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University of California Cooperative Extension • Tulare County

# Field Crop Notes



Volume 4, Issue 2

August 2007

## **Annual Alfalfa Meeting Thursday, September 13, 2007**

**8:00 – 12:00 p.m. (Tram for the field leaves at 8:15 a.m.)  
Kearney Research and Extension Center  
9240 So. Riverbend Ave., Parlier, CA**

**Anyone interested in alfalfa production is invited to attend this free meeting.**

**The final agenda has not been determined, but the meeting will be a combination of outdoor observation of variety plots and indoor (air conditioned) presentations on:**

**Varieties and Variety Selection**

**Aphids and Alfalfa Resistance**

**Deficit Irrigation Studies with Alfalfa**

**Weed Management**

**IPM Resources**

**The Current Issues with Roundup Ready Alfalfa**

**Coexistence with GMO Alfalfa**

**Alfalfa Insect Information**

**Control of Poisonous Weeds in Alfalfa**

## BLACKEYE IRRIGATION MANAGEMENT

(This following article has been modified from an article by Blake Sanden, U.C.C.E. Farm Advisor, Kern County)

So far this has been a petty good season for blackeyes. A warm spring resulted in good stand establishment. Lygus populations were low early in the season. Some fields had to be sprayed for cowpea aphid. Although we had some high temperatures in July, they were not as high, or as extended in duration, as in 2006. The water situation has probably been the most difficult aspect for this year's bean fields. How much water do blackeyes use? The table to the right provides Evapotranspiration (ET) data for blackeyes with different planting dates. Under normal July temperatures, a field with full canopy will use 2 to 2.5 inches of water/week, especially with a heavy set.

A 1993 furrow irrigation/variety trial and a 2005 subsurface drip trial at the Shafter Field Station gave maximum yields of more than 60 sacks/acre for a long-season 150 day crop when the beans are neither water logged nor too dry. But bean quality often suffers from lygus sting damage in the second flush beans. Once the canopy closes over, it becomes nearly impossible to control lygus. For this reason and considering rain risk in the fall, growers often cut blackeyes around 110 days. For a May 10 planting, this means cutting at the end of August with about a 24" crop ET. (See table at right.)

Week	Avg	2007 ET by plant date			
	ET	4/15	5/1	5/15	6/1
4/22	0.11	0.10			
4/29	0.22	0.24			
5/6	0.47	0.45	0.15		
5/13	0.73	0.80	0.27		
5/20	1.02	1.01	0.50	0.17	
5/27	1.58	1.67	0.84	0.28	
6/3	1.99	1.97	1.07	0.54	0.18
6/10	2.09	2.00	1.57	1.04	0.26
6/17	2.14	2.31	2.21	1.81	0.60
6/24	2.17	2.20	2.20	2.10	1.15
7/1	2.17	2.12	2.12	2.12	1.66
7/8	2.17	2.19	2.19	2.19	2.09
7/15	2.17	2.17	2.17	2.17	2.17
7/22	2.09	2.09	2.09	2.09	2.09
7/29	2.09	2.09	2.09	2.09	2.09
8/5	2.01	2.01	2.01	2.01	2.01
8/12	1.89	1.89	1.98	1.98	1.98
8/19	1.83	1.83	1.91	1.91	1.91
8/26	1.67	1.67	1.75	1.83	1.83
	<b>30.6</b>	<b>30.8</b>			
9/2	1.44		<b>27.1</b>	1.51	1.66
9/9	1.23			<b>25.8</b>	1.51
9/16	0.90				<b>23.2</b>
		<b>Days to Harvest</b>			
		<b>133</b>	<b>124</b>	<b>117</b>	<b>107</b>
<b>Total</b>	<b>34.2</b>	<b>inches (for 154 day crop)</b>			

It takes about 21 days from flower to a mature pod. Mature pods are yellow and, if cut at that point, the beans will not suffer in size. When timing the last irrigation, be sure the soil profile and the depth of rooting will provide the moisture needed to get the pods to maturity.

### **Corn Stunt**

In some areas of Kings and Tulare counties, by the last half of July this season, corn leafhopper populations were quite high in small, late planted corn. As the season progresses, populations will increase in these young fields both from reproduction within a field and from migration from early planted fields that are drying down and being harvested. It is possible that some of these hoppers are not carrying the stunt-causing organism, but it is likely that at least some of them, if not most, are carrying the corn stunt pathogen because infected plants were observed in some of the early planted fields.

While applying pesticides to these fields will reduce the corn leafhopper populations, the damage may have been done if populations reached high levels prior to application; or due to the sheer numbers and movement of hoppers, it might be that re-infestation will occur on a regular basis. Limited trial work showed some benefit to spraying for leafhoppers if populations were light, but under heavy population pressure one spray resulted in a little benefit. In hindsight, planting an alternative crop such as sorghum, sorghum-sudan, or sudan reduce risk in a year with high levels of cornstunt.

Last year, 2006 was a relatively light year for stunt. In part this can be due to the fact that the spring was cool and wet, reducing the number of generations. In addition, because of the weather, very little

early corn was planted, reducing the sites for reproduction to occur. With plenty of water following the wet winter in 2006, double-crop corn was planted more quickly following the winter forage harvest this year. With the single crop corn planted later due to weather, and the double-crop corn planted more quickly because water was not limiting, not only were the leafhopper populations in general lower but also the double crop corn was fairly tall when the single-crop corn was harvested. The later in its development that a corn plant becomes infected, the less impact corn stunt has on yield and quality. Although some later plantings had significant levels of stunt, the impact was not severe because there were not as many leafhoppers, and infections tended to occur in plants that were more developed than some of the young fields that have been seen to have high leafhopper populations this July.

### **Conservation Tillage Workgroup Newsletter**

The enclosed insert is an invitation from Dr. Jeff Mitchell, a U.C. Extension Specialist, to add your name to the mailing list for his Conservation Tillage Workgroup Newsletter. Dr. Mitchell heads up a very active U.C., grower, and industry workgroup that is conducting research and demonstration projects on conservation tillage. In addition to receiving information regarding conservation tillage, conservation tillage meetings announcements will be sent to the mailing list. There is no cost for this newsletter, and the mailing list is not shared with other groups.



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Carol Frate, Farm Advisor

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