



Blacklands IPM Update



GENERAL:

Another round of rain halted wheat harvest operations, but was greatly appreciated as the areas corn, cotton, and sorghum acres were getting a little parched. Wheat yield reports are not great but are respectable for the weather we had in the fall and winter. The impact of Hessian fly infestations is starting to be seen as Hessian fly susceptible varieties are yielding less than 40 bushel/acre in most fields. The area's corn crop is just about 100% in the pollination phase, with some fields already in the later part of the blister stage. This last round of rain will greatly help with corn obtaining its potential yield. Most of the cotton in the area is starting to actively square with some of the earliest planted fields already into their second week of squaring. Thrips numbers have been relentless the last few weeks, since our wheat is ready for harvest, and ditches are being shredded or do not have much actively growing plant material. Cotton fleahoppers has moved into area cotton fields that are squaring in high numbers and several fields have been treated this week. Some producers are bailing wheat straw and discussing potentially bailing corn stalks, as due to weather conditions across the state hay supplies will likely be tight later this year. If you are thinking about bailing wheat straw and/or corn stalks, it is highly recommended that you look at the economics of this practice with the amount of nutrients removed per acre and the current prices of fertilizer.

COTTON:

The area's cotton crop is extremely variable with some fields just emerging, to as far along as the second week of squaring. Currently, aphids, fleahoppers, and thrips are causing issues in cotton across the area. The spider mite issues of a few weeks ago have gone away due to rains, beneficial insects, and the most severely infested fields being treated. Aphid populations were starting to grow, but thanks to the recent storms and beneficial insects starting to move into area fields have slowed the growth of the aphid populations. As we continue to scout cotton for thrips and fleahoppers, we need to keep an eye on the development of aphid populations.

Cotton fleahoppers (**Figure 1**) have moved into area cotton fields heavy this week. During scouting earlier this week I was finding fields with fleahopper infestations between 20% and 60% plants infested, and our economic threshold is 10%-15% plants infested. Thankfully, most of the fleahoppers I was finding in cotton this week were adults and had not been in fields long enough for eggs to hatch. Some treatment options for fleahoppers I recommend include a tank mix of acephate at 4 oz/acre and imidacloprid at 2-3 fl oz/acre (depending on formulation), Centric at 1.5 to 2 oz/acre depending on the fleahopper pressure and Transform at 1 oz/acre. All these treatments will provide great control of the cotton fleahopper and provide some level of control of aphids. Another good option for cotton fleahopper management when aphids are present is Sefina at 7 fl oz/acre. This product works good on both fleahoppers and aphids but can be slow to kill the insect even though feeding ceases quickly after exposure. The benefit of Sefina is its residual activity against these insects. Due to the slow knock down of Sefina, it is recommended to tank mix it with 4 oz/acre of acephate, and with this tank mixture you can back Sefina rate down to 3 fl oz/acre and still obtain good residual activity.



Figure 1. Adult cotton fleahopper, photo credit: Salvador Vitanza

BAILING CROP RESIDUES:

It is well known that most of the state of Texas is experiencing some degree of drought, and that hay supplies will likely be tight this fall and winter. During times like these it is not uncommon to see producers bale their crop residues like wheat straw and stalks of both corn and sorghum. With fertilizer prices currently extremely high and showing no promise to drop anytime soon, it is highly recommended to evaluate the economics of the practice between the money made/saved and the cost of replacing the amount of nutrients removed. It is easy to calculate the amount of Nitrogen (N), Phosphorus (P), and Potassium (K) per acre per bushel harvest or ton of silage removed (Table 1). Keeping the crop residue in the field is important in nutrient cycling and the amount of fertilizer needing to be applied to reach your intended yield goal of the next crop. When you leave the crop residue in the field, as it decomposes the nutrients that the plant absorbed during the growing season that was not removed in the grain will become available. For wheat, every bushel of grain removes 1.2 lbs of N, 0.5 lbs of P, and 0.3 lbs of K per acre in the grain, and 0.7 lbs of N, 0.16 lbs of P, and 1.2 lbs of K per acre in the straw. So, a 40 bushel per acre wheat crop will remove roughly 74.5 lbs of N, 25.6 lbs of P, and 60 lbs of K per acre. Corn harvested for grain removes roughly 0.7 lbs of N, 0.4 lbs of P, and 0.31 lbs of K per acre in the grain, and the stalks remove 0.5 lbs of N, 0.2 lbs of P, and 1.1 lbs of K per acre. So, for reference if a field averages 100 bushels per acre, and you bail the corn stalks you are potentially removing roughly 112 lbs of N, 51 lbs of P, and 135 lbs of K per acre. Corn harvested for silage will remove about 10 lbs of N, 3 lbs of P, and 7.3 lbs of K per acre for every ton of silage harvested.

Nutrient	Wheat (per bushel of grain)			Corn (per bushel of grain)			Corn Silage (per ton)
	Grain	Straw	Total	Grain	Stalks	Total	
Nitrogen (N)	1.16	0.70	1.86	0.67	0.45	1.12	9.7
Phosphorus (P)	0.48	0.16	0.64	0.35	0.16	0.51	3.1
Potassium (K)	0.29	1.20	1.49	0.25	1.10	1.35	7.3

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