



Soil and Plant Laboratory, Inc.

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LANDSCAPE PREPLANT REPORT

BACKGROUND

The sample received was described as representing site soil to 6 inches in depth from an area scheduled for landscaping with trees and shrubs.

ANALYSIS RESULTS

Particle size data show a loam classification by USDA standards. No significant problems are suggested by the distribution of particle sizes. Organic content is very low and the estimated infiltration rate is 0.29 inch per hour. Loosening the soil and improving the organic content will help improve porosity.

The reaction value is slightly alkaline and suitable for most plants though slightly acidic is preferred. Lime content is favorably absent indicating the pH will adjust readily to a more appropriate range. Salinity, sodium and boron are safely low and the SAR value shows soluble sodium adequately balanced by calcium and magnesium.

Nutritional data reveal low nitrogen, phosphorous, potassium and sulfate. Calcium is sufficient with magnesium ample.

RECOMMENDATIONS

To improve drainage of the root zone, first loosen any undisturbed or compacted area to a 10-inch depth. The following material should then be evenly spread and thoroughly incorporated with 6-inches of soil to form a homogeneously blended layer:

Amount / 1000 Square Feet

6 cubic yards	Nitrogen Stabilized Organic Amendment
20 pounds	6-20-20 Commercial Fertilizer
5 pounds	Potassium Sulfate (0-0-50)
10 pounds	Soil Sulfur

The above organic amendment rate is based on an organic content of 270 pounds per cubic yard and may be adjusted based on the amendment selected.

To prepare backfill:

- Excavate planting pits at least twice as wide as the diameter of the rootball.
- Soil immediately below the root ball should be left undisturbed to provide support but the sides and the bottom around the sides should be cultivated to improve porosity.



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- The top of the rootball should be at or slightly above final grade.
- The top 12-inches of backfill around the sides of the rootball of trees and shrubs may consist of the above amended soil or may be prepared as follows:

3 parts	Pulverized Site Soil
1 part	Nitrogen Stabilized Organic Amendment

Blended with 1 pound 6-20-20, 1/4 pound potassium sulfate, and 1/2 pound soil sulfur per cubic yard backfill.

- Backfill below 12 inches required for 24-inch box or larger material **should not contain** the organic matter and should *replace* the 1/2 pound soil sulfur with 1 pound iron sulfate* per cubic yard backfill.
- Ideally a weed and turf free zone should be maintained just beyond the diameter of the planting hole. A 2-4 inch deep layer of coarse mulch can be placed around the tree or shrub. **Mulch should be kept a minimum 4 inches from the trunk.**
- Irrigation of new plantings should take into consideration the differing texture of the rootball substrate and surrounding soil matrix to maintain adequate moisture during this critical period of establishment.

**Apply the iron sulfate cautiously* avoiding contact with moist concrete since staining can result.

MAINTENANCE

General maintenance fertilization for new plantings may rely on nitrogen fertilization complemented by a complete fertilizer in the spring and fall. During the winter, plants in need of nitrogen to maintain suitable color may respond best to calcium nitrate (15.5-0-0) applied at a rate of 6 pounds per 1000 square feet. A spring application of 16-6-8 at a 6-pound rate and a fall application of 21-7-14 at a 5-pound rate should insure continuing adequate phosphorous and potassium supply. During the summer, ammonium sulfate (21-0-0) is a good source of nitrogen and should be applied at a 5-pound rate. **Larger tree plantings will require a less aggressive fertilizer regime and applications at half the given rate will be sufficient.** The first application of calcium nitrate should be made 30 days after planting is complete with retreatment scheduled at 45 to 60 day intervals. Once the plants have established, the frequency of fertilization may be decreased depending on color and rate of growth desired.



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COMPREHENSIVE SOIL ANALYSIS
(AO5-1, AO5-2 or AO5-3)

Sam ple #	Half Sat%/ TEC	pH/ Qual Lime	ECe	-----Parts Per Million Parts Dry Soil-----											Organic % dry wt.	Sample Description & Log Number	
				NO3 N	NH4 N	PO4 P	K	Ca	Mg	Cu	Zn	Mn	Fe				
1	18 201	7.5 None	0.4	3	6	5	60	2340	986							0.2	

Sam ple #	-----Saturation Extract Values-----							---Gravel---		Percent of Sample Passing 2 mm Screen					USDA Soil Classification
	Ca me/l	Mg me/l	Na me/l	K me/l	B ppm	SO4 me/l	SAR	Coarse 5-12	Fine 2-5	Very Coarse 1-2	Med. to Coarse 0.5-1	V. Fine 0.05-.5	Silt .002-.05	Clay 0-.002	
1	1.6	1.4	1.5	0.1	0.03	0.6	1.2	0.3	2.7	5.1	9.3	37.4	32.1	16.1	Loam

Sufficiency factor (1.0=sufficient for average crop) below each nutrient value. N factor based on 200 ppm constant feed. SAR = Sodium adsorption ratio. Half Saturation %=approx field moisture capacity. Nitrogen(N), Potassium(K), Calcium(Ca) and Magnesium(Mg) by sodium chloride extraction. Phosphorus(P) by sodium bicarbonate extraction. Copper(Cu), Zinc(Zn), Manganese(Mn) & Iron(Fe) by DTPA extraction. Sat. ext. method for salinity (ECe as dS/m), Boron(B), Sulfate(SO4), Sodium(Na) and SAR. TEC(listed below Half Sat) = Est.Total Exchangeable Cations(meq/kg). Gravel fraction expressed as percent by weight of oven-dried sample passing a 12mm(1/2 inch) sieve. Particle sizes in millimeters.