



Lesson 4: Timing of Pesticide Application

Does the timing of pesticide applications change the effectiveness of the pesticide? Is it more effective to apply a pesticide at planting, or during the growth cycle?

Doing the Science

1. Start the Crop Protection Simulation by clicking on the “Sim” tab.
2. Click on the “Warning” Box, and record the identified pest in Table 1 below, then record the preferred pesticide for the pest. Click on the clip board to close the clipboard.
3. Click on the “Choose Defense” button.
4. Choose the pesticide according to the preferred pesticide for the pest, and choose either “Liquid” or “Granular” application. Record the pesticide and application in Table 1 below.
5. Click on the red “Done” button to close the clipboard.
6. Click on the “Submit” button. You have now applied the pesticide control at planting.
7. Click on the “Choose Defense” button, and unclick the pesticide, so no pesticide or biological controls are chosen. Click the red “Done” button to close the clipboard.
8. Click the “Submit” button. No biological controls or pesticides have been applied in the 1st Growth Cycle.
9. Repeat steps 7 and 8 for the remaining cycles.
10. Click on the “History” file cabinet. Record your data in Table 1 below. Each color represents a Cycle: Planting, Stage 1 Growth, Stage 2 Growth, and Preharvest.
11. Click the “Reset” button until the same pest listed in Table 1 appears.
12. Click on the “Choose Defense” button, and unclick the pesticide so no pesticide is chosen, and click on the red “Done” button to close the clip board.
13. Click on the “Submit” button. No pesticide has been applied at planting.
14. Repeat steps 4-5 above, and click on the “Submit” button. Pesticide will then be applied in Growth Stage 1.
15. Continue the trial, applying the pesticide only during the appropriate growth cycle. Be sure to unclick the pesticide for the other growth cycles.
16. After completing the trial, click on the “History” file cabinet. Record the data in Table 1 below.

Table 1.

	Crop Field Size	Insect Population	Pesticide Detection	Crop Quality
Pest:				
Pesticide:				
Application:				
Planting				
Growth Stage 1				
Growth Stage 2				
Preharvest				

Do You Understand?

1. When is the most effective time to apply pesticide?
2. Why is timing important for pesticide application?