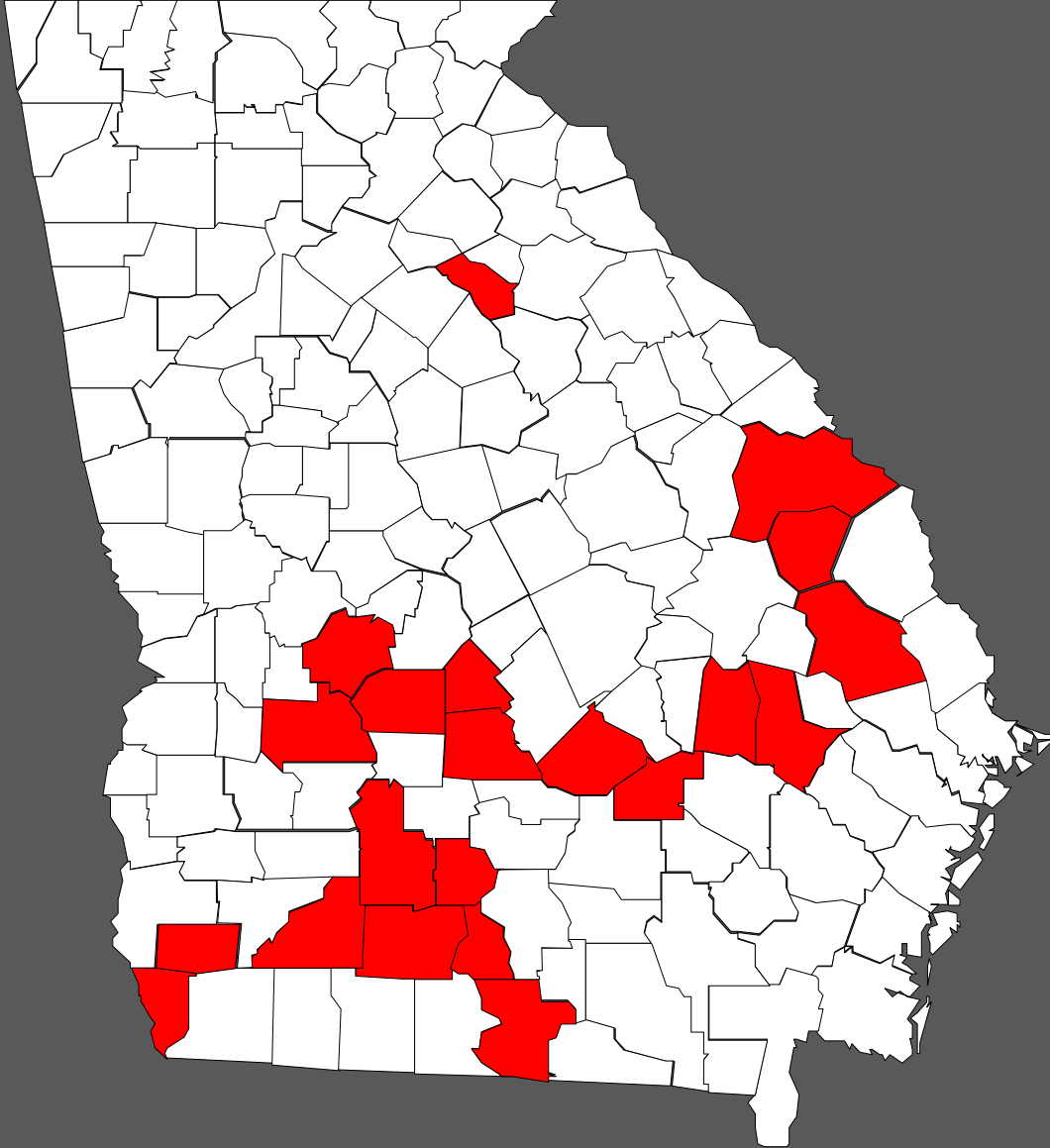
Camp Hand



UNIVERSITY OF GEORGIA  
EXTENSION



# 2022 On-Farm Variety Evaluation Program



1. Oconee
- 2 & 3. Burke (Dryland and Irrigated)
4. Bulloch
5. Telfair
6. Dooly
7. Tattnall
8. Pulaski
9. Toombs
10. Jeff Davis
11. Wilcox
12. Macon
13. Sumter
14. Worth
15. Cook
16. Tift
17. Colquitt
18. Mitchell
19. Lowndes
20. Miller
21. Seminole
22. Jenkins

# 2022 On-Farm Variety Evaluation Program

- Varieties included:
  - DP 1646 B2XF
  - DP 2038 B3XF
  - DP 2127 B3XF
  - ST 4595 B3XF
  - ST 5091 B3XF
  - PHY 400 W3FE
  - PHY 545 W3FE
  - NG 3195 B3XF
  - NG 4190 B3XF
  - DG 3799 B3XF
  - AR 9371 B3XF
  - AR 9831 B3XF
- Managed using grower practices, with assistance from the participating county agent
- Replicated in large plots in grower fields
- Seed cotton samples ginned at the UGA Microgin and fiber sent for quality info in Memphis, TN

# 2022 On-Farm Variety Trial Results

Variety	All Location Avg. Yield	LSD (P=0.1)	% Above Trial Avg.
<b>DG 3799 B3XF</b>	1314	a	86
DP 2038 B3XF	1262	b	73
ST 5091 B3XF	1260	bc	68
AR 9831 B3XF	1258	bc	64
DP 2127 B3XF	1255	bc	59
DP 1646 B2XF	1253	bc	55
NG 3195 B3XF	1234	bcd	41
ST 4595 B3XF	1215	cde	45
AR 9371 B3XF	1204	de	41
NG 4190 B3XF	1170	ef	27
PHY 400 W3FE	1151	f	9
PHY 545 W3FE	1133	f	18

# 2022 On-Farm Variety Trial Results

Variety	County (Lint yield per acre)																							All Loc. Avg.	LSD (P=0.1)	Above Trial Avg.
	Macon DRY	Wilcox DRY	Tift DRY	Oconee DRY	Telfair IRR	Toombs IRR	Lowndes DRY	Sumter IRR	Cook IRR	Miller IRR	Mitchell IRR	Jeff Davis IRR	Tattnall DRY	Worth IRR	Seminole IRR	Burke DRY	Bulloch IRR	Dooly IRR	Pulaski IRR	Burke IRR	Colquitt IRR	Jenkins IRR				
DG 3799 B3XF	625	826	1174	767	1147	1040	1151	1275	1196	1363	1201	1355	1313	1351	1620	1508	1694	1633	1460	1671	1581	1949	1314	a	86	
DP 2038 B3XF	652	886	814	1114	1072	1037	1082	1109	1090	1259	1312	1299	1311	1416	1554	1406	1435	1486	1478	1473	1572	1897	1262	b	73	
ST 5091 B3XF	631	661	890	1021	1220	1189	1192	1192	1171	1333	1318	1232	1272	1201	1400	1409	1465	1580	1610	1458	1426	1848	1260	bc	68	
AR 9831 B3XF	606	683	1090	1050	1007	1127	1182	1203	1118	1163	1197	1377	1338	1269	1467	1470	1435	1303	1463	1526	1768	1839	1258	bc	64	
DP 2127 B3XF	605	903	635	1327	1023	1221	1154	1132	1003	1297	1323	1227	1370	1340	1356	1389	1461	1597	1553	1499	1427	1778	1255	bc	59	
DP 1646 B2XF	508	833	847	1000	1220	1057	1140	1142	1375	1295	1443	1155	1123	1581	1476	1423	1462	1377	1527	1449	1456	1673	1253	bc	55	
NG 3195 B3XF	620	860	1107	1219	1061	1170	1163	1125	1228	1213	1223	1225	1282	1260	1309	1373	1308	1367	1457	1527	1428	1618	1234	bcd	41	
ST 4595 B3XF	656	838	617	1039	1056	1190	1028	1061	1130	1279	1313	1137	1297	1284	1289	1417	1375	1419	1541	1494	1461	1803	1215	cde	45	
AR 9371 B3XF	655	790	1001	1066	909	1122	1047	1155	1140	1187	1123	1198	1202	1228	1261	1370	1457	1411	1425	1487	1536	1706	1204	de	41	
NG 4190 B3XF	646	747	956	1031	1105	998	1006	1135	1063	1055	1116	1163	1278	1189	1206	1358	1373	1384	1395	1364	1518	1650	1170	ef	27	
PHY 400 W3FE	593	853	825	1021	1004	1023	1049	1063	1030	1182	1266	1220	1156	1178	1303	1340	1285	1298	1386	1338	1265	1641	1151	f	9	
PHY 545 W3FE	601	686	968	825	1065	1141	1137	1024	1118	1035	1049	1332	1219	1134	1179	1296	1191	1324	1215	1324	1457	1596	1133	f	18	
	617	797	910	1040	1074	1110	1111	1135	1139	1222	1240	1243	1263	1286	1368	1397	1412	1432	1459	1468	1491	1750				

Available at [ugacotton.com](http://ugacotton.com)  
 Trial average – 1,226 lbs/acre

# 2022 On-Farm Variety Trial Results – Below AVG Locations

Variety	County (Lint yield per acre)											All Loc. Avg.	LSD (P=0.1)	% Above Trial Avg.
	Macon DRY	Wilcox DRY	Tift DRY	Oconee DRY	Telfair IRR	Toombs IRR	Lowndes DRY	Sumter IRR	Cook IRR	Miller IRR				
NG 3195 B3XF	620	860	1107	1219	1061	1170	1163	1125	1228	1213	1077	a	70	
DG 3799 B3XF	625	826	1174	767	1147	1040	1151	1275	1196	1363	1056	ab	80	
ST 5091 B3XF	631	661	890	1021	1220	1189	1192	1192	1171	1333	1050	ab	70	
DP 1646 B2XF	508	833	847	1000	1220	1057	1140	1142	1375	1295	1042	abc	60	
DP 2127 B3XF	605	903	635	1327	1023	1221	1154	1132	1003	1297	1030	abcd	50	
AR 9831 B3XF	606	683	1090	1050	1007	1127	1182	1203	1118	1163	1023	abcd	50	
DP 2038 B3XF	652	886	814	1114	1072	1037	1082	1109	1090	1259	1012	abcd	40	
AR 9371 B3XF	655	790	1001	1066	909	1122	1047	1155	1140	1187	1007	abcd	60	
ST 4595 B3XF	656	838	617	1039	1056	1190	1028	1061	1130	1279	989	bcd	40	
NG 4190 B3XF	646	747	956	1031	1105	998	1006	1135	1063	1055	974	cd	40	
PHY 400 W3FE	593	853	825	1021	1004	1023	1049	1063	1030	1182	964	d	10	
PHY 545 W3FE	601	686	968	825	1065	1141	1137	1024	1118	1035	960	d	30	
	<b>617</b>	<b>797</b>	<b>910</b>	<b>1040</b>	<b>1074</b>	<b>1110</b>	<b>1111</b>	<b>1135</b>	<b>1139</b>	<b>1222</b>				

Available at [ugacotton.com](http://ugacotton.com)

Trial average – 1,226 lbs/acre

# 2022 On-Farm Variety Trial Results – Above AVG Locations

Variety	County (Lint yield per acre)												All Loc. Avg.	LSD (P=0.1)	% Above Trial Avg.
	Mitchell IRR	Jeff Davis IRR	Tattnall DRY	Worth IRR	Seminole IRR	Burke DRY	Bulloch IRR	Dooly IRR	Pulaski IRR	Burke IRR	Colquitt IRR	Jenkins IRR			
DG 3799 B3XF	1201	1355	1313	1351	1620	1508	1694	1633	1460	1671	1581	1949	1528	a	92
DP 2038 B3XF	1312	1299	1311	1416	1554	1406	1435	1486	1478	1473	1572	1897	1470	b	100
AR 9831 B3XF	1197	1377	1338	1269	1467	1470	1435	1303	1463	1526	1768	1839	1454	bc	75
DP 2127 B3XF	1323	1227	1370	1340	1356	1389	1461	1597	1553	1499	1427	1778	1443	bc	67
ST 5091 B3XF	1318	1232	1272	1201	1400	1409	1465	1580	1610	1458	1426	1848	1435	bc	67
DP 1646 B2XF	1443	1155	1123	1581	1476	1423	1462	1377	1527	1449	1456	1673	1429	bc	50
ST 4595 B3XF	1313	1137	1297	1284	1289	1417	1375	1419	1541	1494	1461	1803	1403	cd	50
AR 9371 B3XF	1123	1198	1202	1228	1261	1370	1457	1411	1425	1487	1536	1706	1367	de	25
NG 3195 B3XF	1223	1225	1282	1260	1309	1373	1308	1367	1457	1527	1428	1618	1365	de	17
NG 4190 B3XF	1116	1163	1278	1189	1206	1358	1373	1384	1395	1364	1518	1650	1333	ef	17
PHY 400 W3FE	1266	1220	1156	1178	1303	1340	1285	1298	1386	1338	1265	1641	1306	fg	8
PHY 545 W3FE	1049	1332	1219	1134	1179	1296	1191	1324	1215	1324	1457	1596	1276	g	8
	<b>1240</b>	<b>1243</b>	<b>1263</b>	<b>1286</b>	<b>1368</b>	<b>1397</b>	<b>1412</b>	<b>1432</b>	<b>1459</b>	<b>1468</b>	<b>1491</b>	<b>1750</b>			

Available at [ugacotton.com](http://ugacotton.com)

Trial average – 1,226 lbs/acre

# 2021 & 2022 On-Farm Variety Trial Results

Variety	Two Year Avg. Yield	LSD (P=0.1)	% Above Trial Avg.
<b>DG 3799 B3XF</b>	1320	a	85%
ST 5091 B3XF	1264	b	66%
DP 2038 B3XF	1260	b	72%
DP 1646 B2XF	1248	b	51%
AR 9831 B3XF	1239	b	55%
NG 3195 B3XF	1226	b	47%
PHY 400 W3FE	1159	c	12%
PHY 545 W3FE	1152	c	21%



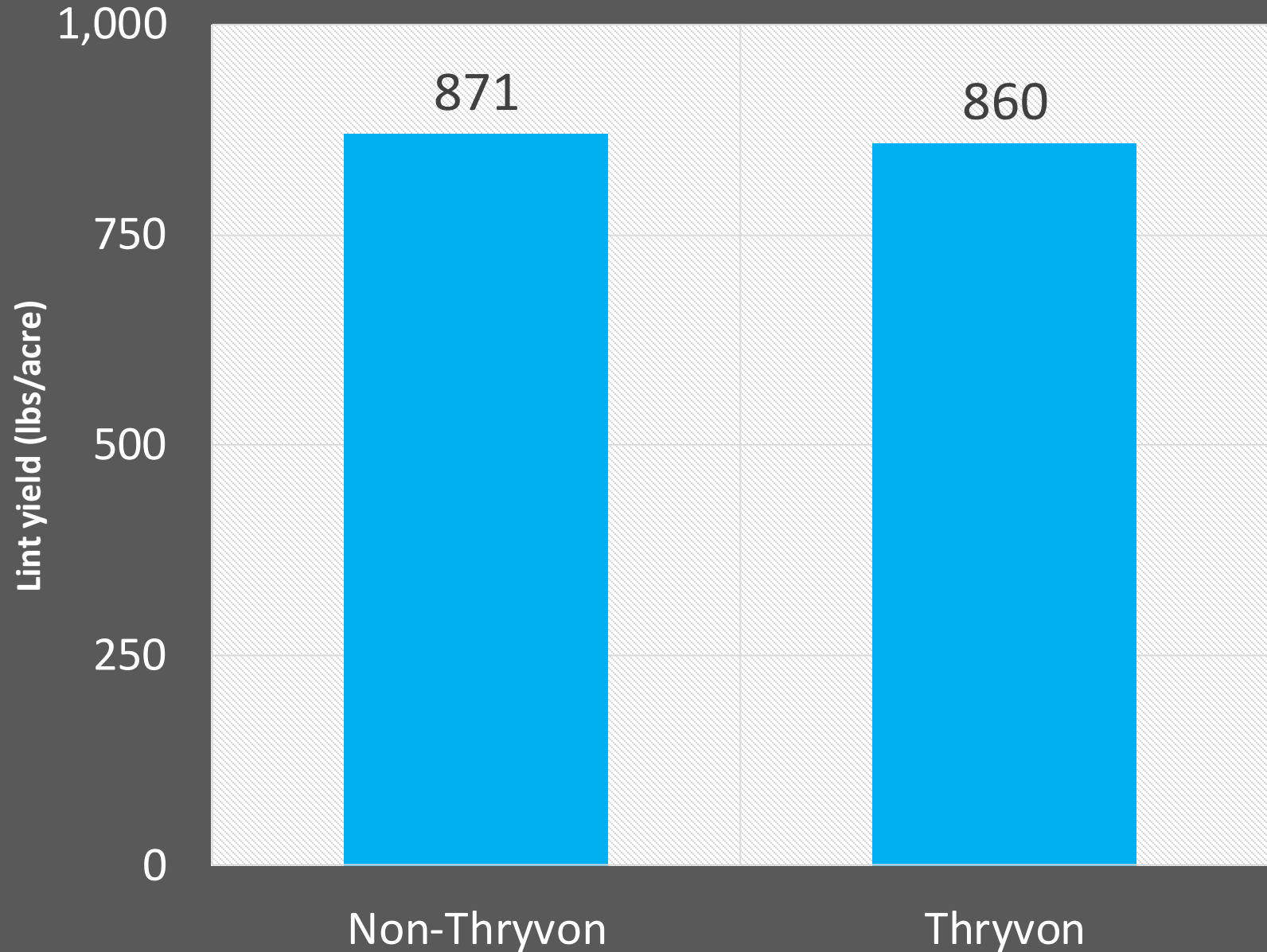
# 2022 Thryvon Variety Evaluation

- B3XF Varieties:

- DP 1646
- DP 2038
- DP 2127
- DP 2333 (NEW)

- B3TXF Varieties:

- DP 2131
- DP 2211
- DP 2317 (NEW)
- DP 2328 (NEW)



# Difference between 2022 and 2023???



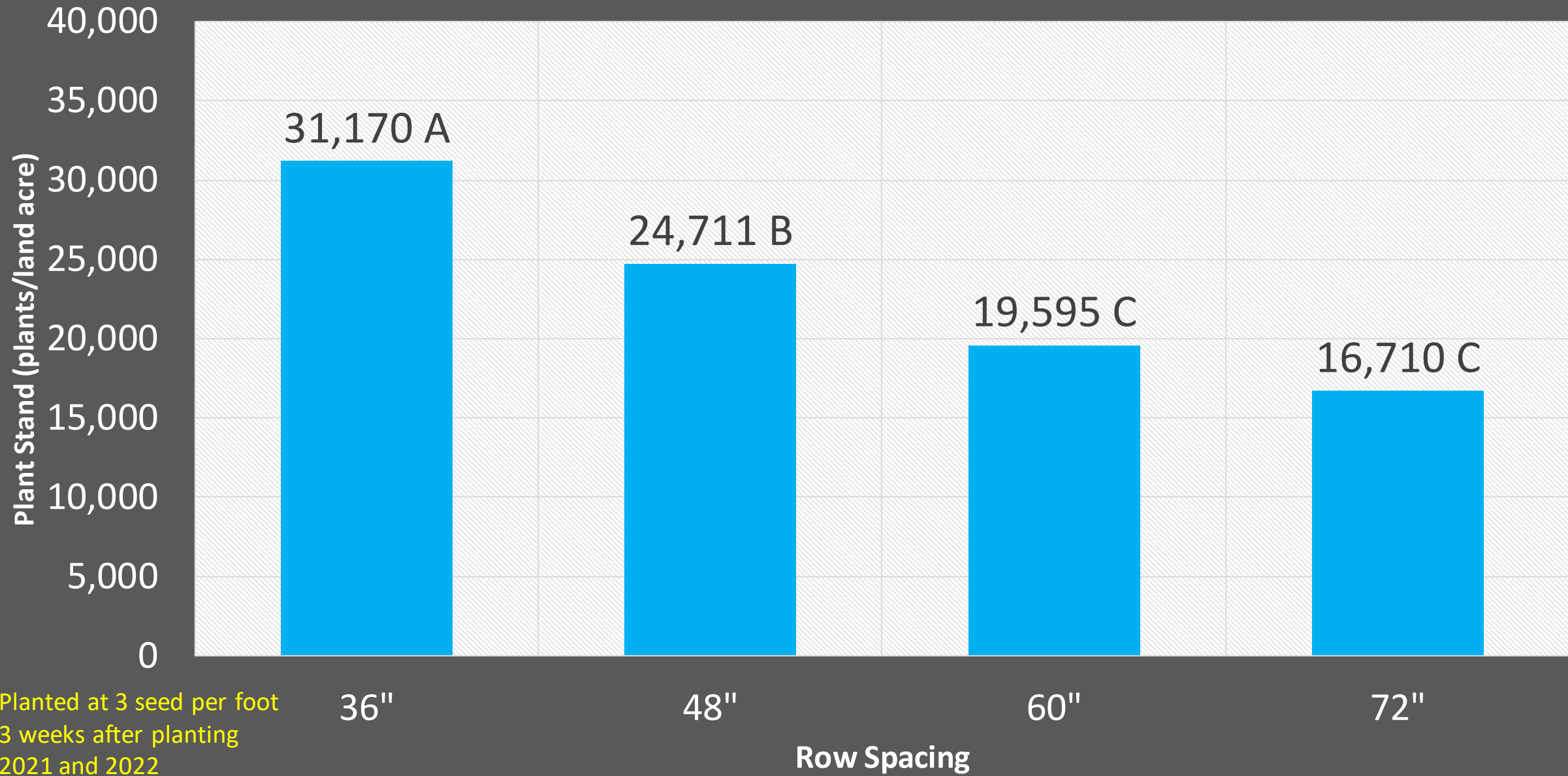
- Price peaked above \$1.50 in 2022... Hovering between \$0.80 and \$0.90 last few months
- Input prices still high... less room for error...

# Wide Row Cotton

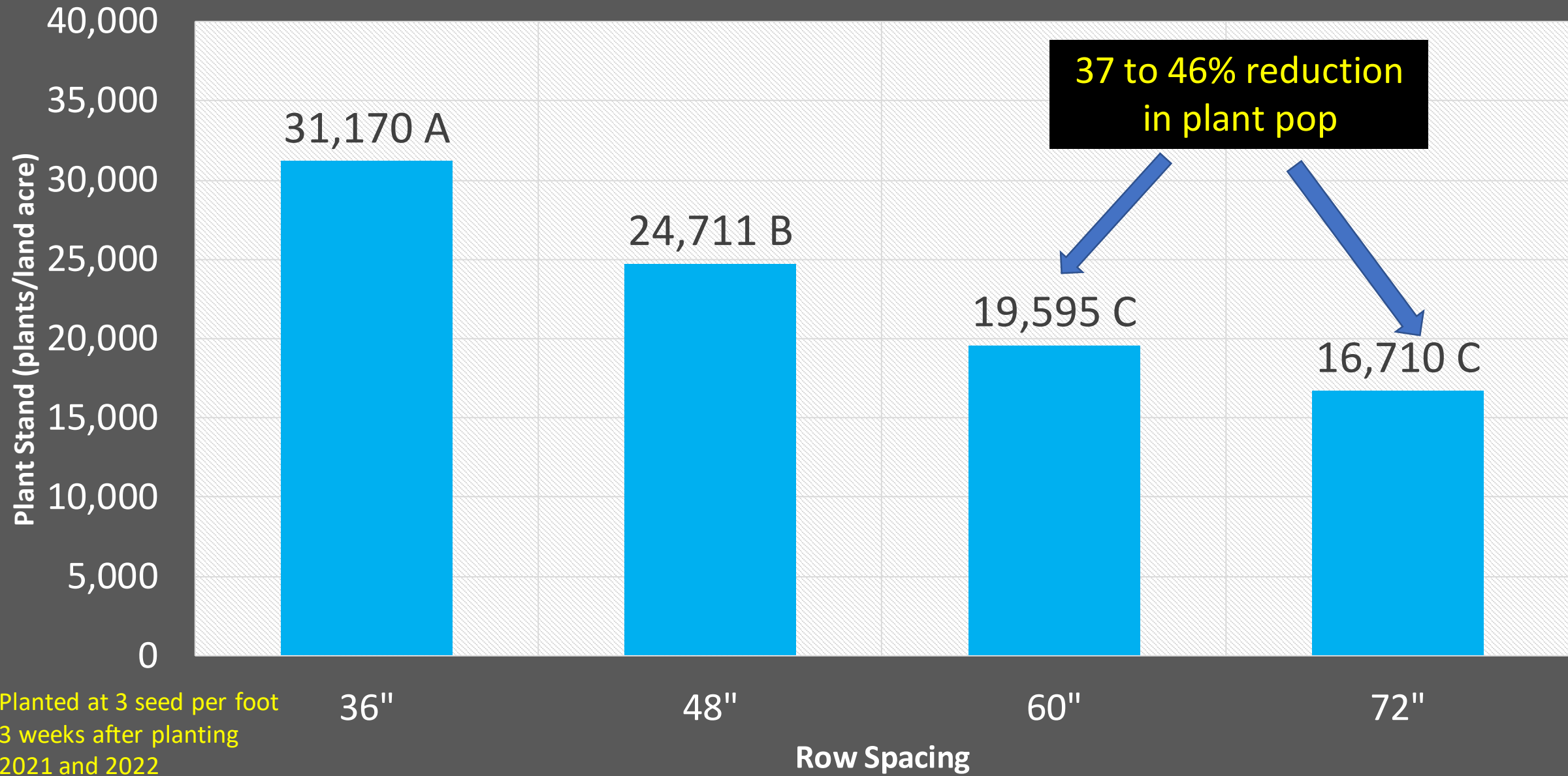
- Makes sense, right???
  - Reduce seed cost
  - Increase airflow through the canopy, helping with foliar diseases and boll rot
  - Decrease moisture competition
- Does it work in GA???
- Looked at multiple row spacings:
  - 36" rows (standard)
  - 48" rows
  - 60" rows
  - 72" rows



# Wide Row Cotton – Plants per acre



# Wide Row Cotton – Plants per acre



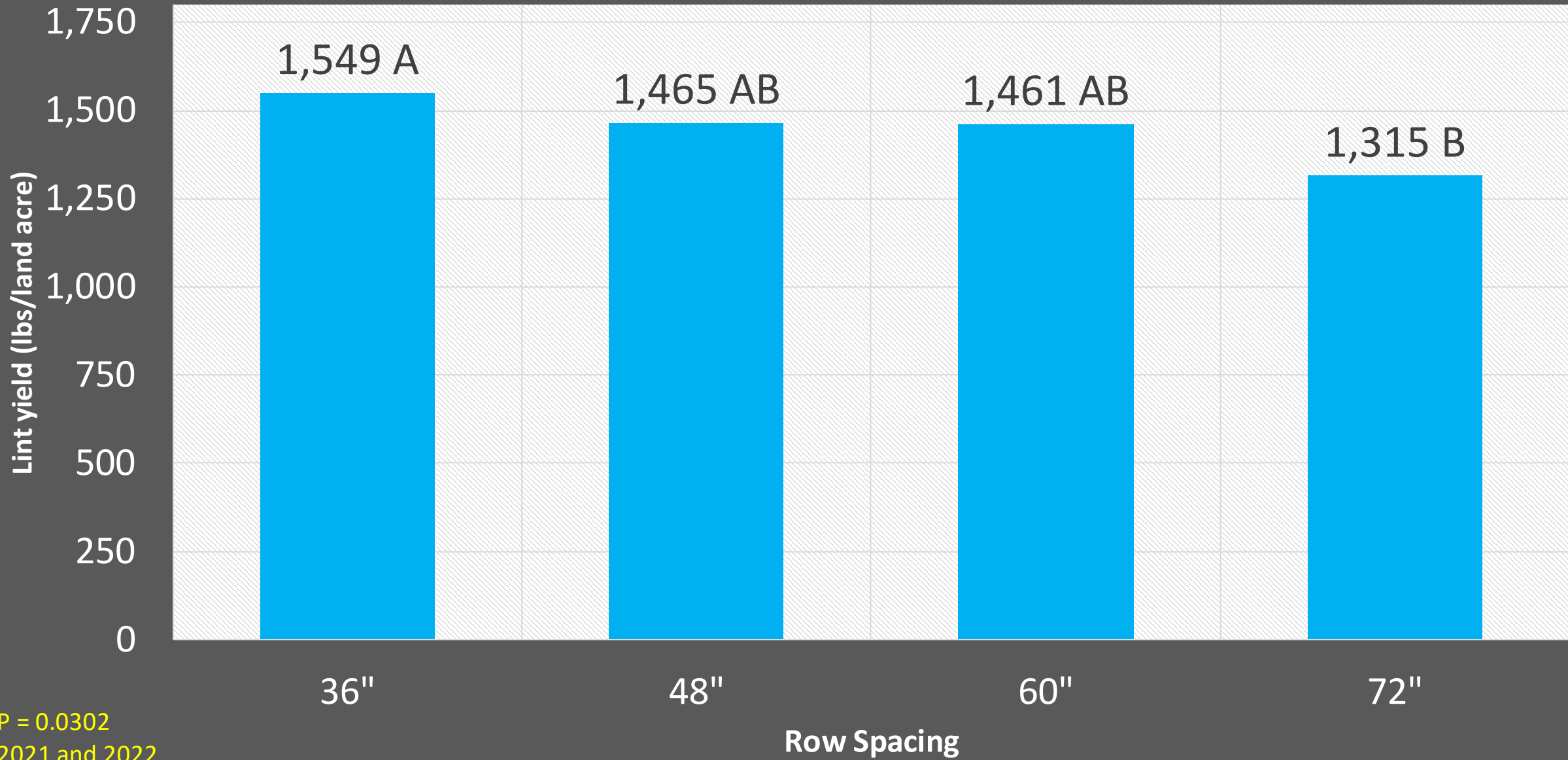
# Wide Row Cotton



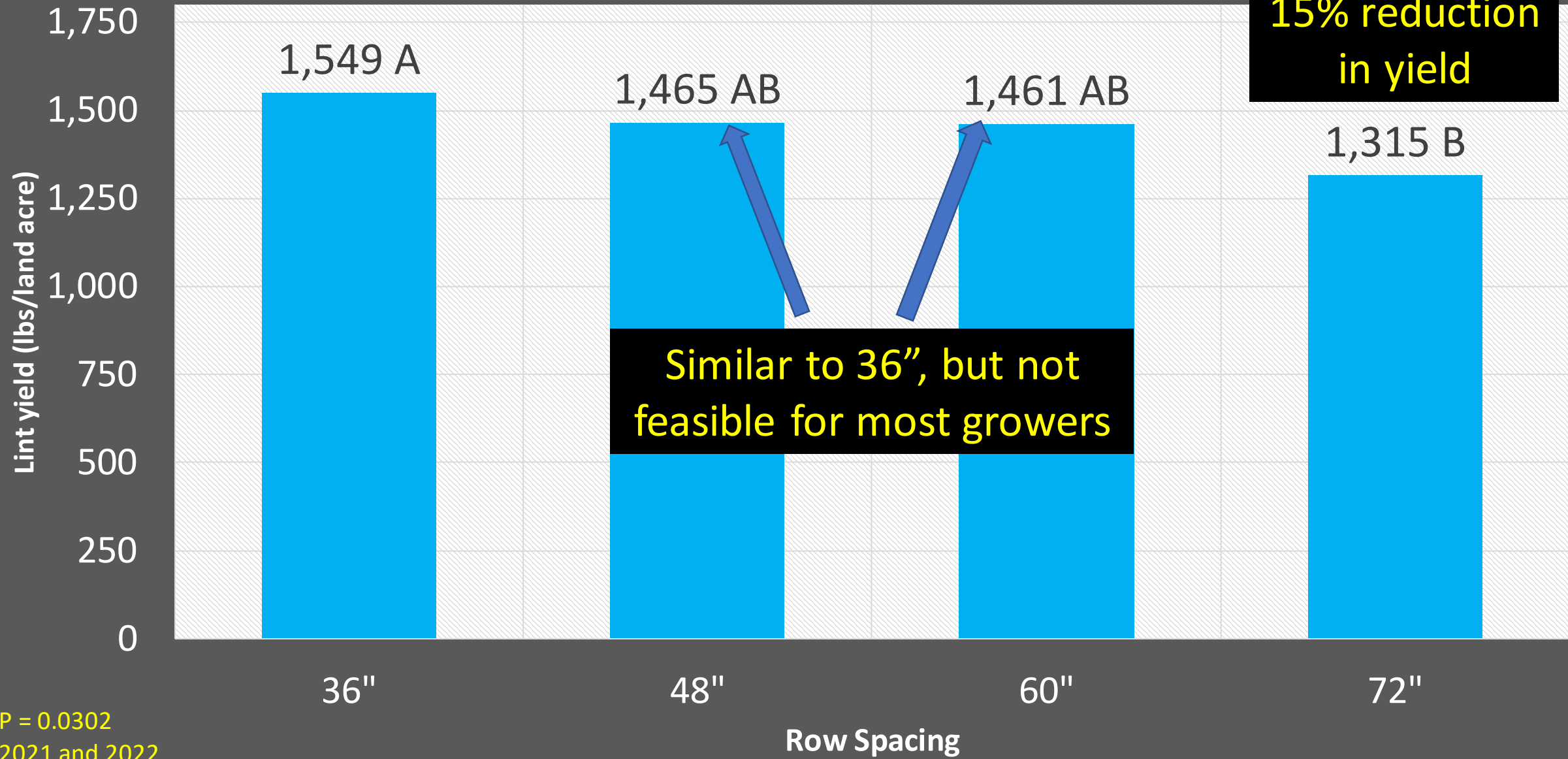
36-inch rows



# Wide Row Cotton – Yield per land acre



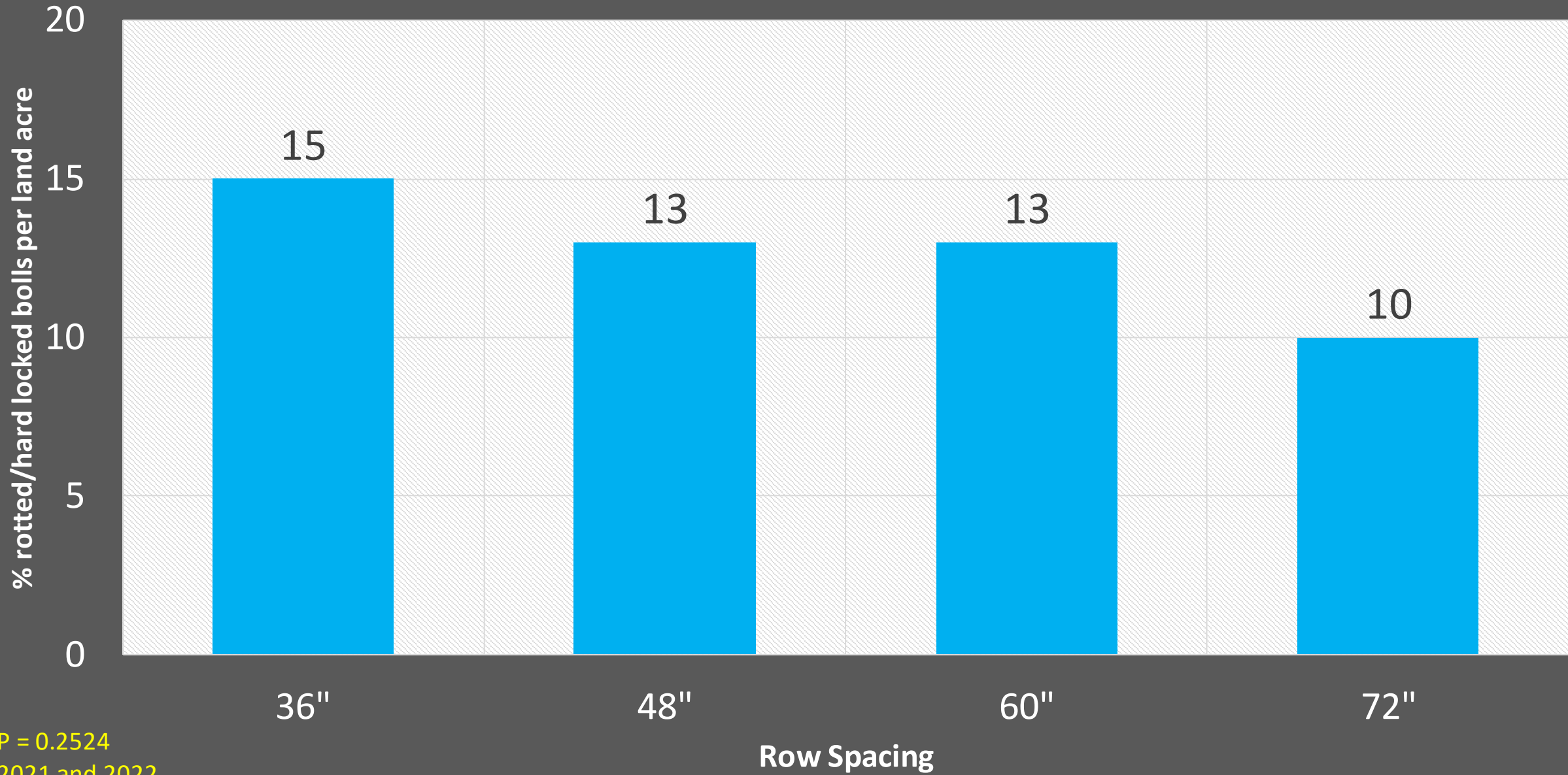
# Wide Row Cotton – Yield per land acre



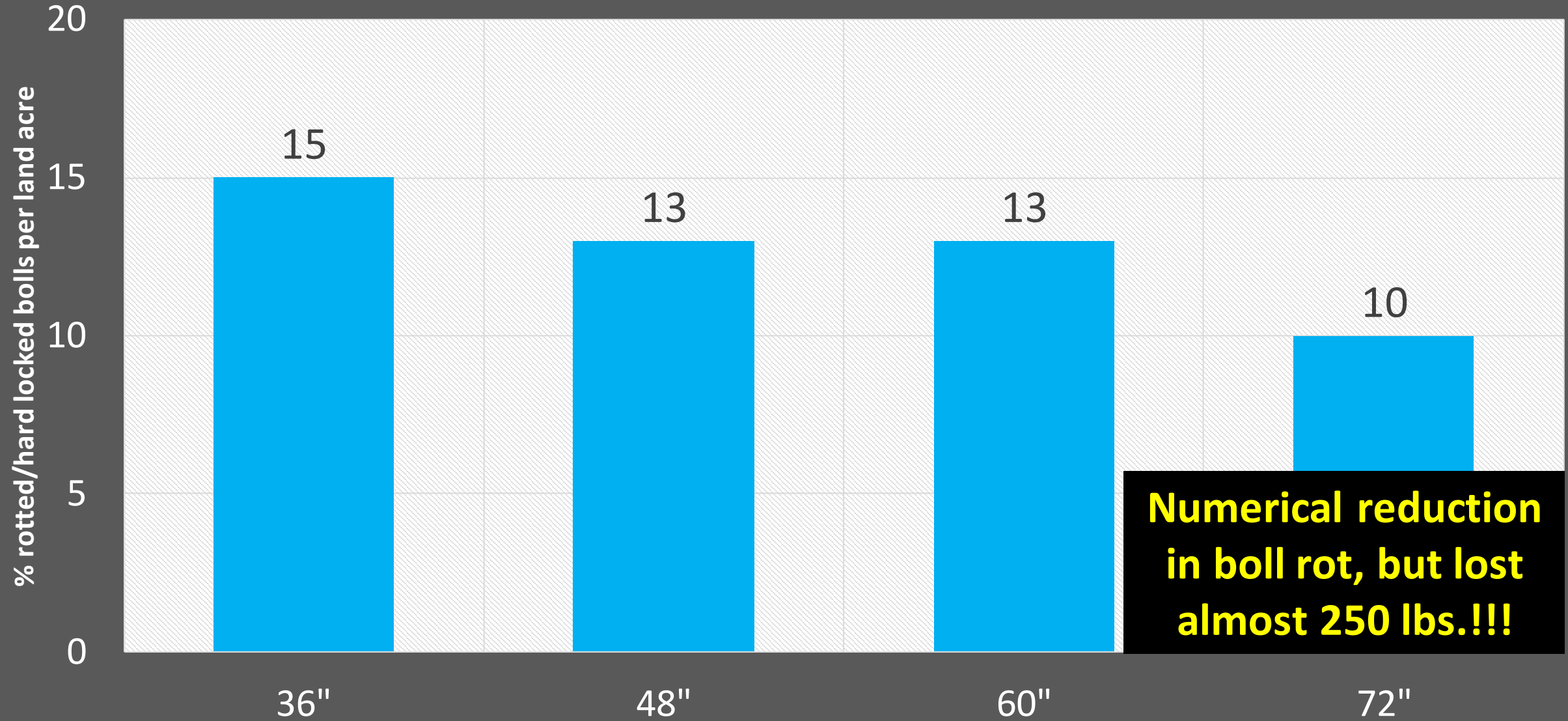




# Wide Row Cotton – Boll Rot



# Wide Row Cotton – Boll Rot



**Numerical reduction  
in boll rot, but lost  
almost 250 lbs.!!!**

P = 0.2524  
2021 and 2022

Row Spacing

## 2 Questions after seeing that:

1. Did you include 2x1 skip row???
2. What about newer varieties???

# New study initiated in 2022

Normal 91-cm row arrangement



2x1 Skip row arrangement



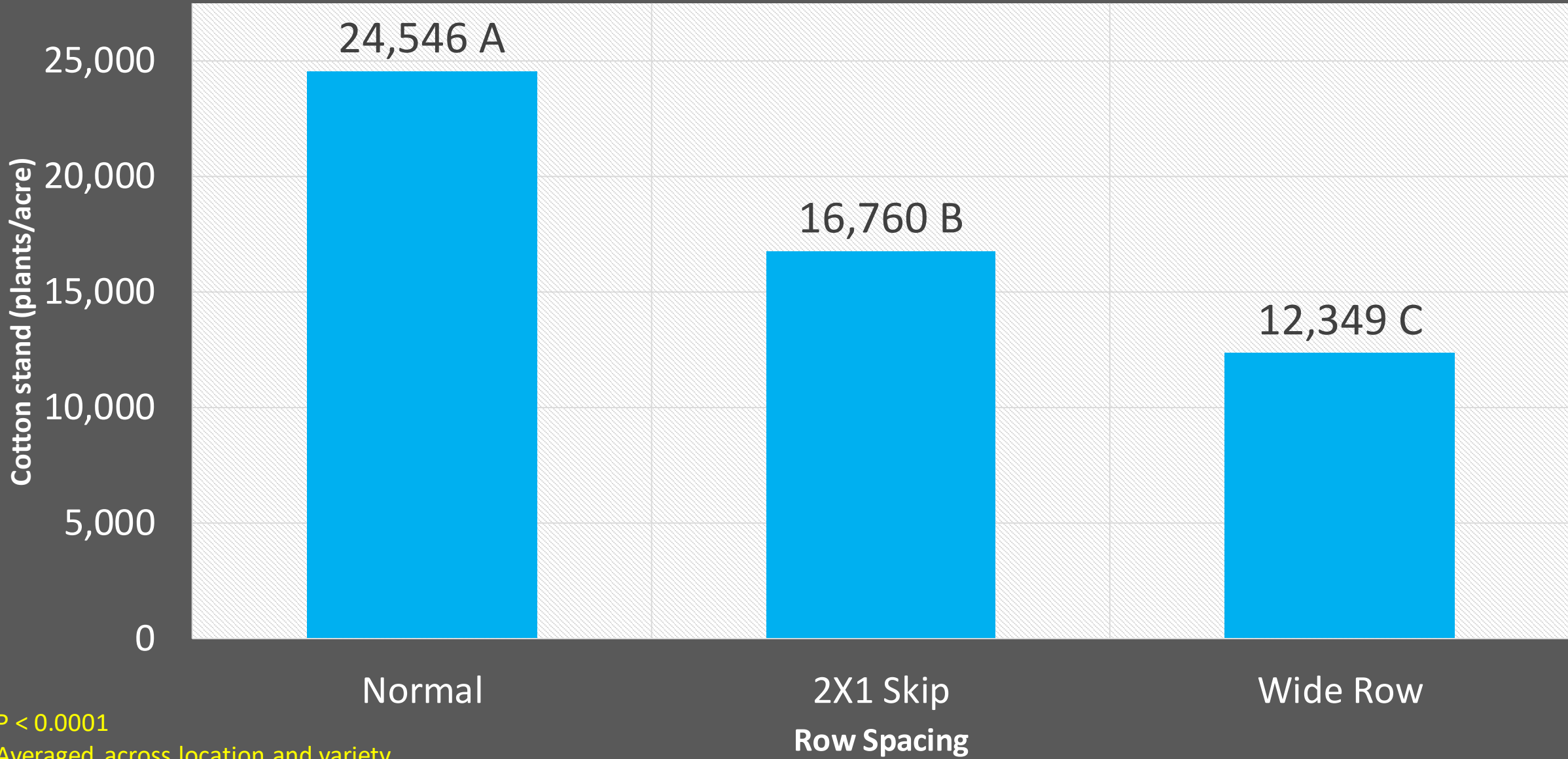
182-cm Wide Row arrangement



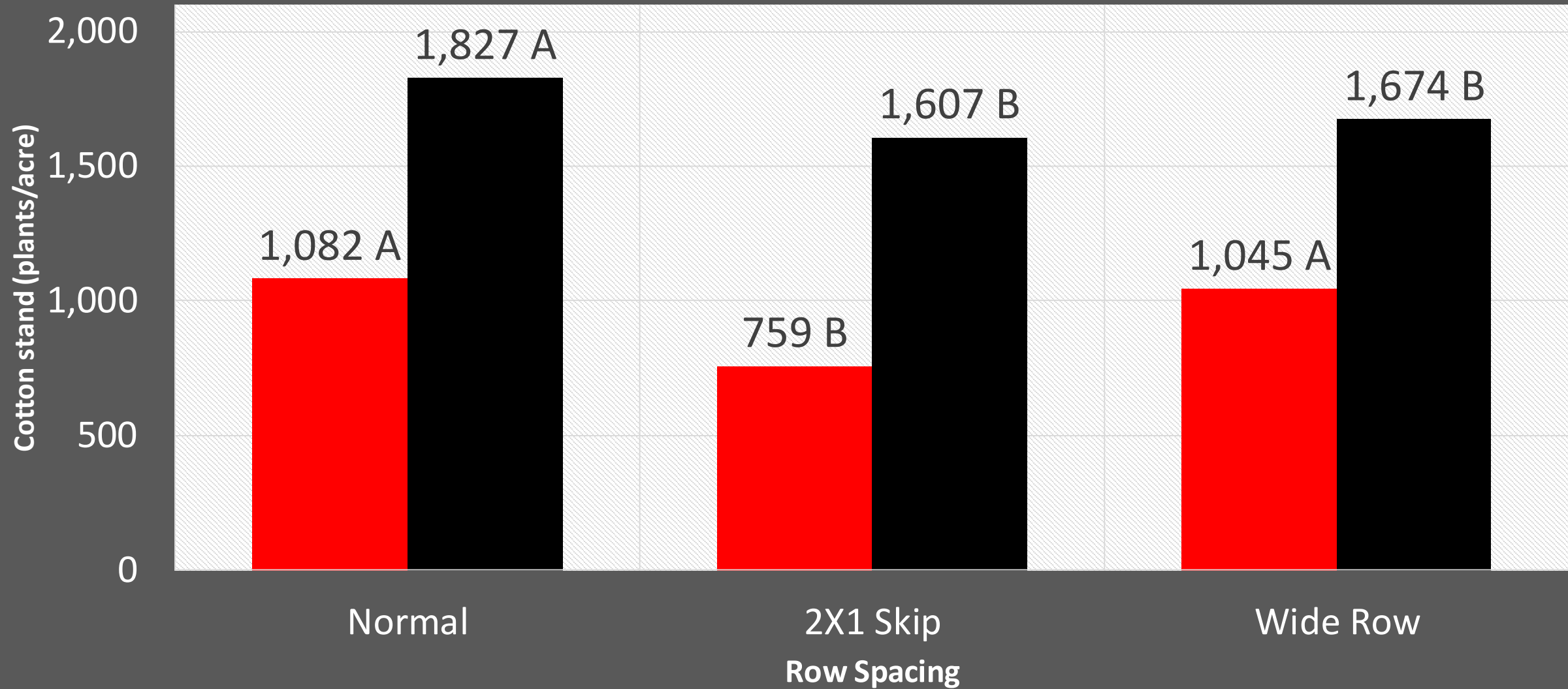
Locations:  
Tifton (dryland)  
Midville  
(irrigated)

Varieties:  
ST 5091 B3XF  
PHY 400 W3FE  
DG 3799 B3XF  
DP 1840 B3XF

# 2022 Row Arrangement Study – Stand



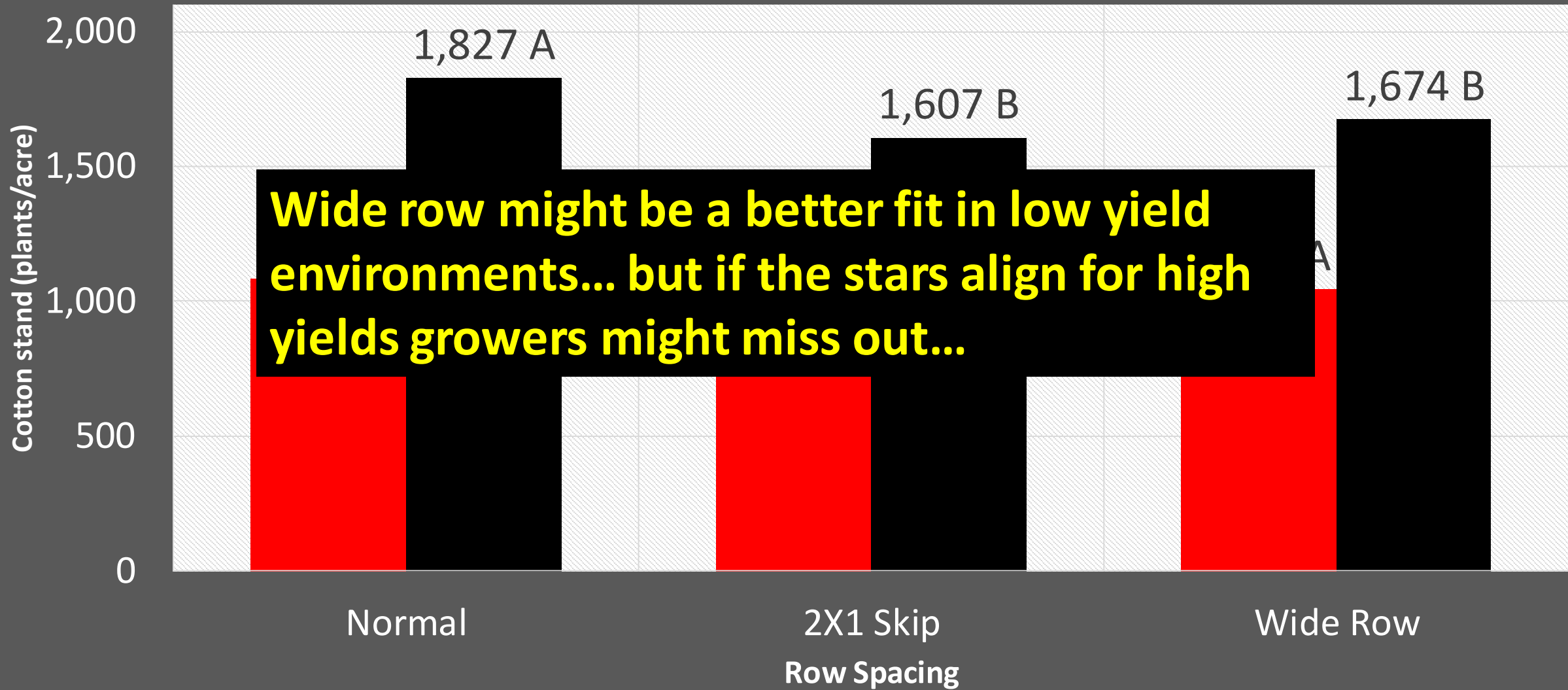
# 2022 Row Arrangement Study – Lint Yield



P < 0.0001  
Averaged across variety

■ Tifton ■ Midville

# 2022 Row Arrangement Study – Lint Yield



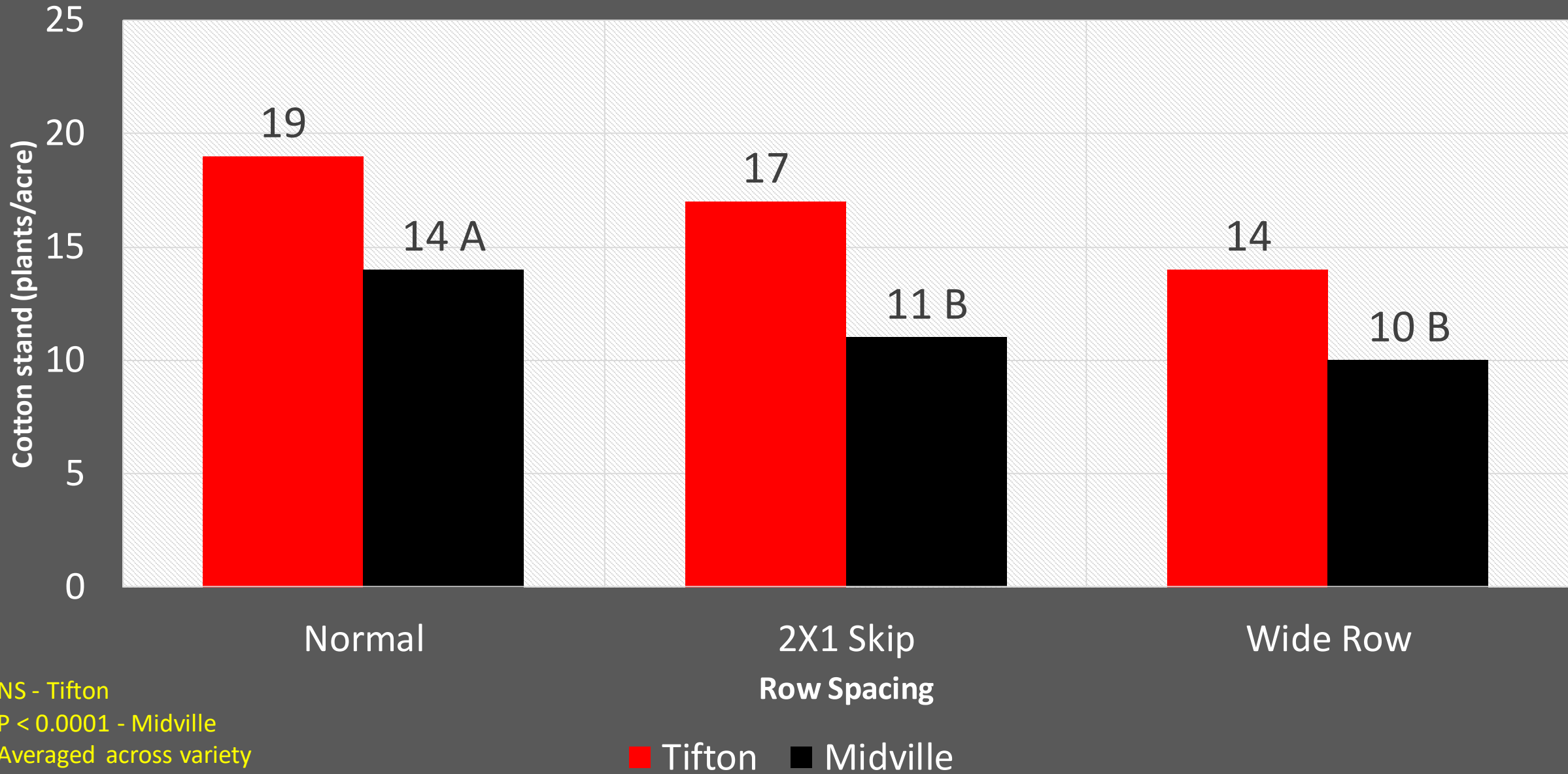
**Wide row might be a better fit in low yield environments... but if the stars align for high yields growers might miss out...**

P < 0.0001  
Averaged across variety

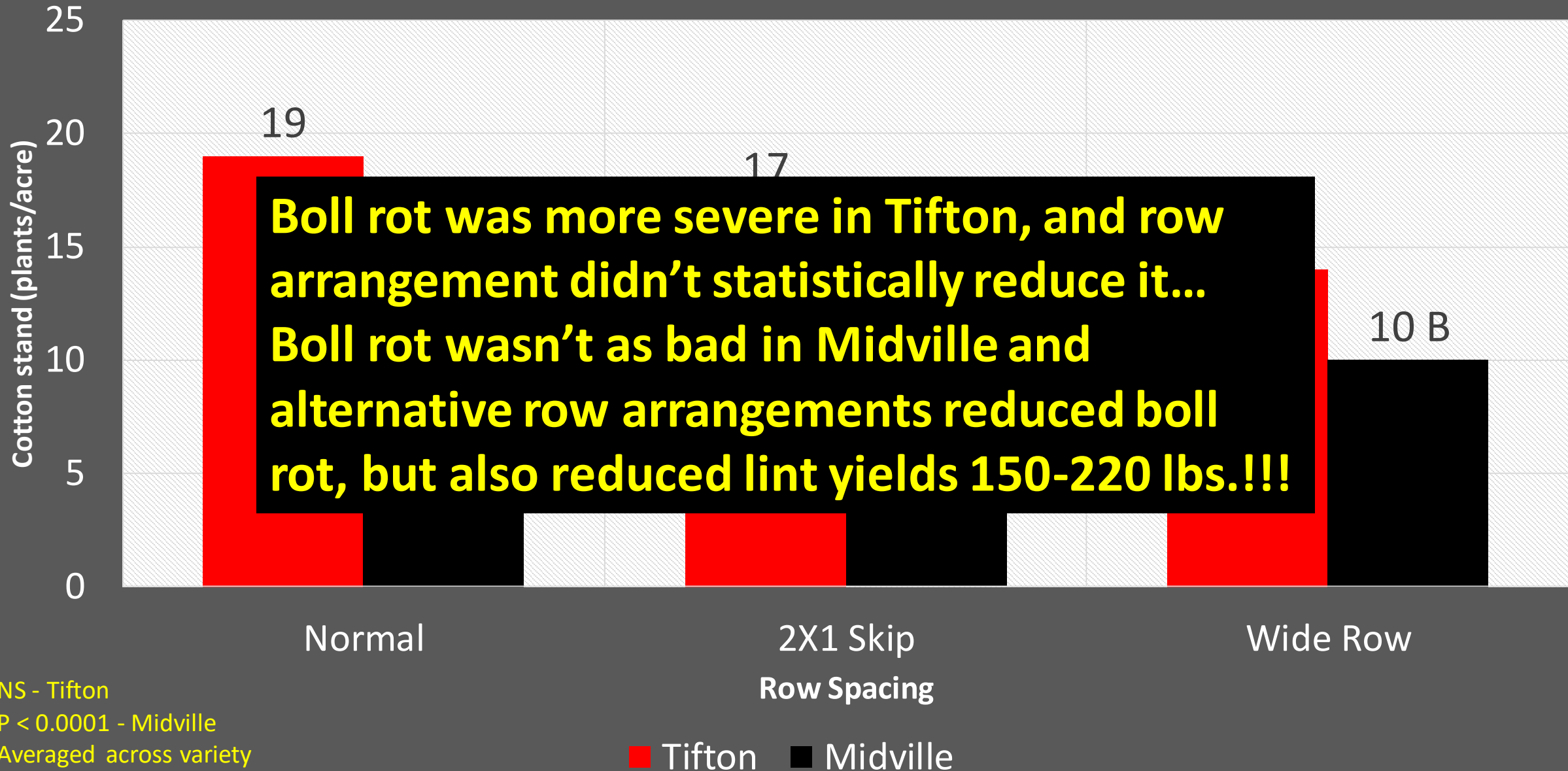
■ Tifton ■ Midville



# 2022 Row Arrangement Study – Boll Rot



# 2022 Row Arrangement Study – Boll Rot



# Thank you!!

- Georgia Cotton Commission
- Cotton Incorporated
- UGA Extension
- County Agents
- Grower Cooperators
- Industry Partners



# Questions??

