### Agronomy Tech Note 76

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

<table>
<thead>
<tr>
<th>Crop: Corn Silage</th>
<th>Expected Yield: 20 tons</th>
<th>Sample Depth: 0-12”</th>
<th>Irr. System: Hi-Flow</th>
<th>Leveled Field: Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAR</strong></td>
<td><strong>APR</strong></td>
<td><strong>MAY</strong></td>
<td><strong>JUN</strong></td>
<td><strong>JUL</strong></td>
</tr>
<tr>
<td>Emergence</td>
<td>Rapid</td>
<td>Effective</td>
<td>Maturation</td>
<td></td>
</tr>
<tr>
<td>Petiole/Leaf Samples</td>
<td>-To assess N sufficiency level &amp; adequacy of fertility program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil Samples taken on March 5</td>
<td></td>
<td>.06</td>
<td>.14</td>
<td>.28</td>
</tr>
<tr>
<td><strong>Daily ETo (in./day)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.40</td>
<td>.30</td>
<td>.20</td>
<td>.10</td>
<td></td>
</tr>
</tbody>
</table>

1/ Agronomy Tech. Note 58 (NMSU jobsheet – soil test interpretations)

2/ ENR = Expected Nitrogen Release (N from mineralized O.M.)

3/ Nitrogen Inputs: Nitrogen (urea) applied in three applications

4/ NMSU Guide A-143: Using Plant Tissue Analyses for Efficient Water Use by Plants

5/ Refer to the following Sections of this Guide for further IWM Assessments:
   - **Section 30:** Field Irrigation Evaluation Guide
   - **Section 32:** Graded Border Irrigation Analyses Guide
   - **Section 35:** Soil Moisture Monitoring Record Keeping Form & Irrigation Scheduling Guide

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**Soil Analysis:**
Enter sampling date(s) and test results for Nitrate-N (ppm) & ENR² (lbs)

- 24 ppm
- 20 lbs

**Nitrogen Inputs³ (N fertilizer, manure, other):**
Enter application date(s) and pounds of N applied per acre

- 4/10
- 50 lbs N

**Petiole/Leaf Analysis⁴:**
Enter sampling date(s) and test results for % N (sufficiency level is 2.7-3.5%)

- 5/15
- 2.9%

**Irrigations⁵ (irrigated on a two-week fixed schedule):**
Enter irrigation dates and amount applied per irrigation (3” applied/irrigation)

- 3/15
- 4/1
- 4/15
- 5/1
- 5/15
- 6/1
- 6/15
- 7/1
- 7/15
- 8/1

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**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.

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