

AGRICULTURAL EXTENSION LABORATORY

COOPERATIVE EXTENSION  
UNIVERSITY OF CALIFORNIA

**REPORT OF PLANT TISSUE ANALYSIS**  
**FERTILITY ASSAY**

County:

Submitted by:

MERCED

SCHEUERMAN

R. MEYER, L. BROWN, R. BURAU, R. VOSS

No.

P-9419-D

Date submitted: 8-31-76

Date reported: 7-15-77

Identification:

JOE ALVERNAZ

CROP: SWEET POTATO

Sample No.	Description	NO <sub>3</sub> -N	PO <sub>4</sub> -P	SO <sub>4</sub> -S	N	P	K	Ca	Mg	Na	Cl	B	Zn	DRY BASIS
		ppm	ppm	ppm	%	%	%	%	%	%	%	ppm	ppm	PPM
1	3A													244
2	3B													424
3	4A													406
4	4B													562
	REFER TO M-1062 FOR ROOT SAMPLES*													
	* DESTROYED BY MICE													



NO<sub>3</sub>-N **Nitrate-Nitrogen** – Nitrate extracted by water from the dried and ground sample and expressed as ppm nitrogen in the dry plant material.

PO<sub>4</sub>-P **Phosphate-Phosphorus** – Phosphorus extracted by 2% acetic acid from the dried and ground sample and expressed as ppm phosphorus in the dry plant material.

SO<sub>4</sub>-S **Sulfate-Sulfur** – The inorganic sulfur fraction in the dried and ground sample, expressed as ppm sulfur in the dry plant material.

All other elements determined as total elemental content and expressed as percent or parts per million of dry plant material.

#### Critical Concentrations\*\*

CROP	PLANT PART	SAMPLING TIME	NO <sub>3</sub> -N ppm	PO <sub>4</sub> -P ppm	SO <sub>4</sub> -S ppm	K %	B ppm	Zn ppm
Alfalfa	midstem	1/10 bloom		700	250*	0.75	25*	
Sugar Beets	petiole of recently matured leaf	anytime during growing season	1000	750	250*	1.0		10*
Ladino Clover				600		0.8		
Sub Clover				600	170			
Grapes	petiole opposite flower cluster	bloom time	T.S. vqr. only 226			0.8	25	15

#### Approximate Adequate Nutrient Levels\*\*\*

Cotton (San Joaquin Valley)	petiole of recently matured leaf	July 1	10,000	1000		6		15*
		July 15	5,000	1000				15*
		August 1	2,000	1000				15*
		August 15	1,000	1000		2.5		15*
Potato	petiole of 4th ma- ture leaf from top	days from planting < 70	8,000	1200		9		
		70-90	6,000	800		7		
		over 90	3,000	500		4		
Tomato process- ing crop	whole plant top less blades	thinning or transplant	1,500	1500		1.5		10*
		set	6,000	1800		2.5		10*
	petiole of recently matured leaf	1st color	2,000					10*
		1st pick	300	700		0.75		10*

\* Level in blades of recently matured leaves.

\*\* The nutrient concentration below which plant growth begins to decrease.

\*\*\* The approximate nutrient level at various growth stages below which the crop yield may be reduced.

These values are based on present information. Your cooperation in completing and returning "followup" sheets will add greatly to the development of more and better interpretation data on a wider range of crops.



L ☒  
C ☒  
W ☒  
☒

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Report No: P-9419-D  
Received: AUG 31 1976

LABORATORY WORK REQUEST

County Merced Submitted by Robert W. Scheuerman  
Date sampled August 15, 1976 Send report copies to Roland D. Meyer, Lloyd Brown  
Identification Ronald Voss, Richard Burau  
Sampling location Joe Alvernaz Livingston, Ca.  
Where possible give 1/4 of 1/4 of Sec. T R (Required for Water)  
Crop Sweet potatoes Soil type                      Drainage                       
Irrigation method                      Water source                       
No. of samples 4 Soil, water, plant feed, misc. (circle one only)  
Plant part sampled: Petiole, blade, mid-rib, grain, whole tops, mid-stem: leaves  
Analyses requested Br  
Project No. or problem description                     

Sample No.      Description (for plants, include age, stage of growth, or cutting)

1	3A
2	3B
3	4A
4	4B

Refer to M-1062  
for root sampler  
↑  
destroyed by mice  
7-12-77 J-Q

(Use another blank sheet, if needed.)