

Virtual Lab: Dependent and Independent Variables Worksheet

1. ECB refers to:
 - a. A genetically engineered plant that is resistant to insect pests
 - b. Edible corn byproducts
 - c. An insect pest that reduces corn yield
 - d. European corn borer

1. State the problem

2. What was the hypothesis?

3. How was the hypothesis tested?

4. Should the hypothesis be supported or rejected based on the experiment?

5. What should be the new hypothesis?

How Penicillin Was Discovered

In 1928, Sir Alexander Fleming was studying *Staphylococcus* bacteria growing in culture dishes. He noticed that a mold called *Penicillium* was also growing in some of the dishes. A clear area existed around the mold because all the bacteria that had grown in this area had died. In the culture dishes without the mold, no clear areas were present. Fleming hypothesized that the mold must be producing a chemical that killed the bacteria. He decided to isolate this substance and name it penicillin. Fleming then added the mold to a nutrient broth solution. This solution contained all the materials the mold needed to grow. After the mold grew, he removed it from the nutrient broth. Fleming then added the nutrient broth in which the mold had grown to a culture of bacteria. He observed that the bacteria died.

6. Identify the problem.

7. What was Fleming's hypothesis?

8. How was the hypothesis tested?

9. Should the hypothesis be supported or rejected based on the experiment?

10. This experiment led to the development of what major medical advancement?