

Cotton Newsletter: Volume 10, Number 1

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NEWSLETTER

HIGHLIGHTS

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Contact Information:
jidowu@nmsu.edu
 575-646-2571

2019 Cotton Season in New Mexico

Cotton season is about to begin in New Mexico. Land preparation and preplant herbicides spray have been completed in many fields and farmers are waiting for optimum temperatures to plant their cotton fields. In 2018, 78,000 acres of cotton were planted in New Mexico and based on National Cotton Council estimates, planted acres in 2019 is expected to be in that same range. Weeds were problematic in many fields last year and could be a problem again this year. Farmers will need to stay on top of weed control this year by using available technologies to secure a good fiber yield and a successful cotton season. *For comments and contributions contact: John Idowu (email: jidowu@nmsu.edu; phone: 575-646-2571)*

Herbicides Update

Paraquat Label has some New Requirements in 2019

The EPA has issued new required certification trainings for the handling and application of the active ingredient paraquat dichloride, commonly known as paraquat. Paraquat is typically sold under the trade name Gramoxone, and is commonly used as a burn-down weed killer and as a defoliant in cotton production throughout the US. Paraquat is classified as a restricted-use herbicide with the signal word "Danger/Poison" due to its extreme acute toxicity in humans. Even in small amounts, ingestions, inhalations, or other exposures to paraquat can be fatal, and there is no antidote.

Because of its' toxicity, the EPA has issued the following label restrictions on any paraquat product issued after September, 2018:

- **Applicators must attend mandatory trainings on safe paraquat handling and applications every three years.** The up-to-date certifications from these trainings must be made available upon inspection when paraquat has been applied. These trainings are required in addition to the normal CEU trainings required to maintain the applicator's license.

- **Paraquat applications must be made by certified applicators only.** Individuals working under the supervision of a licensed applicators are no longer allowed to handle or apply paraquat.

- **New supplemental materials warning of the toxicity potential of paraquat will be included in the label.**

Any paraquat product that was manufactured prior to September, 2018 or that has already been sold prior to the amended label, can still be applied according to the directions of the original label until supplies are exhausted. However, any paraquat product that is sold or applied after the cut-off date of September 30, 2020, must adhere to the newer label restrictions for improved safety.

For more information, contact Dr. Leslie Beck – NMSU Extension Weed Specialist



New Cotton Varieties Released in New Mexico

1. NuMex COT 17 GLS

The New Mexico Agricultural Experiment Station announces the release of a glandless 'NuMex COT 17 GLS' cotton (*Gossypium hirsutum* L.). It is resistant to Fusarium wilt (*Fusarium oxysporum* f. sp. *vasinfectum*) race 4 when evaluated in the field in California and in greenhouse in New Mexico. NuMex COT 19 exceeded the average lint yield of its high-yielding Upland parent Acala 1517-99 by 52.6% in three tests and exceeded the yield of 'Acala 1517-08' by 21.8% in four tests.

2. Acala 1517-20

The New Mexico Agricultural Experiment Station announces the release of a Fusarium wilt (FW) race 4 moderate resistant Upland cotton (*Gossypium hirsutum* L.) cultivar 'Acala 1517-20'. Acala 1517-20 yielded similarly to the high-yielding Acala cotton cultivars such as Acala 1517-08' and the transgenic commercial cultivars of Acala type including 'PHY 725 RF', 'PHY 755 WRF', 'PHY 764 WRF' and 'FM 2322 GL'.

3. Acala 1517-21

The New Mexico Agricultural Experiment Station announces the release of Upland cotton (*Gossypium hirsutum* L.) cultivar 'Acala 1517-21'. In New Mexico, Acala 1517-21 yielded similarly to medium-staple cultivars or transgenic commercial Acala cultivars including 'PHY 725 RF', 'PHY 755 WRF', 'PHY 764 WRF', 'FM 2322 GL', and 'FM 1830 GLT'. Acala 1517-21 represents a high-yielding Upland cotton cultivar with high lint percent and a long-staple.

For more information about these new varieties, please contact Dr. Jinfa Zhang (email: jinzhang@nmsu.edu)

Insect Pest Update

In the past few years, cotton farmers have seen an increase in resistance to Bt cotton. In the past, Bt technology typically gave a good control of bollworm larvae while not affecting beneficial insects. However, more and more growers are seeing bollworm resistance, particularly with the early Bt technologies. With this resistance, growers need to be more aware of the need for scouting and the possibility of needing a foliar insecticide application for bollworm. Newer varieties are showing better control, but might still need foliar treatments as we did not see a difference between two and three gene varieties.

Some entomologists have gone back to making control decisions based on egg lay but here in New Mexico we often have 50-80% control of eggs by predators, so we are still recommending control decisions based on small larvae in squares and the presence of additional eggs. More square losses can happen in the late season than mid-season due to higher numbers of larvae.

If over the top applications become routine over time, growers might want to reassess their options about the economic benefit of Bt cotton varieties. However, cotton farmers in New Mexico need to be more diligent about scouting their fields for bollworm and should be very aggressive about controlling square losses during the time when compensation is much less likely.

For more information, contact Dr. Jane Pierce (email: japierce@nmsu.edu)

FOV 4 Extension Publication

A new publication focused on identification and management of fusarium wilt race 4 (FOV4) disease has been released. The publication was prepared by many collaborating institutions including Cotton Inc., Texas AgriLife Extension Service, USDA-ARS, University of California and New Mexico State University. The publication explains how FOV4 differs from the other FOV races and how FOV4 infestation can happen in cotton fields. Other information provided by the publication include field symptom of the disease, scouting for FOV4, how the disease can spread, what farmers can do if they suspect the disease in their fields and how to prevent the disease from spreading.

If you need a copy of this publication, please contact Dr. John Idowu (email: jidowu@nmsu.edu)

NMSU 2018 Cotton Variety Trial Results

Variety	Lint Yield lb/ac			Seed Cotton Yield lb/ac			Loan Value (cents)		
	Las Cruces	Clovis	Artesia	Las Cruces	Clovis	Artesia	Las Cruces	Clovis	Artesia
DP 1612 2XF	986	1557	976	1666	3739	2156	57.3	53.9	54.5
DP 1646 B2XF	1252	1348	892	2213	2817	1940	57.0	53.9	55.4
DP 1820 B3XF	966	1389	850	1740	2962	1805	54.6	56.6	54.8
DP 1845 B3XF	1330	1360	1113	2324	3071	2401	57.4	53.7	56.3
FM 2334 GLT	1008	1022	1046	1868	2294	2279	57.3	57.1	55.2
FM 2574 GLT	811	1677	958	1380	3543	1940	57.5	57.3	55.5
FM2498 GLT	577	1357	760	1060	3027	1626	52.7	52.2	53.6
BX 1971 GLT	825	1238	1192	1535	2621	2516	52.7	54.6	53.1
BX 1972 GLT	867	1231	1204	1438	3071	2777	57.0	50.6	55.1
ST 4946 GL B2	1018	1495	1092	1712	3623	2414	57.2	26.7	55.4
PHY 250 W3BF		1415	1224		3405	2887		56.2	55.2
PHY 300 W3FE		1715	828		3986	1813		53.1	54.1
PHY 320 W3FE	1548	1343	1070	2798	3238	2418	51.3	51.5	55.6
PHY 350 w3fe	1018	1396	1340	1767	3499	2961	56.4	56.4	53.9
PHY 440 W3FE	1169		1315	2133		2798	55.2		55.5
PHY 480 W3FE	1295		657	2257		1438	55.2		56.1
PHY 499			830			1785			54.6
PX2A31 W3FE		1372	823		3216	1826		56.5	55.6
PX 2B04 W3FE		1512	1159		3601	2528		56.2	56.5
PX 3807 W3FE	1743		1152	3082		2389	57.5		56.6
PX 3C06 W3FE	1289		756	2313		1674	51.9		53.5
DP 341 RF PIMA	1125		749	1850		1801	58.1		54.3
DP 348 RF PIMA	1104		722	1731		1679	58.1		53.3
PHY 841RF PIMA	928			1551			58.1		
PHY 881RF PIMA	1157			1803			58.1		
PHY 888RF PIMA	1518			2381			58.0		
NM 17T1069	978		764	1592		1830	57.6		53.7
NM 17T1125	770		766	1226		2009	57.8		56.8
NM 17T1217	734		884	1188		2189	57.7		55.4
NM 17T1249	1071		893	1071		2214	57.7		54.8
NM 17T1290	1039		1109	1039		2638	53.1		56.8
NM 17T1327	1439		843	1439		1854	55.3		53.2
NM 17T1355	1105		723	1737		1944	57.7		55.4
NM 17T1364	1368		657	2232		1601	57.2		55.7
NM 17T1428	1209		880	2021		2124	55.5		56.3
NM 17T1452	970		990	1540		2459	55.5		56.3
CV(%)	32.9	17.1	40.1	-	15.9	38.1	-	5.04	1.9
LSD (0.05)	500	340	NS	-	NS	NS	-	3.92	NS

CV: Coefficient of variation; LSD: least significant difference; NS: no statistical significant difference

Variety	Fiber Length			Micronaire			Strength		
	Las Cruces	Clovis	Artesia	Las Cruces	Clovis	Artesia	Las Cruces	Clovis	Artesia
DP 1612 2XF	1.14	1.19	1.19	4.78	3.9	5.0	30.5	29.7	32.3
DP 1646 B2XF	1.20	1.22	1.26	4.53	3.7	4.8	27.3	26.8	30.8
DP 1820 B3XF	1.15	1.22	1.23	5.00	3.9	5.1	28.9	30.2	33.0
DP 1845 B3XF	1.18	1.25	1.28	4.50	3.5	4.7	30.8	29.7	32.7
FM 2334 GLT	1.18	1.25	1.24	4.78	3.9	4.8	30.6	28.2	32.2
FM 2574 GLT	1.16	1.24	1.22	4.83	3.7	4.9	30.6	28.1	34.1
FM2498 GLT	1.09	1.21	1.20	5.23	3.8	5.3	27.6	25.7	33.2
BX 1971 GLT	1.08	1.21	1.22	5.15	4.1	5.3	27.7	28.0	32.8
BX 1972 GLT	1.15	1.20	1.29	4.43	3.1	4.5	29.1	28.6	37.4
ST 4946 GL B2	1.15	1.22	1.22	4.88	3.9	4.9	30.5	30.6	32.0
PHY 250 W3BF		1.21	1.24		3.5	4.5		30.0	36.9
PHY 300 W3FE		1.16	1.18		3.4	5.2		29.6	33.3
PHY 320 W3FE	1.08	1.16	1.20	5.03	3.4	4.6	30.1	29.7	32.1
PHY 350 w3fe	1.12	1.22	1.18	5.2	3.9	5.0	28.1	29.5	32.1
PHY 440 W3FE	1.11		1.19	4.63		4.8	29.6		32.6
PHY 480 W3FE	1.09		1.24	4.40		4.8	29.5		32.0
PHY 499			1.26			4.8			32.9
PX2A31 W3FE		1.19	1.23		3.5	4.8		30.9	33.4
PX 2B04 W3FE		1.23	1.18		3.3	4.8		30.3	31.6
PX 3807 W3FE	1.16		1.19	4.78		4.6	31.3		33.0
PX 3C06 W3FE	1.10		1.23	5.23		5.0	27.2		31.6
DP 341 RF PIMA	1.42		1.34	4.00		4.5	48.6		41.9
DP 348 RF PIMA	1.41		1.31	3.90		4.6	50.5		41.1
PHY 841RF PIMA	1.43			4.28			50.4		
PHY 881RF PIMA	1.43			4.18			48.3		
PHY 888RF PIMA	1.45			4.30			49.7		
NM 17T1069	1.15		1.20	4.83		5.1	39.4		30.6
NM 17T1125	1.18		1.23	4.48		4.7	33.1		36.7
NM 17T1217	1.17		1.24	4.53		4.7	33.4		36.4
NM 17T1249	1.19		1.26	4.55		4.8	34.0		38.2
NM 17T1290	1.11		1.25	5.03		4.8	31.7		36.8
NM 17T1327	1.17		1.18	5.13		5.4	31.1		32.0
NM 17T1355	1.17		1.28	4.45		4.4	33.4		33.4
NM 17T1364	1.15		1.21	4.80		4.7	30.7		34.0
NM 17T1428	1.11		1.22	4.93		4.9	32.4		36.9
NM 17T1452	1.08		1.24	4.80		4.8	32.2		37.1
Acala 1517-08 (ck)	1.19			4.63		4.6	36.9		
CV(%)	2.8	2.28	5.8	4.78	6.58	2.9	3.89	4.64	3.2
LSD (0.05)	0.05	0.04	0.10	0.32	0.34	0.2	1.85	1.92	1.7

CV: Coefficient of variation; LSD: least significant difference

For more information on variety test results, contact Dr. Robert Flynn (email: rflynn@nmsu.edu)

COTTON PRICES (2018/2019)

	2018		2019	
	Upland Cotton "A" Index*	ELS (Pima) Spot Price*	Upland Cotton "A" Index*	ELS (Pima) Spot Price*
January	91.06	124.70	82.35	102.50
February	88.27	124.70	81.15	102.20
March	92.14	124.70	83.81	97.50
April	92.24	123.70		
May	94.48	117.60		
June	97.71	116.70		
July	96.18	116.70		
August	94.55	116.70		
September	90.36	116.70		
October	86.80	116.40		
November	86.78	109.50		
December	86.00	107.00		

*Source: National Cotton Council of America and prices in (cents/pound of lint).

Publication Team: John Idowu (jidowu@nmsu.edu); Jinfa Zhang (jinzhang@nmsu.edu); Robert Flynn (rflynn@nmsu.edu); Jane Pierce (japierce@nmsu.edu); Leslie Beck (lebeck@ad.nmsu.edu); Patrick Sullivan (nmbollweevil@zianet.com).

_____, John Idowu, Extension Agronomist, New Mexico State University.

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