Statewide Insect Pest Survey in Soybeans

Personnel: Bill Cissel, Extension IPM Agent
Joanne Whalen, Extension IPM Specialist

Objectives:

1. Establish a statewide monitoring system for soybean insect pests to alert producers in a timely manner of potential pest infestations to help prevent economic losses.

2. Detect new potential invasive pests, such as the Kudzu bug, to alert growers of occurrence and distribution.

3. Use statewide monitoring to identify fields where replicated research and extension demonstrations can be conducted on recently developed and new insect management strategies.

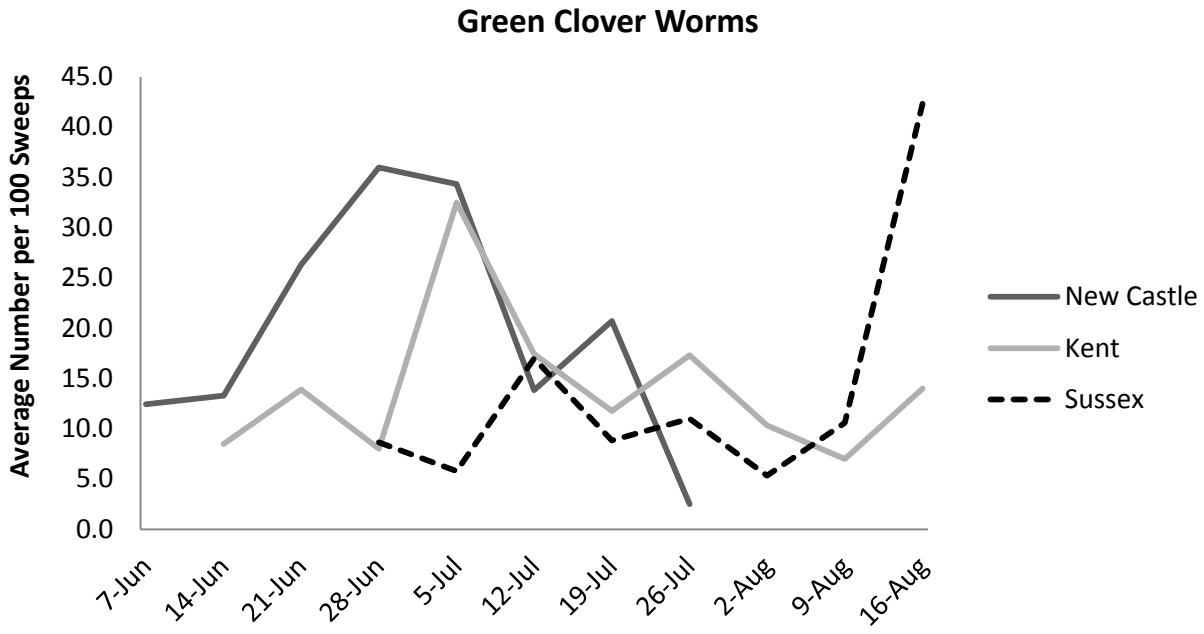
Procedures:

Approximately 75 soybean fields, both full season and double crop, were sampled on a weekly basis from crop emergence through late August to monitor insect pest populations. Each field included in the survey was sampled by performing ten sweeps with a sweep net and visually inspecting five leaves in ten random locations throughout each field. The sampling results provided current information about the distribution of insect pests in Delaware soybean fields. This information was reported in fifteen issues of the University of Delaware's Weekly Crop Update, providing timely information on potential pest outbreaks and control options. The University of Delaware's Weekly Crop Update is published online at http://extension.udel.edu/weeklycropupdate/.

This Project was Funded by the Delaware Soybean Board

Results:

Seasonal Insect Pest Distribution and Abundance in Full Season Soybeans



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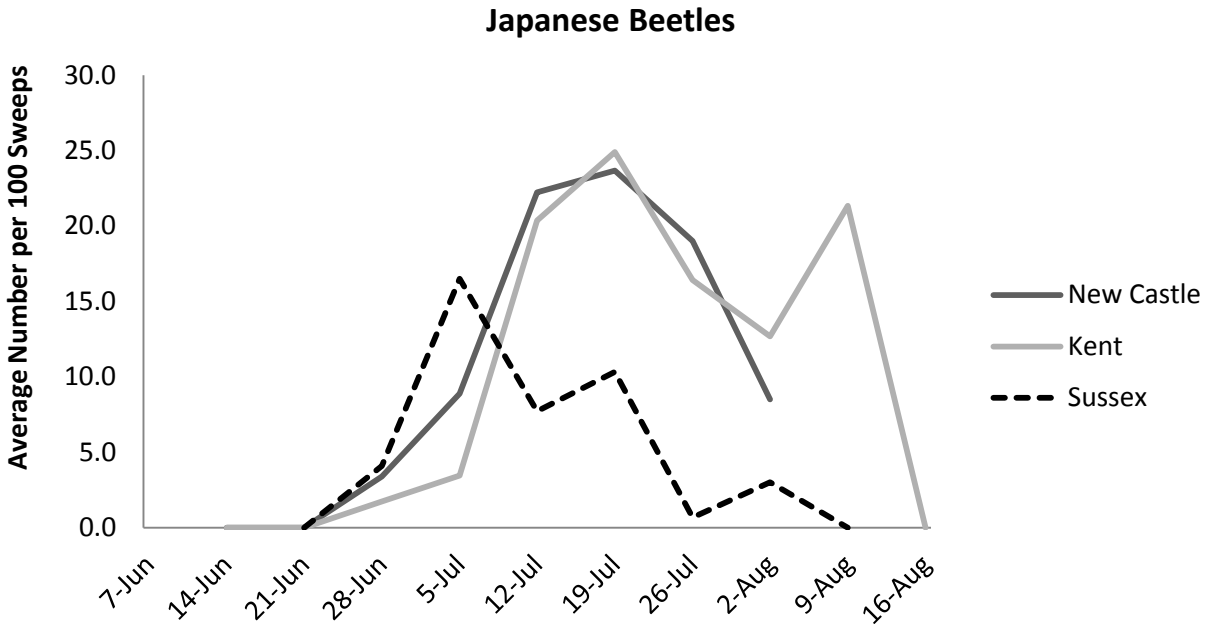

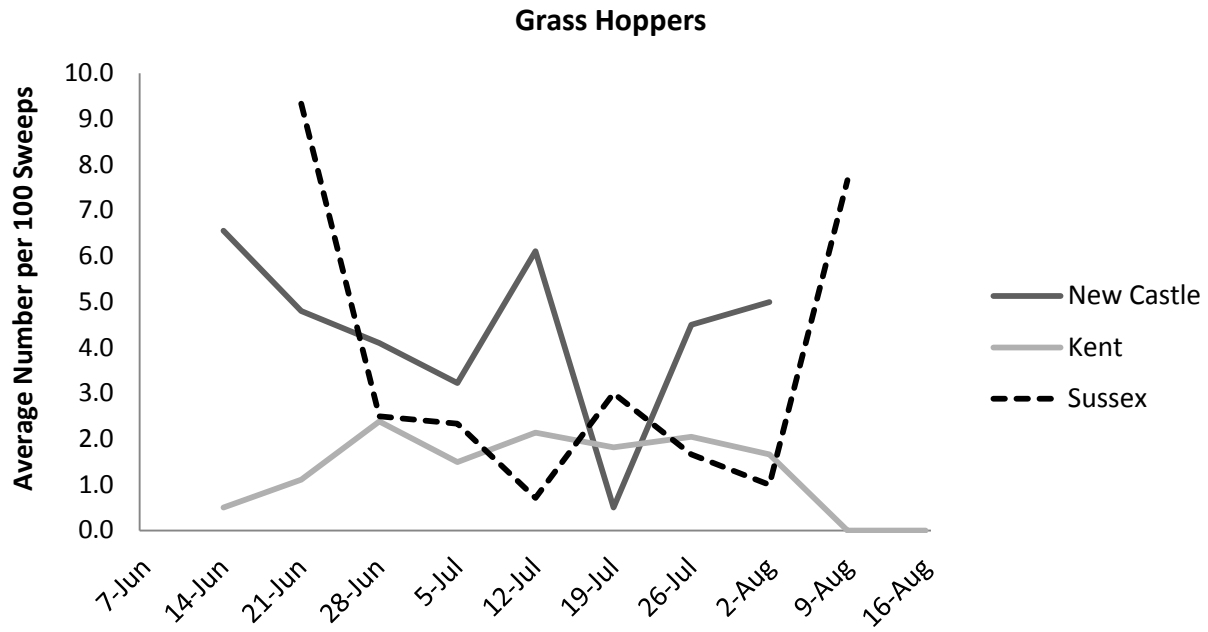

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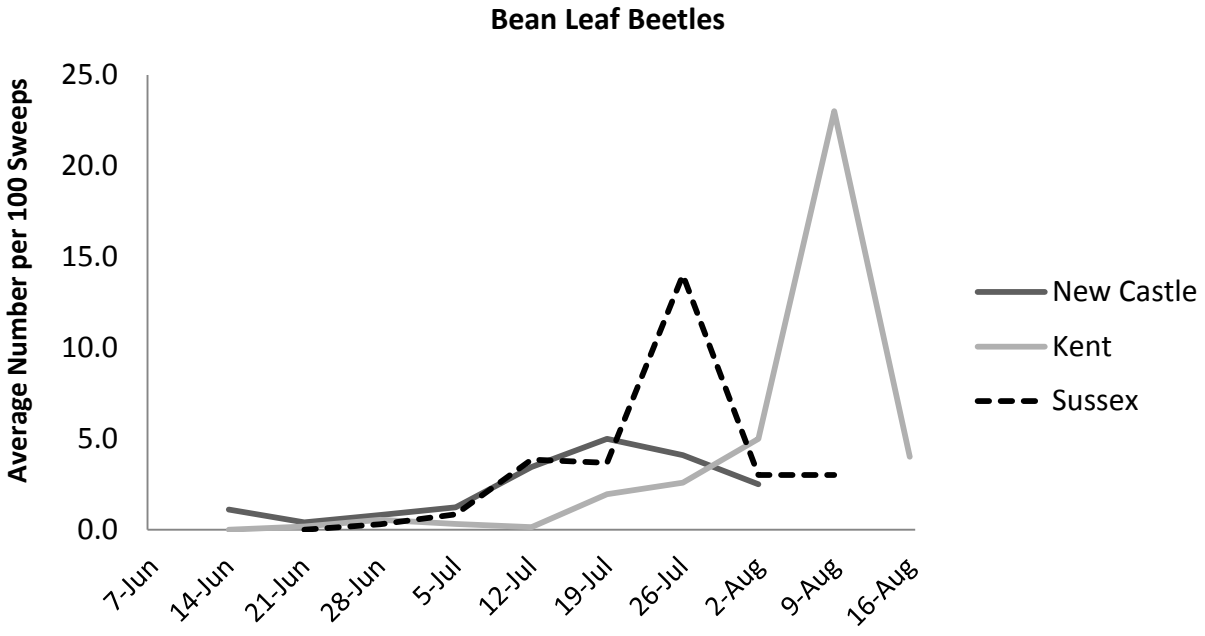

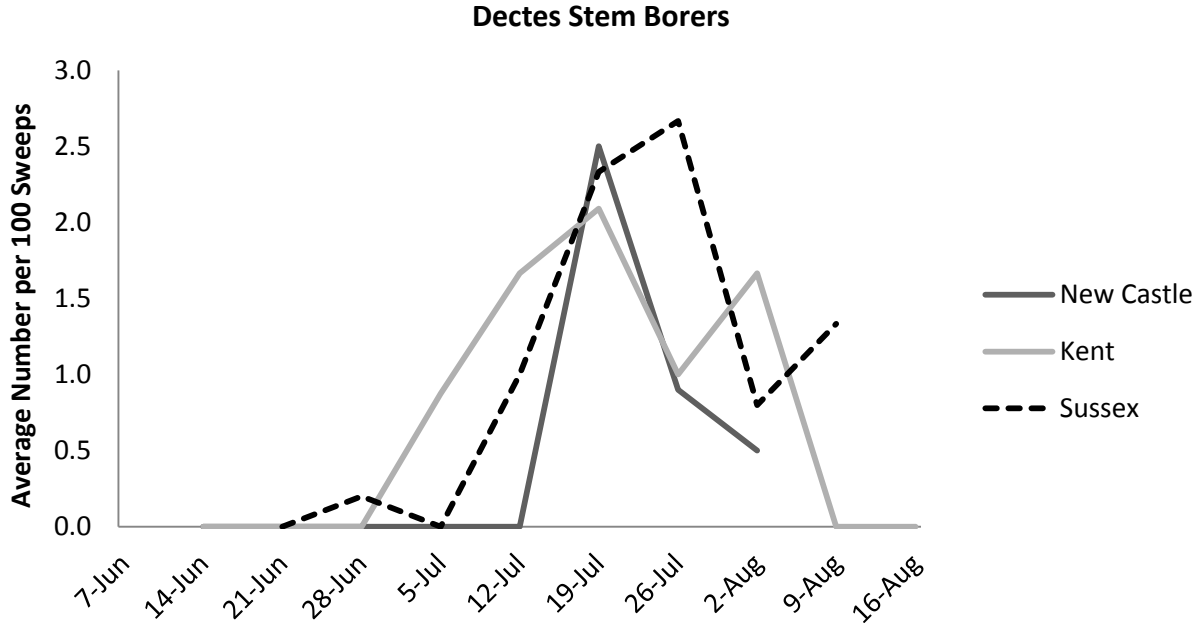

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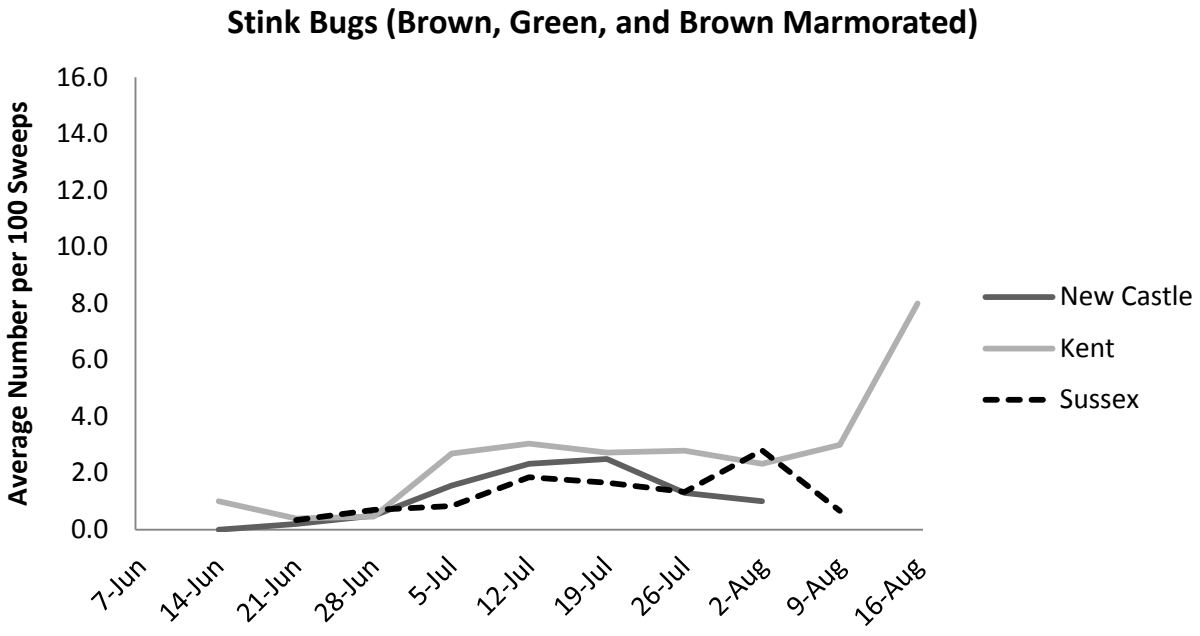

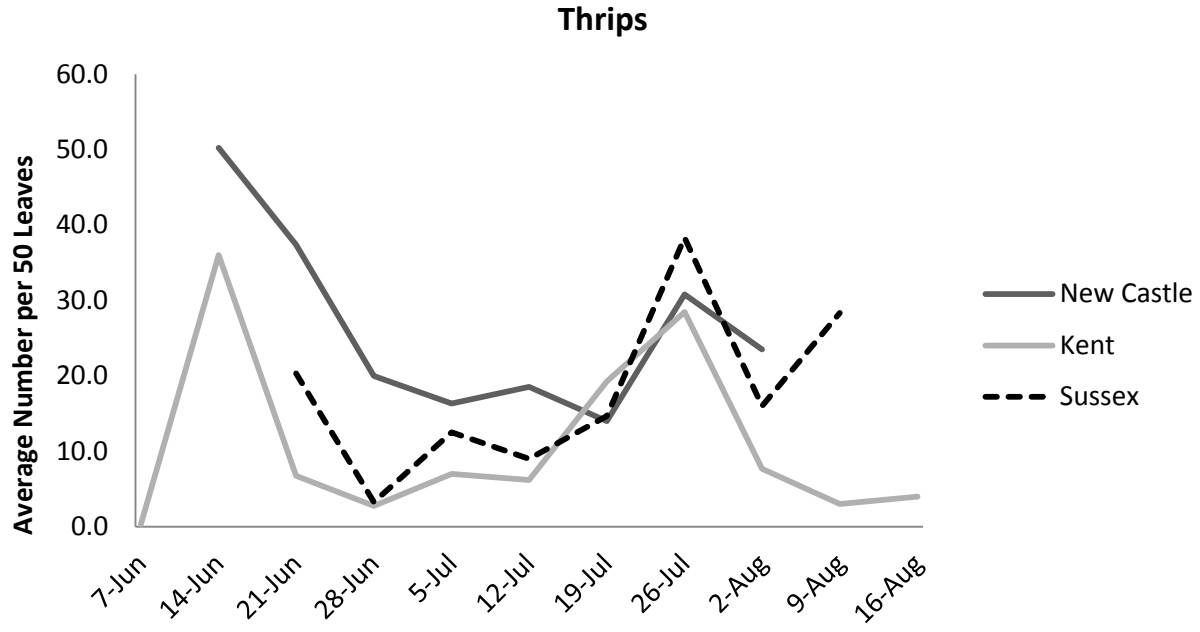

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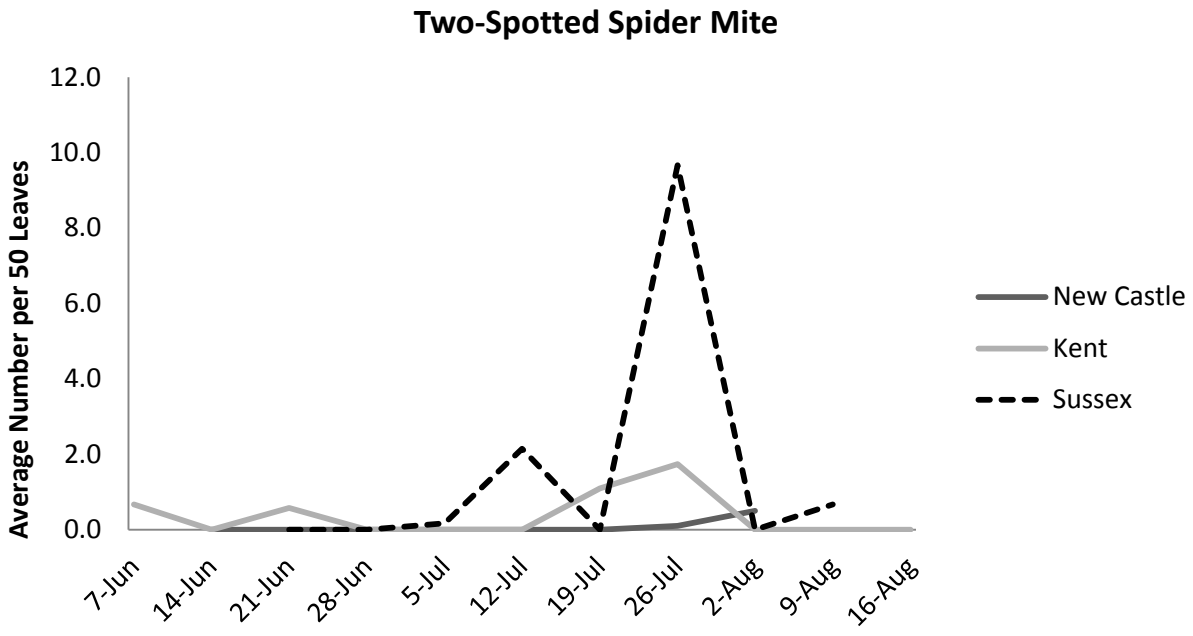

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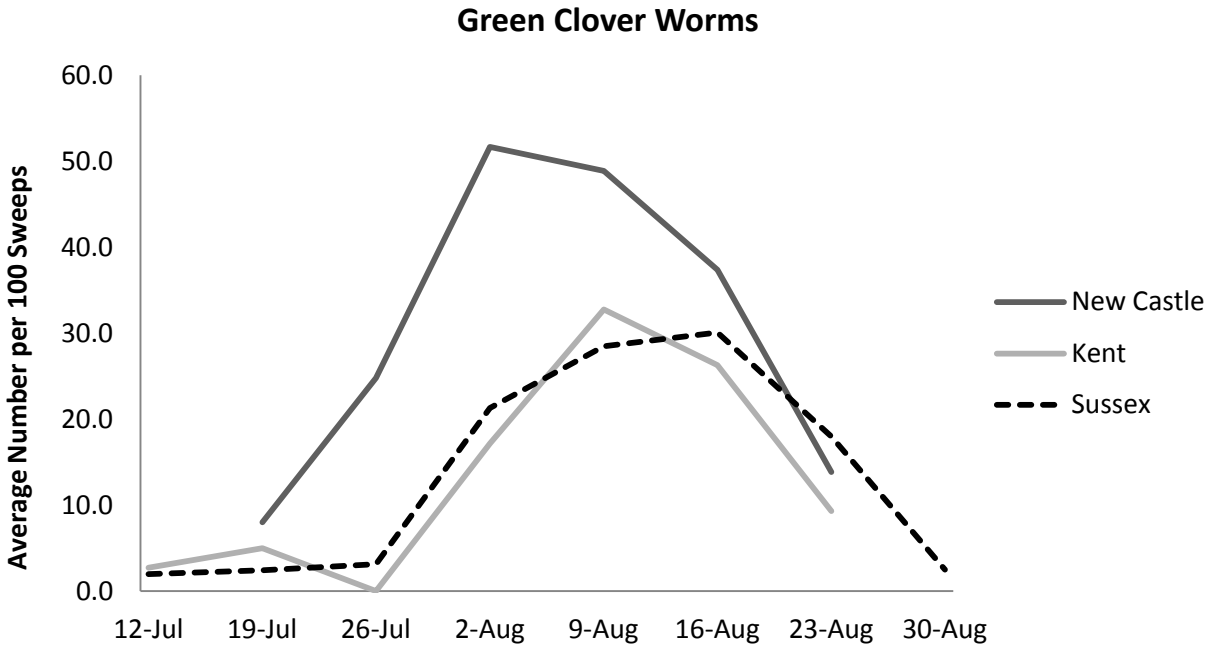
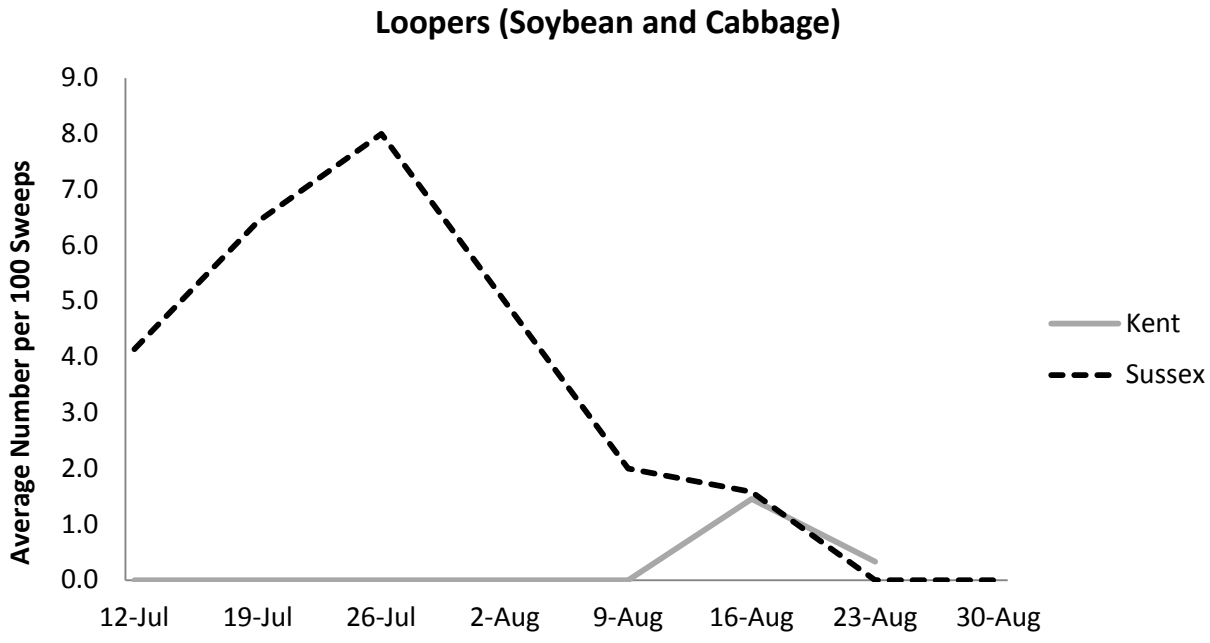
Seasonal Insect Pest Distribution and Abundance in Double Crop Season Soybeans





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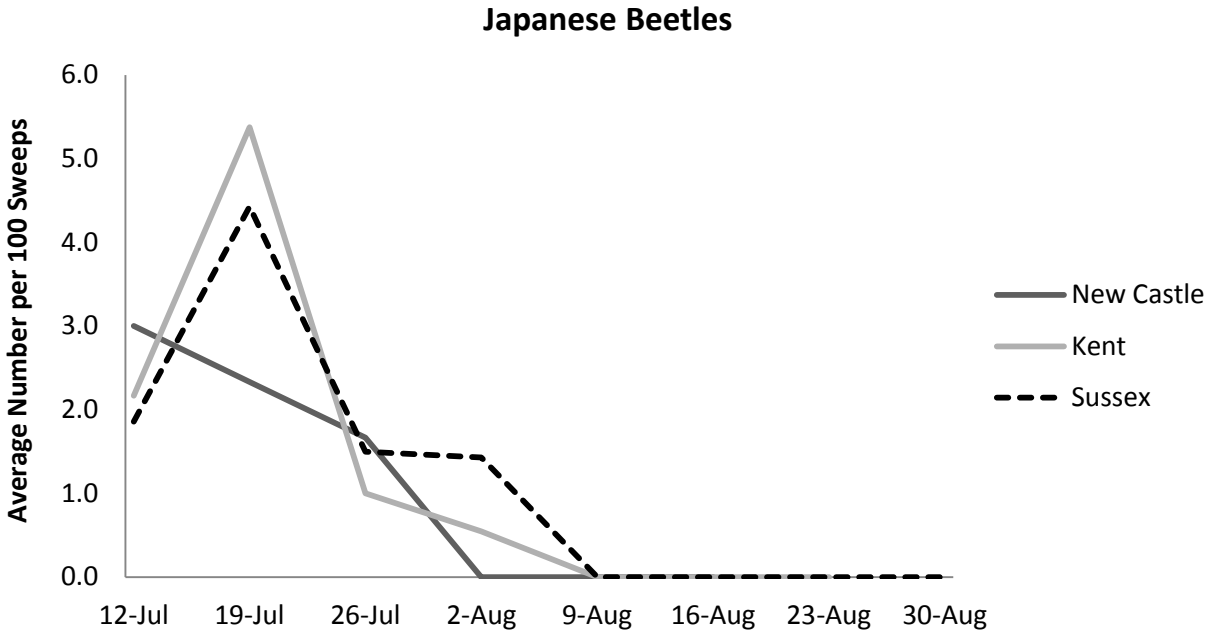

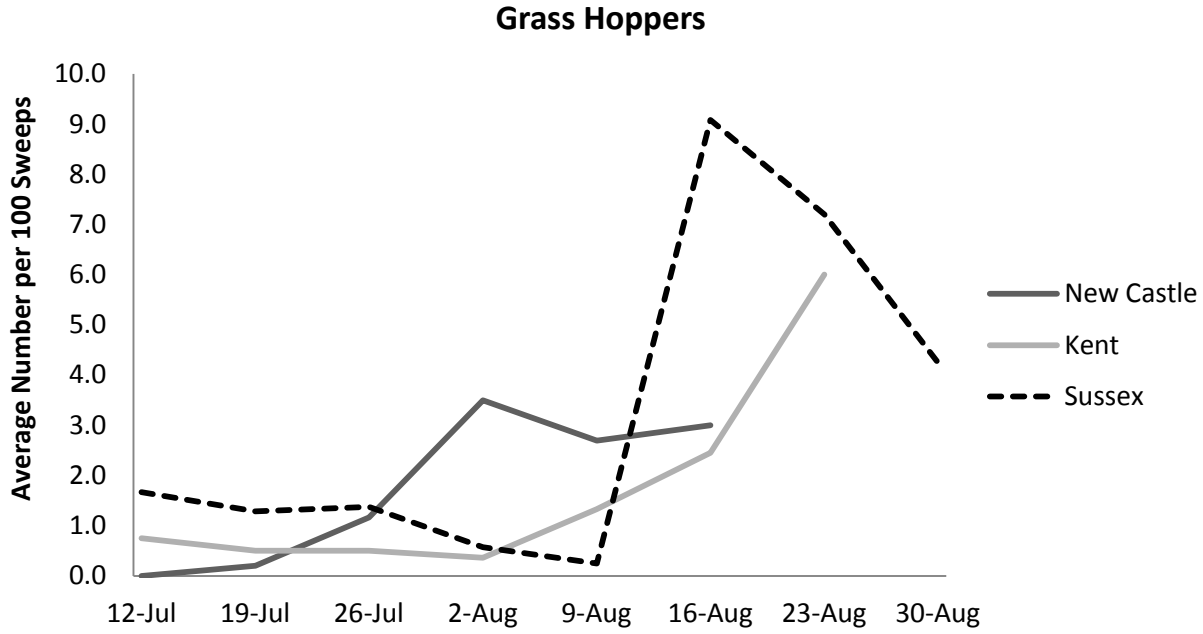

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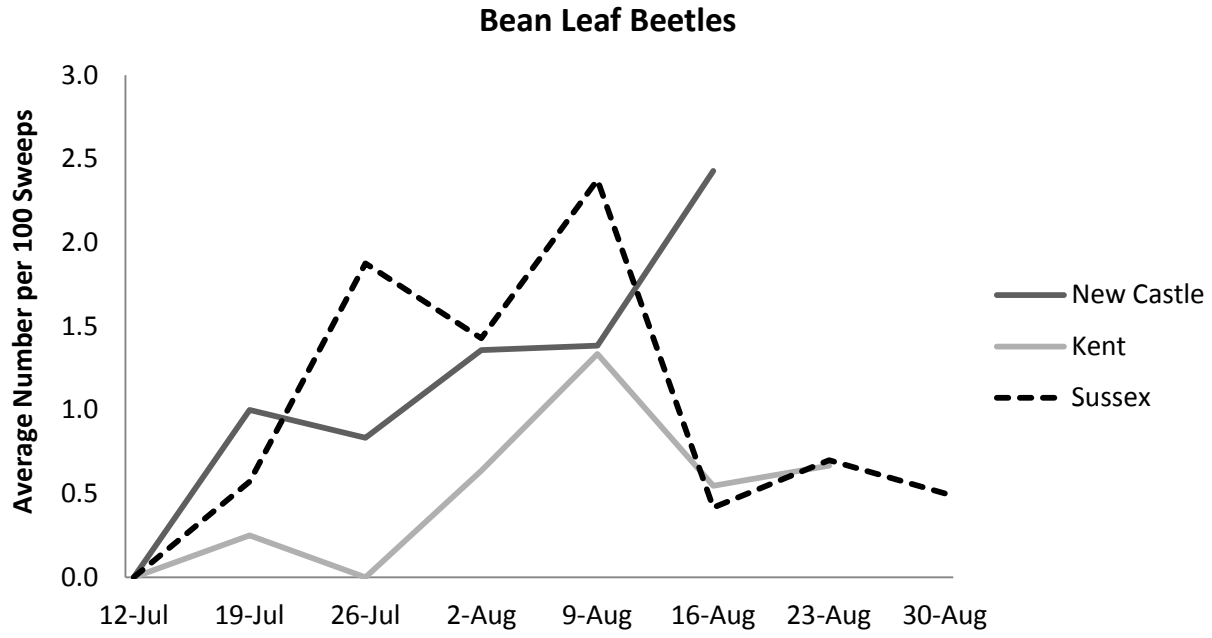

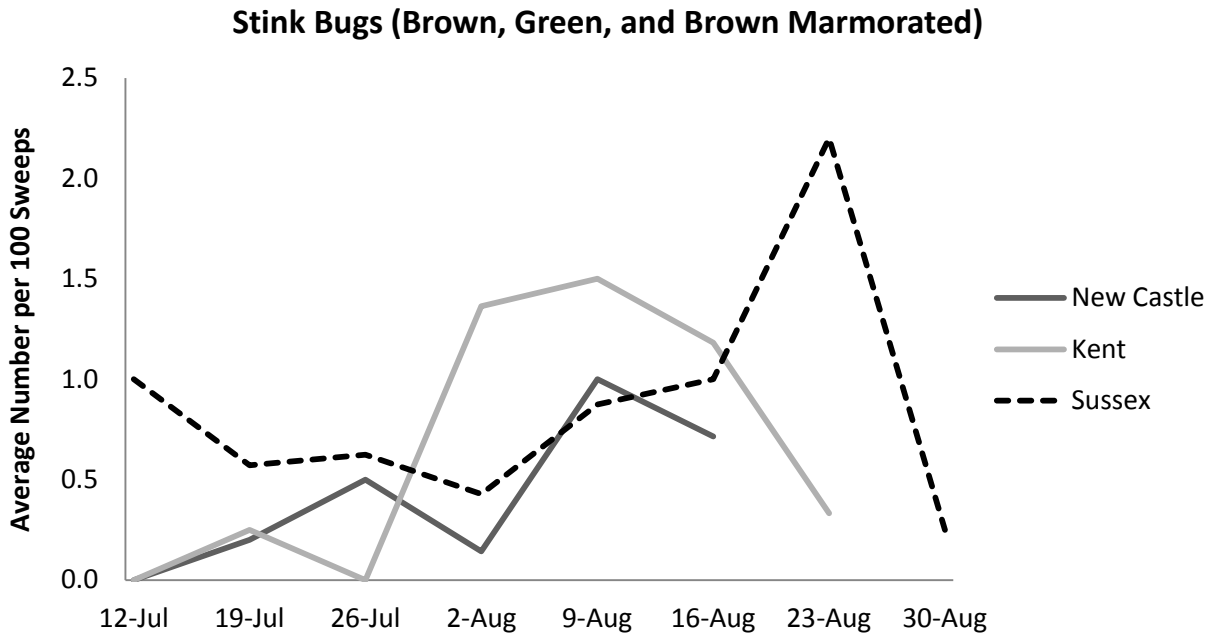

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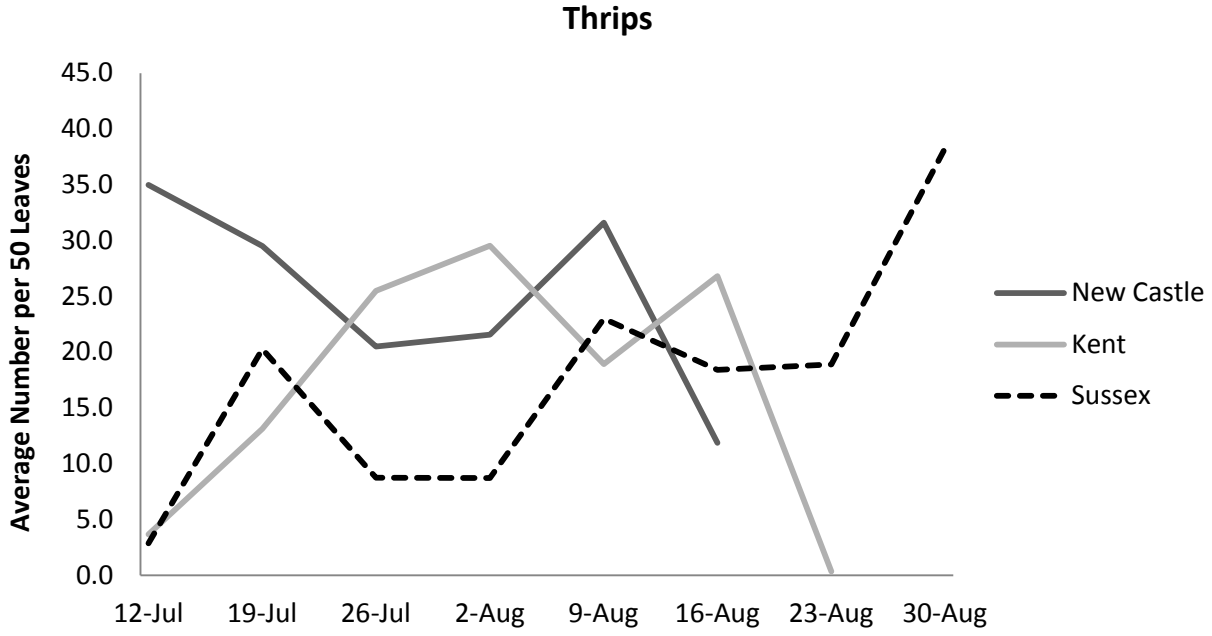

Comments:

Overall, insect pest pressure was relatively low this year, however; some fields experienced higher levels of defoliating insect pests compared to recent years including silver spotted skipper, Japanese beetles, green clover worms, and soybean loopers. Corn earworm pressure was light; however two double crop fields did reaching economic threshold levels in Sussex County in August. Stink bug infestations, including the native brown and green stink bug and the invasive brown marmorated stink bug were generally low compared to past seasons. At the end of the survey season, we did see a slight increase in green stink bug populations in an occasional full season soybean field in Sussex County. All populations were below the economic threshold level of 5 stink bugs per 15 sweeps and this increase occurred after the R-6 stage of plant development therefore, no economic losses occurred. It should be noted that there were a number of reports of delayed senescence (stay green) in soybean fields not included in the survey; however, the pattern of the stay-green could not be attributed to stink bug feeding. It was concluded that it was the result of alternating dry and wet weather in August. The kudzu bug was not detected in any soybean fields in 2015. Although there is no threshold established for Dectes stem borer adults, we did work with one producer to once again evaluate if foliar insecticide applications could provide a reduction in lodging losses from Dectes stem borer. The fields in this on farm demonstration were disked in the spring before planting and two applications of an insecticide were applied in July, 7 days between applications. Although this strategy has not resulted in significant reductions in stem lodging in past years, we did have some success this season so we hope to evaluate this strategy on an area wide level in 2016.

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