Crop Fertility and Drip Irrigation

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Nitrogen

- **Apply 30–40% preplant.**
- **Meet additional needs, as required, with drip.**
- **Use a total of 90–120 lb/acre for most drip-irrigated vegetables over the entire season.**

Phosphorus

- Important for early growth
- Soil test recommendations . . . Can these be reduced?
- Preplant application only

Potassium

- Critical for fruit quality
- Preplant application insufficient
- Application through drip essential
- Apply with every water application

Sulfur

- Many soils in NC are low.
- Soil test and apply preplant.
- Monitor with tissue sampling for additional sulfur needs.
- Consider gypsum.

Calcium

- Important for blossom-end rot control
- Soil test recommendations adequate
- Consider gypsum in sandy soils
- Adequate soil water critical!

Boron

- **Important for potassium uptake**
- **Preplant application insufficient**
- **Additional applications as required**

(Note: some vegetables don't require boron)

Preplant Recommendations for Drip

- **Soil test.**
- **Apply P_2O_5, potassium, boron and lime as recommended.**
- **Apply 30–40% of N preplant.**

Use Plant Analysis

- Sample latest mature, fully extended leaf.
- Sample weekly, beginning when first fruit is the size of a dime.

Other Considerations

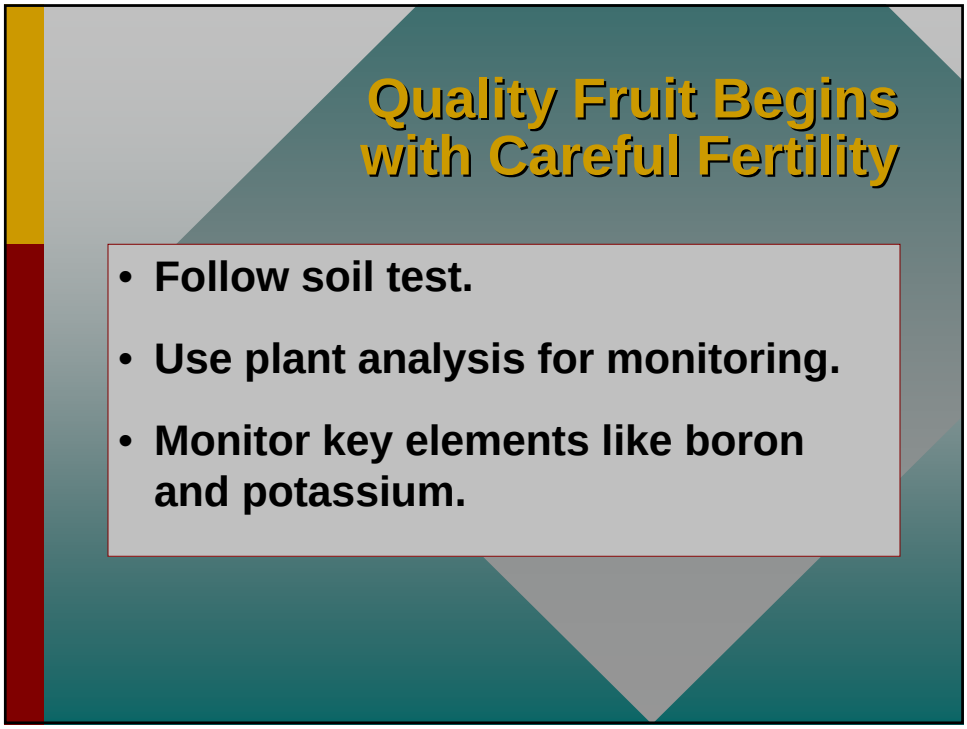
- N and K levels will be > 4% early in season.
- K ≥ 2.5–3% is desirable at harvest.
- K ≤ 2% produces soft fruit.
- K ≤ 1% is unharvestable.

Tomato Fertility Recommendations

- Begin applying fertilizer when fruit is about the size of a dime.
- Apply greenhouse grade 13-0-44 at a rate of 20–25 lb/acre/wk.
- Two weeks before first harvest, increase rate to 50 lb/acre/wk.
- Once 50% of crop is harvested, begin reducing rate.

Other Fertility Considerations

- Calcium levels should not be a concern with drip irrigation.
- Low P_2O_5 levels at harvest should not be a concern.
- Monitor boron levels throughout season.


Quality Fruit Begins with Careful Fertility
• Follow soil test.
• Use plant analysis for monitoring.
• Monitor key elements like boron and potassium.