



Experiment Info:	
Planted:	11/16/20
Harvest:	7/5/2016
Yield Goal:	50
Target Fert.	180-150
Variety:	Duster
Population:	90 lb
Row Width:	21 ft
Prev. Crop:	milo
Plot Size:	1470 sq
Replications:	6
Note:	5

Soil Test Values (ppm):	
pH:	6.3
CEC:	8
%OM:	0.7
Bray P1:	14
Bicarb P:	
K:	137
S:	10
%K:	4.4
%Mg:	15.6
%Ca:	68.8
%H:	10.2
Zn:	0.4
Mn:	4
B:	0.4

Objective:

To evaluate almond fertilizer programs for effectiveness in yield production, from a traditional conventional program to sequential component substitution to a near-complete AgroLiquid program. Almonds continue to be a valuable crop in California. In-season fertilizers are commonly applied as liquid through micro-sprinkler irrigation beneath the tree canopy. Conventional fertilizers typically consist of 32% UAN, 10-34-0 and potassium thiosulfate plus EDTA zinc, with total seasonal rates of application of 120 gallons per acre being common. There are more "premium" products such as Structure (7-21-0 from Actagro) and AgroLiquid that are used at lower total rates per acre. An experiment was established on five year old 'Nonpariel' almonds for effects on yield. Fertilizers were applied in a total fertilizer/water spray volume of 56 gallons per acre through a tractor-mounted boom directed in the irrigation zone. The ground was watered before and after each application, Trees were shaken for almond removal to the ground on August 13 and then collected and weighed for yield on August 20.

Fertilizer Evaluations in *Nonpariel* Almonds. Westley, CA 2019
2019 Application Dates (fertilizer rates per field acre)

	8-Oct-18	6-Mar	2-Apr	16-May	6-Jun	total gal/A	6 rep avg 2018	2019
1	32% UAN: 10 gal 10-34-0: 7.5 gal Potassium Thiosulfate: 5 gal	32% UAN: 10 gal 10-34-0: 15 gal Potassium Thiosulfate: 5 gal Zinc EDTA: 0.5 gal	32% UAN: 15 gal 10-34-0: 15 gal Potassium Thiosulfate: 5 gal Zinc EDTA: 0.5 gal	32% UAN: 15 gal Potassium Thiosulfate: 5 gal Zinc EDTA: 0.5 gal	32% UAN: 15 gal 10-34-0: 7.5 gal Potassium Thiosulfate: 5 gal Zinc EDTA: 0.5 gal	50 45 45 2	2841	2391
2	32% UAN: 10 gal Structure: 5 gal Potassium Thiosulfate: 5 gal	32% UAN: 10 gal Structure: 10 gal Potassium Thiosulfate: 5 gal Zinc EDTA: 0.5 gal	32% UAN: 15 gal Structure: 10 gal Potassium Thiosulfate: 5 gal Zinc EDTA: 0.5 gal	32% UAN: 15 gal Potassium Thiosulfate: 5 gal Zinc EDTA: 0.5 gal	32% UAN: 15 gal Structure: 5 gal Potassium Thiosulfate: 5 gal Zinc EDTA: 0.5 gal	50 30 45 2	3199	2451
3	32% UAN: 10 gal PrG: 3 gal Potassium Thiosulfate: 5 gal	32% UAN: 10 gal PrG: 6 gal Potassium Thiosulfate: 5 gal Zinc EDTA: 0.5 gal	32% UAN: 15 gal PrG: 6 gal Potassium Thiosulfate: 5 gal Zinc EDTA: 0.5 gal	32% UAN: 15 gal Potassium Thiosulfate: 5 gal Zinc EDTA: 0.5 gal	PrG: 3 gal Potassium Thiosulfate: 5 gal Zinc EDTA: 0.5 gal	50 18 45 2	3223	2456
4	32% UAN: 10 gal PrG: 3 gal Kalibrate: 3.3 gal	32% UAN: 10 gal PrG: 6 gal Kalibrate: 3.3 gal Zinc EDTA: 0.5 gal	32% UAN: 15 gal PrG: 6 gal Kalibrate: 3.3 gal Zinc EDTA: 0.5 gal	32% UAN: 15 gal Kalibrate: 3.3 gal Zinc EDTA: 0.5 gal	PrG: 3 gal Kalibrate: 3.3 gal Zinc EDTA: 0.5 gal	50 18 16.5 2	3206	2452
5	32% UAN: 10 gal PrG: 3 gal Kalibrate: 3.3 gal	32% UAN: 10 gal PrG: 6 gal Kalibrate: 3.3 gal Micro 500: 0.5 gal	32% UAN: 15 gal PrG: 6 gal Kalibrate: 3.3 gal Micro 500: 0.5 gal	32% UAN: 15 gal Kalibrate: 3.3 gal Micro 500: 0.5 gal	PrG: 6 gal Kalibrate: 3.3 gal Micro 500: 0.5 gal	50 18 16.5 2	3084	2489

LSD(0.05): 300; (0.1): 247. CV: 9%

Conclusions:

- Note: Pro-Germinator is registered as PrG in California.
- The highest average yield was with PrG as a phosphorus fertilizer substitute. The seasonal application of PrG was 15 gallons per acre compared to 25 and 40 for Structure and 10-34-0, respectively.
- Application of Kalibrate as the potassium source yielded as well as did the potassium thiosulfate, despite a total application volume of 13.2 gallons per acre compared to 40. The yields with Micro 500 and Zinc EDTA were similar.
- The lower application volumes of PrG and Kalibrate are substantially less than those of the other phosphorus and potassium rates. This reduction in application volume while maintaining or increasing yield would be a great advantage to growers in terms of being able to handle and