

## STINK BUGS AS AN EMERGING THREAT TO CROP PRODUCTION: OVERVIEW OF THEIR BIOLOGY, IMPACTS AND MANAGEMENT

Robert Koch <sup>1/</sup>

Stink bugs are emerging as a new threat to crop production in the region. An invasive species, the brown marmorated stink bug, is spreading through the region. In addition, reports from several states indicate that the abundance of native stink bugs may also be increasing. Because stink bugs have historically been infrequent pests in northern states, many growers and consultants have little experience managing these pests.

About 50 species of stink bugs occur in the north central U.S. Some of these species are beneficial and some have little or no impact on crops. However, several species (brown marmorated stink bug, one-spotted stink bug, brown stink bug, green stink bug, and red-shouldered stink bug) are of increasing concern in the region.

In general, stink bug adults have shield-shaped bodies, 5-segmented antennae and piercing sucking mouth part. Eggs are barrel-shaped and often laid under leaves. Nymphs are smaller in size and have a more rounded shape than adults. In addition, nymphs have no wings or small undeveloped wings. Identification of the species of concern will be discussed.

Most species of stink bugs undergo 1 to 2 generations per year. Among the plant-feeding species, many feed on various crop and wild plants. Most of these species overwinter as adults under leaf litter, crop debris or loose bark; but, some are household invaders.

Stink bugs penetrate plant tissues with their piercing-sucking mouthparts, inject digestive enzymes, and remove nutrients. They generally prefer to feed on reproductive tissues of plants. In soybean, stink bugs feed on pods and developing seeds. In corn, stink bugs will feed on developing ears and kernels, but can also be problematic feeding on corn seedlings. Feeding by stink bugs can cause abortion, deformation, and discoloration of seeds/kernels, which can affect yield and quality. In soybean, feeding can also cause delayed plant maturity (“stay-green syndrome”). Scouting and management recommendations for stink bugs in soybean and corn will be discussed.

---

<sup>1/</sup> Assistant Professor and Extension Entomologist, University of Minnesota.