AGRICULTURAL NEWS FOR HALE COUNTY
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TEXAS AGRILIFE EXTENSION SERVICE
July, 2012

AROUND THE COUNTY

Cotton Agronomy

Crop Update

Recent rainfall (July 9-10) events were spotty and provided some relief to those fortunate enough to be under one of the clouds that produced precipitation amounts ranging from a trace to just over an inch, with some reports of 2+ inches localized. According to the Texas Tech University West Texas Mesonet website, for June and July rainfall combined, the Abernathy location reported 6.86 for a high and the Lamesa location recorded the lowest with 0.62 . Cotton crop conditions are very mixed and variable. Under good irrigation with higher rainfall amounts, most are currently in peak bloom and producers should continue to monitor crop for stress or insect pressure to maintain early set fruit. At this time, most irrigated fields are in fair to good shape and range from early to peak bloom. However, there are areas where irrigated crops are still feeling the effects of 2011 were high amounts of irrigation have resulted saline soil conditions. If producers suspect this condition in their fields, a proper soil sample should be taken and sent in for Sodium Absorption Ratio analyses. Recently, a sample was sent in for testing from a field in Lynn county and the results indicated a highly saline soil with an SAR of 7.3 and an EC of 20.1. Based on cottons response to saline soil, at this level, a better than 50% reduction in stand establishment can be expected. Another field has been sampled and results are pending, but it is suspected that salinity may be a factor in slowed growth and development. Unfortunately, the saline soil problem can only be remedied by large amounts of rainfall to leach the salt minerals through the profile. As for dryland cotton crops in the area, most locations are beginning to show signs of moisture stress or are already experiencing such. This again will only be remedied by much needed rainfall. One bright spot are the modest temperatures experienced on the High Plains in early July with Lubbock recorded daily highs in the low to mid 90 s. Although the temperatures have moderated considerably, heat unit accumulations for Lubbock are 19% above normal for the time period of May 1 to July 18. Extended forecasts are mixed with some indicating above normal precipitation in August and September and below normal temperatures in September. Others are predicting continued drought conditions.

The June 29 NASS Crop Report indicated that we planted about 960 thousand cotton acres in 1N (down 23%) and about 3.19 million in 1S (down only 4%) for a combined total of 4.15 million. If these numbers hold up the combined total of 4.15 million acres indicates the 2012 planting is down 9% from 2011. Although acres are down slightly, with beneficial rainfall abandoned acres will be down significantly compared to 2011 (>60%). However, if some areas with struggling dryland do not receive moisture soon, the percent abandonment could soon begin to rise.

2012 Texas AgriLife Recommended Wheat Varieties for the Texas High Plains

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Submitted by: Dr. Calvin Trostle, Extension Agronomist

Full Irrigation	Limited Irrigation	Dryland	
TAM 111	TAM 111	TAM 111	Excellent all round wheat
	TAM 112	TAM 112	Strong on dryland; greenbug tolerant
TAM 113	TAM 113	TAM 113	New pick, good all round
TAM 304			High input production only
Hatcher	Hatcher	Hatcher	High yielder, Russian wheat aphid resist.
Duster	Duster	Duster	Good all round performer.
	Endurance	Endurance	Dual purpose, late hollow stem (grazing)
Winter hawk	Winter hawk	Winter hawk	Strong yields outweigh diseases

The accompanying tables and discussion are being prepared this week, and will be distributed to county Extension offices and posted at http://amarillo.tamu.edu (find the wheat page) shortly.

New additions include TAM 113, which is most comparable to TAM 111, but has a better all round disease tolerance package including tolerance to the different rusts, and the bread making quality is better. Wintehawk (Westbred) has simply yielded very well though the overall disease package is modest and Winterhawk is one of only two varieties that regularly shows susceptibility to stem rust, but the drier High Plains region is not expected to have a major problem with this disease.

Deletions for 2012 include Bill Brown, a sister line of Hatcher. Bill Brown's yields have tailed off in irrigated and dryland the past two years though it is still slightly above average. BB is the other variety that is susceptible to stem rust. Endurance was removed as a pick for full irrigation as yields have tailed off, and it is not performing there better than average, but in drier situations Endurance remains a good choice. Armour was removed from the dryland list as thought it has demonstrated slightly better than average yields in dryland, it was based mostly on a strong 2011 harvest. Most producers interested in Westbred varieties probably would prefer higher yield potential and better test weight of Winterhawk. TAM 304 was

TAM 304 was discussed for removal as a full irrigation pick as performance in Texas not met expectations and test weight is 1-2 lbs./bu lower, but for producers attempting to maximize yield with high N and irrigation, TAM 304 remains a suitable choice due to moderate disease resistance, good straw strength, and slightly reduced height, and it yields very well in western Kansas under high inputs.

	Plant Disease	Standability	Grain Quality	Height	Disease Head	Yield
Everest	2.6	1.0		25.7	1.0	63.6
Fuller	3.0	1.0		26.7	1.3	55.2
Jagger	3.3	1.0		25.3	1.3	36.6
Billings	3.3	1.0		26.0	1.0	44.6
Duster	3.6	1.0		26.0	1.6	48.5
Endurance	3.0	1.0		26.0	1.3	49.1
Garrison	2.3	1.0		26.0	1.3	37.2
OK 07209	3.0	1.0		26.0	2.0	59.4
OK 07214	3.3	1.0		26.0	1.3	51.0
Pete	4.6	1.0		26.0	1.6	41.5
Ruby Lee	3.0	1.0		26.3	1.6	40.1
CJ	3.3	1.0		26.6	1.0	43.2
Doans	4.3	1.0		25.6	2.0	22.8
Fannin	4.0	1.0		25.3	1.6	19.7
Greer	2.3	1.0		27.3	1.3	53.2
Jackpot	2.3	1.0		27.6	1.6	63.0
AP08TA6927	4.6	1.0		27.6	1.6	35.3
APH09T2620	4.3	1.0		25.6	1.6	39.9
APH09T9614	4.0	1.0		23.3	1.6	40.7
Armour	3.6	1.0		25.6	1.3	49.8
Santa Fe	2.6	1.0		27.3	1.6	50.2
TAM W-101	3.3	1.0		24.3	1.6	34.8
TAM 111	3.0	1.0		27.6	1.6	38.2
TAM 112	2.6	1.0		27.6	1.0	59.7
TAM 304	2.3	1.0		27.6	1.6	52.3
TAM203	3.0	1.0		26.0	1.3	43.7
TAM 401	3.0	1.0		24.6	1.3	33.4
TAM 113	2.6	1.0		28.0	1.3	46.7
TX06A001263	3.0	1.0		25.6	2.0	50.7
TX07A001505	4.0	1.0		24.3	1.6	34.6
TXO3A0563	3.3	1.0		26.3	1.6	59.6
TX06V7266	1.3	1.0		30.3	2.0	62.6
Winterhawk	2.0	1.0		27.6	1.0	60.8
Bill Brown	3.6	1.0		22.6	1.3	44.0
Hatcher	3.0	1.0		26.3	1.0	55.1
Mace	3.0	1.0		24.6	1.6	28.2
T158	3.0	1.0		23.0	1.3	47.0
Cedar	3.0	1.0		26.6	1.3	54.1
Hitch	2.3	1.0		25.3	1.3	51.9
Ripper	3.3	1.0		26.3	1.3	45.6
Plot Avg.	3.15	1.00		26.03	1.43	46.2

Disease Scale 1-10

Cotton Disease Update

To date, things have been relatively slow from a disease standpoint in this year's cotton crop. Root-knot nematodes (Meloidogyne incognita) are apparent in many fields with severe damage occurring with high populations. Symptoms of nematode damage include low vigor, stunting and a reduction in bolls. Infected plants may also exhibit nutrient deficiency-like symptoms, as nematode feeding disrupts root functions. Spherical galls or knots may be present on the tips of tap and feeder roots. With the cancelation of Temik 15G, there are few chemical management options that can be used. While seed treatment nematicides may offer some early season protection, they are less effective under high pressure conditions. Foliar applications of Vydate have been shown to reduce nematode damage and increase yields; however, little information exists on how to properly time applications in the absence of Temik. Since nematode damage is a function of populations in the soil, management practices which impact nematode reproduction or survival should be utilized to reduce losses in the future. Several partially resistant varieties, including Deltapine 174RF, Phytogen 367WRF, Stoneville 4288B2F and Stoneville 5458B2F are available. Benefits from planting these varieties include increased yields, as well as a reduction in reproduction. Breeding for resistance to root-knot nematodes is a major interest in many breeding programs, and new resistant varieties are being evaluated. In the meantime, it is important to monitor nematode populations in fields with a history or those that are at risk. Soil sampling is an important process that can be used to determine nematode populations. Samples collected in the fall or early winter can provide insight into potential issues the following year. For information on nematode sampling, handling and processing see the http://lubbock.tamu.edu/files/2011/11/Nematodesampling.pdf. Fields infested with root-knot nematodes could also experience problems with Fusarium wilt. The causal agent of this disease is a soil borne fungus (Fusarium oxysporum f. sp. vasinfectum), that is capable of negatively affecting stands and greatly reducing yields. Symptoms associated with this disease include wilting of leaves early in the day, as well as chlorosis or necrosis on the margins of leaves in the lower canopy. Wilt symptoms are more severe on hot, dry days when the plants demand for water is high. Such symptoms occur because of clogging of the vascular system caused by infection. Mortality can occur in young plants. Discoloration, which is continuous, can be seen when examining the inside of the root system or lower stem. The development of Fusarium wilt in Texas is found to be in conjunction with root-knot nematodes; therefore, the appearance of galls can be used in some cases to distinguish this disease from Verticillium wilt. As the cotton crop transitions from vegetative growth to reproductive stages the plants demand for water increases. As a result, now is the time to expect to see an increase in the incidence of Verticillium wilt (caused by the soil borne fungus Verticillium dahliae). Infections by V. dahliae occur early in the growing season as microsclerotia (the overwintering structures of the fungus) germinate in response to soil conditions and plant exudates. The fungus infects through the roots and ultimately colonizes the vascular system. It is this colonization that plugs the channels which transport water and nutrients (known as the xylem) and results in the wilted symptoms observed on the foliage. Leaves of infected plants will exhibit a yellowing between the veins before becoming necrotic. Under severe circumstances the leaves may defoliate prematurely. Previous research has shown that several cultural practices can affect Verticillium wilt development (lubbock.tamu.edu/files/2011/11/ IntegratedManagementVerticilliumWiltCotton.pdf). There are no fungicides labeled for control of Verticillium wilt in cotton. Rather the disease should be managed with partially resistant varieties. Studies are on-going to determine the performance of cotton varieties and breeding lines in fields infested with varying levels of V. dahliae. Refer to the following link to see the response of cotton varieties to Verticillium wilt and other diseases. (http://lubbock.tamu.edu/ files/2011/11/DiseaseRecommendations.pdf) High relative humidity within the canopy resulting from irrigation applied to maximize fruiting and scattered thunderstorms favors development of other diseases, such as bacterial blight (caused by Xanthomonas axonopodis pv. malvacearum). This disease occurs routinely in the High Plains; however, substantial yield loss is seldom experienced. Recent crop alerts from the mid-south indicate that the disease has been reported in parts of the mid-south. Symptoms of bacterial blight include small, dark green, water-soaked lesions that are first visible on the underside of leaves. These lesions are delimited by the veins within the leaf (which gives rise to the common name angular leaf spot). As individual lesions coalesce and become necrotic, infected leaves will defoliate prematurely. In addition, lesions may develop on the bolls, resulting in the rotting of lint. There are no chemical management options available for bacterial blight; however, the disease can easily be managed through the use of resistant or immune varieties http://lubbock.tamu.edu/cotton/pdf/2010Bacterial.pdf. If you have any questions regarding these or any other disease issues in cotton, please contact Jason Woodward @ 806-632-0762, or via e-mail jewoodward@ag.tamu.edu. JW

NEW MILLET PRODUCTION GUIDE FROM NMSU & TEXAS AGRILIFE

"Millets for Forage and Grain in New Mexico and West Texas," Guide A-417, New Mexico State Univ. Cooperative Extension is now available. Millets include hybrid pearl millet (by far the most common), but also German (or foxtail) millet, which is very short season, and proso millet which is grown on some acres for grain. Distinctives of hybrid pearl millet include high drought tolerance (more so than sorghum/sudan), slightly more leafy forage, better tolerance of high pH soils that cause iron deficiency in sorghum family forages, and since millet is not a member of the sorghum family it does not develop prussic acid from a fall freeze or summer growth after drought stressed conditions. Millet is also suitable for horses unlike sorghum/sudan. Management drawbacks include few labeled herbicides for millet, and the seed is very small, about 70,000 to 90,000 seeds per lb. (about 1/5 the size of sorghum/sudan seed), so it is more difficult to get the seeding rate cut down. This document is posted in the NMSU system, but also at http://lubbock.tamu.edu/programs/crops/other-field-crops/forage/

HUSKIE HERBICIDE IN GRAIN SORGHUM—

POSITIVE RESULTS FROM EARLY 2012 USE

Extension provided an extensive review of Huskie herbicide use in grain sorghum in our April 5 FOCUS newsletter (see http://lubbock.tamu.edu/files/2012/04/Focus2012April5v21.pdf) Among the researchers at the Lubbock Texas AgriLife Research & Extension Center, Peterson, Meason, and Trostle all report impressive control in field test plots. Though there is some burn on leaves, that is to be expected, and the sorghum is growing out of it. Key points for Huskie reviewed in April include:

- Over-the-top weed control in grain sorghum, apply at 3-leaf stage to 12 tall.
- Excellent control of pigweed and many other broadleaf species
- Greatly reduced injury potential compared to 2,4-D and Dicamba
- Atrazine suggested as a key tank mix partner to enhance weed control, but now be cautious about any Atrazine use late in the season if returning to cotton production in 2013.

NEW TEXAS AGRILIFE WHEAT VARIETY—TAM 113

TAM 113 was released last year, but now limited seed supplies are available. TAM 113 is not necessarily intended to replace either TAM 111 or TAM 112, which have been variety picks from Texas AgriLife for several years. Distinctives of TAM 113 include a solid all-round rust disease package particularly for leaf and stripe rust, better than either TAM 111 or TAM 112. In 2011 harvests TAM 113 ranked 4th among forty commercial wheat lines and experimentals in six irrigated Texas High Plains yield trials, and it was 1st in dryland (the same forty entries). For 2012 harvests, it was 5th among forty lines in irrigated (five sites), and slightly above average in dryland. The variety also has good bread making quality, is medium maturity, and considered medium tall. TAM 113 will be considered in the next 2 weeks for addition to our forthcoming Texas High Plains wheat variety picks for irrigated and dryland wheat production. Consult Extension resources by the end of July for finalized information.

ROUNDUP READY WINTER CANOLA— A WEED IN SOME OAT HAY FIELDS

Inquiries were received from Moore, Bailey, and Floyd Counties in June about a scattered weed that was present in oat fields planted for hay. It was Roundup Ready canola though I am unsure if it was winter canola (grown largely in Oklahoma) or spring canola grown in the Dakotas. Producers noticed the weed in some cases, but it wasn't until they found out Roundup didn't touch it that they became worried, especially when they saw how much seed the plants were producing. Rogueing was the only option if the field had been replanted to Roundup Ready corn or other broadleaves, especially since plants were scattered perhaps 3 to 10 per acre. The contamination would have originated in harvest equipment, storage bins, etc., most likely in regions where oat seed production occurs. Much of the oats for forage planted in West Texas is are spring-oat types which fit oat hay production systems here (planted in February).

WTACI Conference Set

The annual meeting of the West Texas Agricultural Chemicals Institute (WTACI) has been scheduled for Thursday, September 6 at the Scottish Rite Temple - Learning Center located at 1101 70th Street in Lubbock, Texas (South Loop 289 and Interstate 27). This year represents the 60th meeting of WTACI, who is an unincorporated organization of dealers, industry representatives, agricultural producers, scientists, educators, and agribusiness members who support education and research programs promoting safe and effective use of agricultural chemicals and protection and preservation of the area's natural resources. Topics to be discussed at the conference include various aspects of pest identification and management, pesticide application and disposal, research efforts on row crops in the High Plains, and much more. The Texas Department of Agriculture (TDA) has approved a total of 6.5 continuing education units (CEU's) in the areas of IPM (1.0), Pesticide Laws and Regs (1.0), Drift Minimization (1.0) and General (3.5). In addition, the WTACI program has been approved for 4.0, 2.0 and 0.5 hours of Pest Management, Crop Management and Professional Development, respectively. A detailed list of presentations and speakers will be available shortly. Pre-registration is currently available online at (http://wtaci.tamu.edu/onlineregistration.php). Registration forms will be mailed out within the next few weeks. On-line registration fees are $75 for conference attendees and $300 for a booth and must be completed or postmarked by August 31. On-site registration will begin at 7:00 the day of the conference and will cost $95 for attendees and $325 for booth sponsors. Lunch will be provided as part of the registration fee. Opportunities also exist to contribute to the WTACI Scholarship Fund which has provided more than $60,000 in scholarships to students majoring in agricultural fields at many Texas universities. Contact Jason Woodward at 806-632-0762 or jewoodward@ag.tamu.edu for questions about the program and CEU's. If you have trouble or questions regarding registration contact David Pointer 806-746-4021 or dlpointer@ag.tamu.edu. JW

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