

## ABSTRACT

### EFFECTS OF NITROGEN SOURCE AND AMOUNT ON LETTUCE YIELD

Lettuce has a shallow tap root with few roots contributing to nutrient absorption below 20 to 24 inches. Lettuce will take up 70-80% of its nitrogen (N) requirements in the three to four weeks preceding harvest. A shallow root system and very little N uptake compounds nitrate leaching in lettuce.

Soil and tissue sampling was carried out during the fall of 2001 and 2002 monitoring nitrate-nitrogen on plots containing from 40 to 180 lb/N ac of applied N in the form of ammonia nitrate and calcium ammonia nitrate in split sidedress applications. Yields showed no significant differences between rates and source of N during 2001 and rates in 2002. Post harvest soil nitrate-nitrogen levels were higher than pre-sidedress nitrate-nitrogen levels in most plots. Tissue levels were at or below desired levels at thinning and moved above desired levels at harvest indicating that all plots received excess applied N.

David Jamison  
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