### Soil Testing Laboratory

**FARM/FIELD AND COMMERCIAL HORTICULTURE CROPS**

**SOIL ANALYSIS REQUEST SHEET**

**Instructions for filling out this form are given on the back side.**

<table>
<thead>
<tr>
<th>Sample Identification</th>
<th>1</th>
<th>Crop History</th>
<th>2</th>
<th>Proposed Crops</th>
<th>3</th>
<th>Check Test Requested (plow layer sample)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Crop Grown Before Last</td>
<td>Last Grown Crop</td>
<td>Option 1</td>
<td>Option 2</td>
<td>Option 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Crop Code No.</td>
<td>Check if Irrigated</td>
<td>If Alfalfa check plants</td>
<td>Crop Code No.</td>
<td>Check if Irrigated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No.</td>
<td>per sq ft</td>
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</tbody>
</table>

#### Crop Code Name Yield Unit

**SMALL GRAINS**

10. Barley
11. Oats
12. Rye/Triticaule
13. Wheat

**MISCELLANEOUS**

14. Buckwheat
15. Edible Beans
16. Fallow
17. Flax
18. Grass Hay
19. Grass Seed Prod.
20. Grass Pasteure
21. Millet
22. Native Grasses
23. Potatoes

**MISCELLANEOUS (continued)**

24. Rape/Mustard/Canola
25. Sorghum Sudan
26. Soybeans
27. Sugarbeets
28. Sunflowers
29. Wild Rice

**VEGETABLES**

30. Asparagus, New Planting
31. Asparagus, Establ. Planting
32. Beans, Snap
33. Beets, Table
34. Broccoli
35. Brussels Sprouts
36. Cabbage
37. Cauliflower
38. Carrots

**VEGETABLES (continued)**

39. Celery
40. Cucumbers
41. Lettuce
42. Melons
43. Onions, Dry
44. Onions, Green
45. Parsnips
46. Peas
47. Peppers
48. Pumpkins/Squash
49. Radishes
50. Turnips
51. Rhubarb
52. Rutabagas
53. Spinach
54. Tomatoes

**FRUITS**

55. Apples
56. Blueberries
57. Grapes
58. Raspberries/Brambles

**TURF**

59. Strawberries
60. Cultured Sod

**NURSERY - FIELD STOCK TREES/SHRUBS**

61. Suggested tests: Regular, Soluble Salts, Nitrate. For sampling instructions, please see Nursery Form.

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**Check for $_______ enclosed, or Call for credit card [ ]**

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**Soil Testing Laboratory**

**UNIVERSITY OF MINNESOTA**

**Mail Reports to:**

Name ______________________
Address _____________________
City, State, Zip ____________
Phone _______________________

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**Field Location:**

Out-of-state submitters: Please visit https://soiltest.cfans.umn.edu/ for a map of quarantined areas.

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**Recommendations available for these crops:**

*See comments on back side*
FIELD HISTORY (1): This information is essential for us to provide the most accurate nitrogen recommendations possible. Indicate crops grown the past two growing seasons. BE SURE TO USE THE CROP CODE NUMBER FROM THE LIST ON THE FRONT SIDE. If alfalfa was the crop grown during either or both of the two previous growing seasons, it is important to indicate the number of plants (crowns) per sq. ft.

PROPOSED CROPS AND YIELD GOALS (2): You may request recommendations for up to three crops by entering the corresponding crop code number, or three yield goals for one crop. At least one option must be completed to receive a fertilizer recommendation. If alfalfa is planned for the following year, list the crop code 01 under Option 2 or Option 3 with the desired yield in order to get a lime recommendation to reach pH 6.5. For CRP acres, list the crop most similar to that being seeded (e.g., 04 for legume/grass hay, or 22 for native grasses.)

TESTS REQUESTED (3): Indicate test choices for each sample. Cost for each test is shown. Before selecting nitrate, read the information below for Nitrate Test to see if it applies to your area or crop.

- **Regular Series**: Sample the plow layer (6-8 inches) for cultivated land, or to 3 inches for pastures or sod fields. Includes phosphorus, potassium, pH - lime requirement, percent organic matter, estimated texture.

- **Special Tests**: These tests are conducted only on the plow layer depth. Includes zinc, copper, iron, manganese, boron, calcium, magnesium, soluble salts (electrical conductivity). Copper recommendations apply only for peat or muck soils. Research has shown that for Minnesota soils, tests for iron and manganese are not practical; they are included to accommodate special requests.

- **Sulfur Test**: The sulfur test is not a reliable predictor of sulfur needs. Sulfur recommendations are based on crop and soil texture. Contact your county extension educator for details.

- **Nutrient Management P Test**: This test is an Olsen extractable P test, but is designed for situations where the soil test level for phosphorus is expected to be in the high range (>50 ppm Olsen) and is required for nutrient management decisions. Range is 20 – 250 ppm extractable Olsen P.

- **Nitrate Test**: For the N recommendation to be based on the nitrate value, the soil MUST be collected to a depth of 24 inches. There are two options: 1) submit two separate samples, a 0-6” depth and a 6”-24” depth sample, or; 2) collect the soil from 0-24” for the nitrate test only. The nitrate test applies to non-sandy soils in western Minnesota with an exception noted below. This test is preferred for making N recommendations for the counties west of and including Lake of the Woods, Beltrami, Becker, Otter Tail, Douglas, Pope, Kandiyohi, Renville, Redwood, Cottonwood, and Jackson. In these counties, the nitrate test is used in making N recommendations for corn, small grains, potatoes, and sugar beets.

  For the counties EAST of those cited, the nitrate test is used to recommend N only if the sample is collected in the spring before or near planting (April 1 – June 15).

  N fertilizer recommendations will not be based on the analysis of only plow layer samples for nitrate-nitrogen. If only a plow layer sample is submitted, N recommendations will be based on cropping history, intended crop, yield goal, and soil organic matter level.

  Samples collected for the nitrate test should be frozen or air-dried immediately. Drying can be accomplished by spreading the soil in the sun, or placing near a heat source. If only nitrate is to be determined, the samples can be dried in a microwave oven using several 2-minute power cycles, stirring between each cycle. Please use an insulated container for shipping frozen samples, as premature thawing may affect nitrate test results.

SAMPLING INSTRUCTIONS

Submit one sample for each area of the field. Each area should have fairly uniform soil color and texture, cropping history, fertilizer, lime, and manure treatments. One sample should not represent more than 20 acres on level, uniform landscapes, or 5 acres on hilly or rolling land. Within each area collect 15-30 sub-samples (cores, borings, or spade slices) in a grid pattern. The more variable the soil, the more sub-samples should be combined per area sample. Mix the sub-samples thoroughly in a clean plastic pail, and fill the sample bag or bag to the fill line (1 pint). If samples must be taken wet, they should be dried before being mixed and submitted to the laboratory. Do not dry the soil sample at a temperature of 97°F, and do not use a microwave oven unless only the nitrate test is requested.

Sample each area as follows: Scrape off all surface residue. Sample to the plow layer for cultivated crops or 3 inches for pastures or sod fields. Sample row crop fields between rows, except for ridge-till plantings. Where ridge-till is used, take the sample to a depth of 6-8 inches on the shoulder of the ridge, avoiding the starter fertilizer band. Avoid sampling dead or back furrows, terraces, old fence rows, lime or fertilizer spill areas, headlands, eroded knolls, low spots, or small saline areas. Sample at least 300 feet away from gravel or crushed limestone roads because their dust changes soil pH.

SHIPPING INSTRUCTIONS

Fill out the information sheet as completely as possible so that accurate recommendations can be given. Keep a copy for your records. Place samples in a shipping carton and enclose the information sheet with a check made payable to The University of Minnesota. Do not send cash. The lab is not responsible for cash payment by mail. If the shipping carton is a re-used box, wrap in heavy brown paper.

Ship samples to:

- Soil Testing Laboratory
- University of Minnesota
- 135 Crops Research Building
- 1902 Dudley Avenue
- St. Paul, MN 55108

For additional information on soil analyses, please see our website: http://soiltest.cfans.umn.edu, or call or visit your local county extension office. You may also call the Landscape Arboretum Yard and Garden line at (952) 443-1426, or the Soil Testing Laboratory at (612) 625-3101.