

A & L WESTERN AGRICULTURAL LABORATORIES

1311 WOODLAND AVE #1 • MODESTO, CALIFORNIA 95351 • (209) 529-4080 • FAX (209) 529-4736



REPORT NUMBER: 17-257-091

CLIENT NO: 9999-D

SEND TO: DR. NICOLE HYNSON
3190 MAILE WAY RM 101
HONOLULU, HI 96822-

SUBMITTED BY: CAMERON EGAN

GROWER: PO #Z10160913

DATE OF REPORT: 10/03/17

SOIL ANALYSIS REPORT

PAGE: 1

SAMPLE ID	LAB NUMBER	Organic Matter		Phosphorus		Potassium	Magnesium	Calcium	Sodium	pH		Hydrogen	Cation Exchange Capacity C.E.C. meq/100g	PERCENT CATION SATURATION (COMPUTED)				
		*	**	P1 (Weak Bray)	NaHCO ₃ -P (Olsen Method)	K	Mg	Ca	Na	Soil pH	Buffer Index	H meq/100g		K %	Mg %	Ca %	H %	Na %
		% Rating	ENR lbs/A	**** *	**** *	**** *	**** *	**** *	**** *									
K6C01	50185	66.0VH	***	20M	13**	58	33	80	23	4.8	6.9	0.8	1.7	8.6	15.7	23.0	47.0	5.8
K6C06	50186	60.1VH	***	13L	11**	41	23	57	27	4.8	7.0	0.6	1.3	7.9	14.5	21.6	47.0	9.0
K6C07	50187	41.3VH	856	1VL	8**	26	24	52	18	5.1	7.0	0.4	1.0	6.9	20.3	26.7	38.0	8.1
K6C08	50188	72.1VH	***	18M	13**	62	37	109	47	4.4	6.7	2.0	3.2	5.0	9.4	17.1	62.0	6.5
K5ME1	50189	48.1VH	992	27H	17**	32	34	93	14	5.0	7.0	0.6	1.5	5.4	18.5	31.1	41.0	4.0

** NaHCO₃-P unreliable at this soil pH

SAMPLE NUMBER	Nitrogen NO ₃ -N ppm	Sulfur SO ₄ -S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Excess Lime Rating	Soluble Salts mmhos/cm	Chloride Cl ppm	PARTICLE SIZE ANALYSIS			
											SAND %	SILT %	CLAY %	SOIL TEXTURE
K6C01	2VL	42VH												
K6C06	2VL	56VH												
K6C07	1VL	44VH												
K6C08	1VL	54VH												
K5ME1	1VL	51VH												

* CODE TO RATING: VERY LOW (VL), LOW (L), MEDIUM (M), HIGH (H), AND VERY HIGH (VH).

** ENR - ESTIMATED NITROGEN RELEASE

*** MULTIPLY THE RESULTS IN ppm BY 2 TO CONVERT TO LBS. PER ACRE OF THE ELEMENTAL FORM

**** MULTIPLY THE RESULTS IN ppm BY 4.6 TO CONVERT TO LBS. PER ACRE P₂O₅

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MOST SOILS WEIGH TWO (2) MILLION POUNDS (DRY WEIGHT) FOR AN ACRE OF SOIL 6-2/3 INCHES DEEP

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		* % Rating	** ENR lbs/A	P1 (Weak Bray)	NaHCO ₃ -P (Olsen Method)	K	Mg	Ca	Na	Soil pH	Buffer Index	H meq/100g		K %	Mg %	Ca %	H %	Na %
				**** *	**** *	***** *	*** *	*** *	*** *					C.E.C. meq/100g				
K5ME2	50190	54.6VH	***	19M	12**	70	37	73	23	5.2	7.0	0.5	1.4	12.4	21.1	25.1	34.5	6.8
K5ME4	50191	36.2VH	754	4VL	5**	40	22	53	13	4.8	7.0	0.5	1.1	9.0	16.1	22.8	47.0	5.1
K5ME8	50192	50.4VH	***	9L	8**	30	19	49	15	5.1	7.0	0.3	0.9	8.7	18.1	27.8	38.0	7.4
K4AC1	50193	64.7VH	***	14L	11**	71	52	293	48	4.7	6.7	2.3	4.6	3.9	9.3	31.7	50.5	4.5
K4AC2	50194	82.0VH	***	11L	7**	45	68	272	51	4.6	6.7	2.6	4.9	2.4	11.3	27.7	54.0	4.6

** NaHCO₃-P unreliable at this soil pH

SAMPLE NUMBER	Nitrogen	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Excess	Soluble	Chloride	PARTICLE SIZE ANALYSIS			
	NO ₃ -N ppm	SO ₄ -S ppm	Zn ppm	Mn ppm	Fe ppm	Cu ppm	B ppm	Lime Rating	Salts mmhos/cm	Cl ppm	SAND %	SILT %	CLAY %	SOIL TEXTURE
K5ME2	1VL	74VH												
K5ME4	1VL	44VH												
K5ME8	1VL	58VH												
K4AC1	1VL	49VH												
K4AC2	1VL	28H												

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SAMPLE ID	LAB NUMBER	Organic Matter		Phosphorus		Potassium	Magnesium	Calcium	Sodium	pH		Hydrogen	Cation Exchange Capacity	PERCENT CATION SATURATION (COMPUTED)				
		* % Rating	** ENR lbs/A	P1 (Weak Bray)	NaHCO ₃ -P (Olsen Method)	K	Mg	Ca	Na	Soil pH	Buffer Index	H meq/100g		K %	Mg %	Ca %	H %	Na %
				**** *	**** *	**** *	**** *	**** *	**** *					C.E.C. meq/100g				
K4AC3	50195	57.3VH	***	11L	7**	30	19	53	21	4.9	7.0	0.5	1.0	7.4	14.7	25.1	44.0	8.7
K4AC4	50196	51.4VH	***	16L	14**	50	27	221	31	5.0	6.9	1.1	2.7	4.8	8.3	40.9	41.0	5.0
K4C01	50197	52.1VH	***	1VL	4**	27	19	66	20	5.2	7.0	0.3	1.0	7.0	16.2	33.6	34.5	8.7
K4C02	50198	50.8VH	***	6VL	4**	40	26	97	48	4.9	6.9	0.8	1.8	5.7	11.8	26.9	44.0	11.6
K4C03	50199	61.4VH	***	9L	6**	46	58	222	26	5.0	6.8	1.3	3.1	3.8	15.4	36.1	41.0	3.7

** NaHCO₃-P unreliable at this soil pH

SAMPLE NUMBER	Nitrogen	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Excess	Soluble	Chloride	PARTICLE SIZE ANALYSIS			
	NO ₃ -N ppm	SO ₄ -S ppm	Zn ppm	Mn ppm	Fe ppm	Cu ppm	B ppm	Lime Rating	Salts mmhos/cm	Cl ppm	SAND %	SILT %	CLAY %	SOIL TEXTURE
K4AC3	1VL	68VH												
K4AC4	1VL	50VH												
K4C01	1VL	63VH												
K4C02	1VL	62VH												
K4C03	1VL	52VH												

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SAMPLE ID	LAB NUMBER	Organic Matter		Phosphorus		Potassium	Magnesium	Calcium	Sodium	pH		Hydrogen	Cation Exchange Capacity	PERCENT CATION SATURATION (COMPUTED)				
		*	**	P1	NaHCO ₃ -P	K	Mg	Ca	Na	Soil pH	Buffer Index	H meq/100g	C.E.C. meq/100g	K %	Mg %	Ca %	H %	Na %
		% Rating	ENR lbs/A	(Weak Bray) **** *	(Olsen Method) **** *	**** *	**** *	**** *	**** *									
K3CH1	50200	51.8VH	***	14L	7**	62	52	252	24	5.0	6.8	1.4	3.3	4.8	12.9	38.1	41.0	3.2
K3CH3	50201	55.4VH	***	7VL	7**	48	49	212	19	4.8	6.8	1.5	3.1	3.9	12.8	33.7	47.0	2.6
K3CH4	50202	51.6VH	***	10L	7**	63	48	234	24	5.2	6.9	1.0	2.8	5.8	14.3	41.8	34.5	3.7
K3CH5	50203	64.6VH	***	12L	9**	59L	148M	829L	17VL	5.5	6.7	2.0	7.5	2.0	16.2	54.9	26.0	1.0
K3MY1	50204	64.2VH	***	22M	11**	86M	107M	569L	32L	5.4	6.8	1.6	5.7	3.9	15.4	49.8	28.5	2.4

** NaHCO₃-P unreliable at this soil pH

SAMPLE NUMBER	Nitrogen	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Excess	Soluble	Chloride	PARTICLE SIZE ANALYSIS			
	NO ₃ -N ppm	SO ₄ -S ppm	Zn ppm	Mn ppm	Fe ppm	Cu ppm	B ppm	Lime Rating	Salts mmhos/cm	Cl ppm	SAND %	SILT %	CLAY %	SOIL TEXTURE
K3CH1	1VL	65VH												
K3CH3	1VL	44VH												
K3CH4	1VL	90VH												
K3CH5	1VL	39VH												
K3MY1	1VL	25M												

* CODE TO RATING: VERY LOW (VL), LOW (L), MEDIUM (M), HIGH (H), AND VERY HIGH (VH).

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SAMPLE ID	LAB NUMBER	Organic Matter		Phosphorus		Potassium	Magnesium	Calcium	Sodium	pH		Hydrogen	Cation	PERCENT				
				P1	NaHCO ₃ -P									Exchange	CATION SATURATION (COMPUTED)			
		*	**	(Weak Bray)	(OlsenMethod)	K	Mg	Ca	Na			H	Capacity					
		% Rating	ENR lbs/A	**** *	**** *	**** *	**** *	**** *	**** *	Soil pH	Buffer Index	meq/100g	meq/100g	K %	Mg %	Ca %	H %	Na %
K3MY2	50205	62.4VH	***	19M	11**	149H	114M	354VL	93H	4.8	6.6	3.1	6.6	5.8	14.2	26.9	47.0	6.1
K3MY4	50206	68.1VH	***	15L	7**	84M	94L	591L	40L	4.8	6.6	3.6	7.8	2.8	10.0	38.0	47.0	2.3
K3MY5	50207	66.7VH	***	17M	14**	74	60	333	25	4.8	6.7	2.2	4.6	4.1	10.6	35.9	47.0	2.4
K3RU1	50208	66.4VH	***	10L	7**	49L	161M	1237M	18VL	5.6	6.7	2.4	10.1	1.2	13.1	61.4	23.5	0.8
K3RU2	50209	24.3VH	516	18M	14**	83	55	291	28	5.0	6.8	1.6	3.8	5.6	12.0	38.2	41.0	3.2

** NaHCO₃-P unreliable at this soil pH

SAMPLE NUMBER	Nitrogen	Sulfur	Zinc	Manganese	Iron	Copper	Boron	Excess	Soluble	Chloride	PARTICLE SIZE ANALYSIS			
	NO ₃ -N ppm	SO ₄ -S ppm	Zn ppm	Mn ppm	Fe ppm	Cu ppm	B ppm	Lime Rating	Salts mmhos/cm	Cl ppm	SAND %	SILT %	CLAY %	SOIL TEXTURE
K3MY2	1VL	37VH												
K3MY4	1VL	41VH												
K3MY5	2VL	39VH												
K3RU1	1VL	18M												
K3RU2	1VL	59VH												

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		*	**	P1 (Weak Bray)	NaHCO ₃ -P (Olsen Method)	K	Mg	Ca	Na	Soil pH	Buffer Index	H meq/100g		K %	Mg %	Ca %	H %	Na %
		% Rating	ENR lbs/A	**** *	**** *	**** *	**** *	**** *	**** *									
K3RU5	50210	31.9VH	668	20M	11**	79	60	287	41	5.2	6.8	1.2	3.5	5.7	14.1	40.6	34.5	5.1
K3RU8	50211	47.5VH	980	9L	5**	39	60	318	18	5.3	6.9	1.0	3.3	3.1	15.1	48.5	31.0	2.4

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SAMPLE NUMBER	Nitrogen NO ₃ -N ppm	Sulfur SO ₄ -S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Excess Lime Rating	Soluble Salts mmhos/cm	Chloride Cl ppm	PARTICLE SIZE ANALYSIS			
											SAND %	SILT %	CLAY %	SOIL TEXTURE
K3RU5	1VL	42VH												
K3RU8	1VL	51VH												

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