

Hessian Fly Poised for an Attack

AGRI-VIEWS

by Chuck Otte, Geary County Extension Agent

Legend has it that when Hessian soldiers came to the New Colonies to help the British in the Revolutionary War, they brought with them bedding stuffed with wheat straw. Within that wheat straw were the dormant pupae of a little fly or midge now called the Hessian Fly. Once that straw bedding was in the country and the adult flies emerged from those pupae, it didn't take long for a new pest of wheat to get well established. Hessian Fly is a serious threat to wheat production but it is often overlooked, the damage being attributed to other problems.

Hessian Fly is a tiny little fly that we should more appropriately call a midge. They are about 1/8 of an inch long and if you do see them flying around, you'd think they were just a gnat or maybe even a mosquito. They fly, but they aren't strong fliers. They are most likely to stay within a mile of where they emerged as an adult. They may fly to adjacent fields to lay eggs but unless they are caught in a strong wind, and don't die in the process, they aren't going to fly miles and miles.

The adult female Hessian Fly looks for a suitable host to lay eggs. She is going to be most attracted to young small wheat plants. While they can live on a few other species of grass, they don't thrive except on wheat. The adults normally emerge from their pupae in September and the females start looking for wheat where they can lay eggs. If there are no hosts to lay eggs on, the cycle is broken or population numbers greatly reduced. If there is volunteer wheat growing or early planted wheat emerging however, she will lay a lot of eggs and the cycle continues. We recommend, for many reasons, not planting wheat until after about October 6th, but in recent years we have found that there are still Hessian Fly active into November and sometimes even early December.

The fall laid eggs hatch and the small Hessian Fly larvae work their way down between the leaf sheath and the stem of the wheat plant and then feed on the juices of the plant. Heavy feeding damage can cause the tillers of the wheat plant to die. Before the winter sets in, the larvae pupate and spend the winter as a pupae. This pupae is often called the flax seed stage as the pupae looks like a flax seed. The fall feeding damage often won't be noticed until spring time when only part of the plant greens up. If this happens, many producers will just assume that they are seeing winter kill from cold temperatures.

These overwintering pupae emerge as adults about now and the next generation will get started feeding on developing tillers. Again, this feeding damage can cause dead tillers which break over before harvest. This damage will look like a hail storm came through and again it can be easily overlooked.

At this point there's nothing that can really be done other than to identify that there is a Hessian Fly problem. This summer, post harvest, volunteer wheat must be controlled, especially during that critical two week pre-planting period. Avoid planting wheat in September or very early October. When possible use a Hessian Fly resistant wheat variety. Insecticidal seed treatments may offer some hope, but we need more research on that.

Hessian Fly has been around a long time and many wheat producers think it is a pest of the past. Unfortunately it isn't and we are seeing more and more evidence of it each year. Producers need to be scouting wheat fields now, identifying where they have a problem and then take management steps to break the cycle.