TIMING AND SAFETY ISSUES REGARDING SUCCESSFUL INSECTICIDE APPLICATIONS Terry Davis Department of Entomology Michigan State University

Chemical control strategies are often applied in situations in which they are not needed and are not safe to the users of the turf area. Sometimes the chemical applied or the time it is applied is inappropriate for controlling the target pest. An understanding of the insect pests and the type and appearance of damage caused by them is important in selecting the best control strategy available. Equally important is the understanding of the activity, toxicity and other properties of each of the 18 chemical tools available to turf managers to control insect pest problems.

All insecticides are poisons and must be treated with respect to avoid harming non-target organisms such as birds, fish, pets or your client. Any chemical control will have wide ranging impacts other than the desired suppression of the particular pest that you may intend to control. Chemical applications should not be used in a preventive mode without the existance of a historical pest problem. Control measures should only be utilized to treat a particular insect when the population of the insect has increased to truly become a pest problem.

Once a problem has been identified, it is advisable to explore a number of strategies with the client so that they will understand what will or will not happen with each proposed strategy. In making a decision for a chemical application three critical issues should be considered:

- 1) Is the seasonal timing correct to make contact with the pest in a susceptible life stage?
- 2) How efficacious is the chemical on the particular pest?
- 3) What choices are available that will minimize damage to non-target organisms and the turf ecosystem, but will still provide a satisfactory level of control?

Follow-up is important after initiating pest control measures to insure the control strategies accomplish the objectives. Handouts listing the potential insect pests and chemical control strategies will be available on the day of the presentation.