



Ag News & Views



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Zan's Take On Midland County Agriculture

2010 is starting as a very promising year for crop production in Midland County. Many have told me they have not seen pre-plant moisture as good as it has been this year. As I stated to the newspaper, we have a good start, but we are going to need midsummer showers to sustain this good start.

At this time, four result demonstrations have been established in Midland County. I would like to express my thanks to Perry Lewis, Al Spinks, Roy Graham, and Andy Schumann for serving as cooperators for these efforts. Plot maps for the crop variety/hybrid demonstrations are illustrated in this newsletter. Late last month, I was contacted by our range specialist, Alyson McDonald, to see about implementing a weed control plot in a bermudagrass pasture. We sprayed the plot at the end of May and are currently monitoring the weed suppression.

I am excited about the prospect of this year, as I know all of you are too. Feel free to contact me if you have any questions or in any other manner if I can be of service. ~AZM

Private Applicator's License

by Zan Matthies

Have you ever needed a license to purchase pesticides for the upkeep of your land? June 25th a Training & Testing will be conducted for landowners needing a PA License. Training Starts: 7:30 A.M. At: Extension Office 2445 E. Hwy. 80 Midland Training Ends: 2:00 P.M.ish Followed By: Licensing Exam Exam is given by TX Dept. of AG Pesticide Inspector RSVP to: (432) 686-4700 by 5 pm on June 22 Cost of the class is \$35.00 (pre-registered) Registration includes: Private Applicator Training Handbook, Texas Laws & Regulations of Pesticides, and the PAT Workbook. (Door registration is available the day of the training at a cost of \$40.00 per person.) Private applicator's licenses are for agriculture producers who produce agriculture commodities or maintain rangelands.

Upcoming Events In The Area

1. ***Pesticide Training & Testing** June 25, 2010 Midland County Extension Office call 686-4700 for more information
2. ***Texas Water Shed Steward Workshop** August 26, 2010 from 8am-4pm at the UGRA Lecture Hall, Guadalupe Basin Natural Resources Center on 125 Lehmann Drive in Kerrville, TX (Guadalupe River above Canyon Lake Watershed).
3. ***Algae: From Raceway to Runway/Opportunities for Renewable Energy & Economic Development**-a briefing on work being done at the Pecos Algae Research & Development Facility, a pilot scale site on the Texas AgriLife Research Station at Pecos. WHEN: 10 a.m. to 1 p.m., June 4 WHERE: The Algae Research and Development Facility is 8 miles west of Pecos at 947 West I-20.
4. ***Midland County Fair -** August 19 thru August 22nd Call Midland County Horseshoe for more Details
5. ***89th Annual Texas Pecan Growers Conference & Trade Show** July 11-14 San Marcos, TX for more info pecans@tpga.org
6. ***San Antonio International Farm & Ranch Show** October 14-16, 2010 for more info www.farmandranchexpo.com

To View Newsletter in Color
Please visit our website at:
<http://midland-tx.tamu.edu/>



A. Zan Matthies Jr.

A. Zan Matthies Jr., Ph.D.
County Extension Agent
Agriculture & Natural Resources
Midland County
z-matthies@tamu.edu

Texas AgriLife Extension Service
Midland County Office

2445 E. HWY 80
Midland, TX 79706
(432) 686-4700
(432) 686-4704 (fax)

<http://midland-tx.tamu.edu>

Evaluating Cotton Seed Quality

By: Dr. Randy Boman, Ext. Agronomist-Cotton, TCE
Dr. Norman Hopper, Seed Physiologist, Texas Tech

High-quality cotton seed is critical for establishing good stands. Over the last several years, producers have scrutinized costs and benefits of numerous new cotton varieties. With the increase in cost of most current cotton varieties and the use of new planting equipment, many producers are reducing seeding rates, placing even more importance on planting high-quality seed. Many growers have opted to continue to plant conventional cotton varieties and have continued saving seed to have it delinted, treated and bagged for planting the following season. Cool, wet fall conditions and failure of cotton to mature fully can reduce seed quality. Seed quality becomes more critical at the reduced seeding rates to which many growers have become accustomed. Producers who plan to save seed from conventional varieties are advised to consider evaluating seed quality prior to planting season, using procedures such as the free fatty acid test, germination tests and the cool-warm vigor index.

Determine Free-Fatty Acid For Fuzzy Seed

The free fatty acid test (FFA) is used extensively as a seed-quality indicator. The test is based on breakdown of oils into fatty acids and glycerol as seeds deteriorate. Free fatty acids usually build up under high temperatures and high seed -moisture conditions. A 1 percent FFA level is most com-



monly accepted as the upper level desirable for seeds.

First, producers should have an FFA test performed on each lot of fuzzy cottonseed. To obtain a good random sample, a seed lot should be sampled at 8 to 10 locations. Take about 1 quart of seed from each of the locations, place all samples together into a tub or other large container, then mix them well. After mixing, submit at least a 2-pound (about a half-gallon) final sample to a reputable laboratory for FFA testing.

An FFA greater than 1 percent indicates that seed quality is suspect, suggesting that seed certainly have started deteriorating. Such seed should not be used for planting. However, an FFA level of 1 percent or lower does not necessarily guarantee that seed is of high quality.

Conduct Germination Tests for Seed Samples with FFA Less Than 1 Percent

If FFA is less than 1 percent, producers should have a standard warm germination test (\$9/sample) and a cool germination test (\$12/sample) conducted by a Texas Department of Agriculture (TDA) Seed Testing Laboratory at:

Texas Dept. of Agriculture Giddings Seed Lab Lubbock Seed Lab P.O. Box 629 4501 Englewood Ave. Giddings, TX 78942 Lubbock, TX 79414 (979) 542-3691 (806) 799-0017

Oak Wilt

By: Zan Matthies



Before Memorial Day, I was contacted by a homeowner in Midland with a concern relating to Oak Wilt. It is a plant disease caused by fungus which is very destructive to red oaks and liveoaks. While on my site visit, I did see a tree exhibiting symptoms of oak wilt and thought this would be a good opportunity to share this information.

The following website, <http://www.texasoakwilt.org>, is a very good informational source relating to this disease. While we do not have the populations of trees like in Central Texas, there are a good amount of them inside Midland and in surrounding commu-

nities. Due to the conjoined root systems of liveoaks, this vascular disease can spread easily. The positives we have is that the trees exhibiting the symptoms were inside the city limits where infrastructure (streets, sewer lines, etc.) greatly inhibit the ability of liveoaks to have root grafts. However, the disease can also be spread by the small nitidulid beetle.

It is a good idea to be cautious of this disease and understand the symptoms and how it spreads. Be sure to check out the above mentioned website and look at the pictures of veinal banding and veinal necrosis, it is the best tell-tell sign in liveoaks.

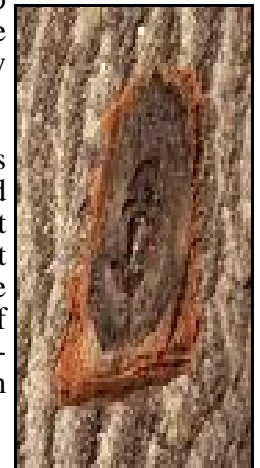


Photo By the Texas Forest Service

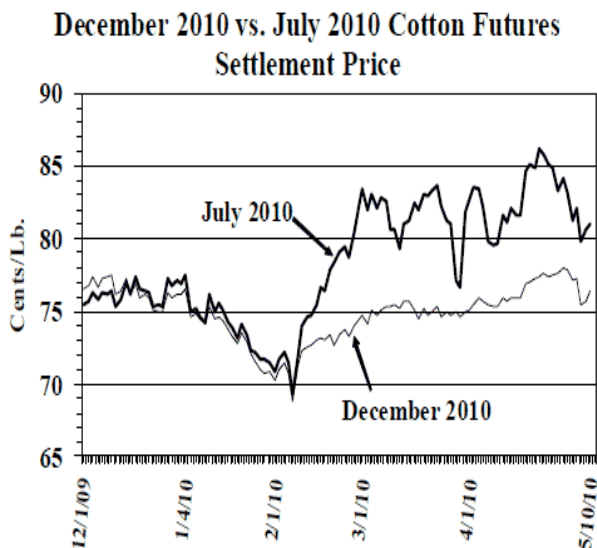
Cotton Market Comments

Tight Cotton Supply Could Ease by Fall

By: *Carl G. Anderson, Professor Emeritus*

In the last month, the cotton market for 2009/10 crop has reflected tight supplies in nearby May and July futures. Meanwhile, December '10 futures has traded roughly at 10 cents per pound less in the 75 cent to 78 cent per pound range because a much larger 2010/11 crop is projected worldwide. However, the latest USDA report indicates cotton stocks will remain at a market supportive level for another season. World cotton carryover stocks dropped in excess of 10 million bales (16.5%) this season and are estimated to decline by another 3 million (5.0%) in the 2010 season.

The result is a tight 2010/11 world carryover-touse(s/u)



ratio of 42.1 percent that is the lowest since 37.8 percent in 1994/95. During the 1994/95 season, the "A" Index averaged 94.3 cents per pound, and the North Delta area spot price 41-34 quality cotton averaged 87.25 cents. Thus, the world cotton market is faced with limited carryover stocks and high prices for another season.

The U.S. cotton price has rallied sharply since 48 cents in 2008/09 to some 67 cents for the 2009/10 season's price quote. Likewise, the world price ("A" Index) has jumped from 61 cents in 2008/09 to recent levels around 90 cents. Yet, December '10 futures seems comfortable in the high 70 cent range until 2010/11 crop begins to firm up in August and September.

Higher prices usually encourage more production and less use. Even so, USDA projects the 2010/11 season's price to average 60 to 74 cents per pound.

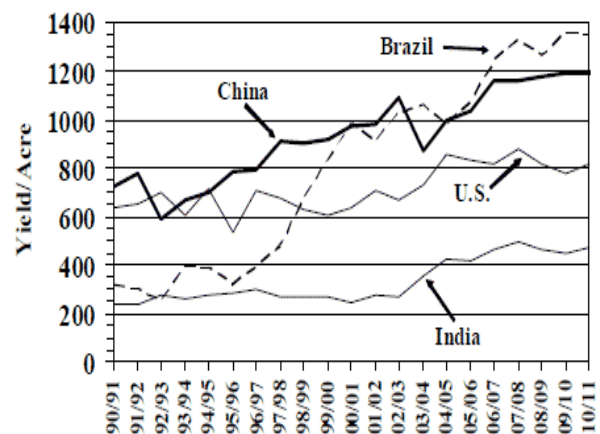
Foreign cotton production has tremendous potential to rebound from last season as does the U.S. crop. Therefore, world production is expected to easily increase by 10 percent and will likely be near the level of consumption. Still, the outlook is for a small decline in carryover stocks. If so, the U.S. 2010/11 farm price may average in the mid to high 60 cent range.

Cotton yields are higher in Brazil (1,355 lbs./ac.) and China (1,188 lbs./ac.) than in the U.S. (815 lbs./ac.).

Although yields are lower, around a bale per acre, in India, their acreage is large and may produce a 25 million bale crop. These four countries are expected to produce at least 82 million bales in 2010/11, compared to 74 million in 2009/10. USDA projects the world production to be 114 million bales in 2010/11 versus 103 million the season before.

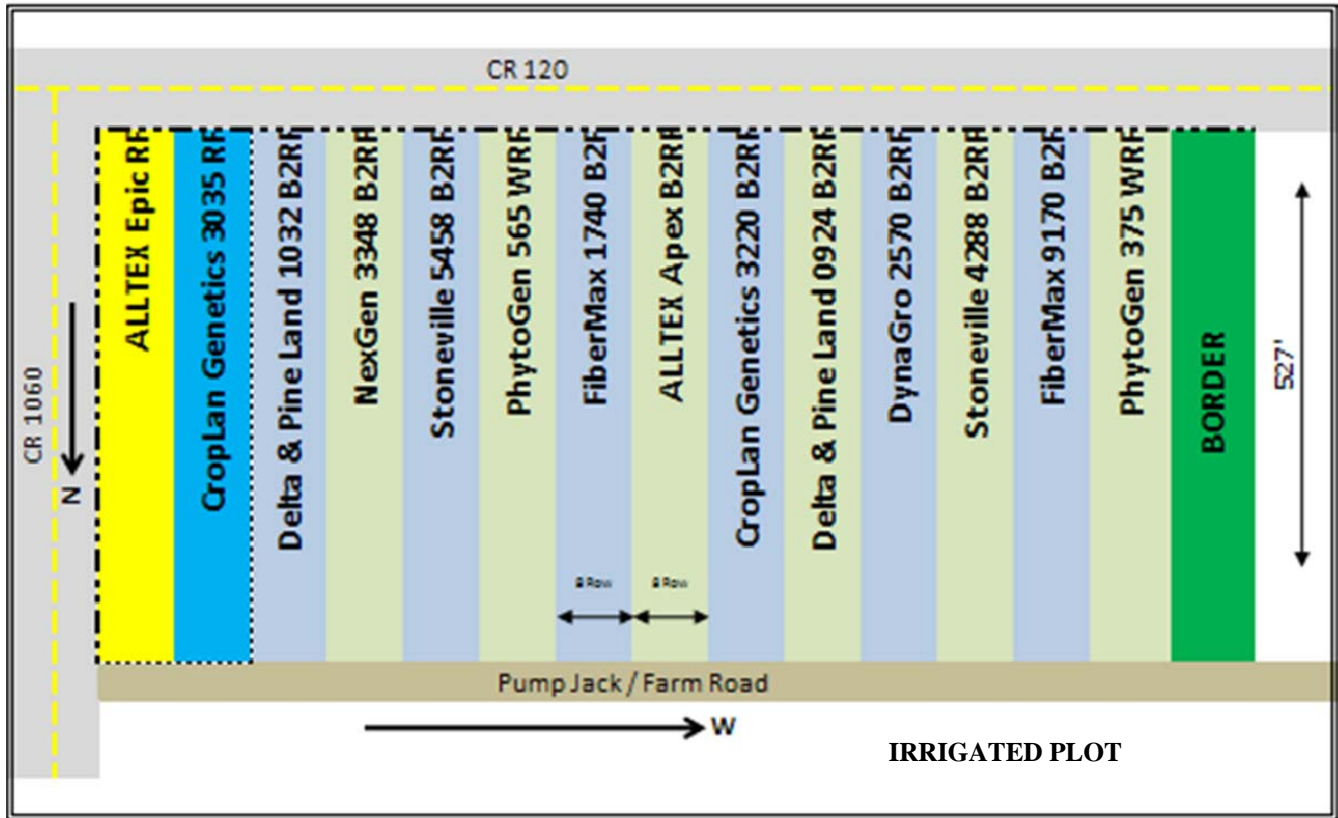
Producers are encouraged to have a market plan to price

Cotton Yields for U.S., Brazil, China, and India, 1990/91 - 2010/11

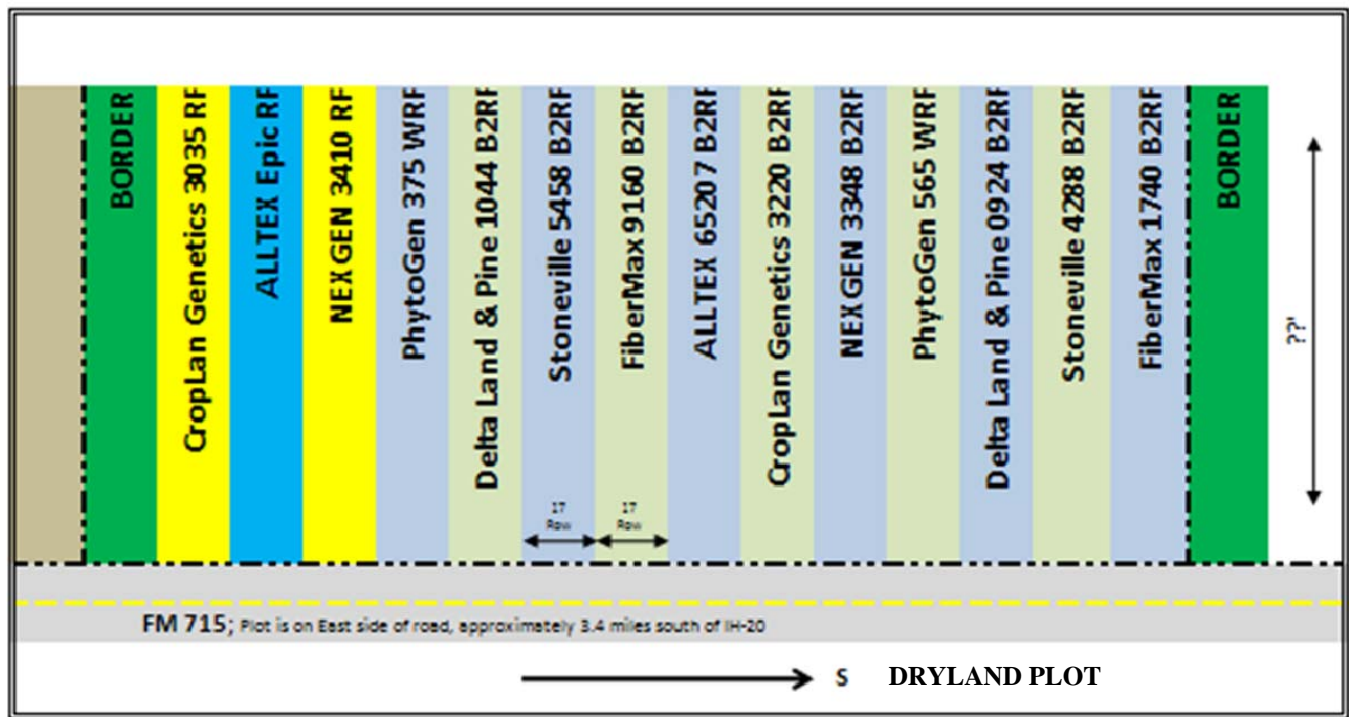


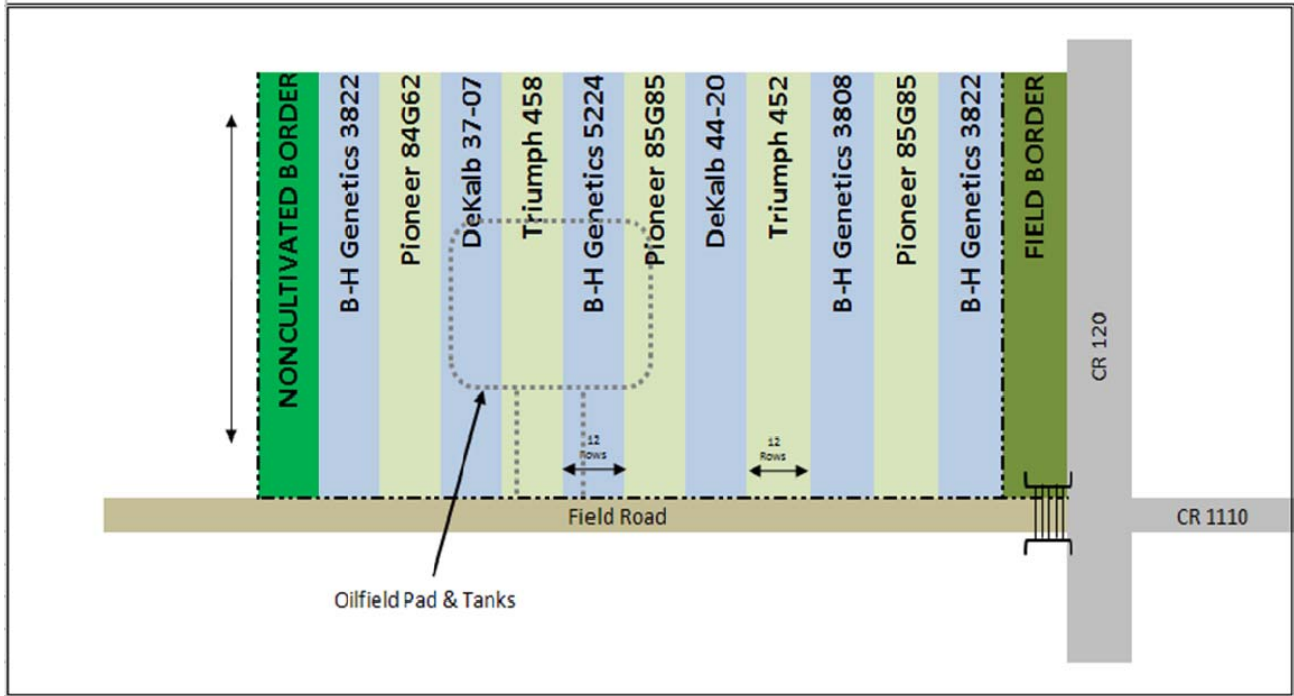
most of their cotton by mid year. Much more acreage, good yields, and lower prices are likely for the fall harvest period than the first half of 2010.





Cotton Test Plot Cooperators: **Roy Graham** (*Irrigated*), established May 21, 2010
Perry Lewis (*Dryland*), established May 12, 2010





Sorghum Test Plot Cooperators:

Al Spinks, established May 17, 2010

Webinar Series Feral Hogs

Wildlife For Lunch Webinar Series

Feral Hogs: The Good, The Bad or the Ugly
 When: June 17th, 2010
 Time: 12:00 noon to 1:30 pm (Central)
 Presented by: Billy Higginbotham -Wildlife & Fisheries Specialist, Texas AgriLife Extension Service

Available CEUs:

- 1 hour of SAF (cat 1)
- 1 hour of TDA Pesticide CEU (IPM)

Texas AgriLife Extension Service and Texas Wildlife Association are co-sponsoring lunch-based webinars every 3rd Thursday of every other month throughout 2010.

It's Easy!

Just point your browser to:

<http://forestrywebinars.net> (http://ethreemail.com/e3ds/mail_link.php?u=http%3A%2F%2Fforestrywebinars.net&i=0&d=9WV2WZWW-U807-4744-YX9W-4840VVVXZY43&e=AMSensing@ag.tamu.edu)

On the day of the webinar then click on "Wildlife for Lunch" in the "Upcoming Webinars" section. You will be able to attend the series.

Picture from Texas AgriLife Extension Service



Diagnosis and Management of Vascular Wilts in Cotton

By: Jason E. Woodward, Extension Plant Pathologist



All Photos By:
AgriLife Extension



Vascular wilts, such as *Fusarium* wilt and *Verticillium* wilt, are capable of significantly reducing cotton yields, and negatively impacting fiber quality. Properly diagnosing these diseases is critical in developing a management system. While subtle differences can be observed in the field, laboratory examinations are often required to differentiate the two diseases. Variety selection is the most effective factor in reducing wilt-associated losses. Studies evaluating the performance of commercially available cotton varieties have led to guidelines that can be used in selecting varieties to be planted in fields with a history of *Fusarium* and/or *Verticillium* wilt. The purpose of this brochure is to improve on the diagnosis of vascular wilts, and help identify varieties suitable for planting in problem fields.

Fusarium wilt

Causal agent: *Fusarium oxysporum* f. sp. *vasinfectum* (*Fov*) Disease development depends on:

Host: susceptibility

Pathogen: inoculum density, infection by *Fov* is dependant upon the root-knot nematode

Environment: warmer temperatures and sandy soils • Symptoms can occur throughout the growing season • Initial symptoms consist of chlorosis and wilting on

the margin of the leaf (Fig. 1a) • Infected seedlings often die (Fig. 1b), and may be confused with seedling disease • Diseased plants exhibit a continuous discoloration of the vascular tissue (Fig. 1c) • Diseased areas in the field occur in circular patches (Fig. 1d), with reduced stands and poor vigor • While the potential for *Fusarium* wilt to occur exists wherever root-knot nematodes are established, the current distribution of *Fov* is limited primarily to areas south and west of Lubbock (Fig. 3)

Management options for Fusarium wilt

Proper identification of *Fusarium* wilt fields is required • Sample infected plants for presence of *Fov* • Assay soil for root-knot nematodes • Nematode risk level will influence management options • Contact your local Extension office for information regarding nematode assays (sampling techniques, time, handling, cost, etc.) • Use of nematicides will indirectly leads to less *Fusarium* wilt damage • Rotation with peanut will not affect populations of *Fov*, but can negatively impact nematode populations • Field observations indicate that using partially resistant cultivars for several seasons can reduce *Fusarium* wilt severity in subsequent years • No immune varieties exist; however, several commercially available varieties have performed consistently well in University trials •

Review annual *Fusarium* wilt research results

Verticillium wilt Causal agent: *Verticillium dahliae* Disease development depends on:

Host: variety, developmental stage, and plant density

Pathogen: defoliating vs. non-defoliating type, aggressiveness, and inoculum density

Environment: cool, wet condition • Initial root infections occur early in the season; however, symptoms are more evident post-bloom • Infected plants may be wilted or stunted (Fig. 2a) • Chlorosis or necrosis of leaf margins and intervenial areas may be observed (Fig. 2b,c) • Light to dark brown discoloration (speckled) is prominent in the vascular system (Fig. 2d) • Severe defoliation (Fig. 2a) can result, leading to reductions in yield and fiber quality • *Verticillium dahliae* is widely distributed throughout the High Plains

Management options for Verticillium wilt

- Identification of fields infested with *V. dahliae* (sample stems (Fig. 2d))
- Quantification of inoculum density in the soil to categorize risk within a field
- Results from soil assays will determine population of fungus in soil
- Contact your local Extension office for information regarding soil assays (sampling techniques, times, cost, etc.)
- Management options depend on level of risk and may require integration of several factors
- Seeding rates of at least 4 seed per foot will minimize losses
- Do not over-water in July or August (excessive water favors disease development)

• Rotation with a grain crop may be beneficial in low risk situations • Use partially resistant/tolerant varieties

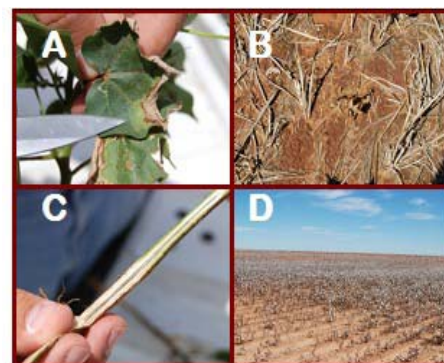


Figure 1. a) Foliar and wilt symptoms of plants with *Fusarium* wilt; b) mortality of young plant infected with *Fusarium* wilt; c) brown vascular discoloration of plant with *Fusarium* wilt; and d) severe *Fusarium* wilt in a field heavily infested with *Fusarium oxysporum* f. sp. *vasinfectum*

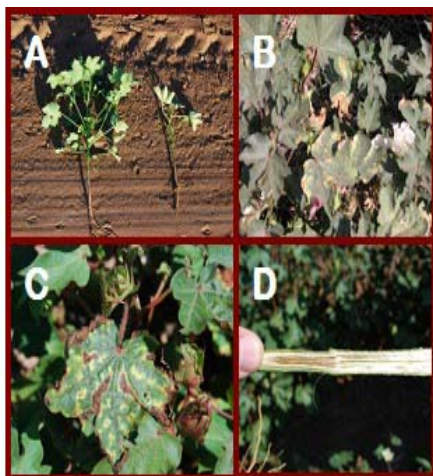


Figure 2. a) Stunting and premature defoliation of plants infected with *Verticillium* wilt; b) initial symptoms of *Verticillium* wilt; c) intervenial chlorosis and necrosis of leaves from plants infected with *Verticillium* wilt; and d) dark brown (continuous) streaks in the stem of a plant infected with *Verticillium* wilt.

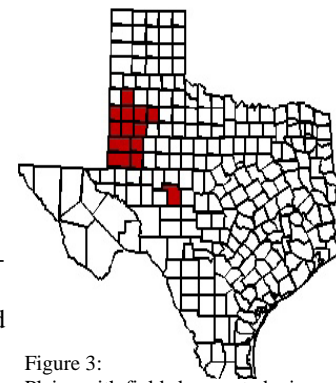


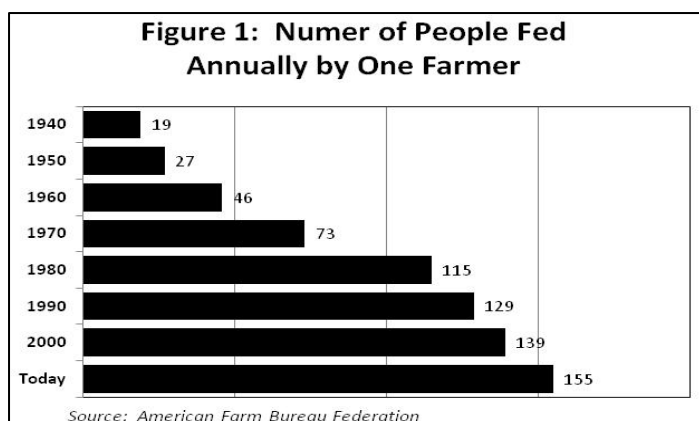
Figure 3: Plains with fields known to be infested with *Fusarium oxysporum*

Agriculture Under Attack And Should Start Dialogue With Consumers About U.S. Food Production

While the U.S. enjoys the least expensive, highest quality and safest food supply in the world, the agricultural sector has been under severe criticism, accused of producing unsafe and low quality food in “factory farms”, the mistreatment of animals, how current production systems are destroying the environment, and many other accusations. For example, U.S. agriculture was implicated in the recent H1N1 crisis and later exonerated after a detailed investigation, but the exoneration was generally ignored by the media.

Media reports and documentaries tend to lump together food production and the value added in distribution systems, suggesting that agriculture should emphasize production of more organic foods and use more sustainable methods of production. The reports, comments and documentaries imply that the U.S. could be better off if agriculture would revert to the methods of production used in earlier eras, such as the 1950's.

The agricultural sector often counters with comments that the criticism of agriculture is mostly coming from uninformed city residents which would have agricultural production revert to very inefficient production methods which would fail to meet current food production requirements. The days of many small farms growing sufficient food supplies and marketing crops directly to



consumers are long gone.

These dramatically opposing views and issues are not going to disappear. The 1.8 percent of the U.S. population, which comprises the production agricultural sector, must begin a meaningful dialogue with the rest of the population, especially with the more vociferous environmental protection segment which continues to express serious concern for the protection of our environment. Farmers have much in common with this latter group as both are seeking ways to efficiently produce abundant supplies of food while protecting the environment.

We need to ask ourselves, what would happen if U.S. agricultural production would return to the levels and methods of production of the mid-50's? Agriculture supports' organic farming and any other alternative production system to satisfy consumer preferences.

But, a major change to alternative production systems would significantly reduce agriculture's ability to produce food. During the

last 60 years, U.S. agriculture has dramatically increased production efficiency, transforming through evolving production cycles, from industrialization at the turn of the last century, a chemical cycle in the 60's to the technological revolution currently underway. This high tech evolution which includes the use of genetically modified organisms (GMOS), use of high tech information systems, the use of crop consultants to frequently monitor/adjust production systems, biological control, IPM and many other technical activities, continue to increase production efficiency and guarantee abundant supplies of healthy food at very inexpensive costs to the consumer.

One mechanized farmer in the 1950's could feed about 27 people compared to today's farmer which can feed about 155 people. (See Figure 1)

The U.S. population in the mid-50's at 163 million inhabitants has close to doubled to 307 million in 2009 (See Table 1). Reverting to production systems of the mid-50's would create food shortages and increase prices dramatically. Agriculture had to rise to the occasion to feed a growing population. Corn forms the base for our food system. During the last 55 years, U.S. corn production efficiency, for example, has increased close to 400 percent, basically from increased yield per acre from about the same number of acres producing corn as in the mid-50's. Currently, the US population spends about 9.6 percent of their disposable income to pay

TABLE 1. Comparison of Selected Items 1954 to 2009

	1954	2009	Percent Change
U.S. population mid-year (million)	163.0	307.2	88.4%
Certain Crop Statistics			
Corn for grain (\$/bu.)	1.4	3.7	158.7%
Acres harvested (million ac.)	80.2	81.8	2.0%
Production (million bushels)	2,708.0	13,370.0	393.7%
Yield per acre (bu./ac.)	39.4	163.5	315.0%
Cotton (¢/lb.)	33.6	67.0	99.3%
Acres harvested (million ac.)	19.3	9.8	-49.2%
Production (million bales)	13.7	16.7	21.9%
Yield per acre (lbs./ac.)	341.0	815.0	139.0%
Wheat (\$/bu.)	2.1	4.6	117.0%
Acres harvested (million ac.)	54.4	47.1	-13.4%
Production (million bushels)	984.0	2,043.0	107.6%
Yield per acre (bu./ac.)	18.1	43.4	139.8%
Total Expenditures for food ¹ (% of disposable income)	19.6	9.6	-51.0%

¹ For 2008 and includes cost of food at home and away from home
Source: U.S. Census of Agriculture, various issues, USDA/NASS data website, USDA/NASS Crop Production, Historical Track Records and Prices Paid by Farmers for Commodities and Services, United

for food at home and away from home. This is the least amount of yearly income spent on food than any country in the world. How many people could not afford milk if the price increased to \$10/gallon? How would consumer spending change if about 20 percent of disposable income was spent just to cover food? Inexpensive food has made possible the economic prosperity enjoyed by the U.S. population.

Quality production of specialized foods is more expensive than production of the basic staples such as corn. U.S. agriculture supports the production of organic foods, poultry, eggs from free range chickens, grass fed beef production, etc. But, agriculture's first obligation remains to provide plentiful supplies of healthy, high quality, inexpensive food. Please note that feeding a hungry world will be a residual benefit of rapidly evolving U.S. food production systems.

Improving Lives. Improving Texas.

Texas AgriLife Extension Service
United States Department of Agriculture
c/o CEA - AGNR
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Midland, TX 79706

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<u>Past & Present Precipitation Levels Midland County</u>		
<i>Month</i>	<i>Year</i>	
Data Provided by Co-CORaHS Community Collaborative Rain, Hail, & Snow Network	2009	2010
January	0.04	2.5
February	0.22	1.84
March	0.56	1.48
April	0.29	3.28
May	0.45	2.98
June	2.33	
July	6.55	
August	0.03	
September	2.47	
October	0.28	
November	0.00	
December	0.45	
Total for 2009	13.67	

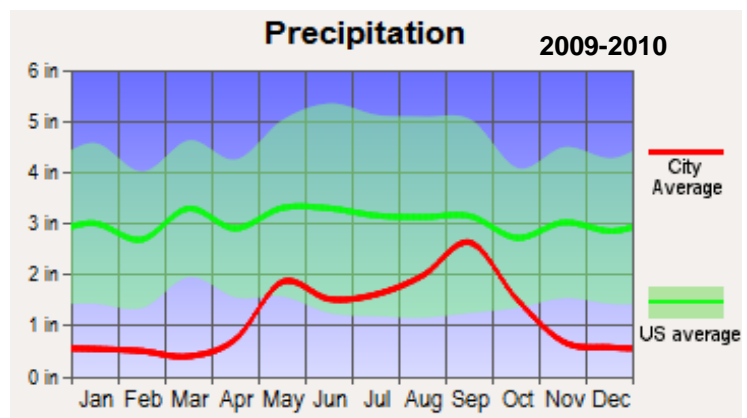


Chart & Information from:
<http://www.city-data.com/city/Midland-Texas.html>

Midland-area historical tornado activity is below Texas state average. It is 7% smaller than the overall U.S. average.

On 5/15/1965, a category 3 (max. wind speeds 158-206 mph) tornado 2.4 miles away from the Midland city center caused between \$50,000 and \$500,000 in damages.

On 5/24/1957, a category 3 tornado 25.6 miles away from the city center injured one person and caused between \$500