Section 9 of 22 (9a - Irrigation Water, Soil and Plant Tissue Analysis Interpretation Guide-Example)

1	**Producer:** Nambe, NM **Crop:** Peas **Yield:** 2,379 lb/ac **Irrigation Water:** 13 ac-in (No. of irrigations =)
2	**Tillage Operations:** minimum tillage with incorporated cover crops (rye)
3	**Soil Texture:** Clay **Soil Structure:** Granular **Aggregate Stability:** Good (high Organic Matter)

4	Nutrients ON = Organic Nitrogen mineralized	Irrigation Water Analysis (ppm x 0.23 x 13" = lb./ac.)		Soil Analysis 0-6" depth (ppm x 1.7 = lb./ac.)		Nutrient Inputs	Plant Tissue Analysis Note: N is kjeldahl nitrogen & Sulfur is total Sulfur		Should I Apply Nutrients? - Yes (Y) No (N) - Maintenance (M) - Not Sure (?) - Other (O)	Conservation Practices to consider for achieving sustainability
		ppm or mg/l	Pounds per Acre	ppm or mg/Kg	Pounds per Acre (VL, L, M, H, &VH)	Pounds per Acre	% or ppm & Rating (low - high)	Sufficiency Range (bud to full bloom)		
5	Organic Matter			1.51%	25,670				O: cover crops	♥ Cover Crops
6	N mineralized			ON	32.0	≈ 90 -150			O: legume	
7	Nitrate-Nitrogen	Not	Analyzed	25.9	44.0 H	N	4.1% H	3.1-3.6%	N: don't apply	♥ Crop Rotations
8	Phosphorus			7.5	12.8 VL	P_2O_5	0.34% H	0.3-0.35%	M: Manure	
9	Potassium	0.9	2.7	78	133.0 H	K_2O	2.4% M	2.2-2.8 %	N: don't apply	
10	Sulfate-Sulfur	5.0	15.0	Not	Analyzed	none	0.22% L	0.2 – 0.4%	O: Gypsum	♥ Manure or Compost
11	Calcium	26.7	79.8	200	340 M	none	0.56% L	1.2-1.5%	M: Gypsum	
12	Magnesium	2.7	8.1	21	36.0 L	none	0.21% L	0.27-0.35%	M: Epsom Salt	
13	Zinc			0.33	0.56 L	none	32 L	25-100 ppm	M: compost	♥ Minimum-Till (No-Till); Residue mgt.
14	Iron	Not	Analyzed	1.85	3.2 L	none	128 M	50-300 ppm	M: compost	
15	Manganese	Not	Analyzed	1.51	2.6 M	none	23 L	30-400 ppm	M: compost	
16	Copper			0.62	1.1 M	none	10 H	5-10 ppm	N: not needed	
17	Boron	Not	Analyzed	Not	Analyzed	none	18 L	20-60 ppm	M: compost	♥ IWM
18	Molybdenum					none	Not	Analyzed	O: not analyzed	
19	Sodium	8.5	25.4	49	use SAR		0.01 %	Range needed	N: don't apply	♥ Soil Amendments (e.g. gypsum)
20	Chloride	2.9	8.7				not analyzed	Range needed	N: don't apply	
21	Bicarbonate	96.4	288.2							
22	Carbonate	0	0							♥ IPM

Additional Assessments to Consider in evaluating your Cropping System (soil pH, free lime & CEC)

- Electrical Conductivity of Irrigation Water (ECiw) = 0.182 mmhos/cm
- Sodium Adsorption Ratio (SAR) from water test = 0.42 & pH = 7.45
- Refer to Irrigation Water Quality Guidelines (Sect.2) for infiltration assessment. Total Dissolved Solids = 119 mg/l (soluble salts applied = 428 lb./ac./yr.)
- ECe (EC of Soil Saturation extract) = 1.41 mmhos/cm & pH = 7.8 Sodium Adsorption Ratio (SAR) from soil test = 0.89
- Refer to Crop Salt Tolerance Table (Sect.2) to evaluate for potential yield reduction and salinity management considerations/options

Refer to the NRCS Nutrient Uptake Tool: http://npk.nrcs.usda.gov/ for calculating NPK removal by crop

rudy.garcia.2009

Agronomy Tech Note 76 (http://www.nm.nrcs.usda.gov/technical/handbooks/iwm/nmiwm.html)