

Instructions

You are a tobacco farmer. The average yield per acre in South Carolina is 2000 pounds per acre. The average number of plants per acre is 6000. The average price, across all grades, is \$1.70 per pound. Average inputs (excluding foliar insect sprays) is \$2400 per acre.

Hornworms are a major pest of tobacco in South Carolina. Left untreated, the “average” hornworm consumes about 0.333 pounds of tobacco during its life cycle, which is about 21 days in the feeding stage.

Hornworms can be controlled with a foliar spray of Orthene insecticide. The cost per treatment, including both materials and application costs is approximately \$10 per acre.

Fields A and B are each one acre of tobacco. Each field is scouted weekly for insects and on May 14, June 11 and July 9 where on each occasion it is found that each field has a 10% infestation of hornworms. Field A is treated on each occasion with Orthene. Field B is not treated. Given the above circumstances, determine:

	<u>A</u>	<u>B</u>
The yield for each Field:	<u>2000 lbs</u>	<u>1457 lbs</u>
The inputs for each field	<u>\$2430</u>	<u>\$2400</u>
The income from each field:	<u>\$3400</u>	<u>\$2477</u>
The profit for each field:	<u>\$970</u>	<u>\$77</u>