AgriLIFE EXTENSION
Texas A&M System

Northwest Plains Pest Management News

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The Northwest plains has been blessed with more precipitation this week. Some fields are at their moisture holding capacity while others could still benefit more precipitation. Local weather stations have recorded 2.2, 1.2, 0.6, and 1.0 inches from July 1 through July 7 (Farwell, Friona, Muleshoe, and Muleshoe Wildlife Refuge weather stations respectively).

Recent environmental conditions have been near perfect for corn growth and development and the local crop has responded very well. Quite a few fields are in the tassel stage and will begin pollination shortly. At this stage corn will be using .4 or more inches of moisture each day (2.8 inches a week). At this high demand it will take 2 inches of irrigation/precipitation per week to maintain optimum yields and that's assuming a current full soil moisture profile to draw from as well.

Area cotton has been developing at near optimum pace; most fields have 5 to 8 fruiting nodes per plant. Square shed rates have ranged from about 5% to 23%. The higher shed rates, for the most part, are on the earlier planted cotton which was subjected to poor environmental conditions when it first began to square. In most cases there just has not been enough pest pressure to cause significant square shed.

Daily Water Use

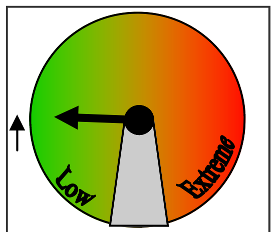
Crop	Inches per day
Corn	.25-.35
Cotton	.20-.25
Sorghum	.10-.20
Bermuda Grass	.15-.25
Fescue/ Bluegrass	.20-.30

Cotton Heat Unit Accumulation[1]

Location	Current	2009	Long Term[2]
Farwell	779	729	
Friona	778	697	
Muleshoe	801	756	704
Muleshoe WR	826	788	

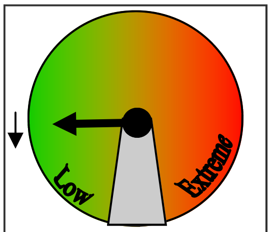
1. DD 60 based on May 1
2. Based on Muleshoe long term weather data 1971-2000

Spider mites are present in most corn fields in varying densities; pressure has remained static in some fields but has increased in others this week. Beneficial arthropods are present in relatively low numbers, hopefully six spotted thrips and minute pirate bug densities will increase as more hosts become available.



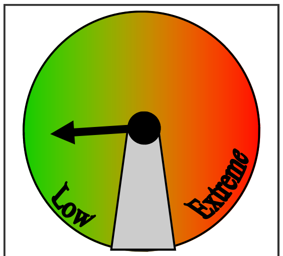
Minute pirate bug nymph in mite colony

Cotton fleahopper pressure has declined some what recently and adults continue to dominate the observed population. The action level for cotton fleahopper is 25-30 per 100 plants and insufficient square set.



Fleahopper Pressure

The number of **Lygus bugs** in cotton seems to have remained static this week. Most fields have averaged 0 to 3 per 100 sweeps which is well below recommended action levels. The established action threshold for Lygus the third week of squaring to first bloom is 15 per 100 sweeps and unacceptable square set. Like the cotton fleahopper populations the Lygus populations are primarily adults.



Lygus Pressure

Current adult dominated populations of cotton fleahopper and Lygus bugs are an indication that they are likely moving in and out of cotton as their primary host's conditions change. Weed and other hosts will harbor a vast number of plant bugs (fleahopper and Lygus), if the primary hosts are destroyed the plant bugs will migrate into adjacent cotton. Alfalfa and safflower are "prime" hosts for Lygus bugs and as these crops are cut or begin to dry down could become a source of infestation. If either of these crops are near cotton fields an especially close eye should be kept on those fields for mass migration.

Remember all square loss is not caused by insect feeding. No amount of insecticide will help a poor square set caused by other factors but will kill valuable beneficial insects which are the building blocks for a sustainable production system based on integrated pest management.

Cotton PGRs: Irrigated cotton in the Northwest Plains of Texas is produced in a short season and is intensively managed for maximum yield and earliness. A heavy boll load will limit vegetative growth and enhance earliness but in a high input environment where moisture and fertility are not limiting factors a heavy boll load alone may not be enough to adequately control vegetative growth in stripper harvested cotton. Mepiquat chloride (MC) is a foliar applied PGR that is absorbed into leaves and translocated throughout the plant. MC regulates cell elongation which in turn reduces overall plant height and internode length. There are many formulations of MC sold by various trade names as well as other mepiquat based PGRs such as Stance and Pentia. When assessing the need for and/or rate of a PGR one should always consider moisture availability, irrigation capacity, fertility, and fruit load. Lower rate multiple applications of PGRs are more effective than later single high rate applications.

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