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TB94: Chemical and Physical Properties of the Boothbay, Brayton, Croghan, Monarda, Plaisted, Scantic, and Swanville Soil Mapping Units

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CHEMICAL AND PHYSICAL PROPERTIES OF THE BOOTHBAY, BRAYTON, CROGHAN, MONARDA, PLAISTED, SCANTIC, AND SWANVILLE SOIL MAPPING UNITS

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SUMMARY

Seven soil mapping units were each sampled at five locations within Maine. The morphology of the soil was described at each site. The profiles were sampled on a horizonal basis from the soil surface to a depth of 100 cm. The soil samples were taken to the laboratory where their chemical and physical properties were determined. Weighted means and weighted standard deviations were determined for several soil properties. Soil profile descriptions and chemical and physical soil data are presented for each sample site.

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Chemical and Physical Properties of the Boothbay, Brayton, Croghan, Monarda, Plaisted, Scantic, and Swanville Soil Mapping Units

R. V. Rourke and K. A. Schmidt[1]

INTRODUCTION

As a result of mixing that was accomplished by the relatively recent glacial activity in Maine, the pattern of soils in the state is complex. As a result soil properties vary from location to location. Since these properties do not change appreciably during a person's lifetime, the utilization of soils is based primarily on their natural properties. As pressure for certain uses builds, it sometimes becomes feasible to modify properties that limit the use of the soil. When this occurs, the cost of making the modification will be dependent on the type of the natural limitation.

A soil can be identified and characterized, and each soil unit has certain physical and chemical properties that are unique. Soils exist in patterns within the landscape that allow trained individuals to create maps delineating various kinds of soils. Soil surveys are being made throughout the United States. The soil map can best be utilized when the properties of the soil mapping units that make up the map are understood. Soil map interpretations have been developed for Maine (4, 7) and the United States (16). These interpretations can be improved as additional information concerning the soil becomes available.

Soil surveys in Maine have been published by the Soil Conservation Service, USDA, in cooperation with the Life Sciences and Agriculture Experiment Station, for Penobscot, Northeast Aroostook, Southern Aroostook, Southern Somerset, Androscoggin, Sagadahoc, Cumberland, and Kennebec Counties. Soil surveys of York County, Waldo County, Knox and Lincoln Counties, Oxford County, and Hancock County are projected to be available within the next decade.

This research is a continuation of work previously published (3, 5, 6, 11, 12, 13, 14, 18) characterizing the soils of Maine. The soils in this bulletin are from many regions in Maine.

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MATERIALS

The Boothbay soil is a deep, moderately well drained soil. It has formed in slack water sediments high in silts. It is in the coastal counties and along the Androscoggin river system. This soil was previously named Belgrade or Scio, but was correlated to Boothbay because of low soil temperature, higher clay content and higher base status than the Belgrade or Scio soils.

Brayton soils have developed in medium or moderately coarse textured glacial till. They have a friable solum and a dense substratum that totals more than a meter in thickness. Brayton soils are throughout Maine excepting Aroostook County. This soil has previously been called Ridgebury, but was changed to Brayton because the soil temperature was lower than defined for the Ridgebury series.

Croghan soils are deep, moderately well drained soils that have developed in sand deposits left by glacial melt waters in Cumberland, Oxford, Waldo, Kennebec, and York Counties. They were previously called Deerfield, but were correlated to Croghan because of lower soil temperature and more organic carbon in the B horizon than defined for the Deerfield series.

The Monarda soils are deep, poorly drained, medium textured soils developed in glacial till. They have about 40 cm of friable soil material above a dense substratum. This soil is throughout Maine with the exception of coastal counties west of Waldo County. This soil is in depressional and lower slope positions.

Plaisted soils have developed in moderately well drained, medium textured, glacial till deposits. There are about 60 cm of friable material above a dense substratum. Plaisted soils are listed in the soils legends of Aroostook, Somerset, Piscataquis, and Penobscot Counties. Plaisted soils are in the upper and/or steeper slopes in the landscape.

Scantic soils are in poorly drained marine or lacustrine sediments. The materials are more than one meter deep. There are about 40 cm of silty material above a more clayey matrix. This soil is extensive in the valleys and coastal regions of Maine that were flooded following glacial recession, and that later came above water as the land rebounded.

Swanville soils have developed in poorly drained marine or lacustrine sediments. These silty sediments have a thickness exceeding one meter. This soil was formerly called Raynham, but has a too high clay content and a too low average soil temperature for placement in this series. Swanville soils are currently mapped only in Waldo County along the lower Penobscot River Valley on landscapes that have emerged following flooding after glacial recession.

These soils have been classified according to Soil Taxonomy (17) as follows:

Boothbay – Fine-silty, mixed, frigid Aquic Dystric Eutrochrepts
Brayton – Coarse-loamy, mixed, frigid Aeric Fragiaquepts
Croghan – Sandy, mixed, frigid Aquic Haplorthods
Monarda – Coarse-loamy, mixed, frigid Aeric Fragiaquepts
Plaisted – Coarse-loamy, mixed, frigid Typic Fragiorthods
Scantic – Fine, illitic, nonacid, frigid Typic Haplaquepts
Swanville – Fine-silty, mixed, nonacid, frigid Aeric Haplaquepts

FIELD PROCEDURE

Sites for sampling were selected in cooperation with soil scientists from the Soil Conservation Service, USDA. Five pedons of each soil unit were sampled at locations separated by at least one mile. A 900 square cm soil sample was taken from each horizon. Each sample was bagged separately. The soils were sampled and described to a one meter depth. Soil cores were removed in triplicate from each horizon for bulk density and water retention analyses in the laboratory. Soil descriptions were made at each site by methods described in the Soil Survey Manual (15).

Soils previously described as having fragipans are described as having lithologic discontinuities in this bulletin. The data do not support genetic development of a fragipan and the dense substratum is possibly dense basal glacial till.

LABORATORY PROCEDURE

Bulk samples of each horizon were screened and the stone volume determined by water displacement. Subsamples of the material smaller than two mm were taken for later laboratory analyses.

Soil moisture retention was determined at 0.06, 0.1, 0.33, 0.67, and 1.0 bar tensions using soil cores taken in the field. The cores were subjected to the various tensions using pressure plate methods as described by Richards (10). Moisture retention was expressed as percent based upon oven dry, stone free soil. Moisture retained at 2, 3, 5, and 15 bar tensions was determined with soil from the subsamples using pressure membrane apparatus (10). Available soil water was determined using moisture retained at 0.33 and 15 bar tensions.

Bulk density was determined using oven dry weights of the cores used to measure soil moisture retention at tensions less than one bar. Adjustments were made so that all material larger than two mm was removed prior to making weight and volume computations.

Particle size analysis of the less than two mm size fraction was determined using sieve and pipet methods as described by Day (2). Soils were oxidized using H_2O_2 and heat. Dispersion of the soil samples was

done by 12 hours of shaking in a dilute solution of sodium metaphosphate.

Organic carbon determinations were by methods described by Allison (1). The factor utilized for correction was 1.33.

Soil reaction was measured at a solution to soil ratio of 1:1 in water or 1N KCl and at a 2:1 ratio in 0.01 M $CaCl_2$. Samples were allowed to stand overnight before measurements were made. All soil reaction measurements were made using glass electrode methods as described by Peech (9).

Exchangeable cations were determined in ammonium acetate soil extracts using atomic absorption methods described previously (14). Exchange acidity was measured by barium chloride triethanolamine technique as described by Peech (8).

RESULTS AND DISCUSSION

Weighted means and weighted standard deviations of the soil properties measured are reported at 20 cm depth intervals in Appendix A. Weighted mean computation techniques were as presented previously (12). Soil data and soil descriptions of each soil unit are presented in Appendix B.

Sand Distribution

A comparison of the distribution of the various sand sizes in each of the soil units is presented in Tables 1 through 5 in Appendix A. Very coarse sands (2 to 1 mm) were present primarily in the profiles of Brayton, Monarda and Plaisted soil units, but were not the predominant sand size present in these units. Coarse sands (1 to 0.5 mm) were highest in the Brayton, Croghan, Monarda and Plaisted units, but again, this sand size did not predominate in any of the soils. Medium sand (0.5 to 0.25 mm) was the predominant size in the sand distribution of the Croghan unit and comprised a significant portion of the sands in the Brayton, Monarda and Plaisted soils. Fine sands (0.25 to 0.1 mm) were the predominant sand size of the Brayton, Monarda and Plaisted soils and a major component of the sands in the Croghan, Scantic and Swanville soil units. Very fine sand (0.1 to 0.05 mm) was the major sand fraction in the sand distribution of the Boothbay, Scantic, and Swanville soil units and was present in considerable amounts in the other soils in this report.

Silt Distribution

Silts were divided into coarse (0.05 to 0.02 mm) and fine (0.02 to 0.002 mm) sizes. The distribution of these sizes is presented in Tables 6 and 7 in Appendix A. Coarse silt was the predominant silt size in the

Croghan soil units. Fine silts were the major portion of the silt fraction in the other soil units.

Clay Distribution

Clay (<0.002 mm) was a major component of the less than two mm particle size fraction in the Scantic and Swanville soils. In the Boothbay and Monarda soil units the average clay content exceeded ten percent throughout the profile. Brayton soils had a clay content that changed only slightly from the surface 20 cm to the 80 to 100 cm depth, but Plaisted soils increased in clay below a 40 cm depth. Croghan soils decreased in clay from an average high of 2.23 percent in the 0 to 20 cm zone as depth increased to 100 cm.

Soil Texture

Soil texture is the relationship of each of the major particle size fractions when all fractions of less than two mm diameter are considered together. Boothbay soils averaged a silt loam in texture to a depth of 100 cm. The average texture in the 0 to 20 cm depth zone of Brayton was a loam and below this depth to 100 cm it was a fine sandy loam. Croghan soils averaged a loamy sand surface 20 cm with a sand texture beneath. The average texture in the 0 to 20 cm depth zone of Monarda was a silt loam. Beneath this depth to 100 cm the average texture was a loam. Textural class of the 0 to 80 cm depth zone in Plaisted soils averaged a silt loam with a loam texture average at the 80 to 100 cm depth. Scantic soils averaged a silty clay loam texture to 40 cm and a silty clay texture to 100 cm. Swanville soils had a silt loam textural average of 0 to 100 cm.

Organic Carbon

The organic carbon content of the various soil layers is a reflection of the amount of organic matter than has been added to the soil as a result of biologic activity. In most soils the organic carbon content is highest in the surface and decreases regularly as depth of the soil increases. Exceptions to this are: (1) a presence of a strongly leached surface layer, or (2) presence of buried soils such as may be found on some flood plains. High levels of organic carbon have been found to increase cation exchange sites, increase soil aeration, and to influence available and total water in the soil.

As seen in Table 9, Appendix A, average organic carbon content decreased as depth increased in all of the soils tested. Brayton and Croghan soils frequently had severely leached horizons of low organic content near the surface and this was the reason that they had the lowest mean organic content in the upper 20 cm of the mineral soil. Other soils had a mixed surface horizon (Ap) as a result of agricultural activity which had destroyed any zone of low organic content in the surface 20 cm.

Bulk Density

The bulk density of a soil is its weight per unit of volume expressed as grams per cubic centimeter (g/cm^3) of material less than two mm diameter. A soil high in organic matter frequently has a bulk density value of less than one. Soils that have been compacted and are slowly permeable may have a bulk density that exceeds 1.8 or 1.9 g/cm^3 Soil roots are inhibited at bulk density values of about 1.5 g/cm^3 In Maine soils that are forested and derived from dense glacial till, bulk density is very low in the surface and generally increased to a value greater than 1.5 g/cm^3 within 40 to 60 cm of the soil surface.

In Table 10, Appendix A, weighted means and weighted standard deviations of bulk density of the soils being characterized are reported by 20 cm depth zones. The soils developed in glacial till (Brayton, Monarda and Plaisted) reached or exceeded a value of 1.5 g/cm^3 within 60 cm of the soil surface. The poorly drained glacial tills (Brayton and Monarda) exceeded a bulk density of 1.7 g/cm^3 within 40 cm of the soil surface. The poorly drained soils developed from sediments having more than 20 percent clay below 40 cm had bulk densities that averaged more than 1.5 g/cm^3 at depths below 20 cm. The Boothbay soils were higher in very fine and fine sands and although developed in water deposited sediments, they did not reach an average bulk density of more than 1.5 g/cm^3 until depth below the surface exceeded 40 cm. Croghan soils were higher in the fine, medium and coarse sand fraction and reached an average bulk density of 1.5 g/cm^3 at an 80 cm depth.

Soil Moisture Retention

Average water retention is presented in Table 11, Appendix A, for 0.1 bar values, and Table 12, Appendix A, for 15 bar values. Water retained by the soil at other tensions is presented in the data for each profile in Appendix B. Percent moisture in the soil at a tension of 0.1 to 0.33 bars is about equal to the amount of water in the soil when it is at field capacity. Water in the soil at 15 bars is thought to be equal to the percent water in the soil when a plant permanently wilts. The difference in water contents is the amount of water held by the soil available for plant use. To convert this difference to a volume measurement it is multiplied by bulk density. The amount of available water in a horizon is equal to the thickness of the horizon times the volume of water retained per unit of measurement. The volume of water must be adjusted by subtracting the volume of material larger than two millimeters to arrive at the amount of water that is actually retained in a plant-available form by a given soil layer.

As seen in Appendix A, Table 11, the amount of water retained at 0.1 bars decreased as depth increased. Soils high in silt and/or clay such as Scantic, Swanville and Boothbay retained more water than a sandy

soil such as Croghan. In soil that had high bulk density there was less moisture retained at 0.1 bars than by a soil of lower density and comparable texture. Differences between moisture retentions at 15 bars were much less pronounced with only high clay content soils retaining the greatest amount of water as seen by the Scantic data in Appendix A, Table 12. Loam or silt loam soils retained about the same amount of water. Sands retained the least amount of 15 bar moisture as evidenced by the values reported for Croghan. The increased moisture at 15 bars in the 0 to 20 cm zone of the Croghan soils was the result of increased organic matter in this area which also enhanced moisture retention.

Soil Reaction

Soil reaction in various solutions is presented in Appendix A, Tables 13, 14, and 15. Soil reaction in 1N KCl solution is usually a measure of total acidity in that it masks differences in salt concentration and causes a large percentage of the exchangeable H^+ to go into solution. Soil reaction in a 0.01 M $CaCl_2$ solution is used to overcome small differences in salt concentrations that could cause differences between samples without causing large amounts of H^+ to go into the solution. Soil reaction in water measures the pH accounted for by the H^+ in solution in the particular soil sample.

Within each soil unit, pH generally increased as depth increased when soil reaction was measured in water or 0.01 M $CaCl_2$. When soil reaction was measured in 1N KCl, soil reaction decreased as depth increased in the Boothbay soil and was slightly erratic in the Scantic, Monarda, Brayton and Croghan soil units. The Plaisted soil increased in pH in the 20 to 40 cm zone then decreased to a constant level in the 60 to 100 cm depth zone when measured in 1N KCl.

Soil reaction as measured in water increased to a value of more than six as depth increased to 100 cm in soil with a loam or finer texture, except in the Plaisted unit. The sandy Croghan soil unit did not increase to an average value of six. Soil reaction as measured in 0.01 M $CaCl_2$ was intermediate between values determined in water and 1N KCl.

Cation Exchange Capacity

The ability of a soil to retain cations in an exchangeable position is its cation exchange capacity. This capacity is a measure of the exchangeable Ca^{++} Mg^{++}, Na^+, K^+ and H^+ in a soil. In Maine Na^+ is generally very low and accounts for only a small portion of the total cations present. Exchangeable H^+ is frequently the dominant cation present in unlimed soils in Maine and is referred to as exchange acidity. In wetter soils that are not excessively leached the lower depths may have more exchangeable basic cations than exchangeable H^+

Exchange acidity values are shown as weighted means in Appendix A, Table 16. Highest values were in the surface 20 cm and values

decreased as depth increased in all soils. The wetter soils, Scantic, Swanville, Brayton and Monarda decreased in exchange acidity more rapidly than did the better drained soils.

Weighted means of the cation exchange capacity are presented in Appendix A, Table 17. The cation exchange capacity was highest in the surface and decreased with depth. It did not decrease as far in the soils with higher clay contents. Scantic, Swanville, Monarda and Boothbay soils had higher mean cation exchange capacities below the 60 cm depth than other soil units. Higher cation exchange capacity levels in the surface soil layer of all soils in this report were consistent with higher organic carbon levels.

Coarse Fragment Volume

Percent total coarse fragment volume expressed as weighted means is presented in Table 18, Appendix A. Within the soils derived from glacial till there was considerable variation about the weighted means within each zone as may be noted by the weighted standard deviations. Thus, the means reported for Brayton, Monarda and Plaisted soil units are subject to a wide fluctuation about the central value when estimating the population. As would be expected, there was little variation in coarse fragment volume in soils derived from slack water deposits as is shown in the Boothbay, Croghan, Swanville and Scantic soil units.

CONCLUSIONS

The fine textured soil mapping units in this report may be separated by clay contents. Scantic units have more than 35% clay below a depth of 20 cm. Swanville units contain between 18% and 34% clay between 20 and 100 cm. Boothbay units averaged between 12% and 18% clay between 20 and 100 cm, which is too low for the established family particle size class.

The glacial till soils are separated by clay and silt contents. Monarda units have from 14% to 18% clay at depths of 20 to 100 cm. Plaisted units have more than 50% silt from 20 to 80 cm. Brayton units have less than 50% silt from 20 to 100 cm.

The Croghan units are sandy with medium and fine sand predominating between 20 and 100 cm.

Soil materials of these soil units have been in place sufficiently long that organic carbon contents decrease regularly with depth. There is no evidence of recent deposition of new soil material. Plaisted and Sites 1, 3, 4, and 5 of Croghan have sufficient organic carbon contents below 12.5 cm to be in Typic subgroups of Spodosols.

The bulk density of all units excepting Croghan exceeded 1.5 g/cm^3 within 60 cm. Brayton, Scantic and Swanville have average densities

exceeding 1.5 g/cm^3 at depths below 20 cm. Boothbay and Monarda exceed a bulk density of 1.5 g/cm^3 below 40 cm.

Available water is most limiting in the Croghan units. The high bulk density at mean depths ranging from 20 to 60 cm in the other units also limited the amount of plant-available water that could be derived from them.

The use of 1N KCl to measure soil reaction as compared to water showed that total acidity in Boothbay increased with depth more than it did in the other soils. Soil reaction as measured in 0.01 M $CaCl_2$ solution was lower than in water, but higher than 1N KCl.

Cation exchange capacity averaged more than 20me/100g in the upper 20 cm of Plaisted, Boothbay and Scantic units, but basic cations were at least 50% of the total only in Scantic. The low natural fertility of the soils in Maine is indicated by the relatively low base content of the surface layer of most soils. With the exception of Plaisted soil units, average base value exceeded 40% of the cation exchange capacity at depths below 80 cm.

Coarse fragment volume was highest in the glacial till soils, but varied greatly within components of each mapping unit.

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APPENDIX A

TABLE 1

Weighted mean and weighted standard deviation of percent very coarse sand (2-1 mm) of <2 mm material of 7 mapping units in 20-cm depth intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	0.62	0.33	0.51	0.49	0.44	0.40	0.32	0.36	0.13	0.11
Brayton	5.88	2.99	6.57	3.81	6.45	4.19	6.25	4.07	6.53	3.93
Croghan	1.97	1.65	3.03	3.13	2.69	2.75	2.82	3.81	2.86	3.79
Monarda	6.15	2.62	8.76	2.45	7.09	1.37	6.83	1.48	6.89	1.65
Plaisted	6.64	2.75	7.03	1.23	7.88	2.24	7.95	2.45	8.23	2.88
Scantic	1.77	1.62	0.94	0.72	0.17	0.25	0.03	0.07	0.02	0.03
Swanville	0.88	0.73	0.47	0.43	0.27	0.26	0.12	0.11	0.08	0.07

TABLE 2

Weighted mean and weighted standard deviation of percent coarse sand (1-0.5 mm) of <2 mm material of 7 mapping units in 20-cm depths intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	0.97	0.49	0.82	0.67	0.86	0.76	0.80	0.82	0.56	0.50
Brayton	7.81	2.18	9.66	2.15	9.91	2.09	9.86	1.80	9.64	1.42
Croghan	12.21	7.69	13.92	9.14	14.50	9.95	11.94	7.99	13.25	9.15
Monarda	5.57	1.52	7.92	1.50	7.19	1.50	6.94	1.76	6.79	1.88
Plaisted	5.71	1.25	6.76	1.37	7.46	1.50	7.49	1.61	7.97	2.30
Scantic	2.39	1.31	1.52	1.05	0.37	0.29	0.12	0.09	0.16	0.13
Swanville	1.02	0.51	0.79	0.40	0.56	0.38	0.31	0.17	0.25	0.22

TABLE 3

Weighted mean and weighted standard deviation of percent medium sand (0.5-0.25 mm) of <2 mm material of 7 mapping units in 20-cm depth intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	1.39	0.62	1.09	0.64	1.23	0.81	1.10	0.76	0.92	0.70
Brayton	9.85	2.48	12.65	1.74	13.08	1.36	12.95	1.36	12.80	1.67
Croghan	30.27	7.00	32.17	8.31	36.07	7.38	38.37	13.03	39.03	13.41
Monarda	5.11	1.55	7.10	1.29	6.79	1.68	6.61	1.88	6.46	1.94
Plaisted	6.07	1.11	7.31	2.25	7.60	1.89	7.45	1.04	8.08	1.93
Scantic	2.37	1.03	1.85	1.00	0.66	0.34	0.33	0.14	0.38	0.20
Swanville	0.98	0.46	0.83	0.30	0.67	0.29	0.46	0.12	0.46	0.21

TABLE 4

Weighted mean and weighted standard deviation of percent fine sand (0.25-0.1 mm) of <2 mm material of 7 mapping units in 20-cm depth intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	7.54	5.24	7.10	5.67	7.77	6.88	6.92	7.59	6.49	8.03
Brayton	13.91	2.76	17.17	3.81	17.81	4.14	17.94	4.03	18.05	3.93
Croghan	30.50	13.08	31.17	13.32	33.10	13.95	35.71	17.02	34.15	17.79
Monarda	7.13	2.18	8.90	1.56	8.20	1.78	8.09	2.01	7.98	2.07
Plaisted	8.94	2.33	10.25	4.31	10.28	3.47	10.31	2.07	11.01	1.68
Scantic	3.06	1.40	3.02	1.42	1.40	0.70	0.85	0.30	0.96	0.50
Swanville	2.11	2.01	1.91	1.23	1.80	1.73	1.83	2.12	1.89	1.32

TABLE 5

Weighted mean and weighted standard deviation of percent very fine sand (0.1-0.05 mm) of <2 mm material of 7 mapping units in 20-cm depth intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	14.30	5.44	13.88	6.47	14.53	8.49	16.52	10.62	18.05	11.69
Brayton	10.32	1.31	10.89	2.70	10.93	2.59	10.99	2.28	11.21	1.65
Croghan	8.71	4.18	8.48	5.27	7.91	5.41	7.57	5.01	7.26	5.24
Monarda	5.68	0.97	6.27	1.23	6.03	1.06	6.02	1.07	6.04	1.02
Plaisted	7.94	2.26	8.12	2.82	7.74	2.05	8.03	1.92	8.80	2.53
Scantic	2.70	1.21	2.74	0.79	1.88	0.99	1.33	0.68	1.35	0.62
Swanville	4.34	2.12	5.20	3.29	3.32	1.43	3.59	1.72	4.31	2.73

TABLE 6

Weighted mean and weighted standard deviation of percent coarse silt (0.05-0.02 mm) of <2 mm material of 7 mapping units in 20-cm depth intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	30.09	4.30	28.85	2.35	26.90	3.44	25.09	8.02	25.15	7.75
Brayton	23.58	4.84	17.71	2.96	15.67	1.91	15.50	2.16	16.24	2.24
Croghan	9.41	2.01	6.68	2.82	4.08	2.43	2.75	1.81	2.69	1.85
Monarda	21.62	3.25	17.23	2.80	15.22	1.98	14.69	1.43	13.93	2.82
Plaisted	26.28	3.91	23.68	3.61	20.11	3.00	19.77	3.29	18.75	3.22
Scantic	16.52	2.43	15.62	3.81	12.07	5.42	10.56	3.16	10.98	3.08
Swanville	30.15	7.85	30.32	8.99	24.96	5.98	26.18	6.45	27.12	8.12

TABLE 7

Weighted mean and weighted standard deviation of percent fine silt (0.02-0.002 mm) of <2 mm material of 7 mapping units in 20-cm depth intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	30.96	11.30	33.91	12.57	32.39	15.30	32.92	22.96	31.95	22.42
Brayton	20.08	4.67	17.15	5.87	17.33	4.19	17.28	3.08	16.84	2.54
Croghan	4.71	1.64	3.33	1.69	1.19	1.13	0.65	0.56	0.56	0.54
Monarda	35.24	6.96	29.81	4.57	32.23	3.37	32.62	6.05	33.01	7.35
Plaisted	34.42	6.94	33.25	9.59	32.06	7.42	31.11	5.08	28.97	5.87
Scantic	42.97	8.59	38.71	5.96	38.85	5.83	40.02	4.06	37.92	2.86
Swanville	43.57	7.76	41.14	9.28	44.74	6.66	44.61	6.30	42.58	7.68

TABLE 8

Weighted mean and weighted standard deviation of percent clay (<0.002 mm) of <2 mm material of 7 mapping units in 20-cm depth intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	14.12	3.73	13.83	4.31	15.89	6.89	16.33	5.90	16.75	5.65
Brayton	8.73	3.03	8.19	2.25	8.89	1.80	9.23	1.92	9.30	1.88
Croghan	2.23	1.10	1.23	0.87	0.47	0.65	0.19	0.27	0.20	0.28
Monarda	13.51	2.85	14.01	3.79	17.25	4.88	18.21	4.30	18.89	4.21
Plaisted	4.01	3.01	3.61	2.64	6.86	5.05	7.89	5.32	8.19	4.74
Scantic	28.22	6.48	35.60	6.94	44.60	3.09	46.75	4.88	48.23	6.75
Swanville	16.95	3.76	19.34	6.49	23.69	7.47	22.89	6.54	23.30	6.40

TABLE 9

Weighted mean and weighted standard deviation of percent organic carbon of material <2 mm of 7 mapping units in 20-cm depth intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	3.09	1.25	0.68	0.47	0.23	0.20	0.09	0.03	0.10	0.03
Brayton	1.94	1.32	0.36	0.44	0.10	0.11	0.06	0.04	0.06	0.04
Croghan	2.46	1.37	1.08	0.72	0.22	0.21	0.09	0.05	0.08	0.04
Monarda	2.97	1.57	0.83	0.50	0.25	0.14	0.19	0.06	0.15	0.05
Plaisted	3.80	1.10	1.74	0.73	0.42	0.24	0.22	0.07	0.17	0.07
Scantic	3.34	1.07	0.84	0.73	0.22	0.08	0.15	0.04	0.14	0.02
Swanville	2.71	1.27	0.45	0.32	0.19	0.08	0.14	0.05	0.11	0.05

TABLE 10

Weighted mean and weighted standard deviation of bulk density as g/cm^3 of stone-free soil of 7 mapping units in 20-cm depth increments to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	1.08	0.22	1.36	0.23	1.52	0.15	1.64	0.07	1.64	0.07
Brayton	1.21	0.26	1.64	0.25	1.90	0.13	1.94	0.11	1.93	0.10
Croghan	1.03	0.14	1.14	0.14	1.36	0.08	1.49	0.05	1.50	0.05
Monarda	1.15	0.23	1.44	0.24	1.72	0.12	1.75	0.06	1.78	0.05
Plaisted	0.68	0.11	0.95	0.13	1.41	0.19	1.57	0.07	1.48	0.11
Scantic	1.12	0.18	1.52	0.14	1.59	0.05	1.63	0.07	1.59	0.07
Swanville	1.14	0.13	1.53	0.15	1.63	0.05	1.63	0.07	1.62	0.08

TABLE 11

Weighted mean and weighted standard deviation of 0.1 bar moisture content as percent by weight water in a stone-free soil of 7 mapping units in 20-cm depth increments to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	44.6	10.8	31.4	9.7	24.8	5.4	22.4	1.6	22.4	1.2
Brayton	38.7	14.6	20.5	7.5	14.2	2.0	13.8	1.8	13.8	1.8
Croghan	26.5	10.1	19.0	9.1	8.6	2.7	6.3	2.2	6.0	2.1
Monarda	38.6	10.1	26.9	7.4	18.1	2.4	17.8	1.5	18.6	1.6
Plaisted	57.8	9.1	43.4	8.2	23.9	5.6	19.6	2.6	20.8	2.6
Scantic	42.7	7.8	25.8	5.7	24.0	2.0	24.5	1.7	26.2	2.2
Swanville	42.0	8.8	25.3	4.7	23.1	2.3	23.5	2.6	24.3	2.6

TABLE 12

Weighted mean and weighted standard deviation of 15 bar moisture content as percent by weight water in a stone-free soil of 7 mapping units in 20-cm depth increments to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	15.2	5.0	8.8	3.1	7.7	2.3	7.4	1.6	7.5	1.6
Brayton	7.1	4.0	3.3	1.5	2.7	0.6	2.7	0.5	2.6	0.8
Croghan	8.5	2.7	6.0	2.7	2.0	1.1	0.8	0.3	0.7	0.3
Monarda	8.9	2.5	6.4	1.6	6.7	2.1	7.4	2.0	7.7	1.8
Plaisted	14.3	3.8	8.9	2.7	4.8	1.3	4.4	1.2	4.5	1.5
Scantic	15.0	3.1	12.6	2.8	16.6	1.8	18.0	1.7	18.1	1.9
Swanville	11.8	3.3	7.1	2.3	9.0	3.3	8.9	3.5	8.4	2.6

TABLE 13

Weighted mean and weighted standard deviation of soil reaction in a 1:1 KCl:soil solution of 7 mapping units expressed in 20-cm depth intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	4.97	0.49	4.72	0.41	4.46	0.38	4.44	0.30	4.39	0.27
Brayton	4.07	0.69	4.57	0.34	4.53	0.29	4.59	0.22	4.64	0.24
Croghan	4.08	0.65	4.93	0.30	5.17	0.09	5.13	0.17	5.16	0.19
Monarda	4.06	0.59	4.45	0.32	4.39	0.23	4.47	0.26	4.62	0.38
Plaisted	3.96	0.36	4.51	0.27	4.43	0.39	4.33	0.43	4.33	0.37
Scantic	4.86	0.61	4.49	0.35	4.63	0.29	4.91	0.25	5.01	0.25
Swanville	4.38	0.67	4.38	0.36	4.39	0.39	4.56	0.43	4.71	0.42

TABLE 14

Weighted mean and weighted standard deviation of soil reaction in a 2:1 $CaCl_2$:soil solution of 7 mapping units expressed in 20-cm depth intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	5.34	0.53	5.32	0.44	5.20	0.46	5.10	0.62	5.18	0.54
Brayton	4.50	0.62	5.05	0.42	5.24	0.38	5.39	0.36	5.54	0.30
Croghan	4.12	0.61	4.98	0.36	5.33	0.14	5.37	0.12	5.40	0.12
Monarda	4.53	0.64	4.84	0.45	5.06	0.35	5.31	0.41	5.52	0.48
Plaisted	4.27	0.34	4.70	0.26	4.81	0.28	4.82	0.28	4.89	0.24
Scantic	5.55	0.63	5.35	0.34	5.73	0.27	6.11	0.14	6.23	0.06
Swanville	4.88	0.75	5.15	0.46	5.32	0.49	5.59	0.48	5.78	0.39

TABLE 15

Weighted mean and weighted standard deviation of soil reaction in a 1:1 water:soil solution of 7 mapping units expressed in 20-cm depth intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	5.86	0.53	5.98	0.50	5.95	0.42	6.07	0.37	6.15	0.34
Brayton	5.19	0.69	5.86	0.42	6.12	0.27	6.26	0.28	6.37	0.28
Croghan	4.40	0.41	4.94	0.30	5.23	0.13	5.33	0.12	5.37	0.12
Monarda	5.00	0.64	5.34	0.38	5.63	0.36	5.83	0.44	6.12	0.61
Plaisted	4.69	0.33	5.01	0.27	5.24	0.31	5.37	0.29	5.42	0.25
Scantic	5.86	0.64	5.70	0.36	6.04	0.26	6.37	0.17	6.50	0.12
Swanville	5.32	0.74	5.64	0.36	5.87	0.31	6.17	0.30	6.34	0.21

TABLE 16

Weighted mean and weighted standard deviation of exchange acidity, as me/100g soil, of 7 mapping units expressed in 20-cm depth intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	14.37	6.15	9.25	4.15	6.92	2.85	5.85	1.97	5.45	1.73
Brayton	8.85	4.73	4.19	3.20	2.24	1.00	1.80	0.64	1.51	0.50
Croghan	14.91	6.08	9.95	5.21	2.76	2.44	0.81	0.50	0.64	0.29
Monarda	13.38	6.90	7.94	4.64	3.88	1.85	3.00	0.78	2.66	0.75
Plaisted	23.72	6.61	14.45	4.72	6.38	2.09	4.88	1.09	4.31	1.03
Scantic	11.07	3.13	6.80	2.67	4.74	1.57	3.42	0.90	3.26	0.78
Swanville	9.20	2.65	5.55	0.77	5.20	0.70	3.93	1.04	3.52	0.87

TABLE 17

Weighted mean and weighted standard deviation of cation exchange capacity, as me/100g soil, of 7 mapping units expressed in 20-cm depth intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	20.76	4.01	11.61	3.18	9.30	2.50	9.22	2.41	9.72	2.66
Brayton	11.71	5.31	5.83	2.97	4.19	0.87	3.90	0.83	3.78	1.02
Croghan	15.66	6.29	10.43	5.24	3.20	2.46	1.23	0.52	1.06	0.29
Monarda	17.01	6.78	9.42	3.99	7.07	2.18	7.63	2.23	8.02	2.30
Plaisted	25.49	7.00	15.43	4.86	7.37	1.96	6.17	1.35	5.79	1.30
Scantic	22.11	4.25	16.93	3.49	18.38	1.22	17.29	1.34	17.06	1.14
Swanville	15.20	4.40	10.21	2.42	11.94	2.69	11.11	3.13	11.73	2.52

TABLE 18

Weighted mean and weighted standard deviation of material larger than 2 mm as percent by volume of 7 mapping units in 20-cm depth intervals to 100 cm.

Soil Mapping Unit	0-20 cm		20-40 cm		40-60 cm		60-80 cm		80-100 cm	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Boothbay	0.50	0.49	0.26	0.41	0.26	0.33	0.40	0.57	0.31	0.50
Brayton	15.43	10.70	11.13	4.32	12.26	5.42	12.00	5.48	11.22	5.87
Croghan	0.52	0.59	1.28	1.52	1.27	1.78	0.83	1.35	0.84	1.34
Monarda	22.64	18.62	20.61	3.96	18.56	4.91	16.76	4.94	13.69	3.67
Plaisted	15.62	7.18	17.90	7.76	25.89	6.74	26.80	6.29	29.74	11.80
Scantic	0.56	0.24	0.49	0.29	0.18	0.13	0.10	0.11	0.08	0.09
Swanville	0.62	0.51	0.29	0.40	0.19	0.07	0.13	0.11	0.27	0.62

APPENDIX B

BOOTHBAY MAPPING UNIT
SITE 1

County, Maine, 1976.

Description

		moderate fine and medium granular structure; friable; many roots; abrupt smooth boundary.
Ap2	7.5-17.5 cm.	Dark brown (10YR3/3) silt loam; moderate medium granular and moderate very fine subangular blocky structure; friable; many roots; abrupt smooth boundary.
B21	17.5-30 cm.	Light olive brown (2.5Y5/4) silt loam; strong very coarse prismatic structure separating to moderate thin platy; prism faces light olive gray (5Y6/2) with light olive brown (2.5Y5/6) edges; friable; common roots; abrupt wavy boundary.
B22	30-50 cm.	Olive (5Y5/4) silt; strong very coarse prismatic structure separating to moderate thin platy; prism faces light olive gray (5Y6/2) with yellowish brown (10YR5/6) edges; friable; few roots; clear wavy boundary.
B3	50-65 cm.	Olive (5Y5/4) silt; few medium distinct (5Y6/2) mottles; strong very coarse prismatic structure separating to moderate thin platy; prism faces light gray to gray (5Y6/1) with yellowish brown (10YR5/6) edges; firm; very few roots; few dark reddish brown (5YR2/2) manganese stains; clear smooth boundary.
C1	65-90 cm.	Olive (5Y5/4) silt; common coarse prominent (2.5Y5/6) mottles; strong very coarse prismatic structure separating to weak thin and medium platy; prism faces light gray to gray (5Y6/1) with yellowish brown (10YR5/6) edges; firm; very few roots; few dark reddish brown (5YR2/2) manganese stains.

C2 90-100 cm. Olive (5Y5/3) silt loam; strong very coarse prismatic structure separating to weak thick platy; prism faces light gray to gray (5Y6/1) with yellowish brown (10YR5/6) edges; firm; very few roots; few black (5YR2.5/1) manganese stains.

M.A.E.S.

OIL Boothbay SOIL Nos. 1 LOCATION Waldo County, Maine

OIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

th .)	Horizon	Size class and particle diameter (mm)												(2-0.1)
		Total			Sand						Silt			
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)		
		Pct. of < 2 mm												
;	Ap1	14.88	73.45	11.67	0.24	0.56	1.36	6.62	6.10	27.07	46.38			
7.5	Ap2	15.29	75.59	9.12	0.47	0.63	1.40	6.65	6.14	25.11	50.48			
30	B21	13.72	77.18	9.10	0.10	0.35	1.14	6.12	6.01	25.68	51.50			
	B22	9.34	83.02	7.64	0.00	0.16	0.58	3.79	4.81	26.00	57.02			
	B3	4.47	86.50	9.03	0.00	0.12	0.35	1.46	7.54	16.32	70.18			
;	C1	4.51	84.10	11.39	0.00	0.13	0.39	0.79	3.20	8.83	75.27			
] 0	C2	2.27	83.13	14.60	0.00	0.11	0.25	0.56	1.35	13.82	69.31			

h)	Organic carbon	Bulk Density		Water Content									Avail. H_2O	pH		
				.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.	g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
	3.24		1.12	38.6	36.7	33.2	32.3	31.3	18.7	16.7	15.5	13.8	0.22	5.5	5.5	5.8
7.5	2.06		1.30	34.0	33.0	30.3	29.6	29.1	25.4	18.5	10.9	8.4	0.28	5.1	5.75	6.25
30	0.65		1.52	26.8	26.1	23.9	23.2	22.4	13.6	10.8	7.7	4.9	0.29	4.65	5.45	6.3
)	0.15		1.67	21.1	20.6	19.3	18.3	18.0	13.8	10.0	7.3	4.8	0.24	4.3	5.15	6.05
;	0.11		1.67	22.1	21.5	20.5	19.6	19.6	15.2	10.8	7.6	5.2	0.26	4.2	5.15	6.15
)	0.10		1.64	24.5	24.0	23.1	22.5	22.2	15.9	11.5	8.2	5.8	0.28	4.2	5.2	6.25
60	0.08		1.65	25.0	24.4	23.3	22.6	23.3	23.0	14.5	9.8	5.9	0.29	4.4	5.5	6.6

)th a.)	Extractable bases				Ex Acidity	CEC	Base Sat. %	% Coarse Fragments - Volume								
	Ca	Mg	Na	K				3+	3-2	2-1½	1½-1	1-¾	¾-½	½-¼	¼-2mm	Total
	meq/100 g															
.5	8.7	0.7	0.1	0.1	11.4	21.0	45.7								0.2	0.2
-17.5	7.4	0.5	0.1	0.1	10.2	18.3	44.3							0.1	0.1	0.2
5-30	2.8	0.3	0.1	<0.1	7.0	10.3	32.0								0.1	0.1
50	2.2	0.6	0.1	0.1	4.3	7.3	41.1									
65	2.3	1.0	0.1	0.1	3.9	6.4	39.1									
90	2.7	1.1	0.1	0.1	3.8	7.8	51.3									
100	3.4	1.6	0.1	0.1	3.6	8.8	59.1									

BOOTHBAY MAPPING UNIT
SITE 2

Location: **Swanville, Waldo County, Maine, 1975.**

Horizon	*Depth*	*Description*
Ap	0-20 cm.	Brown to dark brown (10YR4/3) silt loam; moderate fine and medium granular structure; friable; many roots; clear wavy boundary.
B21	20-32.5 cm.	Light olive brown (2.5Y5/4) silt loam; few medium prominent (2.5Y6/2 and 2.5YR5/6) mottles; friable; many roots; clear wavy boundary.
B22	32.5-62.5 cm.	Olive (5Y5/4) silt loam; common medium distinct (5Y5/2) and common coarse prominent (10YR4/4) mottles; strong very coarse prismatic structure separating to moderate medium and coarse plates that separate to weak very fine and fine subangular blocky; light olive gray (5Y6/2) prism faces with strong brown (7.5YR5/6) edges; friable; few roots; common very dusky red (2.5YR2.5/2) manganese stains; clear wavy boundary.
C1	62.5-90 cm.	Olive (5Y5/4) silt loam with common coarse distinct (5Y5/2) and many coarse prominent (2.5Y5/6) mottles; strong very coarse prismatic structure separating to weak thick and very thick platy; olive gray (5Y5/3) prism faces; firm.
C2	90-100 cm.	Olive (5Y5/4) silt loam with few fine distinct (5Y6/2) mottles; strong very coarse prismatic structure separating to weak thick platy; olive gray (5Y5/3) prism faces; firm; common very dusky red (2.5YR2.5/2) manganese stains on peds.

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SOIL Boothbay SOIL Nos. 2 LOCATION Waldo County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)												
		Total			Sand						Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)		
		Pct. of < 2 mm												
0-20	Ap	17.36	67.06	15.58	0.38	0.52	0.51	3.65	12.30	35.88	31.18			
20-32.5	B21	13.91	66.66	19.43	0.05	0.08	0.22	2.84	10.72	30.98	35.68			
32.5-62.5	B22	9.77	69.53	20.70	0.10	0.07	0.17	1.37	8.06	31.78	37.75			
62.5-90	C1	7.43	73.16	19.41	0.02	0.12	0.35	1.24	5.70	33.50	39.66			
90-100	C2	9.55	70.52	19.93	0.04	0.12	0.32	0.82	8.25	31.87	38.65			

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-20	2.65		1.29		43.4	41.4	35.3	33.5	31.4	23.6	20.1	14.3	10.5	0.32	5.4	5.75	6.25
20-32.5	0.41		1.58		24.3	23.2	19.7	18.7	18.1	16.4	14.3	11.2	7.6	0.19	4.95	5.8	6.5
32.5-62.5	0.15		1.61		21.7	21.0	17.7	17.0	16.5	16.2	13.8	11.7	7.9	0.16	4.65	5.6	6.4
62.5-90	0.07		1.77		21.8	21.4	19.2	18.7	17.9	17.4	15.3	12.7	8.1	0.20	4.5	5.5	6.5
90-100	0.08		1.72		22.2	21.9	20.4	19.8	19.4	18.0	14.8	12.6	9.2	0.19	4.35	5.45	6.5

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume								
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-¼	¼-2mm	Total
	meq/100 g																
0-20	9.9	1.2	0.1	0.1	9.6	20.9	54.1								0.1	0.2	0.3
20-32.5	3.7	0.4	0.1	0.1	5.5	9.8	43.9										
32.5-62.5	3.5	0.7	0.1	0.1	4.6	9.0	48.9										
62.5-90	4.4	1.5	0.1	0.1	4.8	10.9	56.0										
90-100	4.4	2.0	0.1	0.1	4.1	10.7	61.7										

BOOTHBAY MAPPING UNIT
SITE 3

Location: **Buxton, York County, Maine, 1976.**

Horizon	*Depth*	*Description*
Ap	0-19 cm.	Dark brown (10 YR3/3) silt loam; moderate very fine and fine granular structure; friable; many very fine roots and common fine and medium roots; abrupt smooth boundary.
B21	19-35 cm.	Yellowish brown (10YR5/6) silt loam; weak very fine granular structure; friable; common very fine and few fine roots; abrupt smooth boundary.
B22	35-48 cm.	Light olive brown (2.5Y5/4) silt loam; few fine prominent (5Y6/2) mottles; weak very fine subangular blocky structure; friable; common very fine and few fine roots; clear wavy boundary.
B23	48-66 cm.	Light olive brown (2.5Y5/4) silt loam; common medium prominent (2.5Y6/2) and common coarse prominent (10YR5/6) mottles; strong very coarse prismatic structure separating to weak very fine subangular blocky; firm; common very fine and fine roots in prism faces; prism faces light olive gray (5Y6/2) and prism edges yellowish red (5YR4/6); few fine prominent (5YR3/3) manganese stains; clear wavy boundary.
C1	66-86 cm.	Olive (5Y5/3) silt loam; common coarse distinct (2.5Y5/4,5/2) and faint (5Y6/2) mottles; strong very coarse prismatic structure; firm; common fine roots in prism face and very few fine roots within the prism; prism faces light olive gray (5Y6/2) and prism edges yellowish red (5YR4/6); common fine distinct (5YR2.5/2) manganese stains.
C2	86-92 cm.	Dark grayish brown (2.5Y4/2) loam; common coarse distinct (5Y6/2) and prominent (10YR4/4) mottles; strong very coarse prismatic structure separating to weak very thin

and thin platy relict; firm; few fine roots in prism face; prism faces light olive gray (5Y6/2) and prism edges yellowish red (5YR4/6).

C3 92-100 cm. Olive (5Y5/3) silt loam; common coarse prominent (2.5YR2.5/2) and common medium prominent (7.5YR5/8) mottles; strong very coarse prismatic structure; firm; few very fine roots in prism face; prism faces light olive gray (5Y6/2) and prism edges yellowish red (5YR4/6).

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SOIL Scantic SOIL Nos. LOCATION York County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)												(2-0.1)
		Total			Sand						Silt			
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)		
		Pct. of < 2 mm												
0-19	Ap	20.26	59.97	19.77	1.10	1.69	1.68	2.82	12.97	25.06	34.91			
19-35	B21	19.26	65.90	14.84	1.43	1.94	1.46	2.04	12.39	30.49	35.41			
35-48	B22	15.86	63.64	20.50	1.05	1.77	1.35	1.83	9.86	26.56	37.08			
48-66	B23	19.25	53.01	27.64	1.08	1.86	1.85	2.91	11.61	22.38	30.63			
66-86	C1	25.62	52.59	21.79	0.20	0.46	0.65	1.75	22.56	29.85	22.74			
86-92	C2	33.17	46.76	20.07	0.02	0.20	0.28	1.81	30.86	27.50	19.26			
92-100	C3	24.61	51.96	23.43	0.13	0.44	0.44	1.50	22.10	31.67	20.29			

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-19	3.32			0.93	52.2	48.0	41.1	37.7	35.8	30.1	24.9	22.6	20.7	0.19	4.81	5.28	5.89
19-35	1.13			1.05	50.0	46.9	41.1	34.7	31.8	25.0	20.9	18.4	14.0	0.28	4.72	5.20	5.70
35-48	0.40			1.18	39.8	37.5	33.2	30.6	28.8	23.4	20.3	17.3	12.1	0.25	4.48	5.10	5.68
48-66	0.17			1.52	28.3	27.5	25.9	24.8	23.8	21.1	18.4	16.3	11.4	0.22	4.21	4.98	5.70
66-86	0.09			1.63	22.7	22.2	20.5	19.7	19.0	18.0	14.9	13.4	9.0	0.19	4.10	5.02	5.99
86-92	0.04			1.65	22.9	22.1	19.1	18.1	17.1	15.1	12.7	11.4	8.1	0.18	4.07	5.11	6.06
92-100	0.08			1.66	23.8	22.9	21.5	20.6	19.7	16.9	14.3	12.6	8.8	0.21	4.10	5.20	6.11

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1"	1"-1	1-3/4	3/4-1/2	1/2-1/4	Total
	meq/100 g															
0-19	4.0	0.3	0.1	0.2	17.4	22.0	21					<.1	0.1	<.1	<.1	.3
19-35	0.8	0.1	0.1	0.1	15.8	16.9	7								<.1	<.1
35-48	0.8	0.2	0.2	0.1	12.8	14.1	9									<.1
48-66	1.6	0.6	0.2	0.2	10.4	13.0	20								<.1	<.1
66-86	2.8	1.0	0.2	0.2	8.2	12.4	34								<.1	<.1
86-92	3.6	1.2	0.2	0.2	6.9	12.1	43									<.1
92-100	5.0	1.4	0.2	0.2	7.7	14.5	47								<.1	<.1

BOOTHBAY MAPPING UNIT
SITE 4

Location: **York, York County, Maine, 1976.**

Horizon	*Depth*	*Description*
02	3-0 cm.	Dark reddish brown (5YR2.5/2) organic material; weak very fine granular structure; very friable; many very fine, common fine and few medium roots; abrupt wavy boundary.
B21h	0-4 cm.	Dark reddish brown (5YR3/2) silt loam; weak very fine granular structure; very friable; many very fine, common fine and few medium roots; abrupt broken boundary.
B22	0-10 cm.	Dark reddish brown (5YR3/4) silt loam; weak very fine granular structure; very friable; many very fine, common fine and few medium roots; abrupt wavy boundary.
B23	10-25 cm.	Yellowish brown (10YR5/6) silt loam; weak very fine granular structure; very friable; many very fine, common fine and few medium roots; clear wavy boundary.
B3	25-46 cm.	Light olive brown (2.5Y5/4) silt loam; few medium prominent (5Y6/2) and distinct (2.5Y5/6) mottles; weak thin platy structure; friable; few very fine and fine roots; clear wavy boundary.
C1	46-64 cm.	Olive (5Y4/3) loam; common medium distinct (5Y5/2) and common coarse prominent (10YR5/4) mottles; strong very coarse prismatic structure separating to weak medium platy; firm; few very fine, fine and medium roots; light olive gray (5Y6/2) prism face with reddish brown (5YR4/4) prism edge.
C2	64-92 cm.	Olive (5Y4/3) loam; common medium distinct (2.5Y5/2) and common coarse prominent (7.5YR4/4) mottles; strong very coarse prismatic structure separating to weak thin and medium platy; few very fine roots in prism face; light olive gray (5Y6/2) prism face with

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SOIL Boothbay SOIL Nos. 4 LOCATION York County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand					Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm											
0-10	B21h+B22	26.27	58.08	15.65	0.22	0.80	1.86	6.32	17.07	35.46	22.59		
10-25	B23	34.06	57.66	8.28	0.98	1.68	2.71	8.37	20.32	31.65	26.01		
25-46	B3	33.57	52.13	14.30	0.44	0.70	1.72	9.65	21.06	26.17	25.96		
46-64	C1	42.70	38.98	18.32	0.43	0.79	2.45	13.43	25.60	22.32	16.66		
64-92	C2	37.92	42.51	19.57	0.31	0.70	1.55	8.98	26.38	28.08	14.43		
92-100	C3	28.54	47.60	23.86	0.21	0.82	1.61	5.23	20.67	29.62	17.98		

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-10	6.28			0.64	85.8	72.7	49.5	46.2	45.0	35.0	31.0	26.3	22.9	0.17	3.94	4.10	4.76
10-25	2.05			0.89	59.4	47.9	32.6	28.2	26.1	20.5	17.4	16.1	14.1	0.16	4.42	4.62	4.99
25-46	0.36			1.41	26.4	25.1	21.4	19.0	17.3	16.9	13.4	11.6	8.0	0.19	4.21	4.57	5.21
46-64	0.11			1.56	24.9	22.1	19.0	16.9	15.7	14.5	10.9	10.1	7.2	0.18	3.96	4.41	5.30
64-92	0.08			1.58	24.5	22.7	20.0	18.6	17.9	14.0	12.2	11.1	8.0	0.19	4.59	3.92	5.49
92-100	0.13			1.62	24.2	23.2	21.5	20.6	19.9	16.9	16.4	13.8	9.8	0.19	3.98	4.82	5.70

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-3/4	3/4-½	½-¼	¼-2mm	Total
	meq/100 g																
0-10	0.2	0.3	0.1	0.2	29.8	30.6	3					<.1	<.1	<.1	0.1	0.2	0.4
10-25	0.2	0.1	<0.1	0.1	17.7	18.2	3					0.2	0.4	0.2	0.4	0.7	1.9
25-46	0.2	0.3	0.1	0.1	9.3	10.0	7						<.1	<.1	0.1	0.1	0.4
46-64	0.4	0.5	0.2	0.1	7.9	9.1	13					0.2	0.1	0.3	0.2	0.2	1.0
64-92	1.0	1.1	0.2	0.2	7.1	9.6	26			0.4	0.2	0.5	0.2	0.1	0.1	<.1	1.6
92-100	2.5	1.5	0.2	0.2	7.8	12.2	36					0.5	0.3	0.1	0.1	<.1	1.1

BOOTHBAY MAPPING UNIT
SITE 5

Location: **Rockland, Knox County, Maine, 1976.**

Horizon	*Depth*	*Description*
Ap	0-18 cm.	Dark brown (10YR3/3) loam; weak fine granular structure; very friable; many very fine, few fine and few coarse roots; abrupt smooth boundary.
B2	18-45 cm.	Dark yellowish brown (10YR4/4) loam; weak fine granular structure; very friable; common very fine roots; common spots of very pale brown (10YR7/3) with strong brown (7.5YR5/6) edge very fine sandy loam; clear wavy boundary.
B3	45-52 cm.	Yellowish brown (10YR5/4) loam with many medium and coarse prominent (2.5Y6/2) mottles; weak medium platy structure; friable; common very fine roots; abrupt smooth boundary.
C1	52-77 cm.	Very dark grayish brown (10YR3/2), grayish brown (2.5Y5/2) and reddish brown (5YR4/4) very fine sandy loam; strong very coarse prismatic structure separating to moderate thick platy; firm; few very fine roots; prism faces light brownish gray (2.5Y6/2) with dark reddish brown (2.5YR3/4) edges; many medium and coarse prominent (10YR2/2) manganese stains.
C2	77-100 cm.	Grayish brown (10YR5/2), dark reddish brown (5YR3/4) and (5YR2.5/2) very fine sandy loam; strong very coarse prismatic structure separating to moderate thick platy; firm; many coarse prominent (10YR2/2) manganese stains.

M.A.E.S.

SOIL Boothbay SOIL Nos. 5 LOCATION Knox County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand					Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm											
0-18	Ap	41.44	44.97	13.59	0.69	0.80	1.12	17.38	21.45	29.72	15.25		
18-45	B2	41.13	47.07	11.80	0.53	0.91	1.01	16.99	21.69	30.07	17.00		
45-52	B3	44.81	47.16	8.03	0.30	0.98	1.15	18.81	23.57	30.37	16.79		
52-77	C1	52.84	38.59	8.57	0.88	2.30	2.05	20.19	27.42	27.56	11.03		
77-100	C2	57.22	34.91	7.87	0.23	1.43	1.93	21.58	32.05	23.18	11.73		

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-18	3.27			1.16	41.5	40.0	35.3	33.6	33.1	24.1	20.8	18.4	17.5	0.21	5.32	5.67	6.18
18-45	0.95			1.24	37.6	35.9	28.0	23.2	20.5	15.4	12.5	10.7	8.6	0.24	5.38	5.79	6.41
45-52	0.43			1.38	30.4	28.9	23.6	19.7	17.9	11.1	9.2	7.9	6.0	0.24	5.02	5.70	6.22
52-77	0.08			1.63	21.7	21.0	18.4	16.0	14.8	9.5	8.3	7.4	5.9	0.20	4.89	5.80	6.29
77-100	0.15			1.55	21.6	20.6	16.6	14.1	13.1	9.2	7.9	7.0	5.5	0.17	4.80	5.70	6.21

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-¼	¼-2mm	Total
	meq/100 g																
0-18	7.2	0.4	0.2	0.1	11.0	18.9	42							<.1	<.1	0.1	0.2
18-45	2.2	0.1	0.1	<0.1	9.0	11.5	22							<.1	<.1	<.1	0.1
45-52	1.0	0.1	0.2	<0.1	6.1	7.5	19					0.2			<.1	<.1	0.2
52-77	1.0	0.1	0.1	0.1	4.6	5.9	22							<.1	<.1	<.1	<.1
77-100	1.1	0.3	0.1	0.1	4.1	5.7	28						<.1	<.1	<.1	<.1	<.1

BRAYTON MAPPING UNIT
SITE 1

Location: **Limerick, York County, Maine, 1975.**

Horizon	*Depth*	*Description*
A1	0-22.5 cm.	Very dark grayish brown (10YR3/2) silt loam; moderate fine and medium granular structure; very friable; many fine roots; abrupt wavy boundary.
A2g & B21g	22.5-32.5 cm..	Olive (5Y5/3) and dark grayish brown (2.5Y4/2) fine sandy loam; common coarse distinct (5Y6/1), (5Y4/2), (5Y6/2) and few medium faint (5Y5/4) mottles; massive, very friable; common roots; clear wavy boundary.
B22g	32.5-45 cm.	Light olive gray (5Y6/2) sandy loam; common coarse prominent (2.5Y5/4) and few medium prominent (10YR5/8) mottles; massive; firm; clear wavy boundary.
IIC1g	45-82.5 cm.	Olive gray (5Y5/2) fine sandy loam; many coarse prominent (2.5Y5/6) mottles; weak medium and thick platy structure; firm; common fine and medium prominent (2.5YR3/4) manganese stains.
IIC2	82.5-100 cm.	Light olive brown (2.5Y5/4) fine sandy loam with many coarse prominent (5Y6/1) and few (10YR5/6) mottles; weak medium and thick platy structure; firm; no roots.

M.A.E.S.

SOIL Brayton SOIL Nos. 1 LOCATION York County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand						Silt		
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)
		Pct. of < 2 mm											
0-22.5	A1	38.80	55.56	5.64	3.84	5.78	7.28	10.78	11.12	31.56	24.00		
22.5-32.5	A2g+B21g	57.67	32.53	9.80	5.39	9.02	10.91	15.80	16.55	22.82	9.71		
32.5-45	B22g	64.25	30.79	4.96	5.95	10.62	15.00	19.36	13.32	17.84	12.95		
45-82.5	IIC1g	57.25	33.37	9.38	4.42	9.16	13.25	18.74	11.68	15.22	18.15		
82.5-100	IIC2	54.27	38.52	7.21	2.79	8.14	13.15	18.69	11.50	17.97	20.55		

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-22.5	2.74		1.05		52.9	50.4	42.6	41.0	39.4	13.1	10.3	9.9	9.2	0.35	4.85	5.3	6.05
22.5-32.5	0.36		1.75		23.4	20.8	13.6	9.4	7.4	4.6	3.6	3.0	2.7	0.19	4.7	5.35	6.15
32.5-45	0.05		1.79		14.4	12.3	8.4	6.6	5.7	4.0	3.0	2.5	1.6	0.12	4.6	5.8	6.6
45-82.5	0.02		1.97		14.0	12.6	10.4	9.0	8.2	5.4	4.2	3.6	2.4	0.16	4.8	5.85	6.6
82.5-100	0.03		1.99		14.2	13.2	10.9	8.4	6.7	4.4	3.5	3.0	1.4	0.19	4.95	5.9	6.65

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-3/4	3/4-½	½-¼	¼-2mm	Total
	meq/100 g																
0-22.5	5.2	0.4	0.4	0.2	10.7	16.9	36.7		2.6	1.5	0.3	0.6	0.6	0.6	0.8	1.3	8.3
22.5-32.5	1.6	0.1	<0.1	<0.1	2.9	4.8	39.6			1.3	0.6	1.5	0.9	1.3	1.8	3.2	10.6
32.5-45	1.8	0.2	<0.1	<0.1	1.2	3.4	64.7				0.8	2.2	2.6	1.5	2.4	5.4	14.9
45-82.5	1.7	0.2	<0.1	<0.1	1.2	3.3	63.6		1.2		0.7	0.3	0.3	0.4	1.3	3.6	7.8
82.5-100	1.2	0.1	<0.1	<0.1	0.9	2.4	62.5			1.1	0.2	0.5	0.2	0.6	1.7	2.1	6.4

BRAYTON MAPPING UNIT
SITE 2

Location: **Acton, York County, Maine, 1975.**

Horizon	*Depth*	*Description*
A1	0-5 cm.	Very dark gray (10YR3/1) loam; moderate fine granular structure; very friable; many fine and medium roots; abrupt wavy boundary.
A2g	5-20 cm.	Grayish brown (2.5Y5/2) gravelly loam; common medium prominent (7.5YR5/6) mottles; weak thin platy structure; very friable; common fine roots; clear wavy boundary.
B2g	20-32.5 cm.	Olive gray (5Y5/2) fine sandy loam; common medium prominent (10YR4/4) and faint (5Y5/1) and coarse prominent (2.5Y5/6) mottles; weak very thin and thin platy structure; friable; common fine roots; clear wavy boundary.
IIC1	32.5-67.5 cm.	Olive (5Y5/4) fine sandy loam; many coarse distinct (5Y6/1) and common medium prominent (10YR5/6) mottles; weak medium and thick platy structure; friable; few fine roots.
IIC2	67.5-100 cm.	Olive gray (5Y5/2) fine sandy loam; many coarse prominent (7.5YR5/6) and common (7.5YR4/4) mottles; weak thick platy structure; firm; no roots below 75 cm.

M.A.E.S.

SOIL Brayton SOIL Nos. 2 LOCATION York County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)												
		Total			Sand						Silt			
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)
		Pct. of < 2 mm												
0-5	A1	43.64	45.17	11.19	0.92	5.63	10.87	16.36	9.86	23.29	21.88		
5-20	A2g	44.07	44.12	11.81	4.89	5.88	8.92	14.51	9.87	24.66	19.46		
20-32.5	B2g	58.64	31.29	10.07	3.90	8.15	13.26	20.74	12.59	23.03	8.26		
32.5-67.5	IIC1	63.75	25.61	10.64	3.26	7.64	14.46	24.38	14.01	14.84	10.77		
67.5-100	IIC2	64.48	24.85	10.67	3.03	8.28	15.05	24.50	13.62	12.38	12.47		

Depth (cm.)	Organic carbon	Bulk Density		Water Content								Avail. H_2O	pH		
				.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.	g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-5	4.25		0.70	78.7	72.6	60.0	57.7	55.4	20.8	20.6	17.3	16.9	0.30	3.65	4.2	4.85
5-20	1.08		1.24	35.4	33.0	25.4	21.6	19.9	9.8	8.6	7.3	5.8	0.24	3.8	4.4	5.15
20-32.5	0.24		1.65	21.0	18.7	11.0	7.8	5.8	4.3	3.5	3.2	2.2	0.14	4.0	4.45	5.35
32.5-67.5	0.07		1.87	14.0	12.0	8.6	6.7	5.6	4.8	4.4	3.7	2.7	0.11	4.0	4.75	5.8
67.5-100	0.05		2.00	12.6	11.6	9.7	8.7	8.0	4.7	4.0	3.8	2.4	0.15	4.65	5.7	6.6

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume						
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	Total
	meq/100 g														
0-5	4.7	0.9	0.1	0.2	12.1	18.0	32.8					0.4	0.4	0.1	1.6
5-20	2.0	0.4	<0.1	<0.1	6.8	9.4	27.6		13.6	8.2	2.0	2.6	0.7	0.9	30.5
20-32.5	0.8	<0.1	<0.1	<0.1	3.2	4.3	25.6					1.0	0.7	1.0	7.7
32.5-67.5	1.7	0.3	<0.1	<0.1	1.8	4.0	55.0		0.9	0.7		0.5	0.3	0.4	6.6
67.5-100	1.8	0.3	<0.1	<0.1	1.2	3.5	65.7		2.0	0.6	0.2	0.6	0.5	0.5	7.9

BRAYTON MAPPING UNIT
SITE 3

Location: **Limerick, York County, Maine, 1975.**

Horizon	*Depth*	*Description*
A1	0-15 cm.	Very dark grayish brown (10YR3/2) fine sandy loam; moderate fine and very fine granular structure; friable; many fine roots; clear wavy boundary.
A2g	15-22.5 cm.	Grayish brown (2.5Y5/2) sandy loam; few medium prominent (5YR4/6), common (2.5Y5/6) and common coarse faint (5Y6/2) mottles; weak thin platy structure; friable; common roots and earthworm channels; abrupt smooth boundary.
B2g	22.5-32.5 cm.	Grayish brown (10YR5/2) fine sandy loam; common medium prominent (5YR5/6), (5Y6/2) and coarse (10YR5/6) mottles; weak thin platy structure; friable; few roots and earthworm channels; abrupt smooth boundary.
A'2g	32.5-47.5 cm.	Light olive gray (5Y6/2) mixed with pale olive (5Y6/3) fine sandy loam; common medium prominent (10YR5/6) and coarse (2.5Y5/6) mottles; moderate very coarse prismatic structure separating to moderate medium platy; friable; few roots; polygon centers light olive gray (5Y6/2) with dark reddish brown (5YR3/2) edges; abrupt smooth boundary.
IIC1	47.5-75 cm.	Olive (5Y5/3) fine sandy loam; common coarse faint (5Y5/2) and prominent (5YR5/8) mottles; strong coarse prismatic structure separating to weak medium and thick platy; firm; polygon centers gray (5Y6/1) with reddish brown (5YR4/4) edges.
IIC2	75-100 cm.	Olive (5Y5/3) fine sandy loam; common coarse faint (5Y6/2) and prominent (10YR5/6) mottles; strong coarse prismatic structure separating to weak medium and thick platy; firm; polygon centers gray (5Y6/1) with reddish brown (5YR4/4) edges.

M.A.E.S.

SOIL Brayton SOIL Nos. 3 LOCATION York County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)												
		Total			Sand						Silt			
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)
		Pct. of < 2 mm												
0-15	A1	54.41	35.55	10.04	4.70	9.06	12.58	17.15	10.92	20.63	14.92		
15-22.5	A2g	65.65	27.87	6.48	8.20	13.18	14.76	18.62	10.89	15.65	12.22		
22.5-32.5	B2g	60.82	34.30	4.88	6.36	10.09	13.25	19.00	12.12	19.11	15.19		
32.5-47.5	A'2g	60.24	31.82	7.94	5.02	10.64	13.96	18.74	11.88	17.15	14.67		
47.5-75	IIC1	58.54	35.52	5.94	4.24	10.00	13.57	18.90	11.83	16.88	18.64		
75-100	IIC2	59.69	33.10	7.21	4.78	10.60	13.94	18.89	11.48	16.12	16.98		

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-15	3.18		1.11		45.5	43.6	37.7	36.0	34.5	12.7	12.1	11.7	9.2	0.32	4.5	4.75	5.5
15-22.5	0.65		1.47		21.9	19.5	13.2	11.1	9.9	5.5	5.2	4.5	3.7	0.14	4.45	4.75	5.55
22.5-32.5	0.29		1.50		23.3	21.0	14.9	12.1	10.8	4.6	4.0	3.3	2.6	0.18	4.7	4.9	5.7
32.5-47.5	0.45		1.60		19.5	16.9	13.2	11.0	9.2	4.7	3.9	3.2	2.2	0.18	4.85	5.0	5.9
47.5-75	0.02		1.95		13.7	12.6	9.8	8.3	7.4	4.8	4.4	3.5	2.2	0.15	4.65	5.2	6.1
75-100	0.00		1.92		13.7	12.7	10.5	9.2	8.4	5.0	4.3	3.7	2.3	0.16	4.55	5.6	6.35

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-¼	¼-2mm	Total
	meq/100 g																
0-15	3.0	0.3	0.1	0.2	9.1	12.7	28.3			1.0	0.3	2.7	1.2	1.3	1.7	2.6	10.8
15-22.5	0.8	<0.1	<0.1	<0.1	4.1	5.2	21.2					0.2	0.2	1.2	2.2	4.9	8.7
22.5-32.5	0.3	<0.1	<0.1	<0.1	4.6	5.2	11.5			1.2		0.5	0.4	0.9	3.4	6.2	12.6
32.5-47.5	0.5	<0.1	<0.1	<0.1	4.6	5.4	14.8					1.3	0.5	1.1	3.7	6.6	13.2
47.5-75	0.7	<0.1	<0.1	<0.1	1.8	2.8	35.7				0.4	0.3	0.4	0.9	2.6	4.1	8.7
75-100	1.1	0.3	<0.1	<0.1	1.4	3.0	53.3				1.3	0.2	1.3	1.3	2.6	3.8	10.5

BRAYTON MAPPING UNIT
SITE 4

Location: **Berwick, York County, Maine, 1975.**

Horizon	*Depth*	*Description*
A1	0-5 cm.	Very dark grayish brown (10YR3/2) loam; few medium prominent (5Y5/2) mottles; moderate very fine and fine granular structure; very friable; many fine roots; abrupt wavy boundary.
A2g	5-17.5 cm.	Gray (5Y5/1) fine sandy loam; common coarse prominent (2.5Y5/6) mottles; weak thin and medium platy structure; very friable; common fine roots; abrupt irregular boundary.
B2	17.5-42.5 cm.	Strong brown (7.5YR5/8) loam; few coarse prominent (N6/) many (5Y6/1) and common medium distinct (5YR5/8) mottles; weak thin and medium platy structure; friable; few roots; clear wavy boundary.
IIC1	42.5-67.5 cm.	Light gray to gray (5Y6/1) loam; many coarse prominent (7.5YR5/6) mottles; strong very coarse prismatic structure separating to moderate medium and thick platy; friable; few roots in prism faces; polygon centers olive gray (5Y5/2) and edges dark reddish brown (5YR3/3).
IIC2	67.5-100 cm.	Yellowish brown (10YR5/6) loam; many coarse (5Y6/1) and (5YR3/3) mottles; strong very coarse prismatic structure separating to thin and medium platy structure; friable; very few roots in prism faces; polygon centers olive gray (5Y5/2) and edges dark reddish brown (5YR3/3).

M.A.E.S.

SOIL Brayton SOIL Nos. 4 LOCATION York County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand						Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)		0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm												
0-5	A1	35.20	46.84	17.96	4.03	5.61	7.44	9.72	8.40		19.29	27.55		
5-17.5	A2g	53.70	39.90	6.40	5.15	9.03	11.76	16.00	11.76		25.14	14.76		
17.5-42.5	B2	45.63	43.86	10.51	4.46	7.13	9.78	14.10	10.16		19.14	24.72		
42.5-67.5	IIC1	49.14	40.46	10.40	5.05	8.68	10.80	14.33	10.28		17.82	22.64		
67.5-100	IIC2	51.86	36.14	12.00	5.39	9.18	11.29	15.06	10.94		18.91	17.23		

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-5	4.64		0.65		68.8	65.1	50.1	46.3	42.3	27.1	21.6	19.2	15.3	0.23	3.7	3.9	3.9
5-17.5	0.33		1.54		22.5	21.5	13.6	9.1	7.0	5.8	4.1	3.0	1.9	0.18	4.0	4.45	5.2
17.5-42.5	0.10		1.86		17.9	17.3	14.3	13.1	12.3	9.2	7.4	6.0	4.6	0.18	4.75	5.3	6.1
42.5-67.5	0.06		1.79		16.3	15.8	13.5	12.3	11.2	8.2	6.8	5.4	3.6	0.18	4.6	5.45	6.2
67.5-100	0.10		1.73		16.3	15.2	11.4	10.4	8.9	7.1	5.9	4.8	3.5	0.14	4.8	5.5	6.4

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-¼	¼-2mm	Total
	meq/100 g																
0-5	0.6	0.3	0.1	0.1	2.1	3.2	34.4					0.7	0.3	1.4	2.0	2.3	6.7
5-17.5	0.9	0.3	<0.1	<0.1	2.1	3.5	40.0				0.5	0.7	0.5	0.8	2.0	4.1	8.6
17.5-42.5	2.2	0.7	<0.1	<0.1	2.1	5.2	59.6					0.5	0.1	0.4	1.4	3.8	6.2
42.5-67.5	2.3	0.7	<0.1	<0.1	2.0	5.2	61.5		1.2	0.8	1.1	0.8	1.1	1.2	1.8	6.2	14.2
67.5-100	2.5	0.6	<0.1	<0.1	1.6	4.9	67.3				0.6	0.8	0.6	0.8	1.5	4.4	8.7

BRAYTON MAPPING UNIT
SITE 5

Location: **Princeton, Washington County, Maine, 1974.**

Horizon	*Depth*	*Description*
02	5-0 cm.	Black (5YR2.5/2) organic material; very friable; common roots; abrupt smooth boundary.
A2	0-12.5 cm.	Light brownish gray (2.5Y6/2) gravelly loam; weak medium platy structure; friable; many roots; gradual wavy boundary.
B21	12.5-30 cm.	Olive (5Y5/3) gravelly sandy loam; common medium prominent (2.5Y5/6) and distinct (5Y6/2) mottles; weak thin platy structure; friable; common roots; gradual wavy boundary.
B22	30-42.5 cm.	Olive (5Y5/3) gravelly coarse sandy loam; common medium prominent (10YR5/6) and faint (5Y6/2) mottles; weak thick platy structure; friable; few roots; common coarse prominent (5YR2.5/1) manganese stains; abrupt smooth boundary.
IIC1	42.5-75 cm.	Olive (5Y5/3) gravelly coarse sandy loam; many coarse distinct (2.5Y4/4) and faint (5Y6/2) mottles; massive; slightly sticky; slightly plastic; gradual wavy boundary.
IIC2	75-100 cm.	Light olive brown (2.5Y5/4) gravelly coarse sandy loam; massive; slightly sticky; slightly plastic.

M.A.E.S.

SOIL Brayton SOIL Nos. 5 LOCATION Washington County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand					Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm											
0-12.5	A2	46.51	45.16	8.33	12.05	7.42	6.45	10.95	9.64	19.86	25.30		
12.5-30	B21	52.91	39.42	7.67	10.58	11.51	11.49	12.40	6.93	16.24	23.18		
30-42.5	B22	60.15	34.17	5.68	16.31	13.99	12.85	11.49	5.51	12.57	21.60		
42.5-75	IIC1	59.76	31.56	8.68	14.48	13.55	12.48	12.74	6.51	12.69	18.87		
75-100	IIC2	57.50	33.31	9.19	13.48	11.88	10.57	13.09	8.48	16.12	17.19		

Depth (cm.)	Organic carbon	Bulk Density		Water Content								Avail. H_2O	pH		
				.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.	g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-12.5	1.20	1.40		29.1	27.6	23.3	20.3	17.5	12.8	10.1	6.1	3.8	0.27	2.55	3.2	3.9
12.5-30	1.05	1.21		40.1	35.4	28.0	24.8	23.5	11.6	9.7	7.9	5.5	0.27	4.3	4.45	5.05
30-42.5	0.26	1.71		26.3	23.6	18.4	16.2	11.7	7.1	5.4	4.2	2.5	0.27	5.05	5.45	6.1
42.5-75	0.12	2.08		17.3	16.4	13.6	12.2	9.9	8.2	6.4	5.2	2.9	0.22	4.5	5.0	6.0
75-100	0.10	2.00		19.2	16.6	13.4	11.3	8.9	8.5	7.1	6.1	3.5	0.20	4.25	5.0	5.85

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-2mm	Total
	meq/100 g															
0-12.5	0.1	0.2	<0.1	<0.1	17.5	18.0	2.8		5.2	2.8	2.7	6.9	4.0	4.1	4.2	4.4	34.4
12.5-30	0.1	<0.1	<0.1	<0.1	12.5	12.9	3.1					1.1	0.5	1.3	4.9	9.4	17.2
30-42.5	0.1	<0.1	0.1	<0.1	4.8	5.2	7.7					0.2	0.4	1.3	5.6	10.6	18.1
42.5-75	0.8	0.4	0.1	0.1	3.1	4.5	31.1		1.6	0.4	1.5	1.8	2.3	2.9	2.5	8.6	21.6
75-100	1.8	0.6	<0.1	0.1	2.4	5.0	52.0		3.6	3.5	0.9	1.9	1.4	2.0	3.6	5.7	22.6

CROGHAN MAPPING UNIT
SITE 1

Location: **Denmark, Oxford County, Maine, 1973.**

Horizon	*Depth*	*Description*
A1	0-12.5 cm.	Black (5YR2/1) loamy fine sand; single grain; loose; abrupt wavy boundary.
A2	12.5-15 cm.	Light gray (5YR7/1) loamy fine sand; single grain; loose; abrupt broken boundary.
B21	15-30 cm.	Dark reddish brown (5YR3/4) loamy fine sand; weak fine granular structure; very friable; abrupt irregular boundary.
B22	30-37.5 cm.	Yellowish red (5YR4/6) sand; weak fine granular structure; very friable; abrupt smooth boundary.
B23	37.5-45 cm.	Yellowish brown (10YR5/6) fine sand; few fine faint (10YR7/6) mottles; weak fine granular structure; very friable; abrupt smooth boundary.
C	45-100 cm.	Brownish yellow (10YR6/6) sand; common medium prominent (2.5YR7/2) mottles; massive; friable.

N.A.E.S.

SOIL Croghan SOIL Nos. 1 LOCATION Oxford County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)												
		Total			Sand						Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)		
		Pct. of < 2 mm												
0-12.5	A1	83.43	13.18	3.39	0.53	3.89	20.29	44.09	14.63	8.60	4.58			
12.5-15	A2	84.59	10.52	4.89	0.63	3.56	18.07	46.27	16.06	7.51	3.01			
15-30	B21	84.84	12.20	2.96	1.05	4.47	19.93	44.19	15.20	7.91	4.29			
30-37.5	B22	87.46	10.71	1.83	1.70	4.24	19.56	45.38	16.58	7.66	3.05			
37.5-45	B23	86.30	12.31	1.39	1.98	4.02	16.91	40.43	22.96	11.01	1.30			
45-100	C	94.65	5.35	0.00	0.52	5.38	36.23	41.40	11.12	5.26	0.09			

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-12.5	4.31		0.91		36.0	30.5	23.3	22.5	22.0	12.6	11.9	11.4	11.2	0.11	3.6	3.8	4.2
12.5-15	1.30		1.01		26.1	21.2	16.1	14.8	13.9	5.7	5.6	4.7	4.6	0.12	3.95	4.0	4.35
15-30	2.04		1.06		29.8	23.4	17.0	15.8	14.9	9.3	8.7	8.0	7.1	0.10	4.45	4.5	4.7
30-37.5	1.82		1.05		27.0	22.4	17.0	15.7	15.2	8.8	8.6	8.4	7.6	0.10	4.7	4.8	4.8
37.5-45	0.94		1.20		19.0	14.4	10.7	9.8	8.8	5.3	5.1	5.1	4.3	0.08	4.9	5.0	5.05
45-100	0.12		1.45		5.2	4.7	2.9	2.4	2.0	1.5	1.4	1.3	1.0	0.03	5.05	5.2	5.2

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume								
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-¼	¼-2mm	Total
	meq/100 g																
0-12.5	0.8	0.2	<0.1	0.1	20.4	21.6	5.6									0.3	0.3
12.5-15	0.4	<0.1	<0.1	<0.1	7.9	8.6	8.1									0.4	0.4
15-30	0.3	<0.1	<0.1	<0.1	15.8	16.4	3.6								<0.1	0.5	0.6
30-37.5	0.2	<0.1	<0.1	<0.1	13.1	13.6	3.7								<0.1	1.6	1.7
37.5-45	<0.1	<0.1	<0.1	<0.1	7.6	8.0	5.0							<0.1	0.5	2.4	3.0
45-100	<0.1	<0.1	<0.1	<0.1	1.2	1.6	25.0						<0.1	<0.1	<0.1	0.1	0.4

CROGHAN MAPPING UNIT
SITE 2

Location: **West Denmark, Oxford County, Maine, 1973.**

Horizon	*Depth*	*Description*
A2	0-5 cm.	Light gray (5YR7/1) loamy sand; single grain; loose; abrupt broken boundary.
B21	5-10 cm.	Dark reddish brown (2.5YR3/4) loamy sand; weak fine granular structure; friable; abrupt irregular boundary.
B22	10-32.5 cm.	Strong brown (7.5YR5/6) sand; single grain; loose; clear smooth boundary.
B23	32.5-65 cm.	Yellowish brown (10YR5/8) sand; few fine prominent (10YR7/1) mottles; single grain; loose; clear smooth boundary.
C	65-100 cm.	Olive yellow (2.5Y6/6) sand; common medium prominent (10R3/6) and (5Y7/1) mottles; single grain; loose.

M.A.E.S.

SOIL Croghan SOIL Nos. 2 LOCATION Oxford County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand						Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm											
0-5	A2	85.42	12.97	1.61	0.55	5.94	30.34	38.05	10.54	8.80	4.17		
5-10	B21	79.15	18.23	2.62	0.28	5.61	28.28	35.61	9.37	13.55	4.68		
10-32.5	B22	86.79	12.06	1.15	0.76	5.98	30.08	39.61	10.36	8.03	4.03		
32.5-65	B23	95.51	4.21	0.28	1.19	7.58	34.35	41.51	10.88	1.81	2.40		
65-100	C	97.32	2.68	0.00	1.57	6.91	32.31	48.78	7.75	1.67	1.01		

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-5	3.06		0.94		24.5	21.7	17.4	16.7	16.3	9.0	8.7	8.6	8.3	0.08	3.0	3.15	3.7
5-10	2.64		1.05		22.6	19.0	14.5	13.1	12.5	10.5	9.3	8.8	8.4	0.06	3.9	3.9	4.3
10-32.5	1.06		1.06		21.5	18.5	14.8	14.0	13.6	9.0	8.4	7.9	6.9	0.08	4.7	4.6	4.6
32.5-65	0.26		1.25		11.5	9.6	7.8	7.3	6.6	3.5	3.2	2.9	2.6	0.06	5.2	5.2	5.2
65-100	0.06		1.56		7.2	5.7	4.0	3.0	2.2	1.5	1.4	1.2	0.8	0.05	5.35	5.55	5.55

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-3/4	3/4-½	½-¼	¼-2mm	Total
	meq/100 g																
0-5	0.4	0.3	<0.1	0.1	12.5	13.4	6.7										0.0
5-10	0.3	0.2	<0.1	0.1	17.1	17.8	3.9									0.2	0.2
10-32.5	<0.1	0.1	<0.1	<0.1	9.0	9.4	4.2								0.1	0.2	0.3
32.5-65	0.2	0.1	<0.1	<0.1	2.4	2.9	17.2									0.1	0.1
65-100	<0.1	0.1	<0.1	<0.1	0.5	0.9	44.4									0.2	0.2

CROGHAN MAPPING UNIT
SITE 3

Location: **Lovell, Oxford County, Maine, 1973.**

Horizon	*Depth*	*Description*
A2	0-10 cm.	Light gray (5YR7/1) sand; single grain; loose; abrupt wavy boundary.
B21	10-25 cm.	Dark reddish brown (2.5YR3/4) loamy sand; weak fine granular structure; friable; cemented nodules of ortstein (10R2/2); abrupt wavy boundary.
B22	25-37.5 cm.	Dark red (2.5YR3/6) sand; single grain; loose; a few nodules of ortstein (7.5YR5/8); clear smooth boundary.
B23	37.5-50 cm.	Yellowish brown (10YR6/8) sand; common medium prominent (10YR7/1) mottles; single grain; loose; clear smooth boundary.
IIB3	50-60 cm.	Yellow (10YR7/6) fine sand; common medium prominent (10YR7/1) mottles; single grain; loose; few red (10R4/8) root stains; clear smooth boundary.
IIC	60-100 cm.	Light olive brown (2.5Y5/4) fine sand; common medium prominent (10YR7/1) and (7.5YR5/6) mottles; single grain; loose.

U.S.A.I.S.

SOIL Croghan SOIL Nos. 3 LOCATION Oxford County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand					Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm											
0-10	A2	87.83	9.79	2.38	1.21	8.18	26.57	41.22	10.65	7.60	2.19		
10-25	B21	84.43	13.07	2.50	1.91	8.99	26.34	37.69	9.50	8.88	4.19		
25-37.5	B22	90.54	7.98	1.48	2.33	9.68	28.13	40.76	9.64	4.90	3.08		
37.5-50	B23	96.05	3.95	0.00	2.74	14.47	33.65	38.86	6.33	3.95	0.00		
50-60	IIB3	95.75	2.32	1.93	1.02	4.96	23.69	53.76	12.32	1.50	0.82		
60-100	IIC	93.38	5.92	0.70	0.62	5.27	19.59	53.42	14.48	4.56	1.36		

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-10	1.52		1.38		14.7	12.6	8.4	6.7	5.4	5.3	4.8	4.7	4.7	0.05	3.05	3.1	3.8
10-25	2.86		0.88		50.4	47.4	39.5	38.3	37.0	14.2	14.1	13.1	12.8	0.23	4.35	4.35	4.5
25-37.5	1.11		1.09		24.4	22.1	17.5	16.7	16.2	8.6	8.4	8.4	7.9	0.10	4.9	4.9	4.65
37.5-50	0.35		1.40		11.7	10.4	8.2	7.7	6.8	3.4	3.2	3.2	2.5	0.08	5.2	5.3	5.0
50-60	0.16		1.44		14.9	12.7	9.4	9.0	9.0	2.0	1.9	1.8	1.6	0.11	5.2	5.5	5.25
60-100	0.12		1.44		12.4	10.0	7.0	6.3	5.3	1.5	1.4	1.2	1.0	0.09	4.85	5.35	5.3

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1	1-0.5	0.5-0.25	0.25-0.1	<0.1	Total
	meq/100 g															
0-10	0.3	0.1	<0.1	0.1	5.6	6.2	9.7								0.2	0.2
10-25	0.3	0.1	<0.1	<0.1	24.4	25.0	2.4								0.2	0.2
25-37.5	<0.1	<0.1	<0.1	<0.1	11.1	11.5	3.5								0.7	0.7
37.5-50	<0.1	<0.1	<0.1	<0.1	2.9	3.3	12.1								0.2	0.2
50-60	<0.1	<0.1	<0.1	<0.1	1.2	1.6	25.0								0.2	0.2
60-100	<0.1	<0.1	<0.1	<0.1	0.4	0.8	50.0									0.0

CROGHAN MAPPING UNIT
SITE 4

Location: **Oxford, Oxford County, Maine, 1973.**

Horizon	*Depth*	*Description*
A1	0-2.5 cm.	Black (5YR2.5/1) loamy coarse sand; single grain; loose; many roots; abrupt smooth boundary.
A2	2.5-5 cm.	Light gray (5YR7/1) loamy sand; single grain; loose; many roots; abrupt wavy boundary.
B21h	5-12.5 cm.	Dusky red (2.5YR3/2) loamy sand; weak fine granular structure; friable; many roots; abrupt wavy boundary.
B22	12.5-30 cm.	Dark brown to brown (7.5YR4/4) loamy coarse sand; few fine prominent (10YR5/8) mottles; weak medium granular structure; friable; many roots; clear smooth boundary.
B23	30-37.5 cm.	Brownish yellow (10YR6/8) coarse sand; common medium distinct (10YR5/6) mottles; single grain; loose; many roots; abrupt smooth boundary.
B3	37.5-60 cm.	Brownish yellow (10YR6/8) coarse sand; common medium prominent (10YR7/2) mottles; single grain; loose; many roots; clear wavy boundary.
C	60-100 cm.	Light olive brown (2.5Y5/6) coarse sand; common medium prominent (10YR7/2) mottles; single grain; loose; (2.5YR3/6) streaks.

M.A.E.S.

SOIL Croghan SOIL Nos. 4 LOCATION Oxford County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)												
		Total			Sand						Silt			
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)
		Pct. of < 2 mm												
0-2.5	A1	80.76	17.22	2.02	4.99	24.34	38.06	10.06	3.31	14.94	2.28		
2.5-5	A2	82.48	15.97	1.55	3.41	21.04	40.42	13.03	4.58	13.09	2.88		
5-12.5	B21h	80.49	18.61	0.90	4.37	22.67	38.65	11.11	3.69	12.29	6.32		
12.5-30	B22	83.35	16.25	0.40	5.94	23.46	40.68	10.21	3.06	11.71	4.54		
30-37.5	B23	94.03	5.97	0.00	12.08	31.02	39.48	9.88	1.57	5.97	0.00		
37.5-60	B3	93.29	6.71	0.00	8.02	30.95	42.86	10.29	1.17	6.35	0.36		
60-100	C	99.13	0.87	0.00	10.37	23.09	57.97	7.17	0.53	0.87	0.00		

Depth (cm.)	Organic carbon	Bulk Density		Water Content								Avail. H_2O	pH		
				.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.	g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-2.5	8.54	0.79		44.2	42.2	35.5	33.1	31.9	22.1	22.0	19.7	17.6	0.14	3.35	3.4	4.15
2.5-5	1.70	1.06		19.4	17.5	13.2	11.3	10.9	7.6	6.4	6.3	6.2	0.07	3.4	3.5	3.9
5-12.5	2.66	1.02		35.8	30.8	22.6	20.7	19.9	11.8	11.3	10.4	9.6	0.13	4.3	4.2	4.5
12.5-30	1.22	1.04		25.6	23.6	18.2	16.8	15.4	9.6	9.2	8.2	7.6	0.11	5.0	5.0	5.2
30-37.5	0.28	1.22		14.4	12.7	9.9	9.6	9.2	3.8	3.3	2.7	2.4	0.09	5.35	5.5	5.4
37.5-60	0.02	1.36		7.6	6.6	5.0	2.2	1.6	1.6	1.3	1.3	0.8	0.06	5.25	5.45	5.45
60-100	0.03	1.53		5.0	4.0	3.2	2.7	1.9	1.1	0.8	0.5	0.3	0.04	5.25	5.4	5.4

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %	% Coarse Fragments - Volume							
	Ca	Mg	Na	K				3+	3-2	2-1½	1½-1	1-¾	¾-½	½-¼	¼-Fine	Total
	meq/100 g															
0-2.5	1.4	0.4	0.8	0.3	28.0	30.9	9.4								0.6	0.6
2.5-5	0.5	0.2	<0.1	0.1	8.7	9.6	9.4							0.1	0.8	0.9
5-12.5	0.4	0.1	<0.1	<0.1	18.3	19.0	3.7						<0.1	<0.1	0.5	0.7
12.5-30	0.2	0.1	<0.1	<0.1	10.8	11.3	4.4						0.1	0.7	1.6	2.4
30-37.5	0.2	0.1	<0.1	<0.1	3.0	3.5	14.3						0.1	1.2	4.1	5.4
37.5-60	<0.1	<0.1	<0.1	<0.1	1.2	1.6	25.0						0.4	1.0	3.2	4.6
60-100	<0.1	<0.1	<0.1	<0.1	0.5	0.9	44.4						0.1	0.4	3.0	3.5

CROGHAN MAPPING UNIT
SITE 5

Location: **Oxford, Oxford County, Maine, 1973.**

Horizon	*Depth*	*Description*
A1	0-2.5 cm.	Dark reddish brown (5YR2.5/2) loamy sand; single grain; loose; abrupt broken boundary.
A2	2.5-5 cm.	Light gray to gray (10YR6/1) loamy sand; single grain; loose; abrupt broken boundary.
B21h	5-12.5 cm.	Dark reddish brown (2.5YR3/4) and dark brown to brown (7.5YR4/4) loamy sand; weak fine granular structure; friable; abrupt wavy boundary.
B22	12.5-25 cm.	Brownish yellow (10YR6/6) and dark brown to brown (7.5YR4/4) loamy sand; weak fine granular structure; friable; abrupt smooth boundary.
B23	25-52.5 cm.	Yellowish brown (10YR5/8) sand; common medium prominent (10YR6/1) mottles; single grain; loose; abrupt smooth boundary.
B3	52.5-72.5 cm.	Olive yellow (2.5Y6/8) sand; common medium prominent (10YR6/1) mottles; single grain; loose; clear smooth boundary.
C	72.5-100 cm.	Olive yellow (5Y6/6) coarse sand; common coarse prominent (2.5Y6/2) mottles; single grain; loose.

SOIL Creghan SOIL Nos. 5 LOCATION Oxford County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand					Silt			
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. Silt (0.02-0.002)	Int. Silt (0.02-0.002)	(- -)
		Pct. of < 2 mm											
0-3	A1	82.78	13.16	4.06	1.89	19.44	36.10	20.30	5.05	7.60	5.56		
3-5	A2	83.22	13.48	3.30	2.06	20.42	36.23	19.87	4.64	8.36	5.12		
5-12.5	B21	81.06	15.54	3.38	2.04	20.26	35.55	18.40	4.83	7.90	7.64		
12.5-25	B22	81.	17.24	1.41	2.21	18.98	35.40	19.99	4.77	9.45	7.89		
25-52.5	B23	9 .	6.86	1.13	1.84	22.23	42.79	21.71	3.44	3.62	3.24		
52.5-72.5	B3	97.13	2.68	0.19	0.88	14.73	43.51	32.98	5.03	1.59	1.09		
72.5-100	C	98.30	1.42	0.28	1.24	25.58	49.07	20.00	2.41	1.05	0.33		

Depth (cm.)	Organic carbon	Bulk Density		Water Content								Available H_2O	pH		
				.06	1	.33	.67	1	2	3	8	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.	g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-2.5	4.70	0.71		55.7	52.0	42.6	40.9	39.2	15.2	12.9	11.2	9.2	0.24	3.4	3.5	3.9
2.5-5	1.95	1.18		19.2	17.0	13.9	12.4	12.2	7.6	6.7	6.6	6.2	0.09	3.75	3.85	4.2
5-12.5	2.86	1.05		32.7	28.0	20.6	18.1	16.9	11.6	10.4	9.9	9.3	0.12	4.3	4.4	4.45
12.5-25	1.44	1.01		30.3	27.3	21.7	19.7	18.6	10.5	9.8	8.8	7.4	0.14	4.95	5.05	4.9
25-52.5	0.37	1.35		16.6	8.6	6.3	5.0	4.3	4.3	4.0	3.6	3.6	0.04	5.05	5.45	5.2
52.5-72.5	0.09	1.47		10.9	7.9	5.7	3.5	3.0	1.6	1.3	1.3	1.2	0.07	5.15	5.4	5.25
72.5-100	0.07	1.53		6.8	5.6	4.1	2.0	1.4	1.3	0.9	0.8	0.5	0.04	5.3	5.5	5.4

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat.		% Coarse Fragments - Volume						
	Ca	Mg	Na	K					3+	3-2	2-1	1-1/2	1/2-1/4	1/4-2	2+	Total
	meq/100 g						%									
0-2.5	1.3	0.4	0.1	0.2	19.5	21.5	9.3								1.0	1.0
2.5-5	0.4	0.2	<0.1	<0.1	11.1	11.9	6.7							<0.1	0.3	0.4
5-12.5	0.2	0.1	<0.1	<0.1	19.7	20.3	3.0								0.3	0.3
12.5-25	0.2	0.1	<0.1	<0.1	12.3	12.8	3.9							<0.1	0.3	0.4
25-52.5	0.2	<0.1	<0.1	<0.1	8.1	8.6	5.8							0.2	0.4	0.6
52.5-72.5	0.2	<0.1	<0.1	<0.1	1.2	1.7	29.4								<0.1	0.1
72.5-100	0.2	<0.1	<0.1	<0.1	0.6	1.1	45.4								<0.1	0.1

MONARDA MAPPING UNIT
SITE 1

Location: **Palmyra, Somerset County, Maine, 1974.**

Horizon	*Depth*	*Description*
Ap1	0-15 cm.	Dark grayish brown (2.5Y4/2) loam; weak fine granular structure; friable; many roots; abrupt smooth boundary.
Ap2	15-20 cm.	Dark grayish brown (2.5Y4/2) gravelly loam; few medium distinct (5Y5/2) mottles; moderate thin platy structure; friable; common roots; common stains (5YR4/4) on ped faces; abrupt smooth boundary.
B2	20-40 cm.	Olive (5Y5/3) gravelly loam; common medium distinct (5Y6/2) mottles; weak thin platy structure; friable; few roots; few (5YR2.5/2) manganese stains; common (5YR3/4) root stains; clear smooth boundary.
A'2g	40-45 cm.	Olive gray (5Y5/2) loam; many medium prominent (7.5YR4/4) mottles; strong coarse prismatic separating to moderate medium subangular blocky structure; firm; few roots; many (5YR2.5/1) manganese stains; abrupt wavy boundary.
IIC1g	45-70 cm.	Dark grayish brown (2.5Y4/2) gravelly loam; common medium distinct (5Y5/2) mottles having (2.5Y4/4) edges; strong coarse prismatic separating to moderate very thick platy structure; firm; many (5YR2.5/1) manganese stains.
IIC2g	70-80 cm.	Dark grayish brown (2.5Y4/2) loam; common medium distinct (5Y5/2) mottles having (2.5Y4/4) edges; strong coarse prismatic separating to weak thin and medium platy structure; firm.
IIC3g	80-100 cm.	Dark grayish brown (2.5Y4/2) loam; common medium distinct (5Y5/2) mottles having (2.5Y4/4) edges; strong coarse prismatic separating to weak thin and medium platy structure; firm.

N.A.E.S.

SOIL Monarda SOIL Nos. 1 LOCATION Somerset County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand						Silt		
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)		0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)
		Pct. of < 2 mm											
0-15	Ap1	39.71	49.93	10.36	9.42	7.28	6.71	10.40	5.90		23.81	26.12		
15-20	Ap2	42.24	44.36	13.40	9.67	7.77	7.29	11.00	6.51		19.49	24.87		
20-40	B2	46.57	41.03	12.40	12.46	9.50	8.01	10.71	5.89		15.66	25.37		
40-45	A'2g	35.78	46.26	17.96	8.57	7.98	6.31	7.44	5.48		13.26	33.00		
45-70	IIC1g	32.37	45.63	22.00	7.61	6.76	5.99	6.89	5.12		13.09	32.54		
70-80	IIC2g	31.09	45.79	23.12	7.23	6.54	5.81	6.59	4.92		12.11	33.68		
80-100	IIC3g	31.44	45.05	23.51	7.57	6.36	5.68	6.73	5.10		8.93	36.12		

Depth (cm.)	Organic carbon	Bulk Density		Water Content									Avail. H_2O	pH		
				.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.	g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-15	3.35	1.14		38.6	37.0	34.2	32.2	30.0	19.7	16.1	11.4	8.3	0.30	4.75	5.1	5.65
15-20	2.45	1.27		34.0	32.8	30.5	29.5	27.5	15.6	12.3	9.9	7.4	0.29	4.7	5.25	5.5
20-40	0.84	1.35		35.0	33.6	31.4	29.4	27.6	17.3	12.6	10.2	6.5	0.34	4.85	5.35	5.5
40-45	0.32	1.62		19.5	18.5	17.4	16.9	16.4	16.2	14.4	11.7	7.6	0.16	4.55	5.3	5.45
45-70	0.22	1.78		18.2	17.8	17.0	16.4	16.2	15.6	15.4	12.2	7.7	0.16	4.4	5.15	5.25
70-80	0.21	1.75		19.8	19.2	18.6	17.9	17.4	17.3	16.8	13.9	7.6	0.19	4.35	5.05	5.2
80-100	0.20	1.79		21.2	20.4	19.7	18.8	18.3	18.2	16.2	13.2	8.1	0.21	4.4	5.0	5.2

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-2mm	Total
	meq/100 g															
0-15	3.1	0.4	0.3	0.3	10.4	14.5	28.3					0.4	0.4	0.6	1.2	4.9	7.5
15-20	2.9	0.3	0.1	0.1	9.2	12.6	27.0				0.9	0.7	0.9	1.0	3.3	10.4	17.2
20-40	0.8	0.1	<0.1	0.1	6.4	7.5	14.7			0.7	0.6	0.2	0.4	1.1	3.4	14.6	21.0
40-45	1.1	0.2	<0.1	0.1	3.7	5.2	28.8					0.2	1.0	1.1	2.4	8.5	13.2
45-70	1.5	0.4	<0.1	0.2	3.1	5.3	41.5			1.2	0.8	0.4	0.9	1.9	4.2	9.5	18.9
70-80	1.5	0.5	<0.1	0.2	3.0	5.3	43.4			1.1	0.6	0.4	0.4	1.1	2.8	6.1	12.5
80-100	1.5	0.5	<0.1	0.2	3.7	6.0	38.3				0.2	0.3	0.4	1.0	2.4	5.5	9.8

MONARDA MAPPING UNIT
SITE 2

Location: **Stetson, Penobscot County, Maine, 1974.**

Horizon	*Depth*	*Description*
A1	0-7.5 cm.	Very dark grayish brown (10YR3/2) silt loam; moderate fine granular structure; friable; many roots; abrupt wavy boundary.
A2	7.5-12.5 cm.	Olive (5Y5/3) gravelly silt loam; common medium prominent (10YR5/6) and faint (5Y6/3) mottles; weak medium platy structure; firm; common roots; abrupt smooth boundary.
B1	12.5-20 cm.	Olive (5Y5/3) gravelly silt loam; common medium prominent (5YR5/8) and fine distinct (2.5Y6/2) mottles; weak coarse platy structure; firm; few roots; few fine prominent (2.5YR3/2) manganese stains; abrupt smooth boundary.
B2	20-27.5 cm.	Olive (5Y4/3) gravelly loam; few medium faint (5Y6/2) and common medium distinct (2.5Y5/6) mottles; weak medium subangular blocky structure; firm; few roots; abrupt smooth boundary.
A'2	27.5-55 cm.	Olive brown (2.5Y4/4) gravelly silt loam; many coarse prominent (5Y6/2) and medium (7.5YR5/6) mottles; strong very coarse prismatic separating to moderate medium platy structure; firm; few roots; few fine prominent (5YR2.5/1) manganese stains; gradual wavy boundary.
IIC1	55-82.5 cm.	Olive brown (2.5Y4/4) gravelly silt loam; many coarse prominent (7.5YR5/6) mottles; strong very coarse prismatic separating to weak fine subangular blocky structure; slightly firm; few roots.
IIC2	82.5-100 cm.	Olive brown (2.5Y4/4) gravelly loam; many coarse prominent (N/6) and (10YR5/6) mottles; strong very coarse prismatic separating

M.A.E.S.

SOIL Monarda SOIL Nos. 2 LOCATION Penobscot County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand						Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm											
0-7.5	A1	23.01	63.68	13.31	4.39	3.63	3.38	5.58	6.03	26.77	36.91		
7.5-12.5	A2	27.78	59.20	13.02	7.61	4.54	3.57	5.78	6.28	25.58	33.62		
12.5-20	B1	29.39	58.50	12.11	5.95	4.87	4.07	6.96	7.54	27.28	31.22		
20-27.5	B2	41.62	46.10	12.28	7.55	7.17	6.50	10.61	9.79	21.01	25.09		
27.5-55	A'2	30.42	50.26	19.32	5.46	5.36	5.13	7.57	6.90	14.43	35.83		
55-82.5	IIC1	30.83	51.28	17.89	5.94	5.33	5.04	7.70	6.82	16.51	34.77		
82.5-100	IIC2	31.51	49.94	18.55	6.48	5.38	5.20	7.62	6.83	17.30	32.64		

Depth (cm.)	Organic carbon		Bulk Density		Water Content							Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-7.5	5.82		0.82		65.9	63.0	57.1	54.0	50.5	27.0	20.1	17.2	14.4	0.35	4.6	5.1	5.6
7.5-12.5	7.18		1.67		23.7	22.7	21.5	20.1	19.4	14.4	11.2	8.4	4.6	0.28	4.05	5.05	5.5
12.5-20	0.41		1.66		23.0	21.9	20.4	18.4	16.8	12.9	10.4	7.8	4.5	0.26	4.25	5.1	5.4
20-27.5	0.44		1.80		24.3	23.2	20.8	18.4	16.7	11.9	9.8	8.2	4.6	0.29	4.6	5.0	5.3
27.5-55	0.27		1.80		18.3	17.9	17.1	16.1	15.6	15.0	13.4	11.6	7.4	0.17	4.65	5.25	5.5
55-82.5	0.25		1.66		19.0	17.9	16.0	14.7	13.1	13.1	12.7	12.4	9.7	0.10	4.85	5.65	5.8
82.5-100	0.18		1.75		21.6	19.9	17.4	16.0	14.5	14.3	14.0	12.6	9.9	0.13	5.35	6.15	6.9

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-¼	¼-2mm	Total
	meq/100 g																
0-7.5	11.6	1.7	0.2	0.3	14.4	28.2	48.9				1.5	2.3	1.5	1.6	1.8	2.4	11.1
7.5-12.5	2.5	0.5	<0.1	<0.1	4.0	7.2	44.4				1.5	1.9	1.2	4.2	5.2	7.8	21.8
12.5-20	1.2	0.3	<0.1	<0.1	2.8	4.5	37.8				0.4	1.0	1.1	2.4	5.7	8.8	19.4
20-27.5	0.9	0.2	<0.1	0.1	3.3	4.6	28.3					1.2	1.5	2.2	5.2	14.0	24.1
27.5-55	2.0	0.6	<0.1	0.1	3.0	5.8	48.3			0.5	0.9	1.0	0.7	1.8	3.5	7.6	16.0
55-82.5	4.5	0.9	<0.1	0.1	2.3	7.9	70.9		4.0	2.5	1.1	1.6	2.0	2.3	3.7	2.6	19.8
82.5-100	5.4	0.9	<0.1	0.1	1.4	7.9	82.3		2.4	1.0	0.5	1.8	1.2	0.6	2.9	4.9	15.3

MONARDA MAPPING UNIT
SITE 3

Location: **Mattawamkeag, Penobscot County, Maine, 1974.**

Horizon	*Depth*	*Description*
01	4-2 cm.	Loose leaves and twigs.
02	2-0 cm.	Dark reddish brown (5YR3/2) organic material; very fibrous; many roots; abrupt wavy boundary.
A21	0-10 cm.	Light gray (2.5Y7/2) cobbly silt loam; moderate very fine granular structure; very friable; many roots; abrupt wavy boundary.
A22g	10-25 cm.	Light gray (5Y7/2) silt loam; many medium prominent (7.5YR6/8) and faint (5Y6/3) mottles; weak thin platy structure; friable; common roots; abrupt smooth boundary.
B2	25-30 cm.	Olive (5Y5/3) gravelly silt loam; common fine prominent (7.5YR5/8), distinct (2.5Y6/2) and faint (5Y6/3) mottles; weak thin platy structure; friable; few roots; abrupt smooth boundary.
A'2	30-45 cm.	Light olive brown (2.5Y5/4) gravelly silt loam; many medium prominent (10YR6/8) and distinct (5Y6/3) and (5Y6/2) mottles; moderate coarse prismatic separating to moderate medium platy structure; firm; few roots; clear wavy boundary.
IIC1	45-67.5 cm.	Light olive gray (5Y6/2) gravelly loam; many medium prominent (7.5YR5/6) mottles; moderate very coarse prismatic separating to weak medium platy structure; firm; very few roots.
IIC2	67.5-100 cm.	Light olive brown (2.5Y5/4) gravelly loam; many medium prominent (10YR6/6), (5Y6/2) and distinct (2.5Y6/4) mottles; moderate very coarse prismatic separating to weak medium platy structure; firm; very few roots; manganese stains (7.5YR3/2 and 7.5YR3/0).

U.S.A.E.S.

SOIL Monarda SOIL Nos. 3 LOCATION Penobscot County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand						Silt		
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)
		Pct. of < 2 mm											
0-10	A21	20.66	64.23	15.11	4.67	3.73	3.36	4.64	4.26	19.49	44.74		
10-25	A22g	22.65	61.61	15.74	4.74	4.33	3.98	5.20	4.40	20.04	41.57		
25-30	B2	31.72	53.16	15.12	7.65	7.03	5.61	6.46	4.97	18.46	34.70		
30-45	A'2	37.76	50.09	12.15	6.13	8.13	7.82	9.21	6.47	22.42	27.67		
45-67.5	IIC1	46.89	40.63	12.48	8.90	9.82	9.52	11.15	7.50	15.00	25.63		
67.5-100	IIC2	50.01	35.65	14.34	9.69	10.47	10.27	11.94	7.64	15.44	20.21		

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-10	2.59		0.94		45.2	43.3	38.8	36.3	34.6	23.2	17.7	13.7	10.2	0.27	3.1	3.6	4.0
10-25	0.96		1.32		30.9	29.5	26.2	21.6	20.5	17.6	13.8	10.3	6.2	0.26	3.55	4.1	4.5
25-30	1.41		1.31		33.3	31.6	26.0	22.8	20.8	16.7	14.1	11.2	7.2	0.25	4.15	4.3	5.15
30-45	0.85		1.26		27.8	25.2	21.2	19.3	18.6	13.9	11.8	9.9	6.4	0.19	4.25	4.3	4.8
45-67.5	0.25		1.70		16.3	15.3	14.0	12.1	11.6	10.7	9.0	7.6	4.3	0.16	4.1	4.45	5.4
67.5-100	0.09		1.75		17.4	16.0	14.5	12.7	11.8	10.4	9.2	8.0	5.1	0.16	4.2	5.05	5.8

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-¼	¼-2mm	Total
	meq/100 g																
0-10	0.4	0.2	0.1	0.1	25.1	25.9	3.1		56.8		0.7	2.4	1.2	1.4	1.7	2.2	66.4
10-25	0.2	0.1	<0.1	<0.1	14.8	15.3	3.3				0.5	1.9	1.8	2.5	3.2	3.5	13.4
25-30	0.2	0.1	0.1	<0.1	14.1	14.6	3.4					1.2	1.7	2.5	4.9	14.2	24.5
30-45	0.2	0.1	<0.1	<0.1	11.0	11.5	4.3			1.0	0.6	2.4	1.1	1.9	3.0	8.5	18.5
45-67.5	0.5	0.2	<0.1	<0.1	5.0	5.9	15.2		1.0	1.3	3.1	2.6	1.8	2.4	3.7	6.5	22.4
67.5-100	0.2	0.7	<0.1	0.1	2.6	5.7	54.4		1.8	0.6	1.2	4.2	2.1	2.4	3.6	2.4	18.3

MONARDA MAPPING UNIT
SITE 4

Location: **Stacyville, Penobscot County, Maine, 1974.**

Horizon	*Depth*	*Description*
02	1-0 cm.	Black (5YR2.5/1) organic material; weak very fine granular structure; very friable; many roots; abrupt wavy boundary.
A2 + B21	0-15 cm.	Light brownish gray (2.5Y6/2) and dark brown (10YR3/3) silt loam; weak very fine granular and weak thin platy structure; friable; many roots in A2 and common in B21; abrupt wavy boundary.
B22	15-27.5 cm.	Olive (5Y4/3) gravelly loam; common medium prominent (10YR5/8) and few medium distinct (2.5Y6/2) mottles; weak very fine granular structure; very friable; few roots; clear smooth boundary.
A'2	27.5-40 cm.	Olive brown (2.5Y4/4) gravelly loam; many coarse prominent (5Y6/2) and common medium prominent (10YR5/6) mottles; weak thick platy structure; very firm; few roots; few (5YR2.5/1) manganese stains; abrupt smooth boundary.
IIC1	40-67.5 cm.	Light olive brown (2.5Y5/4) gravelly loam; common coarse prominent (5Y5/2) and (10YR5/6) mottles; moderate very coarse prismatic separating to weak very thick platy structure; firm; prism faces are light brownish gray (2.5Y6/2) with strong brown (7.5YR5/6) edges; common (5YR2.5/1) manganese stains.
IIC2	67.5-100 cm.	Light olive brown (2.5Y5/4) gravelly loam; common coarse prominent (5Y5/2) and (10YR5/6) mottles; moderate very coarse prismatic separating to weak very thick platy structure; firm; prism faces are light brownish gray (2.5Y6/2) with strong brown (7.5YR5/6) edges; few (5YR2.5/1) manganese stains.

U.S.D.A.

SOIL Monarda SOIL Nos. 4 LOCATION Penobscot County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)												
		Total			Sand						Silt			
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)		0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)
		Pct. of < 2 mm												
0-15	A2+B21	26.24	55.54	18.22	7.19	5.39	3.97	4.92	4.77		21.79	33.75		
15-27.5	B22	41.82	41.74	16.44	9.32	9.18	7.91	8.89	6.52		16.30	25.44		
27.5-40	A'2	37.09	43.17	19.74	9.17	8.30	6.81	7.55	5.26		13.70	29.47		
40-67.5	IIC1	28.33	48.76	22.91	6.38	6.16	5.32	5.99	4.48		15.94	32.82		
67.5-100	IIC2	28.20	47.98	23.82	5.81	6.06	5.19	6.05	5.09		14.78	33.20		

Depth (cm.)	Organic carbon	Bulk Density		Water Content								Avail. H_2O	pH		
				.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.	g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-15	3.46	1.10		39.1	38.4	34.7	33.5	31.7	23.8	19.9	16.7	9.9	0.27	3.3	3.55	4.1
15-27.5	2.10	1.01		43.6	41.8	31.6	27.7	26.7	17.2	15.2	13.0	9.4	0.22	4.15	4.3	4.75
27.5-40	0.69	1.52		20.9	20.0	18.4	17.4	16.4	15.3	13.9	12.4	7.9	0.16	4.30	4.45	5.25
40-67.5	0.16	1.74		21.1	20.7	19.2	18.6	17.8	16.6	16.0	14.0	9.1	0.18	4.15	5.1	6.0
67.5-100	0.11	1.73		19.7	19.3	18.1	17.4	17.0	16.6	16.0	14.3	9.0	0.16	4.7	6.05	6.7

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾/4	¾/4-½	½-¼	¼-2mm	Total
	meq/100 g																
0-15	0.2	0.3	<0.1	0.1	22.9	23.6	3.0		28.8		1.2	1.7	1.7	1.3	3.2	4.9	42.8
15-27.5	0.3	0.2	<0.1	0.1	16.9	17.6	4.0				1.0	1.0	0.5	1.4	5.4	10.6	19.9
27.5-40	0.2	0.1	<0.1	0.1	9.1	9.6	5.2		3.6	3.4	1.0	2.2	2.7	2.4	5.0	7.8	28.1
40-67.5	5.1	1.9	<0.1	0.1	4.2	10.4	59.6		5.4	0.8	0.9	2.9	2.1	2.7	4.3	5.8	24.9
67.5-100	7.4	2.1	<0.1	0.1	2.4	12.1	80.2		1.4	0.7	0.6	1.4	1.4	1.7	2.9	5.4	15.5

MONARDA MAPPING UNIT
SITE 5

Location: **Rangeley, Franklin County, Maine, 1974.**

Horizon	*Depth*	*Description*
Ap	0-17.5 cm.	Dark brown to brown (10YR4/3) silt loam; moderate fine granular structure; very friable; many roots; abrupt smooth boundary.
B21	17.5-20 cm.	Dark grayish brown (2.5Y4/2) silt loam; few medium distinct (5Y5/2) and common fine prominent (10YR4/4) mottles; moderate medium platy separating to moderate very fine subangular blocky structure; friable; many roots; abrupt smooth boundary.
B22	20-32.5 cm.	Olive (5Y4/3) gravelly silt loam; common medium distinct (5Y6/2) and common medium prominent (2.5YR4/6) and coarse (7.5YR5/6) mottles; moderate thin platy structure; friable; common roots; abrupt smooth boundary.
A'2	32.5-47.5 cm.	Olive (5Y5/3) gravelly loam; many coarse prominent (2.5Y5/6) and (5Y5/2) and common (10YR5/8) mottles; moderate very coarse prismatic separating to moderate thin platy structure; friable; few roots; prism faces olive gray (5Y5/2) with yellowish brown (10YR5/6) edges; abrupt wavy boundary.
IIC1	47.5-67.5 cm.	Olive (5Y5/4) silt loam; common medium faint (5Y5/2) and distinct (2.5Y4/4) and few medium prominent (10YR4/4) mottles; moderate very coarse prismatic separating to moderate medium and thick platy structure; firm; few roots; prism faces olive gray (5Y5/2) with yellowish brown (10YR5/6) edges.
IIC2	67.5-100 cm.	Olive (5Y5/4) silt loam; common medium prominent (10YR4/4) and distinct (5Y5/2) mottles; moderate very coarse prismatic separating to moderate thick and very thick platy structure; firm; few fine roots in the prism face; prism faces olive gray (5Y5/2) with yellowish brown (10YR5/6) edge.

M.A.E.S.

SOIL Monarda SOIL Nos. 5 LOCATION Franklin County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)												
		Total			Sand						Silt			
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)
		Pct. of < 2 mm												
0-17.5	Ap	28.64	60.95	10.41	2.30	5.57	6.37	8.16	6.24	18.25	42.70		
17.5-20	B21	37.77	51.51	10.72	11.13	7.46	6.50	7.49	5.19	20.03	31.48		
20-32.5	B22	40.83	50.16	9.01	9.74	8.29	8.01	9.01	5.78	19.00	31.16		
32.5-47.5	A'2	43.19	47.93	8.88	9.49	8.69	8.57	9.92	6.52	16.18	31.75		
47.5-67.5	IIC1	37.53	50.04	12.43	6.03	7.51	8.24	9.57	6.18	14.59	35.45		
67.5-100	IIC2	29.72	55.98	14.30	4.94	5.67	5.98	7.57	5.56	13.30	42.68		

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-17.5	3.04		1.02		45.0	44.4	37.7	37.4	36.5	18.5	14.4	13.0	10.3	0.28	4.35	4.8	5.35
17.5-20	1.54		1.31		29.2	28.6	25.4	24.4	23.2	15.5	11.8	10.0	7.9	0.23	4.45	4.95	5.65
20-32.5	0.75		1.31		30.0	29.1	24.3	23.0	21.5	12.9	9.9	8.0	5.0	0.25	4.5	5.0	5.75
32.5-47.5	0.22		1.70		17.6	16.9	14.5	13.9	13.4	10.0	7.8	5.9	3.1	0.19	4.55	5.2	6.0
47.5-67.5	0.18		1.82		16.4	15.9	14.4	13.5	13.1	12.1	9.6	7.8	4.6	0.18	4.5	5.25	6.05
67.5-100	0.18		1.87		17.9	17.4	16.6	16.2	15.8	15.2	12.4	10.1	6.2	0.19	4.5	5.4	6.1

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-¼	¼-2mm	Total
	meq/100 g																
0-17.5	4.1	0.8	<0.1	0.1	9.2	14.3	35.7		6.9	1.6	0.8	0.2	0.1	0.2	0.3	0.5	10.6
17.5-20	1.9	0.4	<0.1	<0.1	7.1	9.6	26.0					0.4	0.3	0.4	0.5	0.6	2.2
20-32.5	2.7	0.5	<0.1	0.1	5.8	9.2	37.0			2.7	0.4	1.5	2.1	2.2	4.7	7.5	21.1
32.5-47.5	1.9	0.4	<0.1	<0.1	2.4	4.9	51.0			0.7		2.0	2.3	1.9	3.7	5.9	16.5
47.5-67.5	3.1	0.7	<0.1	<0.1	2.8	6.8	58.8			0.7		0.7	0.9	0.8	1.8	4.2	9.1
67.5-100	4.1	1.0	<0.1	0.1	3.1	8.4	63.1			0.3	0.1	1.0	0.7	0.9	1.7	4.4	9.1

PLAISTED MAPPING UNIT
SITE 1

Location: **Molunkus, Aroostook County, Maine, 1973.**

Horizon	*Depth*	*Description*
Ap	0-7.5 cm.	Dark yellowish brown (10YR4/4) gravelly silt loam; weak very fine granular structure; very friable; many roots; abrupt smooth boundary.
A2	0-1.25 cm.	Light brownish gray (10YR6/2) gravelly silt loam; weak very fine granular structure; very friable; many roots; abrupt broken boundary.
B21h	7.5-12.5 cm.	Strong brown (7.5YR5/6) silt loam; weak very fine granular structure; very friable; many roots; clear wavy boundary.
B22	12.5-25 cm.	Strong brown (7.5YR5/8) silt loam; weak fine granular structure; very friable; many roots; clear wavy boundary.
B23	25-40 cm.	Yellowish brown (10YR5/4) gravelly silt loam; weak fine granular structure; friable; few roots; abrupt smooth boundary.
B3	40-52.5 cm.	Olive (5Y5/3) gravelly silt loam; moderate medium platy structure; friable; few roots; abrupt smooth boundary.
IIC1	52.5-85 cm.	Light olive brown (2.5Y5/4) gravelly loam matrix with light yellowish brown (2.5Y6/4) ped face; moderate coarse prismatic structure with light olive gray (5Y6/2) faces and yellowish brown (10YR5/6) edges separating to moderate thick platy; firm; roots in prism face.
IIC2	85-100 cm.	Light olive brown (2.5Y5/4) gravelly sandy loam; moderate coarse prismatic structure with light olive gray (5Y6/2) faces and yellowish brown (10YR5/6) edges separating to moderate very thick platy; firm; roots in prism face.

N.A.E.S.

SOIL Plaisted SOIL Nos. 1 LOCATION Aroostook County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand					Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm											
0-7.5	Ap	37.10	54.13	8.77	7.95	7.00	6.65	8.56	6.94	25.56	28.57		
7.5-12.5	B21h	38.99	57.85	3.16	8.21	7.63	7.02	8.75	7.38	24.22	33.63		
12.5-25	B22	38.93	59.19	1.88	8.71	7.28	6.98	8.73	7.23	22.70	36.49		
25-40	B23	38.59	56.04	5.37	7.37	7.68	7.26	9.09	7.19	20.72	35.32		
40-52.5	B3	39.33	50.86	9.81	9.24	8.38	7.20	8.23	6.28	18.65	32.21		
52.5-85	IIC1	46.83	42.31	10.86	10.20	10.15	9.11	10.46	6.91	16.66	25.65		
85-100	IIC2	56.57	36.76	6.67	10.45	11.61	11.53	13.74	9.24	18.56	18.20		

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-7.5	4.52		0.75		49.6	45.3	38.2	36.0	35.3	21.7	18.0	16.8	13.6	0.18	3.7	4.05	4.4
7.5-12.5	5.32		0.65		75.4	67.0	53.2	46.6	44.2	23.2	20.2	19.5	15.4	0.24	3.95	4.3	4.6
12.5-25	2.64		0.67		62.6	55.9	43.5	39.1	38.0	18.5	15.9	14.6	11.4	0.22	4.05	4.45	4.8
25-40	0.96		0.93		50.6	46.5	38.8	34.9	30.0	14.1	11.7	9.2	6.3	0.30	4.2	4.6	4.95
40-52.5	0.36		1.18		36.4	33.2	30.1	26.8	24.2	13.4	10.8	8.1	5.4	0.29	4.0	4.5	4.95
52.5-85	0.14		1.66		16.6	15.3	13.4	12.3	11.2	11.2	9.9	8.0	4.4	0.15	3.6	4.5	5.3
85-100	0.11		1.47		19.2	17.4	14.4	12.4	11.2	8.4	7.2	5.7	3.4	0.16	3.8	4.6	5.3

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-2mm	Total
	meq/100 g															
0-7.5	0.7	0.2	<0.1	0.2	20.8	22.0	5.4			2.8	1.1	1.9	1.6	2.1	2.6	3.2	15.3
7.5-12.5	0.4	0.2	<0.1	0.1	28.2	29.0	2.8				1.5	1.1	0.7	1.2	2.0	2.6	9.1
12.5-25	0.3	0.1	<0.1	0.1	19.9	20.5	2.9			0.7	0.6	2.0	1.3	1.9	2.7	4.0	13.2
25-40	0.2	0.1	<0.1	<0.1	9.6	10.1	5.0			1.3	1.5	2.7	1.7	1.5	3.2	4.8	16.7
40-52.5	0.3	0.2	<0.1	0.1	6.2	6.9	10.1		10.3		1.0	3.0	1.8	2.7	3.1	5.6	27.5
52.5-85	1.4	0.6	0.1	0.1	4.7	6.9	31.9		3.6	3.1	2.3	4.4	2.5	3.1	5.9	5.7	30.6
85-100	1.1	0.4	0.1	<0.1	3.0	4.7	36.2			3.9	3.0	4.2	2.9	3.5	5.1	8.0	28.6

PLAISTED MAPPING UNIT
SITE 2

Location: **Dyer Brook, Aroostook County, Maine, 1973.**

Horizon	*Depth*	*Description*
02	10-0 cm.	Dark reddish brown (5YR2/2) organic material; weak very fine granular structure; very friable; many roots; abrupt smooth boundary.
A2	0-1.25 cm.	Light brownish gray (10YR6/2) silt loam; moderate thin platy structure; very friable; many roots; abrupt broken boundary.
B21h	0-7.5 cm.	Very dusky red (2.5YR2/2) silt loam; weak very fine granular structure; very friable; many roots; abrupt smooth boundary.
B22	7.5-15 cm.	Yellowish red (5YR4/6) silt loam; weak very fine granular structure; very friable; many roots; abrupt wavy boundary.
B23	15-35 cm.	Yellowish brown (10YR5/6) silt loam; weak very fine granular structure; friable; common roots; clear wavy boundary.
B3	35-47.5 cm.	Yellowish brown (10YR5/4) gravelly loam matrix with light olive brown (2.5Y5/4) ped face; weak fine granular structure; friable; common roots; abrupt smooth boundary.
IIC1	47.5-75 cm.	Yellowish brown (10YR5/4) gravelly loam matrix with light yellowish brown (2.5Y6/4) ped face; moderate thick platy structure; firm; few roots.
IIC2	75-100 cm.	Yellowish brown (10YR5/4) gravelly loam matrix with light olive brown (2.5Y5/4) ped face; moderate thick platy structure; firm; no roots.

M.A.E.S.

SOIL Plaisted SOIL Nos. 2 LOCATION Aroostook County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)												
		Total			Sand						Silt			
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)
		Pct. of < 2 mm											
-7.5	B21h	21.55	67.82	10.63	3.97	3.72	3.49	5.16	5.21	24.88	42.94		
.5-15	B22	33.83	60.65	5.52	6.17	6.22	6.30	8.02	7.12	28.18	32.47		
5-35	B23	38.81	55.08	6.11	8.09	7.66	7.43	8.71	6.92	22.71	32.37		
5-47.5	B3	41.03	48.16	10.81	9.55	8.34	7.60	9.07	6.47	16.14	32.02		
7.5-75	IIC1	33.67	49.76	16.57	7.61	6.64	6.06	7.34	6.02	15.81	33.95		
5-100	IIC2	41.35	41.93	16.72	9.54	8.40	7.89	9.17	6.35	14.29	27.64		

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
-7.5	5.85		0.59		81.9	71.9	59.8	59.2	58.2	29.2	25.9	25.1	22.0	0.22	3.6	3.85	4.35
.5-15	4.88		0.56		74.7	63.5	49.6	46.5	44.2	29.0	25.7	23.5	22.3	0.15	4.05	4.15	4.65
5-35	2.46		0.81		60.3	55.1	45.2	38.1	32.7	20.6	17.9	16.6	13.3	0.26	4.4	4.4	4.9
5-47.5	0.69		1.24		28.7	26.4	23.4	21.6	18.4	15.0	12.5	10.4	6.6	0.21	4.45	4.6	5.0
7.5-75	0.32		1.60		20.4	19.7	18.8	18.2	17.2	16.2	13.6	11.1	6.3	0.20	4.1	4.5	5.05
5-100	0.25		1.43		26.1	25.0	21.4	20.4	18.0	13.7	11.7	10.1	6.7	0.21	4.2	4.7	5.2

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-2mm	Total
	meq/100 g															
-7.5	2.9	0.9	<0.1	0.1	37.8	41.8	9.6					0.8	0.5	0.6	2.3	2.9	7.1
.5-15	1.3	0.4	<0.1	0.1	35.5	37.4	5.1					0.3	0.8	1.1	2.6	3.7	8.5
5-35	0.6	0.2	<0.1	0.1	20.6	22.2	7.2			0.5	0.5	0.8	1.1	1.6	3.0	4.8	12.3
5-47.5	0.4	0.2	<0.1	<0.1	9.1	9.9	8.1		8.7	2.0	1.6	1.9	1.6	3.0	4.0	14.9	37.7
7.5-75	1.0	0.3	0.1	0.1	7.0	8.5	17.6		2.7	6.9	1.8	3.3	2.4	2.1	3.9	7.6	30.7
5-100	1.1	0.4	0.1	0.1	5.9	7.6	22.4			1.2	1.3	2.6	1.7	1.9	3.4	5.6	17.7

PLAISTED MAPPING UNIT
SITE 3

Location: **St. John, Aroostook County, Maine, 1973.**

Horizon	*Depth*	*Description*
02	2.5-0 cm.	Dark reddish brown (5YR2/2) organic material; weak very fine granular structure; very friable; abrupt smooth boundary.
A2	0-2.5 cm.	Light brownish gray (10YR6/2) gravelly silt loam; weak very thin platy structure; very friable; many roots; abrupt smooth boundary.
B21h	2.5-17.5 cm.	Strong brown (7.5YR5/6) silt loam; weak very fine granular structure; very friable; many roots; clear wavy boundary.
B22	17.5-20 cm.	Yellowish brown (10YR5/6) gravelly silt loam; weak very fine granular structure; very friable; common roots; abrupt smooth boundary.
B23	20-35 cm.	Light olive brown (2.5Y5/4) silt loam; weak medium platy structure; friable; common roots; many (2.5YR3/6) root stains; clear smooth boundary.
B3	35-45 cm.	Light yellowish brown (2.5Y6/4) gravelly silt loam; weak thin platy structure; friable; few roots; clear smooth boundary.
IIC1	45-87.5 cm.	Olive (5Y5/3) gravelly silt loam; moderate very thick platy structure; very firm; very few roots; many peds coated with pale olive (5Y6/3) material.
IIC2	87.5-100 cm.	Olive (5Y5/3) gravelly loam; moderate very thick platy structure; very firm; very few roots; many peds and pores coated with pale olive (5Y6/3) material.

M.A.E.S.

SOIL Plaisted SOIL Nos. 3 LOCATION Aroostook County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand						Silt		(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm											
0-2.5	A2	37.51	52.77	9.72	7.46	5.86	6.02	9.75	8.42	18.75	34.02		
2.5-17.5	B21h	35.86	62.13	2.01	11.36	6.10	5.38	7.07	5.95	23.07	39.06		
17.5-20	B22	29.93	68.57	1.50	7.65	5.94	4.92	5.97	5.45	28.63	39.94		
20-35	B23	27.21	68.61	4.18	6.50	5.10	4.55	5.79	5.27	23.59	45.02		
35-45	B3	31.10	65.24	3.66	7.13	5.96	5.64	6.81	5.56	19.99	45.25		
45-87.5	IIC1	43.60	50.10	6.30	10.95	8.22	7.61	9.79	7.03	20.46	29.64		
87.5-100	IIC2	45.67	46.82	7.51	11.97	8.99	8.00	9.78	6.93	16.98	29.84		

Depth (cm.)	Organic carbon	Bulk Density		Water Content								Avail. H_2O	pH		
				.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.	g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-2.5	2.26	0.72		45.1	43.1	37.8	35.4	34.8	15.2	11.6	11.1	9.3	0.20	3.3	4.0	4.4
2.5-17.5	2.79	0.60		68.2	62.8	48.7	44.7	42.7	18.0	15.2	14.7	12.6	0.22	3.75	4.35	4.55
17.5-20	2.47	0.66		61.4	55.9	43.2	37.4	34.0	17.8	15.4	14.7	10.7	0.21	4.25	4.4	4.7
20-35	2.21	1.00		43.4	41.4	34.4	29.5	25.9	15.4	13.0	11.3	8.4	0.26	4.4	4.55	4.85
35-45	0.80	1.15		32.0	30.2	25.3	22.2	18.7	14.6	12.4	9.8	5.7	0.22	4.5	4.7	5.2
45-87.5	0.19	1.54		22.0	20.6	17.6	15.4	13.6	10.3	8.4	6.7	4.1	0.21	4.5	4.8	5.4
87.5-100	0.16	1.42		21.9	20.7	18.2	17.2	16.6	10.4	8.4	6.8	4.2	0.20	4.5	4.95	5.4

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-3/4	¾-½	½-2mm	Total
	meq/100 g															
0-2.5	3.2	0.4	0.2	0.1	12.6	16.5	23.6				3.7	7.2	3.9	5.7	9.4	6.6	36.5
2.5-17.5	2.2	0.2	0.1	0.1	19.9	22.5	11.6			1.2	0.2	2.6	1.7	2.3	3.6	2.9	14.5
17.5-20	0.8	0.2	<0.1	0.1	20.3	21.5	5.6			7.8		3.4	4.5	4.5	5.6	7.1	32.9
20-35	0.4	0.1	<0.1	0.1	13.0	13.7	5.1			0.5	0.2	1.8	0.8	1.8	3.9	5.1	14.1
35-45	0.4	0.1	<0.1	0.1	8.7	9.4	7.4			1.2	2.1	2.8	2.4	3.1	5.2	7.0	23.8
45-87.5	0.6	0.2	<0.1	0.1	3.5	4.5	22.2		3.5	0.4	0.8	2.8	2.0	3.0	6.0	8.0	26.5
87.5-100	0.8	0.2	<0.1	0.1	3.0	4.2	28.6			2.1	2.5	3.4	3.2	4.7	6.7	8.8	31.4

PLAISTED MAPPING UNIT
SITE 4

Location: **Bingham, Somerset County, Maine, 1973.**

Horizon	*Depth*	*Description*
Ap	0-12.5 cm.	Dark brown (10YR3/3) silt loam; weak fine granular structure; friable; many roots; abrupt smooth boundary.
B21h	12.5-20 cm.	Reddish brown (5YR4/4) silt loam; weak fine granular structure; friable; many roots; abrupt wavy boundary.
B22	20-32.5 cm.	Strong brown (7.5YR5/6) gravelly fine sandy loam; weak fine granular structure; friable; many roots; clear wavy boundary.
B3	32.5-47.5 cm.	Dark brown (10YR4/3) gravelly sandy loam; moderate fine subangular blocky structure; friable; common roots; abrupt smooth boundary.
IIC1	47.5-82.5 cm.	Dark grayish brown (2.5Y4/2) gravelly silt loam matrix with light olive brown (2.5Y5/4) ped faces; moderate medium platy structure separating to moderate medium subangular blocky; firm.
IIC2	82.5-100 cm.	Very dark grayish brown (2.5Y3/2) gravelly silt loam matrix with olive brown (2.5Y4/4) ped faces; moderate medium platy structure separating to moderate medium subangular blocky; firm.

M.A.E.S.

SOIL Plaisted SOIL Nos. 4 LOCATION Somerset County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand						Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)		0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm												
0-12.5	Ap	42.37	55.13	2.50	5.17	5.40	7.40	13.00	11.40		29.43	25.70		
12.5-20	B21h	40.83	57.01	2.16	3.93	4.42	6.50	13.00	12.98		35.47	21.54		
20-32.5	B22	53.48	45.68	0.84	6.19	6.19	9.42	17.34	14.34		28.49	17.19		
32.5-47.5	B3	63.07	36.62	0.31	8.30	9.61	13.28	20.03	11.85		21.37	15.25		
47.5-82.5	IIC1	44.42	51.76	3.82	5.65	5.79	7.58	13.94	11.46		23.76	28.00		
82.5-100	IIC2	39.35	53.56	7.09	4.50	4.28	5.42	11.59	13.56		23.31	30.25		

Depth (cm.)	Organic carbon		Bulk Density		Water Content							Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-12.5	4.79		0.78		48.6	44.2	35.9	35.0	34.3	25.8	17.3	16.2	13.6	0.17	4.3	4.6	5.2
12.5-20	3.62		0.86		60.0	56.3	45.1	39.8	38.2	20.3	18.4	17.7	14.8	0.26	4.5	4.8	5.3
20-32.5	2.30		0.88		48.7	44.3	32.6	27.4	25.7	17.3	15.6	14.9	12.0	0.18	4.85	5.0	5.5
32.5-47.5	0.85		1.07		34.6	31.4	26.2	19.7	17.1	10.6	9.7	9.2	6.4	0.21	5.05	5.3	5.55
47.5-82.5	0.20		1.49		20.1	19.0	17.0	15.5	13.6	10.1	8.6	7.4	4.5	0.19	4.65	5.2	5.9
82.5-100	0.08		1.61		20.2	19.4	18.1	16.8	15.3	12.2	10.5	9.0	5.9	0.20	4.3	5.15	5.9

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-3/4	¾-½	½-2mm	Total
	meq/100 g															
0-12.5	1.6	0.3	<0.1	0.2	20.6	22.8	9.6		2.2		1.6	2.0	1.1	0.8	1.8	2.2	11.7
12.5-20	1.6	0.2	<0.1	0.1	24.8	26.8	7.5		11.8	2.0	4.2	1.7	0.8	1.1	1.9	1.4	25.6
20-32.5	0.8	0.2	<0.1	<0.1	20.4	21.6	5.5		2.3	3.9	2.2	4.4	1.7	2.0	3.0	3.3	22.8
32.5-47.5	0.4	0.1	<0.1	<0.1	10.5	11.2	6.2		5.3	3.2	3.7	3.1	1.9	3.1	4.9	8.1	33.3
47.5-82.5	0.8	0.2	<0.1	0.1	4.7	5.9	20.3			3.1	2.0	1.7	1.6	2.0	3.3	5.1	18.8
82.5-100	1.5	0.6	<0.1	0.2	4.5	6.9	34.8			3.9	1.3	4.2	1.5	2.7	4.2	6.3	24.1

PLAISTED MAPPING UNIT
SITE 5

Location: **Lakeview Plt., Piscataquis County, Maine, 1973.**

Horizon	*Depth*	*Description*
02	3.8-0 cm.	Black (N2.5/) organic material; weak fine granular structure; friable; many roots; abrupt broken boundary.
A2	0-5 cm.	Gray to light gray (10YR6/1) gravelly silt loam; weak fine granular structure; friable; many roots; abrupt wavy boundary.
B21h	5-15 cm.	Dark reddish brown (5YR3/4) silt loam; weak fine granular structure; friable; many roots; abrupt wavy boundary.
B22	15-25 cm.	Dark yellowish brown (10YR4/4) silt loam; weak fine granular structure; friable; many roots; abrupt wavy boundary.
B23	25-40 cm.	Yellowish brown (10YR5/4) silt loam; weak fine granular structure; friable; common roots; clear wavy boundary.
B3	40-52.5 cm.	Light olive brown (2.5Y5/4) silt loam; weak thin platy structure; friable; few roots; clear wavy boundary.
IIC1	52.5-67.5 cm.	Light olive brown (2.5Y5/4) gravelly silt loam; moderate medium platy structure; firm; very few roots.
IIC2	67.5-90 cm.	Light olive brown (2.5Y5/4) gravelly silt loam; moderate medium platy structure; firm; very few roots.
IIC3	90-100 cm.	Light olive brown (2.5Y5/4) gravelly silt loam; weak medium platy structure; very firm; very few roots.

M.A.E.S.

SOIL Plaisted SOIL Nos. 5 LOCATION Piscataquis County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand					Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm											
-5	A2	27.87	68.03	4.10	2.66	3.72	5.06	8.21	8.22	25.56	42.47		
-15	B21h	29.57	67.97	2.46	3.68	4.42	5.26	8.43	7.78	24.62	43.35		
5-25	B22	36.43	63.17	0.40	5.32	6.01	6.77	9.91	8.42	32.14	31.03		
5-40	B23	32.91	65.13	1.96	5.29	5.34	5.87	8.69	7.72	26.35	38.78		
0-52.5	B3	32.52	65.74	1.74	4.43	5.64	6.37	8.69	7.39	23.73	42.01		
2.5-67.5	IIC1	35.08	63.22	1.70	5.12	6.30	6.44	9.07	8.15	23.47	39.75		
7.5-90	IIC2	36.13	61.89	1.98	4.66	6.18	6.44	9.90	8.95	21.92	39.97		
0-100	IIC3	44.41	52.10	3.49	5.47	8.05	9.73	12.78	8.38	17.37	34.73		

Depth (cm.)	Organic carbon	Bulk Density		Water Content								Avail. H_2O	pH		
				.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.	g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
-5	2.85	0.56		69.9	64.4	54.0	52.0	52.0	19.7	11.3	11.0	7.4	0.26	3.15	3.3	4.1
-15	3.91	0.55		73.8	67.1	53.6	47.9	46.4	25.7	20.1	19.3	15.4	0.21	3.85	4.05	4.5
5-25	2.86	0.83		51.3	47.0	36.5	30.3	28.3	20.3	15.8	15.6	10.5	0.22	4.45	4.55	4.7
5-40	1.34	1.00		43.3	41.0	34.5	28.4	25.1	15.4	10.8	10.4	7.2	0.27	4.7	4.85	4.8
0-52.5	0.70	1.37		27.0	26.2	24.1	21.8	20.6	10.6	7.9	7.2	2.7	0.29	4.7	5.0	4.95
2.5-67.5	0.37	1.62		22.1	21.4	19.9	17.6	15.5	9.7	6.6	5.2	3.0	0.27	4.8	4.95	5.0
7.5-90	0.22	1.59		23.2	22.1	20.3	16.8	15.1	8.9	5.8	4.8	2.4	0.28	4.8	5.15	5.3
0-100	0.25	1.23		22.4	21.0	18.7	16.2	14.6	8.6	6.6	5.0	2.9	0.19	4.9	5.15	5.35

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-¼	¼-2mm	Total
	meq/100 g																
-5	0.4	0.2	<0.1	0.1	13.3	14.1	5.7			9.3	2.2	0.4	0.7	1.2	1.1	1.3	16.2
-15	0.2	0.2	<0.1	0.1	28.3	28.9	2.1		21.2			1.0	0.9	1.0	1.3	1.6	27.0
5-25	0.2	0.1	<0.1	<0.1	20.0	20.5	2.4			2.5		1.0	1.3	1.7	1.9	2.2	10.6
5-40	0.2	0.1	<0.1	<0.1	12.0	12.5	4.0			1.4	0.2	2.1	1.2	1.6	2.3	3.0	11.8
0-52.5	0.2	<0.1	<0.1	<0.1	7.5	8.0	6.2				1.8	2.4	1.1	2.1	3.0	4.0	14.4
2.5-67.5	0.2	<0.1	<0.1	<0.1	5.4	5.9	8.5			1.8	2.4	4.2	2.4	2.6	3.4	3.6	20.4
7.5-90	0.2	<0.1	0.1	<0.1	4.4	4.9	10.2		9.4	6.6	4.8	5.6	2.5	2.4	2.7	3.5	37.5
0-100	0.2	<0.1	<0.1	<0.1	4.6	5.1	9.8		41.0	2.0	2.1	3.1	2.7	2.1	3.8	3.5	60.3

SCANTIC MAPPING UNIT
SITE 1

Location: **Whitneyville, Washington County, Maine, 1973.**

Horizon	*Depth*	*Description*
Ap1	0-10 cm.	Yellowish brown (10YR5/4) silt loam; weak very fine granular structure; very friable; many roots; abrupt smooth boundary.
Ap2	10-22.5 cm.	Dark grayish brown (2.5Y4/2) silt loam; common medium distinct (5Y5/2) mottles; moderate very fine granular structure; very friable; common roots; abrupt wavy boundary.
A2g	22.5-27.5 cm.	Olive gray (5Y5/2) silt loam; common medium prominent (2.5Y5/6) mottles; weak medium platy separating to weak very fine subangular blocky structure; friable; common roots.
B2g	27.5-40 cm.	Olive gray (5Y5/2) silty clay loam; common medium prominent (10YR5/6) and faint (5Y6/1) and many coarse prominent (2.5Y4/4) mottles; moderate thin platy structure; plastic; common roots; clear wavy boundary.
C1g	40-55 cm.	Olive gray (5Y5/2) silty clay; common medium faint (5Y6/1) and prominent (2.5Y5/4) mottles; weak medium platy separating to moderate fine subangular blocky structure; sticky and plastic; few roots; few small (5YR2.5/2) manganese stains.
C2g	55-72.5 cm.	Olive gray (5Y4/2) silty clay loam; common medium prominent (2.5Y5/6) and faint (5Y5/2) mottles; moderate very fine and fine subangular blocky structure; sticky and plastic; common small (5YR2.5/2) manganese stains.
C3g	72.5-100 cm.	Olive gray (5Y4/2) clay; few medium prominent (2.5Y5/6) mottles; moderate thick platy separating to moderate fine subangular blocky structure; sticky and very plastic; many small (5YR2.5/2) manganese stains.

82 M.A.E.S.

SOIL Scantic SOIL Nos. 1 LOCATION Washington County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand						Silt			
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)
		Pct. of < 2 mm											
0-10	Ap1	15.68	65.35	18.97	0.91	2.41	3.40	5.36	3.60	17.29	48.06		
10-22.5	Ap2	17.82	62.88	19.30	2.27	3.45	3.54	5.28	3.28	14.63	48.25		
22.5-27.5	A2g	19.79	60.63	19.58	2.49	4.12	4.11	5.79	3.28	16.51	44.12		
27.5-40	B2g	13.38	55.90	30.72	0.71	1.91	2.90	4.86	3.00	13.25	42.65		
40-55	C1g	3.70	47.54	48.76	0.03	0.25	0.65	1.53	1.24	7.69	39.85		
55-72.5	C2g	1.71	47.62	50.67	0.05	0.05	0.22	0.63	0.76	8.50	39.12		
72.5-100	C3g	0.91	39.31	59.78	0.01	0.02	0.07	0.30	0.51	6.08	33.23		

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-10	3.68		1.14		43.1	42.6	39.5	38.3	37.7	21.6	19.3	16.0	14.6	0.28	5.05	5.95	5.95
10-22.5	2.03		1.23		36.0	35.5	33.0	31.8	31.4	19.9	17.2	12.9	10.1	0.28	5.0	5.65	6.0
22.5-27.5	0.85		1.45		24.7	24.5	23.3	22.5	21.9	18.8	16.4	11.6	6.1	0.25	4.95	5.7	6.0
27.5-40	0.36		1.67		21.0	20.9	20.1	19.7	19.4	19.2	18.9	16.4	11.1	0.15	4.9	5.8	6.1
40-55	0.31		1.54		25.5	25.4	24.3	23.8	23.5	23.4	23.3	22.2	17.8	0.10	5.0	6.0	6.2
55-72.5	0.23		1.54		25.6	25.4	24.5	24.0	23.5	23.2	22.4	21.8	20.4	0.06	5.2	6.1	6.2
72.5-100	0.16		1.52		26.6	26.4	25.6	25.1	24.8	24.7	23.6	23.0	20.5	0.08	5.45	6.2	6.5

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-3/4	3/4-½	½-¼	¼-2mm	Total
	meq/100 g																
0-10	9.0	2.6	<0.1	0.1	7.8	19.6	60.2							<0.1		0.1	0.2
10-22.5	6.5	2.1	<0.1	<0.1	6.2	15.0	58.7							<0.1	<0.1	0.4	0.6
22.5-27.5	5.0	2.2	<0.1	<0.1	4.2	11.6	63.8									0.6	0.6
27.5-40	7.7	4.6	0.2	0.1	3.6	16.2	77.8									0.2	0.2
40-55	9.1	5.8	0.2	0.2	3.7	19.0	80.5									0.2	0.2
55-72.5	8.6	5.2	0.2	0.2	3.3	17.5	81.1										0.0
72.5-100	8.6	4.4	0.3	0.3	2.7	16.3	83.4										0.0

SCANTIC MAPPING UNIT
SITE 2

Location: **Lamoine, Hancock County, Maine, 1973.**

Horizon	*Depth*	*Description*
Ap1	0-10 cm.	Dark grayish brown (10YR4/2) silty clay loam; moderate fine granular structure; friable; many roots; abrupt smooth boundary.
Ap2	10-20 cm.	Dark grayish brown (10YR4/2) silty clay loam; common coarse faint (10YR5/2) and few fine prominent (10YR5/8) mottles; moderate thin platy separating to moderate fine granular structure; friable; many roots; abrupt smooth boundary.
A2g	20-30 cm.	Olive gray (5Y5/2) silty clay loam; common medium prominent (2.5Y5/4) mottles; moderate thin platy separating to moderate fine granular structure; friable; common roots; common fine prominent (5YR2/2) manganese stains; abrupt smooth boundary.
B2g	30-50 cm.	Dark grayish brown (2.5Y4/2) silty clay; common medium prominent (5G5/1) and many medium distinct (2.5Y4/4) mottles; weak thick platy separating to moderate medium and fine subangular blocky structure; friable; common roots; common prominent (5YR2/2) manganese stains; clear smooth boundary.
C1g	50-70 cm.	Dark grayish brown (2.5Y4/2) silty clay; common medium prominent (2.5Y5/6) and distinct (5Y5/2 and 5/1) mottles; strong coarse prismatic separating to moderate thick platy and moderate and coarse subangular blocky structure; firm; few roots in prism face; prism face (5GY5/1); many prominent (5YR2/2) manganese stains.
C2g	70-80 cm.	Dark grayish brown (2.5Y4/2) silty clay; common coarse distinct (5Y5/1) and medium (2.5Y5/6) mottles; strong very coarse prismatic structure; firm; few roots in prism face;

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SOIL Scantic SOIL Nos. 2 LOCATION Hancock County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)												
		Total			Sand						Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)		0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm												
0-10	Ap1	10.39	63.34	26.27	1.42	3.10	2.63	1.86	1.38		14.99	48.35		
10-20	Ap2	14.60	59.32	26.08	3.47	4.42	3.16	2.14	1.41		13.41	45.91		
20-30	A2g	12.61	55.67	31.72	1.78	2.86	2.65	2.89	2.43		14.47	41.20		
30-50	B2g	4.14	49.38	46.48	0.09	0.46	0.72	1.39	1.48		9.35	40.03		
50-70	C1g	1.63	54.37	44.00	0.03	0.06	0.18	0.52	0.84		10.55	43.82		
70-80	C2g	3.09	57.24	39.67	0.03	0.20	0.35	1.02	1.49		13.01	44.23		
80-100	C3g	5.13	54.57	40.30	0.03	0.32	0.66	1.79	2.33		14.67	39.90		

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-10	3.94		1.09		48.4	47.9	44.8	43.9	43.1	27.4	25.8	18.1	16.4	0.31	5.2	6.0	6.45
10-20	1.86		1.34		30.0	29.7	28.3	27.9	27.4	23.5	21.9	17.4	10.6	0.24	4.4	5.3	5.9
20-30	0.69		1.58		21.8	21.6	21.0	20.6	20.4	20.3	19.7	17.0	10.9	0.16	4.3	5.15	5.6
30-50	0.27		1.52		25.3	25.0	24.4	24.0	23.8	23.5	23.2	23.1	18.0	0.10	4.3	5.45	5.8
50-70	0.19		1.66		22.9	22.8	22.5	22.3	22.1	22.0	21.1	20.6	16.7	0.10	4.7	5.9	6.1
70-80	0.10		1.60		26.3	26.2	25.8	25.4	24.7	24.6	23.8	22.1	16.9	0.14	4.95	6.05	6.25
80-100	0.16		1.55		28.6	28.4	27.8	27.0	25.8	25.8	25.7	24.1	17.4	0.16	4.8	6.20	6.5

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-3/4	3/4-½	½-¼	¼-2mm	Total
	meq/100 g																
0-10	11.0	2.5	0.2	0.2	14.4	28.3	49.1					0.2				0.1	0.3
10-20	5.3	1.8	<0.1	0.2	12.4	19.8	37.4						0.1	0.1	<0.1	0.2	0.5
20-30	4.6	2.4	<0.1	0.2	5.5	12.8	57.0							<0.1	<0.1	0.2	0.4
30-50	9.0	6.2	0.3	0.3	3.7	19.5	81.0									<0.1	0.1
50-70	8.9	6.6	0.3	0.3	2.4	18.5	87.0									<0.1	0.1
70-80	9.3	6.7	0.4	0.3	2.0	18.7	89.3										0.0
80-100	9.4	6.4	0.4	0.3	2.5	19.0	86.8										0.0

SCANTIC MAPPING UNIT
SITE 3

Location: **Dayton, York County, Maine, 1973.**

Horizon	*Depth*	*Description*
Ap	0-22.5 cm.	Dark grayish brown (10YR4/2) silt loam; few fine prominent (5Y5/1) and (10YR5/6) mottles; moderate medium granular structure; friable; many roots; abrupt smooth boundary.
A2g	22.5-35 cm.	Olive gray (5Y5/2) silty clay loam; common fine faint (5Y5/1) and (5Y6/1) and prominent (2.5Y5/6) and (7.5YR5/6) mottles; weak thick platy separating to moderate fine subangular blocky structure; slightly firm; common roots; abrupt wavy boundary.
B2g	35-50 cm.	Dark grayish brown (2.5Y4/2) silty clay; common fine distinct (10YR5/4) and prominent (10YR5/6) mottles; weak very thick platy separating to moderate medium subangular blocky structure; firm; few roots; many coarse distinct (5Y5/1) coats on peds; clear wavy boundary.
C1g	50-70 cm.	Olive gray (5Y4/2) silty clay; weak coarse prismatic separating to weak very thick platy and moderate fine subangular blocky structure; firm; few roots in ped faces; gray (5Y5/1) coats on peds; prism faces (5Y5/1) and edge (2.5Y5/6); manganese stains (5YR3/2).
C2g	70-90 cm.	Olive gray (5Y4/2) silty clay; weak coarse prismatic separating to weak very thick platy and moderate medium subangular blocky structure; firm; few roots in prism faces; gray (5Y5/1) coats on peds; prism face (5Y5/1) and edge (2.5Y5/6); manganese stains (5YR3/2).
C3g	90-100 cm.	Olive gray (5Y4/2) silty clay; weak coarse prismatic separating to moderate coarse subangular blocky structure; firm; few roots in prism faces; gray (5Y5/1) coats on peds; prism face (5Y5/1) and edge (2.5Y5/6); manganese stains (5YR3/2); few sand lenses less than 1 mm. thick.

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SOIL Scantic SOIL Nos. 3 LOCATION York County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)												
		Total			Sand						Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)		
		Pct. of < 2 mm												
-22.5	Ap	9.17	65.54	25.29	0.53	1.12	1.56	2.35	3.61	18.66	46.88			
2.5-35	A2g	6.02	57.55	36.43	0.20	0.55	1.00	1.68	2.59	14.74	42.81			
5-50	B2g	5.46	50.24	44.30	0.08	0.31	0.77	1.76	2.54	12.43	37.81			
0-70	C1g	3.89	51.31	44.80	0.01	0.16	0.51	1.22	1.99	8.30	43.01			
0-90	C2g	3.56	49.85	46.59	0.00	0.11	0.50	1.19	1.76	10.85	39.00			
0-100	C3g	2.88	47.70	49.42	0.00	0.11	0.33	0.95	1.49	11.87	35.83			

Depth (cm.)	Organic carbon	Bulk Density		Water Content								Avail. H_2O	pH		
				.06	.2	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.	g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
-22.5	3.56	1.04		48.9	47.2	42.2	40.0	38.4	27.5	24.5	21.4	14.9	0.28	5.8	6.35	6.75
2.5-35	0.94	1.44		29.0	28.7	27.7	27.2	26.6	24.3	22.2	18.6	12.0	0.23	4.2	4.95	5.2
5-50	0.30	1.60		27.3	27.1	26.3	26.0	25.3	24.8	24.6	21.9	15.9	0.17	4.2	5.25	5.55
0-70	0.15	1.60		24.5	24.3	23.7	23.4	23.1	20.6	20.0	19.2	17.9	0.09	4.6	5.9	6.25
0-90	0.16	1.58		26.6	26.3	25.7	25.3	24.8	24.8	23.7	22.1	17.0	0.14	4.9	6.2	6.5
0-100	0.15	1.56		30.6	26.4	25.9	25.7	25.4	25.2	24.9	23.4	17.9	0.12	5.05	6.25	6.55

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-2mm	Total
	meq/100 g															
-22.5	13.0	1.7	0.2	0.3	8.2	23.4	65.0						0.1	0.1	0.1	0.3	0.6
2.5-35	4.0	1.6	0.2	0.2	8.7	14.7	40.8						<0.1	<0.1	<0.1	0.2	0.5
5-50	7.9	4.2	0.4	0.3	6.9	19.7	65.0								<0.1	0.1	0.2
0-70	9.9	5.3	0.4	0.4	3.6	19.6	81.6									<0.1	0.1
0-90	8.8	4.4	0.4	0.4	2.7	16.7	83.8										0.0
0-100	9.8	4.4	0.4	0.4	2.7	17.7	84.7									<0.1	0.1

SCANTIC MAPPING UNIT
SITE 4

Location: **Berwick, York County, Maine, 1976.**

Horizon	*Depth*	*Description*
Ap	0-11 cm.	Very dark grayish brown (10YR3/2) clay loam; moderate fine and medium granular structure; friable; many very fine and few fine roots; abrupt smooth boundary.
A2g	11-33 cm.	Gray (5Y5/1) silty clay loam; common medium prominent (7.5YR5 6) mottles; weak medium platy structure; firm; few fine and common very fine roots; clear smooth boundary.
B21g	33-65 cm.	Gray (5Y5/1) silty clay loam; many medium prominent (10YR5/6) mottles; strong very coarse prismatic separating to moderate very fine subangular blocky structure; friable; common very fine roots in prism face; prism face (5Y5/1); gradual smooth boundary.
B22g	65-90 cm.	Olive (5Y4/3) silty clay; common medium prominent (7.5YR5/6) and distinct (5Y5/1) mottles; strong very coarse prismatic separating to strong thick platy structure: firm; few very fine roots in prism face; prism face (5GY5/1); few prominent (5YR2/2) manganese stains; gradual smooth boundary.
C	90-100 cm.	Olive brown (2.5Y4/4) silty clay; strong very coarse prismatic separating to moderate very fine subangular blocky structure; firm; prism faces (5Y5/1); common prominent (5YR2/2) manganese stains.

M.A.E.S.

Scantic SOIL Nos. 4 LOCATION York County, Maine

SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

th .)	Horizon	Size class and particle diameter (mm)												
		Total			Sand						Silt			
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)
		Pct. of < 2 mm											
-11	Ap	21.95	39.95	38.10	5.56	4.25	3.73	4.58	3.83	15.69	24.26		
-33	A2g	12.25	50.22	37.53	1.44	1.73	2.00	2.99	4.09	21.99	28.23		
-65	B21g	6.11	50.62	43.27	0.32	0.41	0.59	1.24	3.55	22.06	28.56		
-90	B22g	2.55	48.90	48.55	0.00	0.14	0.32	0.66	1.43	10.60	38.30		
100	C	3.01	46.30	50.69	0.12	0.39	0.52	0.77	1.21	9.04	37.26		

th .)	Organic carbon	Bulk Density		Water Content									Avail. H_2O	pH		
				.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.	g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
-11	5.25		0.74	59.5	54.7	49.4	48.6	46.4	28.3	25.6	23.7	20.6	0.21	4.68	5.65	5.37
-33	1.77		1.42	31.7	30.2	27.5	26.2	25.2	21.2	19.2	17.2	13.3	0.20	4.61	5.20	5.60
-65	0.12		1.66	21.4	21.0	20.0	19.1	18.4			18.0	15.2	0.08	4.78	5.79	6.30
-90	0.12		1.64	25.8	25.5	24.5	23.7	23.2			22.9	19.9	0.08	5.00	6.30	6.60
100	0.12		1.53	29.9	29.6	28.8	28.3	28.0			25.1	19.2	0.15	5.08	6.36	6.70

th .)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-¾	¾-½	½-¼	¼-2mm	Total
	meq/100 g																
-11	11.7	2.0	0.3	0.2	15.1	29.3	48								<.1	0.9	0.9
-33	10.2	2.3	0.2	0.3	10.3	23.3	56					0.2			<.1	0.6	0.8
-65	9.0	2.5	0.3	0.2	5.0	17.0	71								<.1	<.1	<.1
-90	9.6	2.8	0.3	0.2	4.3	17.2	75									<.1	<.1
100	9.4	2.7	0.3	0.3	4.2	16.9	75									<.1	<.1

SCANTIC MAPPING UNIT
SITE 5

Location: **Trenton, Hancock County, Maine, 1976.**

Horizon	*Depth*	*Description*
Ap	0-18 cm.	Dark grayish brown (2.5Y4/2) silty clay loam; common coarse prominent (5YR4/6) and few fine distinct (5Y5/2) mottles; moderate very fine and fine granular and moderate very fine subangular blocky structure; friable; many very fine, common coarse and medium, few fine roots; clear wavy boundary.
Ap & B	18-24 cm.	Dark grayish brown (2.5Y4/2) silty clay loam; few fine prominent (10YR5/8) and medium distinct (5Y5/2) mottles; moderate very fine and fine granular and moderate very fine subangular blocky structure; friable; many very fine roots; few charcoal particles; abrupt smooth boundary.
B21g	24-45 cm.	Olive gray (5Y5/2) silty clay loam; many coarse prominent (10YR4/4) and common medium faint (5Y6/1) mottles; moderate medium platy separating to moderate very fine subangular blocky structure; friable; common very fine roots; common prominent (5YR2/2) manganese stains; clear wavy boundary.
B22	45-61 cm.	Olive (5Y5/4) silty clay; common medium distinct (5Y5/1) mottles; weak thin platy separating to moderate very fine subangular blocky structure; slightly sticky, plastic; common very fine roots; common prominent (5YR2/2) manganese stains; clear smooth boundary. Olive (5Y4/3) silty clay; common coarse distinct (5Y5/1) mottles; strong very coarse prismatic separating to moderate medium platy structure; slightly sticky, plastic; many very fine roots in prism face; prism face (5G5/1) and edge (5Y5/4); many prominent (5YR2/2) manganese stains.

M.A.E.S.

L Scantic SOIL Nos. 5 LOCATION Hancock County, Maine

L SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

th .)	Horizon	Size class and particle diameter (mm)												
		Total			Sand						Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)		0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm												
-18	Ap	5.32	62.15	32.53	0.57	1.01	0.95	1.72	1.07		15.63	46.52		
-24	Ap & B	6.50	59.70	33.80	0.99	1.16	1.05	2.01	1.29		11.94	47.76		
-45	B21g	10.79	52.85	36.36	1.14	1.45	1.88	4.05	2.27		16.06	36.79		
-61	B22	3.78	54.06	42.16	0.13	0.52	0.78	1.36	0.99		8.06	46.00		
-87	C1	2.35	52.86	44.79	0.01	0.08	0.32	0.96	0.98		10.60	42.26		
100	C2	2.36	54.93	42.71	0.02	0.08	0.38	0.94	0.94		14.22	40.71		

pth .)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
-18	3.86			1.11	46.3	45.2	44.9	40.0	39.2	32.1	28.1	22.3	17.3	0.31	4.00	4.50	4.91
-24	2.43			1.18	40.2	39.7	37.0	35.3	34.6	29.1	26.0	19.9	12.3	0.29	4.10	4.70	5.13
-45	0.41			1.65	21.8	21.4	20.7	20.0	19.6			17.0	11.5	0.13	4.25	5.19	5.55
-61	0.18			1.55	25.2	25.1	24.3	23.5	23.0			20.7	16.3	0.12	4.43	5.72	5.95
-87	0.12			1.74	22.7	22.3	21.7	21.2	21.0			20.4	16.5	0.09	4.70	6.10	6.40
100	0.10			1.69	23.0	22.7	22.0	21.5	21.1			20.3	14.8	0.12	4.82	6.25	6.67

pth .)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume								
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-3/4	3/4-½	½-¼	¼-2mm	Total
	meq/100 g																
-18	3.4	1.6	0.2	0.2	13.8	19.2	28					0.1		<.1	<.1	<.1	0.3
-24	3.3	1.6	0.2	0.2	13.7	19.0	28					0.4		0.2	0.1	0.4	1.1
-45	4.6	2.6	0.2	0.2	7.5	15.1	50						<.1	<.1	0.3	0.4	0.7
-61	6.7	4.7	0.3	0.2	6.6	18.5	64								<.1	<.1	<.1
-87	6.0	4.4	0.3	0.3	4.3	15.3	72						<.1		<.1	<.1	<.1
100	6.4	4.9	0.3	0.3	4.1	16.0	74								<.1	<.1	<.1

SWANVILLE MAPPING UNIT
SITE 1

Location: **Warren, Knox County, Maine, 1973.**

Horizon	*Depth*	*Description*
Ap1	0-12.5 cm.	Dark grayish brown (10YR4/2) silt loam; moderate fine and very fine granular structure; friable; many roots; abrupt smooth boundary.
Ap2	12.5-22.5 cm.	Dark grayish brown (10YR4/2) silt loam; few medium prominent (10YR5/6) and common (5Y5/2) mottles; weak medium platy parting to weak fine granular structure; friable; many roots; abrupt smooth boundary.
A2g	22.5-35 cm.	Olive gray (5Y5/2) silt loam; common medium prominent (10YR5/6) coarse (2.5Y5/4) and few faint (2.5Y5/6) mottles; weak medium platy parting to weak fine granular structure; friable; common roots; abrupt smooth boundary.
B21g	35-52.5 cm.	Olive gray (5Y5/2) silty clay loam; few fine faint (5Y5/1) mottles; weak thick platy parting to weak medium subangular blocky structure; friable; common roots; common (5YR2/1) manganese stains; coatings on ped faces are (5Y5/1); abrupt smooth boundary.
B22g	52.5-75 cm.	Olive gray (5Y4/2) silty clay loam; weak thick and very thick platy parting to medium and fine subangular blocky structure; firm; few roots; (5Y5/1) ped faces; common (5YR2/1) manganese stains; gradual smooth boundary.
B23g	75-90 cm.	Olive gray (5Y4/2) silty clay loam; many coarse prominent (2.5Y4/4) mottles; very coarse prismatic separating to very thick moderate platy structure; firm; few roots; prism faces (5G5/1) with edges (2.5Y5/6); common (5YR2/2) manganese stains; gradual smooth boundary.

N.A.E.S.

L Swanville SOIL Nos. 1 LOCATION Knox County, Maine

L SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

		Size class and particle diameter (mm)											
		Total			Sand						Silt		
ı	Horizon	Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)
		Pct. of < 2 mm											
5	Ap1	16.65	62.66	20.69	0.41	1.23	1.50	6.13	7.38	25.45	37.21		
22.5	Ap2	16.45	62.74	20.81	0.72	1.22	1.42	5.94	7.15	25.41	37.33		
35	A2g	12.10	62.69	25.21	0.22	0.46	0.74	3.81	6.87	27.38	35.31		
.5	B21g	10.00	52.11	37.89	0.20	0.33	0.60	3.88	4.99	18.29	33.82		
75	B22g	12.97	51.59	35.44	0.03	0.11	0.44	6.67	5.72	17.95	33.64		
	B23g	9.99	60.29	29.72	0.05	0.09	0.27	3.22	6.36	25.08	35.21		
)	Cg	13.46	60.88	25.66	0.10	0.15	0.44	4.06	8.71	30.46	30.42		

		Bulk Density		Water Content									pH		
	Organic carbon			.06	.1	.33	.67	1	2	3	5	15	Avail. H_2O	KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.	g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
)	4.25	1.02		52.1	51.4	46.9	45.7	45.4	24.8	23.5	17.1	16.7	0.31	5.7	6.2	6.6
22.5	1.81	1.33		31.3	30.9	28.1	27.1	26.8	18.3	14.5	13.0	11.1	0.23	5.35	6.1	6.4
35	0.69	1.52		24.3	24.1	22.5	21.6	21.3	16.9	15.3	12.2	8.3	0.22	5.0	5.9	6.1
.5	0.35	1.57		25.3	25.2	24.2	23.8	23.6	22.4	20.9	18.6	14.9	0.15	4.7	5.85	6.1
75	0.20	1.60		24.3	23.4	23.0	22.7	22.6	22.1	19.6	16.0	0.12	4.7	5.9	6.2	
	0.17	1.66		22.8	22.7	22.0	21.6	21.4	20.9	20.4	17.0	12.3	0.16	4.75	6.0	6.25
)	0.13	1.72		21.5	21.4	20.6	20.1	19.9	19.6	18.2	15.6	12.1	0.15	4.8	6.0	6.25

	Extractable bases							% Coarse Fragments - Volume							
	Ca	Mg	Na	K	Ex Acidity	CEC	Base Sat. %	3+	3-2	2-1½	1½-1	1-¾	¾-½	½-2mm	Total
	meq/100 g														
	13.1	3.0	0.3	0.3	7.3	24.0	69.6					<0.1		<0.1	0.2	0.4
2.5	6.7	1.7	0.5	0.2	6.0	15.1	60.3			0.9	0.1	<0.1	0.1	0.1	0.4	1.7
5	3.8	1.5	0.2	0.2	4.9	10.6	53.8									0.0
5	7.4	4.1	0.2	0.3	4.7	16.7	71.8					0.1	0.1			0.2
5	7.5	4.7	0.2	0.2	3.7	16.3	77.3						<0.1	<0.1		0.2
	7.2	4.7	0.2	0.2	3.0	15.3	80.4									0.0
	5.6	4.4	0.2	0.2	2.6	13.0	80.0					1.5	0.1	<0.1	<0.1	0.3	2.1

SWANVILLE MAPPING UNIT
SITE 2

Location: **Belfast, Waldo County, Maine, 1973.**

Horizon	*Depth*	*Description*
Ap1	0-15 cm.	Dark brown (10YR3/3) silt loam; strong very fine and fine subangular blocky structure; friable; many roots; abrupt smooth boundary.
Ap2	15-20 cm.	Dark brown to brown (10YR4/3) silt loam; common medium distinct (10YR5/2 and 10YR5/6) mottles; strong very fine and fine subangular blocky structure; friable; many roots; abrupt smooth boundary.
A2g	20-32.5 cm.	Gray to light gray (5Y6/1) silt loam; common medium prominent (2.5Y5/6 and 2.5Y5/8) mottles; moderate very thin and medium platy separating to weak fine subangular blocky structure; friable; many roots; abrupt smooth boundary.
B21g	32.5-45 cm.	Gray (5Y5/1) silt loam; common fine and medium prominent (2.5Y5/6) mottles; moderate medium and thick platy separating to strong fine and medium angular blocky structure; firm; common roots; clear wavy boundary.
B22g	45-67.5 cm.	Gray (5Y5/1) ped faces and olive (5Y4/3) ped interior silt loam; common medium prominent (7.5YR4/4) mottles; moderate thick platy separating to strong fine and medium angular blocky structure; firm; few fine roots; clear wavy boundary.
B23g	67.5-95 cm.	Gray (5Y5/1) ped faces and greenish gray (5GY5/1) ped interior silt loam; many medium prominent (5YR4/6 and 10YR5/6) mottles; moderate very coarse prismatic separating to strong thick platy separating to moderate medium angular blocky structure; firm; few roots in prism faces; prism faces (5Y5/1); common (5YR2.5/1) manganese stains and (5YR3/4) concretions; gradual wavy boundary.

M.A.E.S.

SOIL Swanville SOIL Nos. 2 LOCATION Waldo County, Maine

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

...th ...)	Horizon	Size class and particle diameter (mm)											
		Total			Sand					Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm											
15	Ap1	3.87	74.10	22.03	0.45	0.80	0.81	0.84	0.97	18.27	55.83		
20	Ap2	4.03	74.28	21.69	0.48	0.89	0.76	0.86	1.04	17.48	56.80		
32.5	A2g	2.86	75.60	21.54	0.18	0.45	0.57	0.74	0.92	18.08	57.52		
5-45	B21g	2.82	70.86	26.32	0.13	0.27	0.42	0.84	1.16	18.37	52.49		
67.5	B22g	2.48	71.34	26.18	0.05	0.21	0.33	0.76	1.13	17.79	53.55		
5-95	B23g	2.91	72.16	24.93	0.05	0.17	0.32	0.92	1.45	20.55	51.61		
100	Cg	2.91	68.17	28.92	0.05	0.28	0.41	0.95	1.22	14.07	54.10		

...th ...)	Organic carbon	Bulk Density		Water Content									Avail. H_2O	pH		
				.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.	g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
15	3.80	1.02		49.8	48.7	46.0	44.6	43.7	26.8	24.1	21.0	15.3	0.31	4.25	4.7	5.0
20	2.61	1.11		42.8	41.8	39.6	38.7	38.1	24.5	20.8	17.9	11.6	0.31	4.25	4.7	5.15
32.5	0.62	1.54		24.5	24.2	23.3	22.9	22.4	19.2	16.6	13.5	7.2	0.25	4.4	5.1	5.35
5-45	0.32	1.63		22.2	22.0	21.4	21.0	20.4	19.4	17.0	14.2	8.3	0.21	4.6	5.4	5.7
67.5	0.20	1.69		21.5	21.3	20.8	20.4	20.0	20.0	18.2	15.8	9.3	0.19	5.0	6.0	6.3
5-95	0.18	1.62		24.0	23.8	23.4	22.9	22.3	22.0	19.3	16.0	9.8	0.18	5.45	6.4	6.7
100	0.18	1.54		28.0	27.8	27.2	26.7	26.2	26.1	23.8	20.5	12.1	0.23	5.6	6.55	6.8

...th ...)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-3/4	¾-½	½-¼	¼-2mm	Total
	meq/100 g																
5	4.2	1.3	<0.1	0.2	8.3	14.1	41.1								<0.1	0.1	0.2
20	3.3	<0.1	<0.1	0.2	9.3	13.0	28.5								<0.1	0.1	0.2
32.5	2.8	0.9	<0.1	0.1	6.6	10.5	37.1									<0.1	0.1
5-45	5.4	2.2	<0.1	0.2	5.0	12.9	61.2									<0.1	0.1
67.5	5.7	2.7	<0.1	0.2	3.4	12.1	71.9						<0.1			<0.1	0.2
5-95	6.6	3.0	<0.1	0.2	3.1	13.0	76.2										0.0
100	8.7	3.6	<0.1	0.3	3.2	15.9	79.9										0.0

SWANVILLE MAPPING UNIT
SITE 3

Location: **Swanville, Waldo County, Maine, 1975.**

Horizon	*Depth*	*Description*
Ap	0-20 cm.	Brown (10YR5/3) silt loam; common fine distinct (2.5Y6/2) and prominent (5YR4/6) mottles; moderate fine and medium granular structure; friable; many roots; abrupt smooth boundary.
A2g	20-32.5 cm.	Light gray (2.5Y7/2) silt loam; common coarse prominent (10YR5/8) mottles; weak thin and medium platy structure; friable; common roots; few (7.5YR5/8) concretions; clear wavy boundary.
B21g	32.5-52.5 cm.	Olive gray (5Y5/2) silt loam; common coarse prominent (2.5Y5/6) mottles; strong very coarse prismatic separating to moderate thin and medium platy separating to weak very fine and fine subangular blocky structure; few roots; many (5YR5/2) manganese stains; clear wavy boundary.
B22g	52.5-82.5 cm.	Light gray (5Y6/1) ped faces and yellowish brown (10YR5/6) ped interior silt loam; many coarse prominent (5Y6/1) mottles; strong very coarse prismatic separating to weak medium and thick platy structure; firm; very few roots; clear wavy boundary.
Cg	82.5-100 cm.	Light olive gray (5Y6/2) ped faces and olive (5Y5/4) ped interior silty clay loam; common coarse faint (5Y6/1) mottles; strong very coarse prismatic structure; firm; many (5YR5/2) manganese stains.

M.A.E.S.

SOIL Swanville SOIL Nos. 3 LOCATION Waldo County

SOIL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand					Silt			
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)
		Pct. of < 2 mm											
0-20	Ap	9.53	76.26	14.21	1.32	0.90	0.67	1.05	5.59	39.62	36.64		
20-32.5	A2g	11.27	73.90	14.83	1.09	1.22	0.75	1.38	6.83	40.30	33.60		
32.5-52.5	B21g	8.41	72.13	19.46	0.87	1.25	1.04	1.23	4.02	31.46	40.67		
52.5-82.5	B22g	4.62	75.78	19.60	0.33	0.57	0.62	0.82	2.28	28.10	47.68		
82.5-100	Cg	1.72	66.81	31.47	0.00	0.06	0.24	0.59	0.83	17.67	49.14		

Depth (cm.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-20	1.68		1.16		40.9	39.8	33.6	30.7	28.2	15.8	12.4	10.8	9.6	0.28	4.4	5.1	5.7
20-32.5	0.35		1.67		24.1	23.5	17.9	15.0	12.2	12.2	10.0	8.0	4.9	0.22	4.3	5.1	5.8
32.5-52.5	0.16		1.66		22.5	22.2	19.6	18.3	16.1	16.1	13.4	11.1	6.8	0.21	4.45	5.15	5.85
52.5-82.5	0.14		1.70		22.8	22.6	20.0	18.3	16.7	16.7	13.8	11.0	6.8	0.22	4.25	5.05	5.9
82.5-100	0.07		1.72		21.5	21.4	20.8	20.4	20.3	20.3	18.6	15.3	6.0	0.25	4.45	5.45	6.4

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume								
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-3/4	3/4-½	½-¼	¼-2mm	Total
	meq/100 g																
0-20	4.0	0.6	0.2	<0.1	7.8	12.7	38.6					0.1			0.1	0.8	1.0
20-32.5	1.9	0.4	0.1	<0.1	5.5	8.0	31.2									1.1	1.1
32.5-52.5	2.5	1.1	0.1	0.1	5.4	9.2	41.3									0.3	0.3
52.5-82.5	1.7	0.3	<0.1	<0.1	5.4	7.6	28.9						0.1			0.2	0.3
82.5-100	4.7	2.4	0.1	0.1	4.6	11.9	61.3										

SWANVILLE MAPPING UNIT
SITE 4

Location: **Lyman, York County, Maine, 1976.**

Horizon	*Depth*	*Description*
A1	0-6 cm.	Very dark gray (10YR3/1) silt loam; weak fine and medium granular structure; friable; common very fine and medium and few fine roots; abrupt smooth boundary.
A21g	6-21 cm.	Gray to light gray (10YR6/1) silt loam; weak thin and medium platy structure; friable; common very fine and medium and few fine roots; abrupt wavy boundary.
A22g	21-36 cm.	Light olive gray (5Y6/2) silt loam; many coarse prominent (10YR5/6) and few medium prominent (2.5YR3/4) mottles; moderate thin and medium platy structure; friable; few very fine roots; abrupt smooth boundary.
B2g	36-66 cm.	Olive gray (5Y5/2) silt loam; many coarse prominent (7.5YR5/8) mottles; strong very coarse prismatic separating to weak thin and medium platy structure; firm; common very fine roots in prism faces; prism faces gray to light gray (5Y6/1); gradual smooth boundary.
Cg	66-100 cm.	Gray (5Y5/1) silt loam; many coarse prominent (7.5YR5/6) and common medium prominent (10YR4/4) mottles; strong very coarse prismatic structure; firm; few very fine roots in prism faces; prism faces gray to light gray (5Y6/1); few fine prominent (5YR3/2) manganese stains.

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M.A.E.S.

ILL. Swanville SOIL Nos. 4 LOCATION York County, Maine

ILL. SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

Depth (cm.)	Horizon	Size class and particle diameter (mm)												
		Total			Sand						Silt			
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)		0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	(2-0.1)
		Pct. of < 2 mm												
0-6	A1	5.17	77.77	17.06	0.05	0.34	0.42	0.93	3.43		31.63	46.14		
6-21	A21g	5.34	80.31	14.35	0.06	0.29	0.42	0.89	3.68		30.35	49.96		
21-36	A22g	15.41	73.13	11.46	0.19	0.69	0.79	2.47	11.27		43.43	29.70		
36-66	B2g	5.64	74.35	20.01	0.13	0.46	0.58	1.14	3.33		27.30	47.05		
66-100	Cg	11.39	74.57	14.04	0.18	0.65	0.82	3.31	6.43		39.33	35.24		

Depth (cm.)	Organic carbon	Bulk Density		Water Content								Avail. H_2O	pH		
				.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.	g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-6	5.77		0.85	67.2	64.7	57.6	51.2	48.0	41.8	24.6	18.7	16.5	0.35	4.22	4.55	4.81
6-21	1.98		1.17	39.0	37.0	33.0	29.2	26.3	18.2	14.6	10.8	8.6	0.29	4.10	4.55	4.88
21-36	0.46		1.24	36.9	34.9	28.3	22.6	19.5	12.1	8.0	6.3	4.7	0.29	4.23	4.70	5.18
36-66	0.09		1.57	27.0	26.5	25.0	23.5	22.6	20.2	12.2	10.0	7.2	0.28	3.85	4.69	5.40
66-100	0.06		1.50	29.4	28.4	23.6	19.7	17.1	10.6	9.2	7.6	5.4	0.27	4.46	5.55	6.25

Depth (cm.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-3/4	3/4-½	½-¼	¼-2mm	Total
	meq/100 g																
0-6	5.8	2.2	0.2	0.3	15.8	24.3	35									<.1	<.1
6-21	2.1	0.8	0.1	0.3	9.1	12.4	27									<.1	<.1
21-36	0.8	0.5	0.1	0.3	5.2	6.9	25									<.1	<.1
36-66	2.6	2.4	0.3	0.2	5.9	11.4	48									<.1	<.1
66-100	2.4	2.2	0.3	0.1	2.6	7.6	66								<.1	<.1	<.1

SWANVILLE MAPPING UNIT
SITE 5

Location: **Searsmont, Waldo County, Maine, 1976.**

Horizon	*Depth*	*Description*
Ap	0-15 cm.	Dark grayish brown (10YR4/2) silt loam; few fine and common medium prominent (5Y5/2) and (10YR5/6) mottles; weak thick platy separating to weak fine granular structure; friable; many very fine and fine and common medium and coarse roots; clear wavy boundary.
B21	15-25 cm.	Olive (5Y5/4) silt loam; many coarse distinct (5Y5/2) and common coarse prominent (10YR5/6) mottles; moderate coarse subangular blocky separating to weak fine granular structure; friable; common fine roots; clear smooth boundary.
B22g	25-56 cm.	Olive gray (5Y5/2) ped faces and olive (5Y5/3) ped interior silt loam; many coarse prominent (10YR4/4), (2.5Y5/4) and distinct (5Y5/1) mottles; very coarse prismatic separating to weak medium and thick platy structure; friable; few very fine roots; many coarse prominent (10YR3/2) manganese stains; gradual wavy boundary.
B23g	56-80 cm.	Gray (5Y6/1) ped faces and olive (5Y5/3) ped interior silt loam; common medium prominent (2.5Y5/6) and faint (5Y5/2) mottles; very coarse prismatic separating to weak thick platy structure; friable; common medium prominent (10YR3/2) manganese stains; gradual wavy boundary.
Cg	80-100 cm.	Gray (5Y5/1) ped faces and olive gray (5Y5/2) ped interior silt loam; common coarse prominent (2.5Y5/4) and (10YR5/4) mottles; very coarse prismatic structure; friable; common coarse prominent (5YR3/2) manganese stains.

100 M.A.E.S.

.L Swanville SOIL Nos. 5 LOCATION Waldo County, Maine

IL SURVEY LABORATORY Maine Agricultural Experiment Station LAB. Nos.

pth n.)	Horizon	Size class and particle diameter (mm)											
		Total			Sand						Silt			(2-0.1)
		Sand (2-0.05)	Silt (0.05-0.002)	Clay (<0.002)	Very Coarse (2-1)	Coarse (1-0.5)	Medium (0.5-0.25)	Fine (0.25-0.1)	Very Fine (0.1-0.05)	0.05-0.02	Int. III (0.02-0.002)	Int. II (0.2-0.02)	
		Pct. of < 2 mm											
0-15	Ap	11.34	76.27	12.39	2.17	1.89	1.54	1.69	4.05	36.25	40.02		
5-25	B21	11.55	74.92	13.53	1.71	1.68	1.65	1.71	4.80	38.72	36.20		
5-56	B22g	6.88	77.24	15.88	0.45	1.05	1.16	1.11	3.11	30.02	47.22		
6-80	B23g	6.35	78.23	15.42	0.06	0.25	0.39	0.53	5.12	36.33	41.90		
-100	Cg	6.91	74.51	18.58	0.06	0.19	0.48	0.97	5.21	30.88	43.63		

pth m.)	Organic carbon		Bulk Density		Water Content								Avail. H_2O	pH		
					.06	.1	.33	.67	1	2	3	5	15		KCl (1:1)	$CaCl_2$ (2:1)	H_2O (1:1)
	Pct.		g/cc	g/cc	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	cm/cm			
0-15	2.40			1.22	39.0	37.6	32.8	27.8	25.0	19.5	16.5	13.7	11.0	0.27	3.52	3.80	4.30
5-25	0.74			1.45	28.2	27.0	24.5	20.9	18.6	14.5	10.5	8.1	5.6	0.27	3.70	4.19	4.93
5-56	0.18			1.65	20.7	20.3	19.4	18.5	17.9	16.1	12.7	10.3	6.8	0.21	4.10	4.99	5.70
6-80	0.11			1.69	21.4	20.2	19.5	18.2	17.5	16.0	12.7	10.3	6.9	0.21	4.31	5.46	6.20
-100	0.10			1.61	25.0	24.8	22.3	20.6	19.9	18.8	15.0	12.0	7.9	0.23	4.38	5.49	6.17

pth m.)	Extractable bases				Ex Acidity	CEC	Base Sat. %		% Coarse Fragments - Volume							
	Ca	Mg	Na	K					3+	3-2	2-1½	1½-1	1-3/4	3/4-½	½-¼	¼-2mm	Total
	meq/100 g																
0-15	0.8	0.3	<0.1	0.1	13.2	14.5	9							<.1	<.1	0.4	0.4
5-25	0.8	0.4	<0.1	<0.1	7.4	8.8	16								<.1	0.6	0.7
5-56	3.9	1.6	0.1	0.1	5.3	11.0	52								<.1	0.1	0.1
6-80	4.2	2.1	0.2	0.1	3.9	10.5	63									<.1	<.1
-100	4.6	2.3	0.2	0.2	4.4	11.7	62									<.1	<.1