SOIL NUTRIENT ANALYSIS
MORGAN SUBMISSION GUIDE

SNA Modified Morgan Test (MM) determines all major nutrients and most of the micronutrients simultaneously and their potential for biological activation. This method is most relevant to soils that have a >3% organic matter and growers that are interested in understanding how they can biologically activate their soils. Not meant as a substitute for cation balancing but as a complement. Ideally, it connects fall cation balancing with nutrients available via diffusion and mass flow; often used in the spring for nitrogen, phosphorus, and potassium (NPK) balancing and budget optimization.



SUBMISSION INSTRUCTIONS:

1. **Collect** a representative sample from each test block by taking 10+ cores. Mix all the cores together and provide at least 2 cups of soil per test.
2. **Place** the sample into a Ziploc or Apical provided submission bag. The maximum size of each sample should not exceed 1 quart.
3. **Order** reports online at https://www.apical-ag.com/grower/order/quick?step=1.
4. **Print** out your order summary and include it with your shipment.
5. **Write** the sample numbers from your order summary on each bag.
6. **Mail** samples (including check/money order or paid submission form) and order summary to:

Apical Crop Science LLC
1382 SE 3rd Ave, Suite 4
Canby, OR 97013

DO NOT SEND ANY INTERNATIONAL LEAF, SOIL, WATER, CNA SAMPLES WITHOUT PRIOR WRITTEN APPROVAL FROM APICAL. SUBMISSIONS THAT DO NOT COMPLY WITH THE ESTABLISHED SAMPLING PROTOCOL WILL BE DEEMED INVALID.

TIPS FOR BEST RESULTS:

- Depth of each core should be determined by the average plant height. See chart.
- Sample size should be a minimum of 2 cups.
- Sample weak or troubled areas separately.
- Test method typically utilized in the Spring.
- Take samples when the soil is at Field Capacity (not saturated or overly dry).

Crop Height	Core Depth
0-12"	0-6"
12-30"	0-10"
30"+	0-16"