

Farm Business Management: The Fundamentals of Good Practice

Chapter 2: A Synopsis of Production Economics

Questions

- Given the information below, what is the optimal level of insecticide to maximize crop profit?

| Insecticide level | Average product (kg) | Marginal cost (\$) | Marginal return (\$) |
|-------------------|----------------------|--------------------|----------------------|
| 1 | 2000 | 20 | 40 |
| 2 | 2300 | 20 | 28 |
| 3 | 2500 | 20 | 20 |
| 4 | 2400 | 20 | 16 |

- What is the profit-maximizing level of wheat, wool and clover given the following data?

| Wheat (t) | Clover (t) | Wool (t) | Marginal value product (\$) | | |
|-----------|------------|----------|-----------------------------|--------|------|
| | | | Wheat | Clover | Wool |
| 600 | 0 | 0 | 100 | 500 | 350 |
| 500 | 6 | 1.5 | 150 | 440 | 340 |
| 400 | 11 | 2.8 | 210 | 370 | 325 |
| 300 | 15 | 4.0 | 300 | 300 | 300 |
| 200 | 18 | 5.1 | 380 | 240 | 225 |
| 100 | 20 | 6.0 | 450 | 200 | 150 |

- Complete the following table of data from a fertilizer trial. The price of the product is \$2 per unit, and the cost of fertilizer \$10 per unit.

| Fertilizer input | Yield of product | Marginal product | Marginal return | Marginal cost |
|------------------|------------------|------------------|-----------------|---------------|
| 0 | 2000 | | | |
| 20 | 2500 | | | |
| 40 | 2800 | | | |
| 60 | 2900 | | | |
| 80 | 2950 | | | |