UNIVERSITY OF MINNESOTA
Soil Testing Laboratory

FARM/FIELD AND COMMERCIAL HORTICULTURE CROPS

SOIL ANALYSIS REQUEST SHEET

Report No.

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

Sample Location (if different than "Submitter" address)

Name ______________________

Address ______________________

City, State, Zip ______________________

Phone ______________________

Email ______________________

Sample Location County ______________________

☐Copy results to my local Extension Service

Out-of-state submitters: Visit z.umn.edu/soil-quarantines for a map of quarantined areas.

Amount $ ____________

☐check ☐cash ☐credit card ☐account

Submitter Information

Name ______________________

Address ______________________

City, State, Zip ______________________

Phone ______________________

Sample Identification			1 Crop History				2 Proposed Crops						3 Test(s) Requested (see back page for depth)								
			Before Last Crop Grown		Last Grown Crop		Option 1		Option 2		Option 3										
Laboratory Number (Lab Use Only)	Field or Sample number or letter	Check if irrigated	Crop Code No.	If Alfalfa check # plants per sq ft	Crop Code No.	If Alfalfa check # plants per sq ft	Crop Code No.	expected yield	Crop Code No.	expected yield	Crop Code No.	expected yield	Regular Series P, K, pH, OM %	Sulfur*	Zinc, Iron, Copper, Manganese	Boron	Magnesium and Calcium	Lead	Nutrient Mgmt P	Soluble Salts	Nitrate Read about this test on the back. **Sampling to 24" is required for this test.**
													$20	$8.50	$14.50	$8.50	$8.50	$21	$8.50	$8.50	
				☐ 4+ ☐ 2-3 ☐ 0-1		☐ 4+ ☐ 2-3 ☐ 0-1															$8.50 ☐0-6"/6-24" sample ☐0-24" sample
				☐ 4+ ☐ 2-3 ☐ 0-1		☐ 4+ ☐ 2-3 ☐ 0-1															
				☐ 4+ ☐ 2-3 ☐ 0-1		☐ 4+ ☐ 2-3 ☐ 0-1															
				☐ 4+ ☐ 2-3 ☐ 0-1		☐ 4+ ☐ 2-3 ☐ 0-1															
				☐ 4+ ☐ 2-3 ☐ 0-1		☐ 4+ ☐ 2-3 ☐ 0-1															
				☐ 4+ ☐ 2-3 ☐ 0-1		☐ 4+ ☐ 2-3 ☐ 0-1															

Recommendations available for these crops:

*See comments on the back of this page.

Prices effective January 2023. Subject to change.

Crop Code	Name	Yield Unit
	LEGUMES	
01.	Alfalfa, new seed	ton/acre
02.	Alfalfa, established	ton/acre
03.	Birdsfoot Trefoil	ton/acre
04.	Legume/Grass Hay	ton/acre
05.	Legume/Grass Pasture	–
06.	Red Clover	ton/acre
	CORN	
07.	Corn, grain	bu/acre
08.	Corn, silage	ton/acre
09.	Sweet Corn	ton/acre
	SMALL GRAINS	
10.	Barley	bu/acre
11.	Oats	bu/acre
12.	Rye/Triticale	bu/acre
13.	Wheat	bu/acre
	MISCELLANEOUS	
14.	Buckwheat	lb/arce
15.	Edible Beans	lb/arce
16.	Fallow	–
17.	Flax	bu/acre
18.	Grass Hay	tons/acre
19.	Grass Seed Prod.	lb/arce
20.	Grass Pasture	–
21.	Millet	lb/arce
22.	Native Grasses	tons/acre
23.	Potatoes	cwt/acre
	MISCELLANEOUS (continued)	
24.	Rape/Mustard/Canola	cwt/acre
25.	Sorghum Sudan	–
26.	Soybeans	bu/acre
27.	Sugarbeets	tons/acre
28.	Sunflowers	lb/arce
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	
59.	Strawberries	
	TURF	
60.	Cultured Sod	
61.	**NURSERY - FIELD STOCK TREES/SCRUBS** Suggested tests: Regular, Soluble Salts, Nitrate. For sampling instructions, please see Nursery Form	
62.	Other ____________	

<u>Instructions for Completing this Soil Sample Analysis Request Sheet</u> - complete information will provide the most accurate recommendations possible.

<u>1 - Crop History</u>: Indicate crops grown in the past **two** growing seasons using the Crop Codes from the list at the bottom of the first page. If alfalfa was grown indicate the number of plants (crowns) per sq. ft.

<u>2 - Proposed Crops</u>: Request recommendations for up to **three crops or three yield goals for one crop.** At least one option must be completed to receive a fertilizer recommendation. For CRP acres, list the crop most similar to that being seeded (e.g., 04 for legume/grass hay or 22 for native grasses.)

<u>3 - Test(s) Requested</u>: Indicate test choices for each sample. **Before selecting nitrate, read the information below for <u>Nitrate Test</u>** to see if it applies to your area or crop.

Regular Series: Sample the plow layer for cultivated land or to 3 inches for pastures/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. 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: This test 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 for a Nitrate Only test: 1) submit two separate samples, a 0-6" depth sample and a 6"-24" depth sample, or; 2) collect the soil from 0-24". 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 noted above, 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 can affect nitrate test results.

<u>Sampling Instructions</u>

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 sampled. Mix the sub-samples thoroughly in a clean pail, **fill a bag or other clean container with approximately 2 cups of soil.** If samples must be taken wet, they should be dried before being mixed and submitted to the laboratory. Do not exceed a drying temperature of 97°F, and do not use a microwave oven unless <u>only</u> the nitrate test is requested.

Sample by scraping off the surface residue. **Sample to the plow layer (6-8") for cultivated land or 3" for pastures/sod fields.** Sample row crop fields between rows. For ridge-till plantings take the sample 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.

Mail or deliver the sample(s), this completed request sheet and payment (check made out to the University of Minnesota - or you may pay with a credit card) to:

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

Laboratory Hours
Monday-Friday
8am-4:30pm

Prices effective 01-2023. Visit z.umn.edu/farm-field to check for price changes.

For additional information visit our website at <u>https://soiltest.cfans.umn.edu</u>, call us at (612) 625-3101, or contact your local county extension office.