## Foliar Fertilization of Cotton

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Various rates and combinations of urea (46-0-0), ammonium phosphate (11-48-0) and potassium nitrate (13-0-46) were applied to short staple cotton as foliar sprays in Marana and Phoenix, Arizona. The test plots were in a randomized complete block design with five replications of each treatment. Plots were four rows by 30 feet with a five foot alley between plots. The center two rows were mechanically harvested for lint yield following termination.

While the application of foliar fertilizers had no significant effect on seed cotton yields in Phoenix, AZ, yields were significantly increased in Marana, AZ (Table 1). The highest yields were associated with high levels of applied fertilizer, primarily in the form of nitrogen. The lower yielding plots received little or no applied fertilizer. These data are encouraging as to the potential of foliar applied fertilizers to increase yield of cotton.

Table 1. Effect of foliar applied fertilizer on seed cotton yield of short staple cotton. Marana and Phoenix, 1980.

| Treatment N-P-K lb/acre | Marana lb/acre | Phoenix lb/acre |
|---|---|---|
| 67-0-19 | 3890.70 a* | 4240.03** |
| 67-9-0 | 3772.80 ab | 4318.63 |
| 4-5-10 | 3755.33 ab | 4146.33 |
| 34-5-0 | 3707.30 ab | 4314.27 |
| 67-0-0 | 3676.73 ab | 4301.17 |
| 7-9-19 | 3624.33 abc | 4261.87 |
| 34-0-10 | 3598.13 abc | 4161.43 |
| 67-9-19 | 3397.27 abc | 4183.27 |
| 34-5-10 | 3349.23 abc | 4340.47 |
| 34-0-0 | 3344.87 abc | 4423.43 |
| 5-0-19 | 3344.87 abc | 4292.43 |
| 3-0-10 | 3067.23 abc | 4178.90 |
| 2-9-0 | 3004.27 bc | 4371.03 |
| 0-0-0 | 2986.80 bc | 4122.13 |
| 1-5-0 | 2803.40 c | 4143.97 |

*Means followed by the same letter are not significantly different ($P < 0.05$)

**No significant differences.