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# PEST MANAGEMENT NEWS

Calhoun, Refugio & Victoria Counties

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## Grain Sorghum and Sugarcane Aphids

One of the insect pests we are expecting to face this year in sorghum fields is the Sugarcane Aphid. A considerable amount of research was conducted on this pest last year to help in management decisions. Early season, insecticide seed treatments were shown to have effective control beyond 28 days after planting.

Control with foliar insecticides will be possible with Sivanto and Transform. Both of these insecticides were found to be effective at controlling sugarcane aphids when applied to populations below 350 per leaf. When populations rise to the point there is excessive amounts of honeydew on the leaf, some trials found the insecticides had problems controlling the aphids. This may be due to the honeydew preventing the insecticide from reaching the leaf surface.

Sivanto has a regular (Section 2ee) label and Transform has received a Section 18 Emergency Exemption for use in 2015.

**Table 1:** Application information from the labels of Sivanto200 SL and Transform® WG:



	<u>Sivanto200 SL</u>	<u>Transform® WG</u>
Use Rate	4-7 oz/A	0.75-1.5 oz/A
Minimum Interval between Applications	7 days	14 days
Minimum Application Volume	10 GPA (ground) 2 GPA (air)	Full coverage by ground 5 GPA (air)
Maximum rate per year	28 oz / A	3.0 oz / A 2 applications / year
Pre-harvest interval	21 days	14 days
Label	<a href="http://www.cdms.net/LDat/lcC4K006.pdf">http://www.cdms.net/LDat/lcC4K006.pdf</a>	<a href="http://www.cdms.net/LDat/lcAM5000.pdf">http://www.cdms.net/LDat/lcAM5000.pdf</a>

Sugarcane Aphid Economic Threshold research conducted by Dr. Mike Brewer showed a preliminary economic threshold for this pest is between **50 and 125 aphids per leaf**. Research done in Louisiana by Dr. David Kerns found similar results. This is a good place to start when making treatment decisions in your sorghum fields.

Nitrogen Fertility and Aphid populations are linked in numerous research papers. In these reports, increased nitrogen fertilizer rates have been associated with increases in aphid numbers. Application of proper rates of nitrogen fertilizer may be a critical tactic for managing the sugarcane aphid. By applying nitrogen fertilizers based on soil testing you may be able to reduce the susceptibility of your sorghum crop to sugarcane aphids.

Sorghum Seeding Rate varies across Calhoun, Refugio and Victoria Counties such that sorghum growers are planting sorghum at seeding rates range from 40,000 to 120,000 seed per acre. In the past three years, growers in each of these counties have asked me to evaluate sorghum populations.

Trials have been conducted in Refugio and Victoria Counties over the past two years. In Refugio County, the trials were conducted in 2013 and 2014 with Walt Franke. The fields were planted to five seeding rates (35,000-75,000 seed per acre). Plant populations were counted and yield was measured. No differences were found in yield of the five populations in sorghum yielding 4000-5000 lbs/A.

The 2014 Victoria County trial was a plant population trial conducted on Kenneth Hanslik's farm. Five plant populations were evaluated ranging from 2-6 plants per foot. This trial was done by planting a high seeding rate and hand thinning the plant populations to 2, 3, 4, 5, and 6 plants per foot soon after emergence. Harvest found a decline in grain yield when plant population was below 4 plants per foot, or 55,000 plants per acre (Table 2).

Annual rainfall and soil type is considerably different from Victoria to Woodsboro and I would expect optimum seeding rates to change between these environments as well.

### **Call me to set a planting rate trial up on your farm. 361-920-1138.**

We can plant and harvest seeding rate trials from the cab of the tractor and harvester without delaying either of these activities.

**Table 2.** Yield comparison of sorghum plant populations in Victoria County.

	<u>Yield (lbs/A)</u>
2 Plants per Foot	3705 c
3 Plants per Foot	4731 b
4 Plants per Foot	5067 a
5 Plants per Foot	5195 a
6 Plants per Foot	5223 a
LSD P=.05	330.72
Standard Deviation	214.66
CV	4.49
Treatment Prob(F)	0.0001

### **Support for the 2015 IPM Program comes from the following:**

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