

Section 9 of 22 (9h - IWM to increase Nitrogen Use Efficiency) (Corn Silage example)

Crop: <u>Corn Silage</u>		Expected Yield: <u>20 tons</u>		Sample Depth: <u>0-12"</u>		Irr. System: <u>Hi-Flow</u>		Leveled Field: <u>Yes</u>	
③	MAR	APR	MAY	JUN	JUL	AUG	SEP	1/ Agronomy Tech. Note 58 (NMSU jobsheet – soil test interpretations)	
	Emergence		Rapid Growth		Effective Full Cover		Maturation		
Daily ETc (in./day)	.40							2/ ENR = Expected Nitrogen Release (N from mineralized O.M.)	
	.30				.28	.33	.28		
	.20		.14					3/ <u>Nitrogen Inputs</u> : Nitrogen (urea) applied in three applications	
	.10	.06							
<p>Soil Analysis: Enter sampling date(s) and test results for Nitrate-N (ppm) & ENR^{2/} (lbs)</p> <p>24 ppm 20 lbs</p>									
<p>Nitrogen Inputs^{3/} (N fertilizer, manure, other): Enter application date(s) and pounds of N applied per acre</p> <p>4/10 50 lbs N</p> <p>6/5 50 lbs N</p> <p>7/5 50 lbs N</p>									
<p>Petiole/Leaf Analysis^{4/}: Enter sampling date(s) and test results for % N (sufficiency level is 2.7-3.5%)</p> <p>5/15 2.9%</p>									
<p>Irrigations^{5/} (irrigated on a two-week fixed schedule): Enter irrigation dates and amount applied per irrigation (3" applied/irrigation)</p> <p>3/15</p> <p>4/1 4/15</p> <p>5/1 5/15</p> <p>6/1 6/15</p> <p>7/1 7/15</p> <p>8/1</p>									
<p>4/ NMSU Guide A-143: Using Plant Tissue Analyses for Efficient Water Use by Plants</p> <p>5/ Refer to the following Sections of this Guide for further IWM Assessments: <u>Section 30: Field Irrigation Evaluation Guide</u> <u>Section 32: Graded Border Irrigation Analyses Guide</u> <u>Section 35: Soil Moisture Monitoring Record Keeping Form & Irrigation Scheduling Guide</u></p> <p>rudy.garcia.2008</p>									

Petiole/Leaf Samples
- To assess N sufficiency level & adequacy of fertility program

Removal of Soil N occurs through leaching, volatilization, denitrification, soil erosion, and harvested crop.

It is important that the plant response (yield & quality) be correlated to the IWM and Fertility program (which is based on soil & tissue analysis and NMSU recommendations^{6/}).

NOTE: Factors involved in IWM planning: Soil Texture, Soil Structure, Intake Family, Water Quality (salinity and SAR), Irrigation Application Efficiency evaluations, irrigation monitoring and scheduling, Irrigation System selection, consumptive use requirements, root zone depth.