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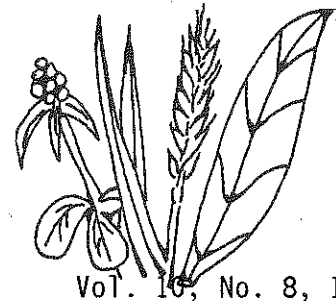
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Department of Agronomy

# Soil Science News & Views



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## Foliar Fertilization of Burley Tobacco At Topping

K. L. Wells and K. D. Strohmeier

### Background

Many burley growers follow the practice of applying 1-2 gallons/A of liquid fertilizer to their tobacco crop by mixing it with their sucker control chemical and spraying the combined mixture on the crop soon after topping. This practice is thought to improve yields. However, previously reported testing of this practice by the University of Kentucky College of Agriculture<sup>1</sup> indicated that it did not improve yields.

### Objective and Methods

The objective of this field study was to test the practice again, under farm conditions, to determine its agronomic and economic value. Site of the study was in Owen County, Kentucky, and the soil was a Nicholson soil on a 6-12% slope. The field had been in sod several years prior to being plowed for tobacco in 1988. Soil test levels were: pH 6.8; P, 152(VH); K, 194(L). The field was fertilized with 250 lbs/A each of N and K<sub>2</sub>O. No phosphorus was used. Foliar fertilization treatments tested were 0, 1.5, 3.0, and 4.5 gal/A of a liquid fertilizer grade 7-14-7. The fertilizer was applied soon after the first topping by mixing it with water in a Hi-Boy sprayer and then spraying it onto appropriate plots at a tank mix volume of 30 gal/A. Treatments were replicated three times and randomly located within each replication. Plots were four rows wide and 100 ft long. Yields were estimated by weighing five sticks (30 stalks) of cured leaf cut from the two center rows of each plot. The field was irrigated once in early July. Growing conditions at this site were good during 1988 and excellent yields and quality were obtained.

### Results and Discussion

Yields obtained from the foliar fertilizer treatments are shown in Table 1. They were very high, averaging 4,353 lbs/A of cured leaf. This compared very favorably with yield from the entire field within which the study was conducted from which the producer marketed 4,200 lbs cured leaf/A. Individual treatment yields were statistically analyzed and it was found that there were no significant yield differences among the treatments. This is the same result as has previously been obtained in testing of this fertilization practice indicating that it has no agronomic or economic value.

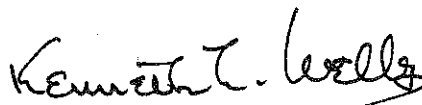
<sup>1</sup> Tobacco Handbook. Univ. of Ky. Coop. Ext. Serv. Publ. ID-45, p. 21. 1981.

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Table 1. Effect of Foliar Fertilization of Burley Tobacco at time of Topping

<u>Treatment</u>	<u>Lbs. Cured Leaf per Acre</u>			<u>Av</u>
	<u>1</u>	<u>2</u>	<u>3</u>	
No foliar fertilization	4,500	4,350	4,710	4,520
1.5 gal/A of 7-14-7	4,290	4,110	4,080	4,160
3.0 gal/A of 7-14-7	4,260	4,440	4,380	4,360
4.5 gal/A of 7-14-7	4,440	4,470	4,280	4,370

L.S.D. (0.05) = N.S.



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