**Chapter 22 Alternate Demo Problem**

**Jack and Susan Roberts own a farm that produces potatoes. Based on a review of the income statement shown below, Jack remarked that they should have fed the No. 3 potatoes to the pigs; then they would have avoided the loss from the sale of the those potatoes.**

**JACK AND SUSAN ROBERTS**

**Income from the Production and Sale of Potatoes**

**For Year Ended December 31, 20xx**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Results by Grade** | | | |
|  | **No. 1** | **No. 2** | **No. 3** | **Combined** |
| **Sales by grades:** |  |  |  |  |
| **No. 1, 300,000 lbs. $0.045 per lb.** | **$13,500** |  |  |  |
| **No. 2, 500,000 lbs. $0.04 per lb.** |  | **$20,000** |  |  |
| **No. 3, 200,000 lbs. $0.03 per lb.** |  |  | **$6,000** |  |
| **Combined sales:** |  |  |  | **$39,500** |
| **Costs:** |  |  |  |  |
| **Land preparation, seed,  planting, cultivating @ $0.01422/lb.** | **4,266** | **7,110** | **2,844** | **14,220** |
| **Harvesting, sorting, grading** |  |  |  |  |
| **@ $0.01185 per lb.** | **3,555** | **5,925** | **2,370** | **11,850** |
| **Marketing @ $0.00415 per lb.** | **1,245** | **2,075** | **830** | **4,150** |
| **Total costs** | **9,066** | **15,110** | **6,044** | **30,220** |
| **Income (or loss)** | **$4,434** | **$4,890** | **($44)** | **$9,280** |

**Jack and Susan divided their costs among the grades on a per pound basis, because their records do not show cost per grade. However, their records did show that $4,020 of the $4,150 of marketing costs represented the cost of placing the No. 1 and No. 2 potatoes in bags and hauling them to the warehouse of the produce buyer. Bagging and hauling costs were the same for both grades. The remaining $130 represented the cost of loading the No. 3 potatoes into the trucks of the potato starch factory that bought these potatoes in bulk and picked them up at the farm.**

***Required:***

**Prepare a departmental income statement to show the results of producing and marketing each of the potatoe grades.**

**Chapter 22 Alternate Demo Problem: Solution**

**JACK AND SUSAN ROBERTS**

**Income from the Production and Sale of Potatoes**

**For Year Ended December 31, 20xx**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Results by Grade** | | | |
|  | **No. 1** | **No. 2** | **No. 3** | **Combined** |
| **Revenue from sales:** | **$13,500** | **$20,000** | **$6,000** | **$39,500** |
| **Costs:** |  |  |  |  |
| **Land preparation, seed,** |  |  |  |  |
| **planting, cultivating** | **4,860** | **7,200** | **2,160** | **14,220** |
| **Harvesting, sorting, grading** | **4,050** | **6,000** | **1,800** | **11,850** |
| **Marketing** | **1,620** | **2,400** | **130** | **4,150** |
| **Total costs** | **10,530** | **15,600** | **4,090** | **30,220** |
| **Income** | **$2,970** | **$4,400** | **$1,910** | **$9,280** |

**COST ALLOCATIONS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Land preparation, seed, planting, and cultivating: No. 1: $13,500 / $39,500 x $14,220 =**  **No. 2: $20,000 / $39,500 x $14,220 = No. 3: $ 6,000 / $39,500 x $14,220 =** | **$ 4,860  7,200  2,160** |  |  |  |
|  | **$14,220** |  |  |  |
| **Harvesting, sorting, and grading:  No. 1: $13,500 / $39,500 x $11,850 =   No. 2: $20,000 / $39,500 x $11,850 =  No. 3: $ 6,000 / $39,500 x $11,850 =** | **$ 4,050 6,000 1,800** |  |  |  |
|  | **$11,850** |  |  |  |
| **Marketing:  No. 1: $13,500 / $33,500 x $4,020 =  No. 2: $20,000 / $33,500 x $4,020 =** | **$1,620 2,400** |  |  |  |
| **Subtotal bagging and hauling costs** | **4,020** |  |  |  |
| **No. 3: Loading costs** | **130** |  |  |  |
|  | **$4,150** |  |  |  |