

GAINES COUNTY IPM NEWSLETTER

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General Situation

Dry conditions prevail despite the traceable amount of rain that we received last week. Russian wheat aphids and wheat leaves with purple streaks (the purple streaks are a result of the Russian wheat aphids injecting a toxin into the leaves while they are feeding) continue to be observed in wheat fields. Please see the March 23rd issue of the *Gaines County IPM Newsletter* for a description of this pest and economic thresholds.

Variety selection is the most important decisions a grower can make during the season. Variety selection is made only once during the season and that selection will dictate the management (insecticide use, herbicide use, plant growth regulator use, and water) of the field for the entire season.

Preplant weed control is one of the keys for successful weed management in field crops. Successful weed management starts with correctly identifying the weeds you are trying to control. Many weeds look similar, but may respond differently to mechanical and chemical weed control. There are several weed identification references available in text and on the internet. Winter weeds and early-emerging summer weeds, like tumbleweed, should not be present at the time the crop is emerging. Early-season weed competition can slow crop growth and compete for water and nutrients. The most critical time for weed control is the first 4 to 6 weeks after emergence. This is the time that weeds can have the greatest impact on yield.

Up Coming Meetings

April 2 – Private Applicator Training and Worker Protection Standard (WPS) Handler Training

Beginning at 8:00 a.m. at the Gaines County Civic Building

The private applicators license allows an individual to apply restricted use pesticides to their own property for the production of an agriculture commodity. The Workers Protection Standard requires that any worker who handles or works around pesticides and is not a Private Applicator must receive training on pesticide handling and chemical safety. These workers and handlers must be re-trained every five years.

If you are interested in these trainings please call the Texas AgriLife Extension Office at (432)758-4006 ext. 238 by March 23rd.

April 7 – Farm Bill Meeting

9:00 a.m. to 12 p.m. at the Gaines County Civic Building

The Texas A&M Agricultural and Food Policy Center has developed an online software decision-aid program that will allow producers to enter all the necessary data to compare the possible benefits of ACRE with the possible costs of signing into the program. At the meeting, Extension Economists and Risk Management Specialists will be discussing the ACRE program, demonstrating the online decision-aid software tool and the data necessary to run the program. The online

program will enable a producer to enter his own data by FSA farm number along with what he expects to plant and what he expects prices to be. With the data entered, the program will calculate the expected benefits of ACRE compared with what he has to give up to get those benefits. Extension will be supporting USDA-FSA by providing assistance in the use of the software. Each producer should leave the meeting knowing how to access the program online from his own computer and understand what data is needed and how to interpret the results. There are many factors that determine whether the ACRE program will be beneficial to area producers and using the online software will help in the understanding of this complicated decision. Please contact the Texas AgriLife Extension Office at (432)758-4007 ext. 238 for further details.

April 16 – Homeowner Horticulture Training

6:00 p.m. to 8:30 p.m. at the Gaines County Civic Building

This training will cover general horticulture lawn and gardening practices.

Please contact the Texas AgriLife Extension Office at (432)758-4007 ext. 238 for further details.

April 18 – Water Wise Landscape Workshop

8:00 a.m. to 12 p.m. at the First Christian Church in Brownfield

The workshop features expert presenters on rainwater harvesting and water wise landscaping.

Contact the South Plains UWCD at (806)-637-7467.

Cotton Variety Selection

In the March 12th issue of *Focus on South Plains Agriculture* talked about the importance of matching variety characteristics with specific field conditions. There are several new varieties on the market that have high yield potentials and a good fiber package. However, growers are encouraged to plant a relatively small acreage of these new varieties before deciding to plant the whole farm to a new variety. This will help to spread your risks and help you evaluate the new varieties in your fields with your farming practices.

Variety selection also needs to take in consider the presence of diseases (Verticillium wilt and/or Fusarium Wilt) and nematodes in fields. Some varieties have shown tolerance to these disease and nematodes. However, one variety may perform better in the presence of Verticillium wilt, were as a different variety may perform better in the presence of Fusarium wilt. Therefore, growers need to make variety selection based on individual field's presence or absence of these diseases and nematodes. To read more from the *Focus on South Plains Agriculture* go to <http://lubbock.tamu.edu/focus/>.

2008 Research Trial Results

Results from the cotton, peanut, and wheat trials conducted in Gaines County can be found on the Gaines County Texas AgriLife Extension web site <http://gaines-co.tamu.edu/>. Click on the "Publications" tab.

The Lubbock AgriLife Research and Extension website <http://lubbock.tamu.edu/> has results from trials conducted throughout the Texas High Plains. Below is a list of some of their publications:

- Applied Cotton Insect and Disease Pest Management Evaluations in the Texas High Plains
- 2008 AG-Cares Annual Report
- 2008 Cotton Performance Tests
- 2008 Systems Agronomic and Economic Evaluation of Cotton Varieties in the Texas High Plains

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Preplant Weed Control in Cotton

(Reported by Dr. Peter Dotray and Dr. Wayne Keeling in the March 12th issue of *Focus on South Plains Agriculture*)

Much has been written and spoken over the past few years on the development of Roundup-resistant weeds, namely Palmer amaranth (carelessweed). To date, there are 15 different weeds worldwide that have been confirmed to be resistant to Roundup. One of the main reasons for the selection of herbicide-resistant weeds is the sole reliance on a single herbicide to control weeds over the course of several years.

Growers on the Texas High Plains have done a good job of using several weed management strategies to control weeds and not relying on Roundup as the only tool. Although the amount of cultivation has declined for understandable reasons, we still see plowing and cultivation as an effective strategy against the development of herbicide resistant weeds. We also see the benefit of using other “mode-of-action” herbicides as an important part of successful weed management and as an effective weed-resistance strategy. One of the key herbicide timings with an alternative mode-of-action is the use of preplant herbicides. Effective preplant weed control will conserve soil moisture, allow planting operations to occur without the interference of weeds, and help to provide the critical weed free periods for the first six to eight weeks after crop emergence. One of the major challenges of using herbicides preplant is to ensure the herbicide activity in soil will not reduce crop germination and emergence. A second challenge is to select the proper herbicide(s) for the weeds that need to be controlled.

The use of Prowl (pendimethalin) or Treflan (trifluralin) is the first step towards successful weed management programs in cotton. The strength of these dinitroaniline (DNA) herbicides is annual grass control (barnyardgrass, crabgrass, foxtails, panicums, etc.) and control of small-seeded broadleaf weeds such as Palmer amaranth (carelessweed and other pigweed species), Russian thistle (tumbleweed), and kochia (ironweed). Most larger-seeded broadleaf weeds, like annual morningglories, cocklebur, and sunflowers, and perennial weeds are not controlled by these herbicides.

The rate of each DNA herbicide is dependent on soil type. The sandier the soil, the lower the recommended rate. If soil conditions are dry and large clods are present during mechanical incorporation, herbicide performance will be less effective. Keep in mind that when Treflan was first used over 35 years ago, farmers were diligent with two-pass incorporation prior to bedding and planting. This resulted in thorough mixing of the herbicide and excellent weed control. In recent years many farmers have cut back on incorporation to save time and money. Some have still achieved adequate weed control while others have observed that poor incorporation caused herbicide failures. In cotton, Prowl EC rates range from 1.2 to 3.6 pints per acre in conventional or minimal tillage and from 1.8 to 4.8 pints per acre in no-tillage. Rates for Treflan and other trifluralin products (formulated at 4 pounds per gallon) range from ½ to 1 pint per acre for sandy soils, and up to 2 pints per acre on other soils.

The DNA herbicides may be incorporated by mechanical means or by irrigation. Incorporation methods vary widely across the High Plains and state. A double-pass method of incorporation is recommended and is most commonly used. Mechanical implements used to incorporate these herbicides include a springtooth harrow, a disk, a double or single stalkcutter, and a rolling cultivator to name a few. The better the implement mixes and uniformly distributes the herbicide in

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the upper 1- to 2-inches of soil, the better the weed control. Treflan should be incorporated within 24 hours after application. Prowl must be incorporated within 7 days after application, but the sooner the better.

Prowl EC may be surface applied and then incorporated by rainfall or irrigation. Three-quarters to one-inch of irrigation is necessary to incorporate (activate) these herbicides. Both Prowl EC and Treflan may be chemigated into the soil. These applications may not be the best way to incorporate Prowl or Treflan, but may be the only way to use these herbicides in a reduced tillage or no-tillage crop production system. When surface applications followed by irrigation or chemigation methods are used, herbicide rates are generally higher when compared to mechanically incorporated methods. Research conducted at the AG-CARES farm north of Lamesa by researchers with Texas AgriLife Research suggested that Prowl EC provided more consistent weed control when compared to Treflan when surface applied and watered in, but Treflan performed better than Prowl EC when chemigated.

Prowl H20 is the newest formulation of pendimethalin. One gallon of Prowl H20 contains 3.8 pounds of pendimethalin formulated as an aqueous capsule suspension. Since it formulated at a higher concentration than Prowl 3.3 EC, less product is needed on a per acre basis in general. In cotton, Prowl H20 may be applied in conventional, minimum, stale seedbed, or no-till systems as a preplant surface, preplant incorporated, preemergence, or at layby. It may be applied by ground, air, or chemigation. Use rates vary from 1 to 3 pints per acre in conventional or minimal tillage and 2 to 4 pints in no-till depending on soil texture.

Valor is a new burndown option for use preplant in cotton. Valor may be used at 1 to 2 ounces per acre with labeled burndown herbicides like Roundup and 2,4-D to enhance the speed of burndown, widen the spectrum of weed control, and provide residual weed control. Do not till after application or the residual weed control may be reduced. A minimum of 30 days and 1 inch of rainfall/irrigation must pass between application and planting in conventionally tilled cotton. In no-till or strip-till cotton, a minimum of 14 days plus 1 inch of rainfall/irrigation must occur between application and planting when 1 ounce of Valor is used or 21 days must occur between application and planting when 1.5 to 2 ounces is used. Valor has soil residual activity on several broadleaf weeds including chickweed, dandelion, henbit, marestail, pigweed, primrose, mustard, and sheperdspurse.

DuPont FirstShot may be applied as a burndown treatment to control emerged weeds prior to planting. FirstShot at 0.5 to 0.6 ounces per acre may be applied in tank mix with other registered burndown herbicides (Roundup, 2,4-D, Ignite, paraquat) or may be applied at 0.5 to 0.8 ounces alone. Sequential treatments not to exceed 1 ounce per acre may be made during one pre-plant cropping season and allow at least 30 days between applications. FirstShot has good activity on several weeds including cutleaf eveingprimrose, marestail, and prickly lettuce. There is a 14 day preplant interval between application and planting.

Always carefully read and follow label recommendations.

Information for this newsletter was obtained from the following publications:

- May 6, 2004 Focus on Entomology, For South Plains Agriculture
- March 12, 2009 Focus on South Plains Agriculture

Crop Management publications can be found on the web at <http://agrilifebookstore.org>.

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