

2021 UGA

# On-Farm Cotton Variety EVALUATION PROGRAM

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The UGA On-Farm Cotton Variety Evaluation Program continues to be a successful program with 25 individual trials throughout the cotton-producing regions of Georgia. This program would not be possible without the UGA County Extension Agents, our industry partners (Americot, BASF Corporation, Bayer CropScience, Corteva Agrisciences, Nutrien, and WinField United), the Georgia Cotton Commission, Cotton Incorporated, and grower cooperators. Since the implementation of this program it has made a tremendous impact on variety selection for our growers from year to year.

## Program Description

In 2010, the UGA Cotton Agronomists implemented this variety testing program. Our industry partners were asked to provide their most well-suited varieties for Georgia. Additionally, the most-planted variety from 2020 was evaluated (DP 1646 B2XF), along with the variety that won the 2020 trial (DG 3799 B3XF). Historically, the 12 varieties evaluated in this trial have accounted for nearly 75% of the planted acreage in Georgia in the same year. These varieties were planted in replicated trials in growers' fields throughout cotton-producing regions of Georgia, through coordination with the county agents. The trials were managed and replicated by the grower with the assistance of the coordinating county agent to achieve realistic and statistically sound results.

Seed cotton samples from each variety were collected upon harvest of each trial and ginned at the UGA Microgin to provide realistic values for lint percentage and fiber quality. A major benefit of this program is the wide range of yield environments, with trial averages ranging from 537 to 1,530 lb per acre in 2021. This approach not only allows for a consistent assessment across yield environments, which account for multiple factors including planting date, harvest date, grower management, soil types, rainfall amounts/timing/patterns, degree of irrigation, etc., but also it could provide evidence that some varieties perform better in certain situations or yield environments. This could justify planting a certain variety, but it is of paramount importance to place these varieties only where they are competitive.

## Variety Selection Considerations

Choosing a cotton variety is the most important single decision a grower makes, as it then influences many other management decisions. Trait packages can directly influence nematode, insect, disease, and weed management strategies. Other variety characteristics, including leaf pubescence or growth habit, can influence these decisions as well. Varieties also differ in response to plant growth regulators. Although variety selection influences all of these decisions, the biggest decision that is influenced is the maximum genetic potential of that variety for a particular field in a given year. In the 2021 UGA On-Farm Cotton Variety Evaluation Program, it was determined that, on average, improper variety selection could cost a grower up to \$160 of potential return per acre. This was calculated based on the average price of cotton in 2021 and the difference between the top- and bottom-yielding variety in this trial in the same year. Although the variety selection decision does not directly cost the grower anything, substantial losses could occur from improper variety selection and planting.

When choosing a variety, growers must consider the most yield-limiting factor in their field. Growers may experience multiple yield-limiting factors in a single field, which could include any agronomic practice or influences of nematodes, diseases, insects, or weeds. However, one of the most yield-limiting factors in Georgia is the ability to utilize irrigation in a timely manner. Not unique to this year's trials, there are varieties that perform better in irrigated environments. Dryland cotton production is far more dependent on rainfall, and there might be varieties that perform better in those environments. Soil type also influences the availability of water, which is why it is beneficial to have these trials in both dryland and irrigated environments across different soil types. Additionally, other factors have a direct impact on yield potential in certain fields. Growers should take trait packages (nematode, disease, insect, or herbicide tolerance), seed-quality information, and seed treatments into account so that their needs are met for their specific production environments.

## Individual Trial Information

On-farm replicated variety trials were planted in growers' fields in each of the counties listed in Table 1. These counties also can be found highlighted in Figure 1. Additional information on planting, defoliation, and harvest dates, growing degree day (DD-60s) accumulation from planting to defoliation, and rainfall/irrigation from planting to defoliation can be found in Tables 2 and 3. Weather stations were incorporated into the program for the first time in 2021, giving us the ability to measure growing degree days (DD-60s) and rainfall throughout the season. DD-60s were calculated using the formula below:

$$DD60 = \frac{(^{\circ}F_{max} + ^{\circ}F_{min})}{2} - 60$$

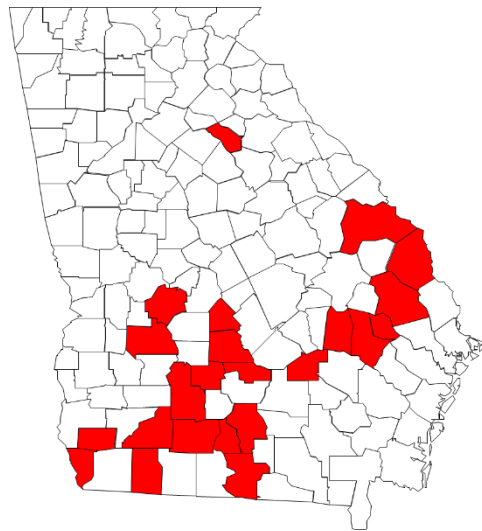
Each year, the participation of county agents, grower cooperators, and the UGA Microgin make this program possible, and their cooperation is always appreciated. When evaluating variety selection, growers should look to their local UGA county agent for their expertise in this area, as well as other production decisions throughout the growing season.

Table 1. On-farm variety trial locations for 2021. Trials are listed by number in ascending order based on trial average. These trial numbers can be correlated to those in the following tables.

Trial Number	County	Environment	Trial average (lb/acre)
1	Cook	Dryland	537
2	Colquitt	Irrigated	676
3	Lowndes	Dryland	769
4	Toombs	Dryland	801
5	Turner	Dryland	1042
6	Macon	Dryland	1074
7	Cook	Irrigated	1140
8	Jeff Davis	Irrigated	1162
9	Bulloch	Irrigated	1181
10	Sumter	Irrigated	1185
11	Ben Hill	Irrigated	1198
12	Grady	Dryland	1198
13	Mitchell	Irrigated	1214
14	Miller	Irrigated	1224
15	Worth	Dryland	1266
16	Pulaski	Irrigated	1276
17	Seminole	Irrigated	1304
18	Berrien	Dryland	1364
19	Evans	Dryland	1379
20	Tattnall	Dryland	1389
21	Wilcox	Dryland	1449
22	Oconee	Dryland	1474
23	Burke	Irrigated	1475
24	Burke	Dryland	1483
25	Screven	Irrigated	1530

## Interpretation of Results

Although the UGA On-Farm Cotton Variety Evaluation program is conducted each year, it demonstrates variety performance only in each respective year. Therefore, these results illustrate variety performance in 2021 and do not intend to predict variety performance for future years. To determine variety stability, it is best to evaluate variety performance over multiple years with as much data as possible. It is difficult to make proper variety decisions based on one year of data or a single trial. Although the On-Farm Variety Evaluation Program helps provide data on variety performance across a wide range of environments, the Statewide Variety Testing Program also can assist in variety selection. They have the ability to look at far more varieties, so this can assist with decisions on newer varieties, or on varieties that haven't been tested in the on-farm program.



**Figure 1.** Counties highlighted in red represent trial participation in the 2021 On-Farm Variety Evaluation Program.

Naturally, growers are inclined toward basing decisions on the trial locations closest to their farms, however geographically close locations can vary greatly in yield based on crop management. For example, the lowest yielding location in 2021 was in Cook County with an average yield of 537 lb per acre, and another location in Cook County yielded over twice as much (1,140 lb per acre). Environment and management both play huge roles in variety performance. Although certain varieties may perform better in certain environments, the frequency at which a specific variety is one of the higher yielding varieties can be an indicator of that variety's stability. Noting performance and stability across a wide range of environments can provide growers with great information for variety decisions.

The two methods of data analysis presented include observing above-average performing varieties, and statistical significance of lint yield when averaged across all locations. An extremely wide range of environments was represented in the 2021 On-Farm Cotton Variety Evaluation Program, which is demonstrated in Table 1. Yield environments ranged from 537 to 1,530 lb per acre and included both irrigated and dryland environments across the cotton-producing regions of Georgia. With this wide range of environments represented, growers should be able to determine which variety has the best fit in their environment.

Table 4 shows yields for all 25 environments in 2021, with yields averaged over all locations. The top-yielding variety across all environments was DG 3615 B3XF, and it also consistently performed above-average, with it yielding above the location average 84% of the time. The other variety in the top-yielding group was DG 3799 B3XF, which yielded above the location average 84% of the time across all locations. Also of note when looking across all locations is that, numerically speaking, six out of the eight top-yielding varieties all performed above the location average yield over 50% of the time.

Table 5 shows the locations that yielded below the overall trial average of 1,192 lb per acre. The top-yielding variety in below-average locations was DG 3615 B3XF, yielding above the location average 90% of the time. The other top-yielding variety in the below-average location group was DG 3799 B3XF, yielding above the location average 90% of the time. In terms of variety stability, the top seven varieties in below-average-yield environments performed above the location average greater than 50% of the time.

The locations that yielded above the overall average saw trends similar to that of the overall results (Table 6). The top-yielding variety in above-average-yield environments was DG 3799 B3XF, followed by DG 3615 B3XF and

ST 5091 B3XF. All three varieties were consistent performers in high-yielding environments, each one yielding above the location average 80% of the time. Relative to stability, this was followed by DP 1646 B2XF (60%), and DP 2038 B3XF (53%). The top five varieties yielded above the location average over 50% of the time in high-yielding environments.

Turnout and fiber quality parameters for each variety, averaged across all locations, is found in Table 7. State-wide, 2021 was an excellent year in terms of fiber quality, which largely can be attributed to phenomenal harvest conditions. The samples taken from the 2021 On-Farm Evaluation Program and ginned at the UGA Microgin mirror that. Averaged across locations, no variety was in the discount range relative to micronaire, fiber strength for every variety was strong to very strong, uniformity was high to very high, and color grades were standard for what we expect to see in Georgia. As these varieties represented the majority of cotton production in 2021, and will be planted on many acres in 2022, these parameters bode well for cotton producers in our state.

Variety selection is a complex decision, and should be made using data from replicated trials as well as multiple years and environments. Your local UGA county extension agent is an excellent resource for this, and other production decisions as well. They can provide more information and should be consulted when making this important decision.

Table 2. Planting, defoliation, and harvest dates; cumulative growing degree days (DD-60s) from planting to defoliation for each variety trial location in 2021.

	Trial Number												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Planting Date	5/15	5/17	5/27	5/22	5/25	5/17	4/23	6/2	5/19	6/17	5/28	6/4	5/27
Defoliation Date	11/26	10/7	11/10	11/2	11/12	11/1	9/24	11/18	11/5	11/10	11/1	11/10	10/28
Harvest Date	12/18	10/27	12/2	11/12	12/2	11/18	10/28	11/27	11/18	12/20	11/18	12/4	11/15
DD-60s	3410	2804	3100	3048	3148	2894	3000	2957	2732	2518	2748	2874	2986

	Trial Number												
	14	15	16	17	18	19	20	21	22	23	24	25	
Planting Date	5/10	5/18	5/24	5/27	5/15	5/19	5/18	6/4	5/18	5/7	5/6	5/17	
Defoliation Date	10/22	10/23	10/22	10/26	10/21	11/8	9/29	11/11	10/12	10/4	10/4	10/11	
Harvest Date	11/23	11/10	11/9	11/23	11/18	11/18	10/10	12/23	11/3	10/19	10/18	10/27	
DD-60s	3068	3073	2943	2969	3069	3044	2589	2881	2371	2653	2663	*	

Note. Trial number corresponds to Table 1.

\* indicates there was a weather station malfunction.

Table 3. Amount of rainfall/irrigation from planting to defoliation for each variety trial location in 2021.

	Trial Number																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Rainfall/Irrigation (inches)																	
April	-	-	-	-	-	-	3.93	-	-	-	*	-	-	-	-	-	-
May	0.23	0.54	0	0.41	0.37	0.38	0.86	-	1.41	-	*	-	0.87	2.11	0.31	0.62	0.91
June	6.32	5.93	6.82	5.19	3.57	8.27	7.82	8.14	7.92	2.9	*	6.99	8.92	6.14	7.5	4.94	6.83
July	10.4	9.74	9.52	5.87	4.87	8.25	9.41	5.07	5.65	5.4	*	8.48	8.3	6.99	9.32	6.49	6.12
August	5.79	8.28	7.4	1.51	3.94	11.14	4.9	4.6	7.32	3.64	*	6.88	9.52	7.62	5.84	5.24	13.11
September	9.89	7.8	4.83	4.25	4.2	4.47	7.06	4.2	5.62	4.1	*	4.33	2.69	7.31	5.06	3.27	2.85
October	3.47	2.32	2.26	3.29	3.35	5.05	1.47	3.35	5.54	2.98	*	3.7	4.04	7.32	4.2	2.5	0.19
November	1.25	-	2.14	0.48	0.92	-	-	2.03	0.01	0.85	*	0.32	0.02	-	0.05	0.06	-
Total	37.35	34.61	32.97	21	21.22	37.56	35.45	27.39	33.47	19.87	*	30.7	34.36	37.49	32.28	23.12	30.01

Table 3. Amount of rainfall/irrigation from planting to defoliation for each variety trial location in 2021 (continued)

	Trial Number							
	18	19	20	21	22	23	24	25
	Rainfall/Irrigation (inches)							
April	-	-	-	-	-	-	-	*
May	0.44	0.44	0.15	-	0.1	3.49	1.89	*
June	8.57	8.14	6.54	6.08	3.01	5.81	5.31	*
July	7.85	4.88	4.36	6.48	4.97	6.15	6.15	*
August	7.87	8.08	4.84	3.37	5.2	5.33	2.58	*
September	3.67	4.35	7.87	3.96	2.39	2.41	2.41	*
October	4.16	1.73	-	4.2	5.21	1.38	1.38	*
November	0.94	1.35	-	0.1	-	-	-	*
Total	33.5	28.97	23.76	24.19	20.88	24.57	19.72	*

Note. Trial number corresponds to Table 1.  
 - indicates cotton wasn't in the field during that time.  
 \* indicates there was a weather station malfunction.

Table 4. Lint yields of 12 varieties evaluated in 2021 analyzed across location.

Trial Number	1	2	3	4	5	6	7	8	9	10	11	12	13
Variety	Lint Yield (lb/acre)												
DG 3615 B3XF	527	689	868	901	1094	1206	1341	1304	1262	1499	1348	1384	1244
DG 3799 B3XF	661	745	817	942	1135	1251	1173	1257	1236	1022	1363	1273	1350
ST 5091 B3XF	449	586	828	808	1173	1116	1130	1196	1219	1169	1142	1257	1260
DP 2038 B3XF	460	743	741	891	1138	1146	1197	1160	1276	1260	1189	1144	1207
DP 1646 B2XF	451	734	735	813	1062	1009	1225	1199	1156	1146	1269	1283	1289
DP 2055 B3XF	528	813	702	833	1074	988	1098	1158	1173	1092	1192	1216	1184
AR 9831 B3XF	615	766	774	714	796	1132	1144	1069	1133	1135	1310	1108	1242
NG 3195 B3XF	590	562	718	747	1069	1171	1215	1102	1197	1215	1191	1251	1113
ST 4990 B3XF	479	700	676	682	945	1089	1131	1170	1128	1309	1061	1171	1114
PHY 545 W3FE	580	675	1039	764	1168	1090	981	1108	1233	1006	985	974	1168
PHY 400 W3FE	615	575	797	747	1002	882	1012	1110	1068	1187	1106	1217	1183
NG 4936 B3XF	487	526	533	768	846	807	1037	1113	1091	1182	1221	1102	1208
<b>Trial Average</b>	<b>537</b>	<b>676</b>	<b>769</b>	<b>801</b>	<b>1042</b>	<b>1074</b>	<b>1140</b>	<b>1162</b>	<b>1181</b>	<b>1185</b>	<b>1198</b>	<b>1198</b>	<b>1214</b>

Trial Number	14	15	16	17	18	19	20	21	22	23	24	25
Variety	Lint Yield (lb/acre)											
DG 3615 B3XF	1482	1513	1316	1520	1591	1511	1272	1555	1476	1406	1513	1521
DG 3799 B3XF	1384	1420	1278	1582	1529	1405	1861	1786	1265	1430	1353	1540
ST 5091 B3XF	1146	1387	1296	1337	1357	1409	1405	1532	1635	1534	1490	1732
DP 2038 B3XF	1188	1175	1383	1258	1340	1464	1395	1477	1486	1568	1587	1539
DP 1646 B2XF	1024	1218	1397	1298	1380	1461	1571	1215	1379	1445	1591	1670
DP 2055 B3XF	1178	1245	1386	1222	1486	1249	1214	1371	1591	1680	1560	1523
AR 9831 B3XF	1318	1258	1266	1487	1362	1357	1314	1339	1392	1500	1481	1482
NG 3195 B3XF	1077	1145	1298	1196	1358	1423	1265	1504	1505	1505	1538	1485
ST 4990 B3XF	1273	1363	1273	1263	1177	1373	1343	1460	1571	1454	1463	1390
PHY 545 W3FE	1192	1059	1075	1124	1267	1242	1294	1422	1444	1367	1346	1581
PHY 400 W3FE	1108	1211	1175	1153	1284	1305	1313	1297	1457	1358	1447	1493
NG 4936 B3XF	1317	1202	1175	1211	1239	1353	1416	1425	1488	1457	1431	1399
<i>Trial Average</i>	1224	1266	1277	1304	1364	1379	1389	1449	1474	1475	1483	1530

Variety	Average Yield Over All Trials	LSD (p=0.1)	Above Trial Average % of Trials
DG 3615 B3XF	1294	a	84
DG 3799 B3XF	1282	a	84
ST 5091 B3XF	1224	b	72
DP 2038 B3XF	1216	bc	60
DP 1646 B2XF	1201	bcd	56
DP 2055 B3XF	1190	bcd	36
AR 9831 B3XF	1180	bcd	44
NG 3195 B3XF	1178	cd	52
ST 4990 B3XF	1162	de	32
PHY 545 W3FE	1127	e	24
PHY 400 W3FE	1124	e	16
NG 4936 B3XF	1121	e	16

*Note.* Trials are listed from left to right in order of increasing lint yield by location, with trial numbers corresponding to those in Table 1.

**Bolded text** indicates varieties that yielded above the trial average for each location.

Overall average yields, statistical significance, and percent of the time a given variety performed above the trial average is listed in the far-right columns. Yields followed by the same LSD letter are statistically similar.



Table 5. Lint yields of 12 varieties evaluated in 2021 analyzed across below-average-yielding locations (< 1,192 lb/acre).

Trial Number	1	2	3	4	5	6	7	8	9	10	Average Yield Over All Trials	LSD (p=0.1)	Above Trial Average
Variety	Lint Yield (lb/acre)										% of Trials		
DG 3615 B3XF	527	<b>689</b>	<b>868</b>	<b>901</b>	<b>1094</b>	<b>1206</b>	<b>1341</b>	<b>1304</b>	<b>1262</b>	<b>1499</b>	1069	a	90
DG 3799 B3XF	<b>661</b>	<b>745</b>	<b>817</b>	<b>942</b>	<b>1135</b>	<b>1251</b>	<b>1173</b>	<b>1257</b>	<b>1236</b>	1022	1024	ab	90
DP 2038 B3XF	460	<b>743</b>	741	<b>891</b>	<b>1138</b>	<b>1146</b>	<b>1197</b>	1160	<b>1276</b>	<b>1260</b>	1001	bc	70
ST 5091 B3XF	449	586	<b>828</b>	<b>808</b>	<b>1173</b>	<b>1116</b>	1130	<b>1196</b>	<b>1219</b>	1169	967	bcd	60
PHY 545 W3FE	<b>580</b>	675	<b>1039</b>	764	<b>1168</b>	<b>1090</b>	981	1108	<b>1233</b>	1006	964	bcde	50
NG 3195 B3XF	<b>590</b>	562	718	747	<b>1069</b>	<b>1171</b>	<b>1215</b>	1102	<b>1197</b>	<b>1215</b>	959	cde	60
DP 1646 B2XF	451	<b>734</b>	735	<b>813</b>	<b>1062</b>	1009	<b>1225</b>	<b>1199</b>	1156	1146	953	cde	50
DP 2055 B3XF	528	<b>813</b>	702	<b>833</b>	<b>1074</b>	988	1098	1158	1173	1092	946	cde	30
ST 4990 B3XF	479	<b>700</b>	676	682	945	<b>1089</b>	1131	<b>1170</b>	1128	<b>1309</b>	931	de	40
AR 9831 B3XF	<b>615</b>	<b>766</b>	<b>774</b>	714	796	<b>1132</b>	<b>1144</b>	1069	1133	1135	928	de	50
PHY 400 W3FE	<b>615</b>	575	<b>797</b>	747	1002	882	1012	1110	1068	<b>1187</b>	899	ef	30
NG 4936 B3XF	487	526	533	768	846	807	1037	1113	1091	1182	839	f	0
<b>Trial Average</b>	<b>537</b>	<b>676</b>	<b>769</b>	<b>801</b>	<b>1042</b>	<b>1074</b>	<b>1140</b>	<b>1162</b>	<b>1181</b>	<b>1185</b>			

Note. Trials are listed from left to right in order of increasing lint yield by location, with trial numbers corresponding to those in Table 1.

**Bolded text** indicates varieties that yielded above the trial average for each location.

Overall average yields, statistical significance, and percent of the time a given variety performed above the trial average is listed in the far-right columns.

Yields followed by the same LSD letter are statistically similar.

Table 6. Lint yields of 12 varieties evaluated in 2021 analyzed across above-average-yielding locations (> 1,092 lb/acre).

Trial Number	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Variety	Lint Yield (lb/acre)														
DG 3799 B3XF	<b>1363</b>	<b>1273</b>	<b>1350</b>	<b>1384</b>	<b>1420</b>	<b>1278</b>	<b>1582</b>	<b>1529</b>	<b>1405</b>	<b>1861</b>	<b>1786</b>	1265	1430	1353	<b>1540</b>
DG 3615 B3XF	<b>1348</b>	<b>1384</b>	<b>1244</b>	<b>1482</b>	<b>1513</b>	<b>1316</b>	<b>1520</b>	<b>1591</b>	<b>1511</b>	1272	<b>1555</b>	<b>1476</b>	1406	<b>1513</b>	1521
ST 5091 B3XF	1142	<b>1257</b>	<b>1260</b>	1146	<b>1387</b>	<b>1296</b>	<b>1337</b>	1357	<b>1409</b>	<b>1405</b>	<b>1532</b>	<b>1635</b>	<b>1534</b>	<b>1490</b>	<b>1732</b>
DP 1646 B2XF	<b>1269</b>	<b>1283</b>	<b>1289</b>	1024	1218	<b>1397</b>	1298	<b>1380</b>	<b>1461</b>	<b>1571</b>	1215	1379	1445	<b>1591</b>	<b>1670</b>
DP 2038 B3XF	1189	1144	1207	1188	1175	<b>1383</b>	1258	1340	<b>1464</b>	<b>1395</b>	<b>1477</b>	<b>1486</b>	<b>1568</b>	<b>1587</b>	<b>1539</b>
DP 2055 B3XF	1192	<b>1216</b>	1184	1178	1245	<b>1386</b>	1222	<b>1486</b>	1249	1214	1371	<b>1591</b>	<b>1680</b>	<b>1560</b>	1523
AR 9831 B3XF	<b>1310</b>	1108	<b>1242</b>	<b>1318</b>	1258	1266	<b>1487</b>	1362	1357	1314	1339	1392	<b>1500</b>	1481	1482
NG 3195 B3XF	1191	<b>1251</b>	1113	1077	1145	<b>1298</b>	1196	1358	<b>1423</b>	1265	<b>1504</b>	<b>1505</b>	<b>1505</b>	<b>1538</b>	1485
ST 4990 B3XF	1061	1171	1114	<b>1273</b>	<b>1363</b>	1273	1263	1177	1373	1343	<b>1460</b>	<b>1571</b>	1454	1463	1390
NG 4936 B3XF	<b>1221</b>	1102	1208	<b>1317</b>	1202	1175	1211	1239	1353	<b>1416</b>	1425	<b>1488</b>	1457	1431	1399
PHY 400 W3FE	1106	<b>1217</b>	1183	1108	1211	1175	1153	1284	1305	1313	1297	1457	1358	1447	1493
PHY 545 W3FE	985	974	1168	1192	1059	1075	1124	1267	1242	1294	1422	1444	1367	1346	<b>1581</b>
<b>Trial Average</b>	<b>1198</b>	<b>1198</b>	<b>1214</b>	<b>1224</b>	<b>1266</b>	<b>1276</b>	<b>1304</b>	<b>1364</b>	<b>1379</b>	<b>1389</b>	<b>1449</b>	<b>1474</b>	<b>1475</b>	<b>1483</b>	<b>1530</b>

	Average Yield Over All Trials	LSD (p=0.1)	Above Trial Average
Variety	% of Trials		
DG 3799 B3XF	1454	a	80
DG 3615 B3XF	1444	a	80
ST 5091 B3XF	1395	ab	80
DP 1646 B2XF	1366	bc	60
DP 2038 B3XF	1360	bc	53
DP 2055 B3XF	1353	bc	40
AR 9831 B3XF	1348	bc	33
NG 3195 B3XF	1324	cd	47
ST 4990 B3XF	1317	cd	27
NG 4936 B3XF	1310	cd	27
PHY 400 W3FE	1274	de	7
PHY 545 W3FE	1236	e	7

Note. Trials are listed from left to right in order of increasing lint yield by location, with trial numbers corresponding to those in Table 1.

**Bolded text** indicates varieties that yielded above the trial average for each location.

Overall average yields, statistical significance, and percent of the time a given variety performed above the trial average is listed in the far-right columns. Yields followed by the same LSD letter are statistically similar.

Table 7. Turnout and fiber quality data averaged across all 2021 On-Farm Variety Evaluation locations.

Variety	Turnout	Color	Staple	Mic	Strength	Leaf	Rd	+B	Trash	Length	Uniformity	Loan Value (¢/lb)
DP 1646 B2XF	39.77%	41-1	40	4.0	30.1	3.6	78.3	7.2	0.5	1.24	82.81	54.46
DP 2038 B3XF	42.49%	31-1	36	4.4	30.1	2.7	78.7	7.5	0.3	1.13	81.70	55.01
DP 2055 B3XF	39.84%	31-2	39	4.2	30.9	2.9	79.4	7.4	0.4	1.23	82.62	56.09
ST 4990 B3XF	38.36%	31-2	38	4.2	30.8	2.9	79.4	6.9	0.3	1.20	83.42	55.84
ST 5091 B3XF	39.41%	31-2	38	4.0	30.2	3.2	79.0	7.3	0.5	1.17	82.40	55.25
PHY 400 W3FE	39.69%	31-2	38	4.0	32.1	3.2	78.2	7.5	0.4	1.18	82.38	55.61
PHY 545 W3FE	39.80%	31-2	37	4.1	30.8	3.5	77.1	7.9	0.6	1.14	82.99	54.58
NG 3195 B3XF	39.85%	31-2	37	4.3	31.0	3.1	78.8	7.2	0.4	1.16	83.41	55.45
NG 4936 B3XF	38.29%	31-1	38	4.2	30.9	2.8	79.7	7.1	0.4	1.20	83.54	55.99
DG 3615 B3XF	40.56%	31-1	38	4.2	31.9	3.3	77.8	8.0	0.5	1.18	82.54	54.91
DG 3799 B3XF	40.52%	31-2	37	4.2	31.6	3.3	77.7	7.7	0.5	1.17	82.19	54.53
AR 9831 B3XF	39.87%	31-2	37	4.4	31.4	3.0	78.4	7.5	0.4	1.16	82.31	55.20

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