

# BUDGET--For Event Use Only--Page 1

State Number: \_\_\_\_\_ State Name: \_\_\_\_\_

**Fertility Costs:** Round All Numbers to Two Decimal Places at Each Step

**Question 1.** What is the recommended amount of N, P2O5, and K2O needed preplant broadcast for each field?

| Hodges Field |    |         |
|--------------|----|---------|
| N            | 30 | lb/acre |
| P2O5         | 45 | lb/acre |
| K2O          | 45 | lb/acre |

| Peterson Field |    |         |
|----------------|----|---------|
| N              | 30 | lb/acre |
| P2O5           | 45 | lb/acre |
| K2O            | 45 | lb/acre |

**Question 2.** What fertilizer would you choose to provide the N, P2O5, and K2O preplant broadcast and why?

**Answer:** In this instance, 300 pounds of 10-15-15 fertilizer per acre matches the nutrient needs of the fields and is competitive on a cost basis especially since all three nutrients can be applied in one operation rather than 3 separate operations.

**Question 3.** Since both fields can have the same amount of fertilizer applied, what is the per acre and field cost for the preplant broadcast fertilizer application?

| Hodges Field |             |
|--------------|-------------|
| Per acre     | \$51.00     |
| Appl cost    | \$9.50/acre |
| # Acres      | 73 acres    |
| Total cost   | \$4,416.50  |

| Peterson Field |             |
|----------------|-------------|
| Per acre       | \$51.00     |
| Appl cost      | \$9.50/acre |
| # Acres        | 56 acres    |
| Total cost     | \$3,388.00  |

**Question 4.** Since the fields require both phosphorus and potassium, could these nutrients be applied the previous fall during normal tillage operations? \_\_\_ Yes or X No (check the answer)

**Question 5.** Does the GA Soil Test Laboratory recommend an application of sulfur? Yes

**Question 6.** If sulfur is applied, what are the two application timing options?

**Option 1.** Apply it as part of the preplant or at planting fertilizer application or

**Option 2.** Apply the S with the sidedress N application

**Question 7.** What two (2) special concerns are there on deep sand soils?

**Answer:** You must apply 2 foliar applications of 4.4 lb K2O/acre in 5 or more gallons of water as an aerial application during 1st bloom to 4th week of bloom **AND** increase the N rate by 25%.

**Question 8.** During what plant growth stages should sidedress N be applied?

**Answer:** Apply sideress N between first square and first bloom but near first square if plants are pale green or growing slowly.

**Question 9.** At what rate and when should Boron be applied to the cotton crop?

B rate lb/acre/application 0.25 lb B/acre Type of application: Foliar Number: 2  
Timing of B: Apply two foliar applications of 0.25 lb B between first square and first bloom.

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**Question 10.** Under what conditions should the recommended N rate be increased by 25%?**Answers:****Condition 1.** Cotton is planted on a Deep Sand (>18 inches to subsoil clay)**Condition 2.** Cotton follows cotton**Condition 3.** The field has a history of poor cotton stalk growth**Question 11.** Under what conditions should the recommended N rate be decreased by 25%?**Answers:****Condition 1.** Cotton follows a soybean or peanut crop**Condition 2.** Cotton is following a good stand of winter legume cover crop**Condition 3.** The field has a history of excessive or rank cotton vegetative growth**Question 12.** What fertilizer would you select to apply sidedress N via the irrigation system?**Answer:** To obtain the needed/recommended sulfur, use the 28-0-0-5S thiosulfate liquid.**Question 13.** What rate of N should be applied to each field? What is the cost? How much and at what cost can Boron be added? What is the total cost for sidedress N + B?

| <b>Answers:</b>      | <b>Hodges Field</b> |           | <b>Peterson Field</b> |           |
|----------------------|---------------------|-----------|-----------------------|-----------|
|                      | <b>73 acres</b>     |           | <b>56 acres</b>       |           |
| Lb N/acre            | 75                  | lb N/acre | 101.25                | lb N/acre |
| Cost of N/ac         | \$37.50             | \$/acre   | \$50.63               | \$/acre   |
| Amt B/acre           | 0.25                | lb B/acre | 0.25                  | lb B/acre |
| Cost of B/ac         | \$2.68              | \$/acre   | \$2.68                | \$/acre   |
| Appl. cost           | \$0.00              | \$/acre   | \$0.00                | \$/acre   |
| Total Cost per field | \$2,933.14          | \$/field  | \$2,985.36            | \$/field  |

**Question 14.** Both fields will require a second foliar application of Boron by ground rig so what is the cost?**Answer:**

|                      | <b>Hodges Field</b> |          | <b>Peterson Field</b> |          |
|----------------------|---------------------|----------|-----------------------|----------|
|                      | <b>73 acres</b>     |          | <b>56 acres</b>       |          |
| Amt of B/acre        | 0.25 lb B/acre      |          | 0.25 lb B/acre        |          |
| Cost of B            | \$2.68              | per acre | \$2.68                | per acre |
| Appl. Cost           | \$8.00              | per acre | \$8.00                | per acre |
| Total Cost per field | \$779.64            |          | \$598.08              |          |

**Question 15.** Which field requires a special fertilizer application to prevent a nutrient deficiency?**Answer:** Peterson Field

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**Question 16.** What fertilizer must be used to prevent the possible deficiency?

**Answer:** 13-0-46 or KNO3

**Question 17.** Complete the following cost calculations for using this foliar fertilizer.

Fertilizer Selected 13-0-46 or KNO3  
 Type of Application Aerial foliar  
 Number of Applications Needed Two

**For the calculations below, you must round the amount of fertilizer needed per acre to the nearest whole number!**

|                                           | For 1 acre      |          | For the Field |
|-------------------------------------------|-----------------|----------|---------------|
| Application rate lbs nutrient per acre    | 4.4 lb K2O/acre |          |               |
| Amount of the chosen fertilizer needed    | 10              | lb/acre  | 560 lbs       |
| Cost of chosen fertilizer per application | \$3.30          | per acre | \$184.80      |
| Fertilizer cost for all applications      | \$6.60          | per acre | \$369.60      |
| Cost of all foliar aerial applications    | \$34.00         | per acre | \$1,904.00    |
| All Inclusive Cost for Special Nutrient   | \$40.60         | per acre | \$2,273.60    |

**Question 18.** What are the total costs for all fertilizer that the soil tests on the fields recommended (include at planting fertilizer, sidedress N + B, foliar boron, and any special required nutrients).

|                                | Hodges Field      | Peterson Field    |
|--------------------------------|-------------------|-------------------|
| All inclusive fertilizer costs | <u>\$8,129.28</u> | <u>\$9,245.04</u> |