Florida Tech's 4-tiered IPM Approach (based on EPA guidelines)

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Reviewed March 3, 2022 by Kirk Hemphill, Director of Facilities Maintenance

1. Set action thresholds

Before taking any pest control action, we set an action threshold (a point at which pest populations or environmental conditions indicate pest control action must be taken). Sighting a single pest does not always mean control is needed. The level at which pests will become an economic or environmental threat is critical for guiding future pest control decisions.

2. Monitor and identify pests

We have implemented a Zone Maintenance Approach, wherein each Grounds crew member has a specific area of the university assigned to them. Each person monitors their respective zone monthly for pests and identify them accurately (call University Horticulturist or another crew member for assistance as needed) so appropriate control decisions can be made in conjunction with action thresholds. If we identify an issue, we initially treat with an organic control (specified for the issue) and monitor the area for results. We reexamine the area to determine if a second application may be necessary. This monitoring and identification remove the possibility that pesticides will be used when they are not really needed or that the wrong kind of pesticide will be used. Chemical pesticides are to be used only when they are absolutely justified and during certain times of the day (essentially as dictated by student traffic). In the botanical garden, specific chemicals are completely restricted, and NO chemicals are used in the butterfly garden.

3. Prevent pests from becoming a threat

IPM programs prevent pests from becoming a threat. We seek out disease and insect resistant cultivars of turf and ornamentals. These control methods can be very effective and cost-efficient, and present little to no risk to people or the environment.

4. Control

Once monitoring, identification and action thresholds indicate that pest control is required, and preventative methods are no longer effective or available, find the most effective control method that presents the least risk to the environment and human health. Such methods include:

- Highly targeted chemicals such as pheromones that disrupt pest mating
- Mechanical controls such as trapping or weeding
- Ecologically minded organic turf fertilizers that encourage strong turf root systems and therefore promote turf that can resist climactic issues and rebound easier from pest issues.

If further monitoring, identification and action thresholds indicate that less risky controls are not working, we employ additional pest control methods such as targeted spraying of pesticides. The general spraying of nonspecific pesticides is a last resort.