



Cotton Newsletter, April 2012, Volume 3, Number 1

This is the first edition of the NM Cotton Newsletter for the year 2012 . The purpose of this newsletter is to present information and news items relevant to the needs of New Mexico cotton growers and other stakeholders in the cotton industry.

We are still in a drought this year and some counties have already received the news of reduced water allotment for this cropping season. It appears that this year, like the last one will be challenging for cotton growers. We have included in this edition of the NM Cotton Newsletter, some basic information that can help growers cope with farming during a drought. Also in this edition, we have presented some information on the status of the pink bollworm eradication program in New Mexico.

Wishing all our cotton growers a successful growing season despite the challenges!

Please feel free to send your comments, information and contributions to John Idowu (email: jjidowu@nmsu.edu; phone: 575-646-2571). If you are interested in previous editions of the Cotton Newsletter, please feel free to download at <http://aces.nmsu.edu/ces/ifcpm/cotton-production.html>

Basic Principles to Cope with Farming in a Drought

According to the national weather service, drought is defined as "a period of abnormally dry weather, sufficiently prolonged for the lack of water to cause serious hydrologic imbalance in the affected area". Agriculturally, this means that the amount of water available can no longer meet the needs of the crops that are grown in the farm. Without enough water, there will be reduced yield or even total yield losses as experienced by many farmers in western part of Texas last year. We are currently in a drought in New Mexico, and many farmers complained last year that they were unable to get enough water for their total acreage. The drought situation was made worse by the high temperatures that we experienced in NM during last summer.

From recent forecast, it appears that the drought will still be with us for a while, and farmers need to cope with this drought in order to remain productive and profitable. Below are a few suggestions that can help cope with the current on-going drought.

NEWSLETTER HIGHLIGHTS

FARMING IN A DROUGHT

2012 COTTON TRIALS

PINK BOLLWORM ERADICATION PROGRAM

COTTON PRICES

1. Good Planning

Since a drought situation is not business as usual, there is need for a carefully planned strategy on how best to utilize the water that is available. An important consideration is to analyze the economics of the situation, since it is different from the normal years. The focus should be to optimize your economic returns with the water that is available. Don't be too ambitious hoping that the situation will improve through in-season rainfall. Plan ONLY for the water that you have.

2. Scaling Back on Acreage to be Planted

One of the ways to cope with drought is by scaling back on the acreage to be planted during the season. Calculate the amount of acres that your water allotment can successfully support, and limit your production to those acreages. The rest of the land can be left to fallow until the water situation becomes better. Make sure that you concentrate your farming on the most productive fields on your farm, since such lands are likely to be more resilient against drought condition.

3. Moving Away from Water Intensive Crops

Forage crops such alfalfa and corn have very high demands for water. In situations with limited water, it becomes difficult to raise these crops. An alternative is to transition temporarily to crops that consume less water and that are more drought tolerant, such as sorghum and millet. Cotton also consumes less water and is drought tolerant. It is important to note that some crops may consume less water but may not be drought tolerant.

4. Selecting Early Maturing and Drought Tolerant Varieties

This is another strategy that can help growers cope with drought. It is good to carefully select crop varieties that will mature earlier than those that mature late. Although varieties that mature later tend to have higher yields, however, during a drought, the yield advantage may be lost due to insufficient water, in fact, total yield failure can occur if water is not available during the critical stages of growth. Another option is to look for crop varieties that are drought tolerant. Drought tolerance indicate the ability of a crop to withstand moisture stress and still be able to produce yield, although the yield may be lower than expected from a normal moisture condition.

5. Watch Out for Salinity

Due to problems with water availability during a drought, there is tendency to irrigate without thinking about leaching out the accumulated salts in the surface soil. It is important to note that a build-up of salts can occur on the farm, if insufficient amount of water is applied to leach out the excess salts. Accumulation of salts can affect yields and crop quality. It is advised to still calculate the leaching requirement along with the crop demands for water. Soil and irrigation water testing can help to estimate the amount of extra water to apply in order to prevent salt accumulation in the surface soil.

6. Timing of Irrigation

If possible, schedule your irrigation during early morning or late evening to avoid evaporation losses. During the day time, the temperature is high, and this can lead to excessive water losses, thus reducing the overall efficiency of the irrigation system.

7. Reduced Tillage Practices

Reduced tillage compared to the conventional plowing and disking has been shown to be beneficial for conserving soil moisture and for improving soil health. Reduced tillage emphasizes i.) reduction in the area of the land that is being intensively tilled, ii.) maintenance of protective residue on the soil surface and iii.) reduction in the number of field passes. There are many reduced tillage options available to farmers such as strip-till, no-till, zone-till, chiseling, and permanent beds. The type of reduced tillage that will fit each farming operation will vary. Some reduced tillage method may involve getting new tillage tools. Therefore, reducing tillage should be seen as a long-term strategy to conserve moisture and improve soil quality.

(John Idowu, Extension Agronomist, NMSU, Las Cruces, NM)

Cotton Trials This Year

Trials evaluating the glandless cotton adaptability to NM will continue for the third year. This year, we will add some more varieties of glandless cotton for evaluation. Another trial, focused on optimizing the yield of selected transgenic varieties through agronomic methods will be started this year. Meanwhile, Dr. Jinfa Zhang's breeding program will continue trials on developing drought tolerant cotton varieties adaptable to NM environment.

Pink Bollworm Nearly Eradicated in New Mexico?

No pink bollworms were collected in the New Mexico eradication zone in 2011. This was good news since there was one capture near El Paso in 2010 after no captures in 2008 and 2009. There have been no pink bollworm larvae detected in bolls in the eradication zone since 2004. Pink bollworm trapping rates are highest with 1 trap per 10 acres near El Paso but are reduced to 1:40 acres further north. A total of 18,399 acres were trapped for pink bollworm this year with 891 pink bollworm traps.

In Texas 1 billion sterile moths were released and 2 million sterile moths were recaptured (0.002%) with 60 captures of native moths in 60 fields. There were also 1048 fields with no captures of native pink bollworm moths. Since 2008 no larvae have been collected in cotton bolls in the Texas eradication zone. Although Texas continues to capture moths that are considered native moths, there is considerable doubt that the 60 captures are actually native moths. It is likely that the dye used to identify the moths as sterile moths degrades before the adult moth dies. In this case a sterile would be counted as a native moth. Plans for 2012 are being adjusted to reduce this possibility.

Refuge Exemption: Some areas of New Mexico that have an active pink bollworm eradication programs have received exemptions for the non-Bt cotton refuge requirement based on their eradication status. Currently, three counties in New Mexico have received a section 24c exemption from planting non-Bt refuge in 2012. These counties are Dona Ana, Luna and Sierra. Information about the exemption is available from the New Mexico Department of Agriculture and seed dealers. All other areas of New Mexico still have strict non Bt cotton refuge requirements.

PBW Outside Eradication Zones /NM & West Texas: Data collected by NMSU entomologists in a joint program with Texas A & M University and USDA-APHIS indicate that populations of pink bollworm in eastern NM are, at the very least extremely low. Traps placed in commercial fields and in trap-lines in eastern New Mexico, in the Pecos Valley and Lea County, had zero captures in 2010 and 2011. Some pink bollworms were captured in 2010 and 2011 but were in a very limited area. In 2011, 729 pink bollworms were captured, but were limited to six fields south of Midland, Texas., In 2010, 1450 pink bollworms were captured, with only 11 outside of the Midland, TX area. One moth was captured in Gaines County, Texas adjoining New Mexico, but it likely had spread from source fields near Midland.

Bt cotton is virtually immune to pink bollworm, so the prevalence of Bt cotton clearly decimated pink bollworm populations even in areas outside the eradication zone. Weather related stress from record cold in the winter of 2010/2011 to record heat and drought in the summer of 2011 also may have reduced pink bollworm populations. To help suppress any possible remaining pink bollworms, growers are encouraged to plant Bt cotton before the refuge cotton. Overwintered pink bollworms are attracted to flowering cotton and will prefer to lay eggs in the Bt cotton if it is more advanced in growth than the refuge cotton. Since the Bt cotton will kill any emerging larvae it will effectively act as a trap crop.

(Jane Pierce, Entomologist, NMSU Agricultural Science Center, Artesia, NM)

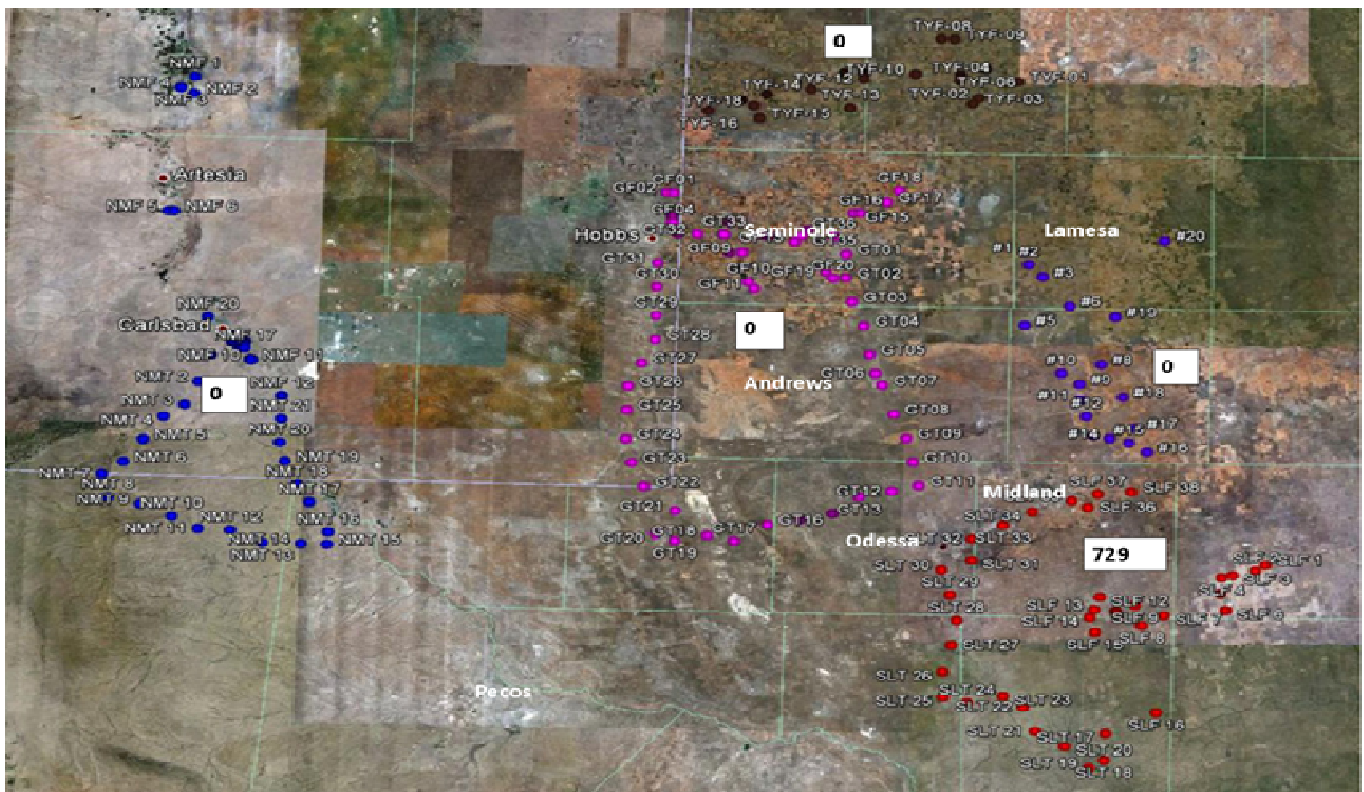


Figure 1. Southern Plains region of Texas and New Mexico showing pink bollworm trap locations and pink bollworm trap captures during the fall of 2011.

Table 1. Cotton Prices

| | Prices Received by Farmers (Upland cotton)* cents/pound | Cotton "A" index* cents/pound |
|----------|---|-------------------------------|
| Oct 2011 | 91.5 | 110.6 |
| Nov 2011 | 92.5 | 104.6 |
| Dec 2011 | 88.5 | 95.45 |
| Jan 2012 | 90.3 | 101.1 |
| Feb 2012 | 92.3 | 100.7 |

*Source: National Cotton Council of America

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