

**COOPERATIVE EXTENSION  
UNIVERSITY OF CALIFORNIA  
YOLO COUNTY**

**Agriculture, 4-H Youth, Family & Consumer Sciences**

University of California  
United States Department  
of Agriculture and  
Yolo County Cooperating

December 3, 1993

70 Cottonwood Street  
Woodland, Calif. 95695  
666-8143

John R. Monnich  
CalTec Agri Marketing Services  
P.O. Box 576155  
Modesto, CA 95357

Dear Rudi:

Thank you for your support of my program this past year. I enjoyed talking with you this past week and am sorry for the delay in some of the reports.

The Polymethylene Urea was applied to 6 and 10 year old almond trees in the Esparto area in 3 different blocks. Each block was set up to have a minimum of two trees of each variety per replicate. There were 4 replicates in a randomized block design.

Bud counts were conducted March 1 before spraying on March 2. A second application was made on April 12. Two gallons of Polymethylene Urea in 100 gallons of water were applied between 9 and 10 a.m. by an air carrier sprayer. The Polymethylene Urea was easy to handle and apply. No phytotoxicity was seen from either application.

Buds were counted on two limbs per tree and the limbs tagged. Nuts present on these limbs were counted in early June after all drop had occurred and the set count was figured by dividing the nuts per limb by the number of buds on that limb.

1993 Almond/Marianna Nitrogen Spray Trial

<u>Variety</u>	% Nut Set	
	<u>PMU Sprayed<sup>1</sup></u>	<u>No Spray</u>
Price	56%	61 08% lower
Carmel	49%	44 10% higher

1993 Almond/Nemaguard Nitrogen Spray Trial

<u>Variety</u>	% Nut Set	
	<u>PMU Sprayed<sup>1</sup></u>	<u>No Spray</u>
Padre	33%	30 09% higher
Butte	58%	51 12% higher
Nonpareil	*	32 22% higher

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1993 Almond/Peach Almond Nitrogen Spray Trial  
% Nut Set

<u>Variety</u>	<u>PMU Sprayed<sup>1</sup></u>	<u>No Spray</u>	
Padre	25	22	12% higher
Butte	44	42	4.5% higher
Nonpareil	43	41	4.6% higher
Price	38	33	13% higher

<sup>1</sup> PMU, abbreviation for Polymethylene Urea, applied 3/2 and 4/12 @ 2 gal/ac.

\* Significant difference at .05%

Each block was analyzed separately by an analysis of variance. From the three tables, the second trial on the Almond/Nemaguard was statistically significant at .05%. The other two were not.

Eight of the 9 variety treatments showed an increased set from the spray. If the analysis was conducted as a single trial and analyzed accordingly, a probability of .029 occurred which suggests an improved set did occur in the trial. It may require more replicates than 4 to conclusively prove a difference. These trials, though, suggest about a 10% increase set may have occurred.

I did mention that I harvested one variety in the trial on the Nemaguard and peach almond rootstock, but I was dissatisfied with the results.

The yield was about 6% higher in one trial and lower in the other on the Polymethylene Urea treated trees but the variability between trees was high (about 30%) which makes the results suspect. I suspect our sampling technique was not as good as it should have been. We would weigh the 2 trees in the trial and take a small sample (about 2 lbs.) then crack the sample out for a conversion factor to get meats per tree. Next year I believe we need a larger sample to figure the conversion.

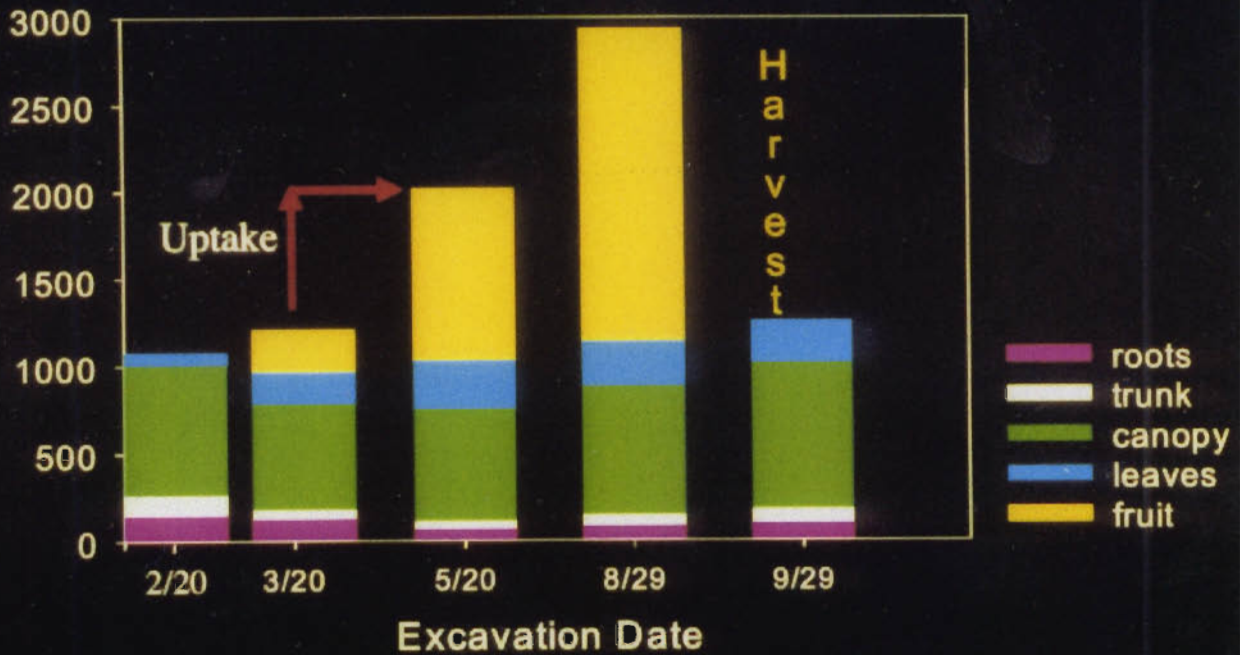
The Polymethylene Urea does look interesting and definitely should have more testing. The orchard where the trial was conducted is under a high nitrogen fertility program with good growth and good leaf color.

Sincerely,



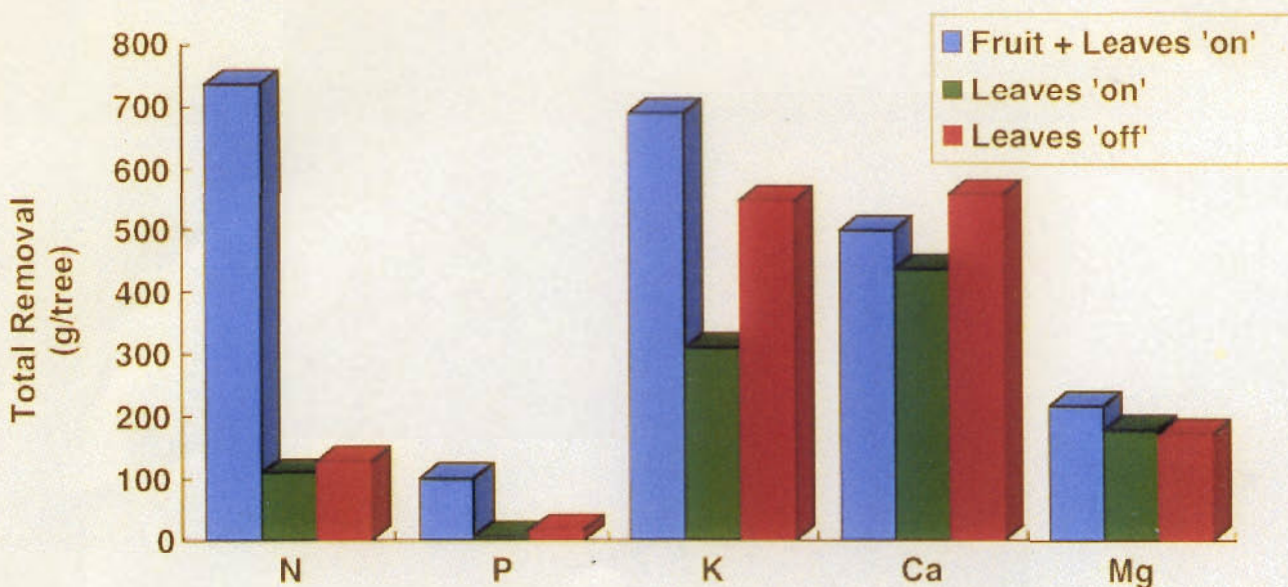
Wilbur Reil  
Farm Advisor, Yolo/Solano

## Whole Tree N Contents by Organ in Almond.



**NITROGEN** requirements in almonds increases prior to harvest. Greenfeed fills out meat in shell with foliar application of 1-2 gals./Ac. Due to foliar N (Greenfeed) slow release efficiency, almonds will continue to utilize Nitrogen up to harvest.

## Annual Removal of Macronutrients



**NITROGEN** obviously goes to fruit and nuts. **GREENFEED FOLIARLY** produces larger meats.