

Sawtooth Ag Research

SEASOL: EFFECT ON YIELD IN PISTACHIO

Trial ID: 21SSP001 pistachio	Location: FAMOSO, CA	Trial Year: 2021
Protocol ID:	Investigator (Creator): Stephen S. Deitz	
Project ID:	Study Director: CAROLINE KAY	
	Sponsor Contact:	

	C	PIAVE	C	PIAVE	C	PIAVE	C	PIAVE	C	PIAVE	C	PIAVE
Crop Type, Code		BPER		BPER		BPER		BPER		BPER		BPER
BBCH Scale		Pistacia vera		Pistacia vera		Pistacia vera		Pistacia vera		Pistacia vera		Pistacia vera
Crop Scientific Name		Pistachio		Pistachio		Pistachio		Pistachio		Pistachio		Pistachio
Crop Name		STEVE DEITZ		STEVE DEITZ		STEVE DEITZ		STEVE DEITZ		STEVE DEITZ		STEVE DEITZ
Crop Variety		6-28-21		9-6-21		9-6-21		9-6-21		9-6-21		9-6-21
Rating Date		LEAF -		YIELD -		YIELD -		YIELD -		YIELD -		YIELD -
Part Rated		PHYGEN		YIELD		YIELD		EDIBLE		BLANKS		OPEN
Rating Type		%		LBS/PLOT		LBS/ACRE		%		%		%
Rating Unit		1		1		1		1		1		1
Number of Subsamples		STEVE DEITZ		STEVE DEITZ		STEVE DEITZ		STEVE DEITZ		STEVE DEITZ		STEVE DEITZ
Assessed By		12-17-20		12-17-20		10-29-19		12-17-20		10-29-19		10-29-19
Data Entry Date		75 53		145 56		145 56		145 56		145 56		145 56
Days After First/Last Applic.		26 DA-F		97 DA-G		97 DA-G		97 DA-G		97 DA-G		97 DA-G
Trt-Eval Interval												
ARM Action Codes												
Number of Decimals				1		1		1				
Trt Treatment		1*		2*		3*		4*		5*		6*
No. Name		Rate		Rate		Rate		Rate		Rate		Rate
		Unit		Unit		Unit		Unit		Unit		Unit
		Code		Code		Code		Code		Code		Code
1UNTREATED CHECK		0.0a		281.1a		7644.7a		26.6a		34.92a		23.00a
2SEASOL		2qt/a	ABCD	0.0a		290.9a		7910.8a		29.0a		36.58a
3SEASOL		2qt/a	ABCD	0.0a		308.3a		8386.3a		28.7a		38.00a
MAG DL		1qt/a	CD									34.75a
LSD P=.10		.		22.90		622.90		5.84		7.722		9.250
Standard Deviation		0.00		21.89		595.26		5.58		7.380		8.840
CV		0.0		7.46		7.46		19.85		20.22		30.42
Levene's F^		.		0.272		0.274		0.963		0.36		2.035
Levene's Prob(F)		.		0.765		0.764		0.404		0.703		0.165
Skewness^		.		0.8729		0.8724		-0.3373		0.3266		-0.1903
Kurtosis^		.		0.2391		0.2361		1.1654		-0.8568		0.4171
Replicate F		0.000		1.975		1.976		0.107		1.175		0.499
Replicate Prob(F)		1.0000		0.1682		0.1682		0.9882		0.3860		0.7705
Treatment F		0.000		2.390		2.390		0.338		0.262		2.658
Treatment Prob(F)		1.0000		0.1418		0.1417		0.7211		0.7743		0.1187

Means followed by same letter or symbol do not significantly differ (P=.10, Duncan's New MRT).
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 * Adjusted means
 Could not calculate LSD (% mean diff) for columns 1 because error mean square = 0.
 ^Calculated from residual.

Sawtooth Ag Research

SEASOL: EFFECT ON YIELD IN PISTACHIO

Trial ID: 21SSP001 pistachio	Location: FAMOSO, CA	Trial Year: 2021
Protocol ID:	Investigator (Creator): Stephen S. Deitz	
Project ID:	Study Director: CAROLINE KAY	
	Sponsor Contact:	

Crop Type, Code	C	PIAVE	C	PIAVE
BBCH Scale		BPER		BPER
Crop Scientific Name		Pistacia vera		Pistacia vera
Crop Name		Pistachio		Pistachio
Crop Variety				
Rating Date		9-6-21		9-6-21
Part Rated		YIELD -		YIELD -
Rating Type		PAYABLE		PAYABLE
Rating Unit		LBS/ACRE		\$/ACRE
Number of Subsamples		1		1
Assessed By		STEVE DEITZ		STEVE DEITZ
Data Entry Date		12-17-20		
Days After First/Last Applic.		145 56		145 56
Trt-Eval Interval		97 DA-G		
ARM Action Codes				T1
Number of Decimals		2		
Trt Treatment		7*		8*
No. Name	Rate	Unit	Code	
1UNTREATED CHECK				
	2018.13a			9081.600a
2SEASOL	2qt/a	ABCD		2296.18a
				10332.825a
3SEASOL	2qt/a	ABCD		2408.50a
				10838.250a
MAG DL	1qt/a	CD		
LSD P=.10		448.486		2018.1884
Standard Deviation		428.589		1928.6510
CV		19.13		19.13
Levene's F^		1.051		1.051
Levene's Prob(F)		0.374		0.374
Skewness^		-0.6386		-0.6386
Kurtosis^		0.4204		0.4204
Replicate F		0.414		0.414
Replicate Prob(F)		0.8287		0.8287
Treatment F		1.319		1.319
Treatment Prob(F)		0.3101		0.3101

Means followed by same letter or symbol do not significantly differ (P=.10, Duncan's New MRT).
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.
 * Adjusted means
 Could not calculate LSD (% mean diff) for columns 1 because error mean square = 0.
 ^Calculated from residual.

Sawtooth Ag Research

SEASOL: EFFECT ON YIELD IN PISTACHIO

Trial ID: 21SSP001 pistachio Location: FAMOSO, CA Trial Year: 2021
 Protocol ID: Investigator (Creator): Stephen S. Deitz
 Project ID: Study Director: CAROLINE KAY
 Sponsor Contact:

Crop Type, Code
 C = EPPO species (Bayer) codes
 PIAVE, BPER, Pistacia vera, Pistachio = US

Part Rated
 LEAF = leaf
 YIELD = yield

Rating Type
 PHYGEN = phytotoxicity - general / injury
 YIELD = yield

Rating Unit
 % = percent

ARM Action Codes
 T1 = [7]*4.5

Crop Type, Code	C	PIAVE	C	PIAVE	C	PIAVE	C	PIAVE	C	PIAVE	C	PIAVE
BBCH Scale	BPER		BPER		BPER		BPER		BPER		BPER	
Crop Scientific Name	Pistacia vera		Pistacia vera		Pistacia vera		Pistacia vera		Pistacia vera		Pistacia vera	
Crop Name	Pistachio		Pistachio		Pistachio		Pistachio		Pistachio		Pistachio	
Crop Variety	STEVE DEITZ		STEVE DEITZ		STEVE DEITZ		STEVE DEITZ		STEVE DEITZ		STEVE DEITZ	
Rating Date	6-28-21		9-6-21		9-6-21		9-6-21		9-6-21		9-6-21	
Part Rated	LEAF -		YIELD -		YIELD -		YIELD -		YIELD -		YIELD -	
Rating Type	PHYGEN		YIELD		YIELD		EDIBLE		BLANKS		OPEN	
Rating Unit	%		LBS/PLOT		LBS/ACRE		%		%		%	
Number of Subsamples	1		1		1		1		1		1	
Assessed By	STEVE DEITZ		STEVE DEITZ		STEVE DEITZ		STEVE DEITZ		STEVE DEITZ		STEVE DEITZ	
Data Entry Date	12-17-20		12-17-20		10-29-19		12-17-20		10-29-19		10-29-19	
Days After First/Last Applic.	75 53		145 56		145 56		145 56		145 56		145 56	
Trt-Eval Interval	26 DA-F		97 DA-G		97 DA-G		97 DA-G		97 DA-G		97 DA-G	
ARM Action Codes												
Number of Decimals			1		1		1					
Trt Treatment	Rate Appl		Rate Appl		Rate Appl		Rate Appl		Rate Appl		Rate Appl	
No. Name	Rate	Unit	Code	Plot	1	2	3	4	5	6	6	6
1UNTREATED CHECK				101	0.0	272.5	7412.0	34.4	33.00	32.00		
				204	0.0	329.7	8967.0	24.7	24.00	28.00		
				303	0.0	248.5	6759.0	30.3	37.50	24.00		
				404	0.0	296.9	8075.0	20.4	42.50	12.00		
				504	0.0	280.6	7632.0	24.7	43.00	18.00		
				603	0.0	258.2	7023.0	25.0	29.50	24.00		
				Mean =	0.0	281.1	7644.7	26.6	34.92	23.00		
2SEASOL	2qt/a		ABCD	102	0.0	280.3	7624.0	34.4	44.00	31.00		
				201	0.0	283.3	7707.0	27.0	38.50	31.50		
				304	0.0	252.0	6853.0	26.9	39.00	26.00		
				401	0.0	347.1	9441.0	27.8	26.00	22.50		
				503	0.0	302.7	8232.0	30.4	40.00	35.00		
				602	0.0	279.7	7608.0	27.7	32.00	30.50		
			Mean =	0.0	290.9	7910.8	29.0	36.58	29.42			
3SEASOL	2qt/a		ABCD	103	0.0	316.0	8596.0	20.2	50.50	17.50		
	MAG DL	1qt/a	CD	202	0.0	303.2	8247.0	27.7	29.00	45.50		
				301	0.0	303.2	8247.0	26.2	44.50	27.50		
				403	0.0	309.0	8404.0	37.5	31.00	44.50		
				502	0.0	313.1	8515.0	30.1	32.00	42.00		
				601	0.0	305.5	8309.0	30.8	41.00	31.50		
			Mean =	0.0	308.3	8386.3	28.7	38.00	34.75			

Sawtooth Ag Research

SEASOL: EFFECT ON YIELD IN PISTACHIO

Trial ID: 21SSP001 pistachio	Location: FAMOSO, CA	Trial Year: 2021
Protocol ID:	Investigator (Creator): Stephen S. Deitz	
Project ID:	Study Director: CAROLINE KAY	
	Sponsor Contact:	

Crop Type, Code	C	PIAVE	C	PIAVE
BBCH Scale		BPER		BPER
Crop Scientific Name		Pistacia vera		Pistacia vera
Crop Name		Pistachio		Pistachio
Crop Variety				
Rating Date		9-6-21		9-6-21
Part Rated		YIELD -		YIELD -
Rating Type		PAYABLE		PAYABLE
Rating Unit		LBS/ACRE		\$/ACRE
Number of Subsamples		1		1
Assessed By		STEVE DEITZ		STEVE DEITZ
Data Entry Date		12-17-20		
Days After First/Last Applic.		145 56		145 56
Trt-Eval Interval		97 DA-G		
ARM Action Codes				T1
Number of Decimals		2		
Trt Treatment				
No. Name	Rate	Unit	Code	Plot
1UNTREATED CHECK				7
				8
				101
				2550.30
				204
				2218.40
				303
				2049.90
				404
				1649.30
				504
				1885.20
				603
				1755.70
				Mean =
				2018.13
				9081.600
2SEASOL	2qt/a	ABCD		102
				2621.10
				201
				2080.30
				304
				1844.80
				401
				2626.70
				503
				2500.10
				602
				2104.10
				Mean =
				2296.18
				10332.825
3SEASOL	2qt/a	ABCD		103
MAG DL	1qt/a	CD		202
				301
				2159.80
				403
				3150.30
				502
				2565.10
				601
				2556.30
				Mean =
				2408.50
				10838.250

Sawtooth Ag Research

SEASOL: EFFECT ON YIELD IN PISTACHIO

Trial ID: 21SSP001 pistachio Location: FAMOSO, CA Trial Year: 2021
 Protocol ID: Investigator (Creator): Stephen S. Deitz
 Project ID: Study Director: CAROLINE KAY
 Sponsor Contact:

Crop Type, Code

C = EPPO species (Bayer) codes
 PIAVE, BPER, Pistacia vera, Pistachio = US

Part Rated

LEAF = leaf
 YIELD = yield

Rating Type

PHYGEN = phytotoxicity - general / injury
 YIELD = yield

Rating Unit

% = percent

ARM Action Codes

T1 = [7]*4.5

General Trial Information

Study Director: CAROLINE KAY **Title:** DEVELOPMENT
Investigator: Stephen S. Deitz **Title:** Research biologist

Discipline: D fertilizer
Trial Status: F one-year/final
ARM Trial Created On: 11-4-21
Initiation Date: 4-14-21
Completion Date: 11-4-21

Trial Location

City: FAMOSA **Country:** USA United States
State/Prov.: California

Directions:

FAMOSA RD AND KYTE RD. BAKERSFIELD, CA

Conducted Under GLP: No
Conducted Under GEP: No

Objectives:

Contacts

Role: STYDIR study director
Study Director: CAROLINE KAY **Title:** DEVELOPMENT
Organization: SEASOL
Role: INVEST investigator
Investigator: Stephen S. Deitz **Title:** Research biologist
Organization: Sawtooth Ag Research, Inc.
Address 1: 20829 Ave. 380 **Mobile No.:** 559-731-0901
City: Woodlake, CA **E-mail:** stevesdeitz@gmail.com
Postal Code: 93286

Crop Description

Crop 1: C PIAVE Pistacia vera Pistachio **BBCH Scale:** BPER
Entry Date: 12-17-20 **Stage Scale:** BBCH
Variety: KERMAN
Row Spacing: 20 FT
Spacing within Row: 20 FT

Site and Design

Treated Plot Width: 20 FT **Site Type:** ORCHAR orchard
Treated Plot Length: 80 FT **Experimental Unit:** 4 TREE tree
Treated Plot Area: 1600.0 FT2 **Treatments:** 3 **Tillage Type:** NOTILL no-till
Replications: 6 **Study Design:** RACOBL Randomized Complete Block (RCB)

Soil Description

Description Name: SANDY LOAM

Sawtooth Ag Research

SEASOL: EFFECT ON YIELD IN PISTACHIO

Trial ID: 21SSP001 pistachio	Location: FAMOSO, CA	Trial Year: 2021
Protocol ID:	Investigator (Creator): Stephen S. Deitz	
Project ID:	Study Director: CAROLINE KAY	
	Sponsor Contact:	

Application Description

	A	B	C	D
Application Date	4-14-21	5-6-21	6-28-21	7-12-21
Appl. Start Time	9:00 AM	9:00 AM	9:00 AM	9:00 AM
Appl. Stop Time	10:00 AM	10:00 AM	10:00 AM	10:00 AM
Interval to Prev. Appl.		22 DAYS	53 DAYS	14 DAYS
Application Method	BROADCAST	BROADCAST	BROADCAST	BROADCAST
Application Timing	BLOOM	LEAF EXPANSI	nut fill	nut fill
Application Placement	SOIL	FOLIAR	SOIL	SOIL
Applied By	STEVE DEITZ	STEVE DEITZ	STEVE DEITZ	STEVE DEITZ
Appl. Entry Date	11-4-21	11-4-21	11-4-21	11-4-21
Air Temperature Start, Stop	65 F	68 F	75 F	80 85 F
% Relative Humidity Start, Stop	40	40	40	40
Wind Velocity+Dir. Start	1 MPH E	1 MPH E	1 MPH E	1 MPH E
Wet Leaves (Y/N)	N no	N no	N no	N no
Soil Temperature	65 F	67 F	73 F	75 F
Soil Moisture	WET	MOIST	WET	WET
% Cloud Cover	0	0		

Crop Stage At Each Application

	A		B		C		D	
Crop 1 Code, BBCH Scale	PIAVE	BPER	PIAVE	BPER	PIAVE	BPER	PIAVE	BPER
Stage Scale Used	BBCH		BBCH		BBCH		BBCH	
Height Average	14	FT	14	FT	14	FT	14	FT
Coverage			100 %					

Application Equipment

	A	B	C	D
Appl. Equipment	BUCKET	MISTBLOWER	BUCKET	BUCKET
Equipment Type	DRENCH	MISTBL	DRENCH	DRENCH
Nozzle Type		ORIFICE		
Nozzle Size		2.3		
Nozzles/Row	1	1	1.0	1.0
% Coverage	100	100	100	100
Row Sides Applied	2	2	2	2
Carrier	WATER	WATER	WATER	WATER
Application Amount	500 GAL/AC	100 GAL/AC	500 GAL/AC	500 GAL/AC
Mix Size	12.0 L	12 L	12.0 L	12.0 L
Propellant		AIR+PUMP		
Tank Mix (Y/N)	N no	N no	N no	N no