

Kansas Insect Newsletter

For Agribusinesses, Applicators, Consultants and Extension Personnel



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November 7, 2008 No. 29

Hessian Fly Reported in Far Western Kansas

We received a report of Hessian fly this week from west of Syracuse in Hamilton County. This is a fairly unusual observation for this time of year in far western Kansas. Historically the Hessian fly has been more of a pest in South Central Kansas. This report was even more unusual in that tillers were so heavily infested that they were already beginning to die. Often tillers don't die until later in the winter when they are often misdiagnosed as winter-kill.

Several things have probably combined to favor the Hessian fly increase in this area. First Hessian fly has been on a general increase the last few years based on the fact that few hybrids carry any resistance to the fly and no-till planting practices are increasing its ability to survive. Secondly the area received timely rains in late summer or early fall, which is considered favorable to Hessian fly development. Also the rains spurred early planting and in some cases lead to the planting of continuous wheat to take advantage of the full soil profile. In addition the rains also lead to lots of volunteer wheat, which serves as a good host for Hessian fly. The early rains and mild fall weather probably lead to multiple generations of fly in the area this fall.

Thus, elements have combined to create perfect conditions for Hessian fly to become a problem. Few varieties have any resistance to the fly, no-till planting is allowing better survival of the fly, timely moisture favors the fly and volunteer wheat, early planting increases the chances for wheat to be infested, and continuous wheat also increases the likelihood of having Hessian fly problems.

Not really much one can do at this point except monitor fields and determine if the fly is present. In heavily infested fields some tillers may be dying. In others, the infested tillers may still be green, but the tillers may be stunted with an underdeveloped central shoot and an unusually broad and thickened dark green leaf. To confirm the diagnosis, carefully remove the plant from the soil and look closely for maggots or flaxseeds by gently pulling the leaf sheath away from the stem around the crown area of the plant.

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<p>Hessian fly infested plant on left healthy plant on the right.</p>	<p>Dying Tiller</p>
	
<p>Leaf sheath pulled back to expose Hessian fly pupae.</p>	<p>Hessian fly pupae or "flaxseeds" at base of tiller of heavily infested plant.</p>

Fields with light infestations on a few tillers may not suffer noticeable damage, however heavily infestations on poorly tillered wheat could cause serious stand losses. Fields will need to be monitored throughout the winter to determine the extent of the damage. Tillers that are heavily infested are already dying. Tillers that have only one or two larvae or pupae will likely die later this winter. Fields most likely to be infested are continuous no-till wheat and wheat planted near rank volunteer wheat.

The real concern in regard to fields that are infested, but survive the winter with adequate stands is: Will they suffer lodging from Hessian fly prior to harvest? Predicting what will happen next spring is hard to do. The severity of next spring's generation will depend on weather conditions. If 10-20% of the tillers are infested with larvae or pupae at levels of 4 per tiller, you could expect a heavy spring infestation, but if weather is hot and dry then damage could be minimal.

While it is too early to tell exactly what is going to happen and how widespread the problem is at this point it is a wake-up call that Hessian fly populations are on the increase and may need to become more of a factor in determining planting decisions.

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Sincerely,

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