

## Prime and Important Farmlands (VT)

Grand Isle County, Vermont

[This information is intended to be used in making Important Farmlands and Vermont Act 250 Primary Agricultural Soils evaluations. These ratings are based on the USDA-NRCS report "Farmland Classification Systems for Vermont Soils," revised June, 2006]

Map symbol	Soil map unit name	Vermont Important Farmland Rating (with footnote)	Vermont Agricultural Value Group (with footnote)
AaA	Amenia silt loam, 0 to 3 percent slopes	Prime	3
AaB	Amenia silt loam, 3 to 8 percent slopes	Prime	3
AaC	Amenia silt loam, 8 to 15 percent slopes	Statewide	7
AbA	Amenia very stony silt loam, 0 to 3 percent slopes	NPSL	9
AbB	Amenia very stony silt loam, 3 to 8 percent slopes	NPSL	9
AbC	Amenia very stony silt loam, 8 to 15 percent slopes	NPSL	9
BaA	Balch peat	NPSL	11
Bb	Beach and Dune sand	NPSL	11
BcA	Benson rocky loam, over massive limestone, 0 to 3 percent slopes	Statewide	6e
BcB	Benson rocky loam, over massive limestone, 3 to 8 percent slopes	Statewide	6e
BcC	Benson rocky loam, over massive limestone, 8 to 15 percent slopes	NPSL	8e
BdA	Benson very rocky loam, over massive limestone, 0 to 3 percent slopes	NPSL	10
BdB	Benson very rocky loam, over massive limestone, 3 to 8 percent slopes	NPSL	10
BdC	Benson very rocky loam, over massive limestone, 8 to 15 percent slopes	NPSL	10
BdD	Benson very rocky loam, over massive limestone, 15 to 25 percent slopes	NPSL	10
BdE	Benson very rocky loam, over massive limestone, 25 to 35 percent slopes	NPSL	11
BeA	Benson rocky silt loam, over shaly limestone, 0 to 3 percent slopes	Statewide	6e
BeB	Benson rocky silt loam, over shaly limestone, 3 to 8 percent slopes	Statewide	6e
BeC	Benson rocky silt loam, over shaly limestone, 8 to 15 percent slopes	NPSL	8e
BeD	Benson rocky silt loam, over shaly limestone, 15 to 25 percent slopes	NPSL	10
BeE	Benson rocky silt loam, over shaly limestone, 25 to 35 percent slopes	NPSL	11
BeF	Benson rocky silt loam, over shaly limestone, 35 to 50 percent slopes	NPSL	11
BfB	Benson very rocky silt loam, over shaly limestone, 3 to 8 percent slopes	NPSL	10
BfC	Benson very rocky silt loam, over shaly limestone, 8 to 15 percent slopes	NPSL	10
BfD	Benson very rocky silt loam, over shaly limestone, 15 to 25 percent slopes	NPSL	10
BfE	Benson very rocky silt loam, over shaly limestone, 25 to 50 percent slopes	NPSL	11
CaA	Carlisle muck	NPSL	11
CbA	Covington silty clay loam, 0 to 3 percent slopes	Statewide (b)	6d
CbB	Covington silty clay loam, 3 to 8 percent slopes	Statewide (b)	6d
EaA	Elmwood fine sandy loam, 0 to 3 percent slopes	Prime	3
EaB	Elmwood fine sandy loam, 3 to 8 percent slopes	Prime	3
FaA	Fresh water marsh	NPSL	11
Gr	Pits, Sand, and Pits, gravel	NPSL	11
KaA	Kars fine sandy loam, 0 to 3 percent slopes	Statewide	2
KaB	Kars fine sandy loam, 3 to 8 percent slopes	Statewide	2
KaC	Kars fine sandy loam, 8 to 15 percent slopes	Statewide	7
KaD	Kars fine sandy loam, 15 to 25 percent slopes	NPSL	8
KaE	Kars fine sandy loam, 25 to 50 percent slopes	NPSL	11
KbA	Kendaia silt loam, 0 to 3 percent slopes	Prime	3d
KbB	Kendaia silt loam, 3 to 8 percent slopes	Prime	3d
KcA	Kendaia very stony silt loam, 0 to 3 percent slopes	NPSL	9
KcB	Kendaia very stony silt loam, 3 to 8 percent slopes	NPSL	9
LaA	Livingston silty clay loam, 0 to 3 percent slopes	NPSL	10
LbA	Lyons silt loam, 0 to 3 percent slopes	NPSL	9

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LcA	Lyons very stony silt loam, 0 to 3 percent slopes	NPSL	9
MaA	Melrose fine sandy loam, 0 to 3 percent slopes	Prime	1
MaB	Melrose fine sandy loam, 3 to 8 percent slopes	Prime	1
MaC	Melrose fine sandy loam, 8 to 15 percent slopes	Statewide	5
MaD	Melrose fine sandy loam, 15 to 25 percent slopes	NPSL	8
NaA	Nellis silt loam, 0 to 3 percent slopes	Prime	1
NaB	Nellis silt loam, 3 to 8 percent slopes	Prime	1
NaC	Nellis silt loam, 8 to 15 percent slopes	Statewide	5
NaD	Nellis silt loam, 15 to 25 percent slopes	NPSL	8
NbA	Nellis very stony silt loam, 0 to 3 percent slopes	NPSL	9
NbB	Nellis very stony silt loam, 3 to 8 percent slopes	NPSL	9
NbC	Nellis very stony silt loam, 8 to 15 percent slopes	NPSL	9
NbD	Nellis very stony silt loam, 15 to 25 percent slopes	NPSL	9
Qu	Pits, quarry	NPSL	11
SaB	St. Albans-Dutchess loams, 3 to 8 percent slopes	Prime	1
SbB	St. Albans-Dutchess rocky loams, 3 to 8 percent slopes	Prime	3e
SbC	St. Albans-Dutchess rocky loams, 8 to 15 percent slopes	Statewide	5e
ScB	St. Albans-Dutchess very rocky loams, 3 to 8 percent slopes	NPSL	9
ScD	St. Albans-Dutchess very rocky loams, 15 to 25 percent slopes	NPSL	9
SdA	Swanton fine sandy loam, 0 to 3 percent slopes	Prime (b)	3d
SdB	Swanton fine sandy loam, 3 to 8 percent slopes	Prime (b)	3d
VaA	Vergennes silty clay loam, 0 to 3 percent slopes	Statewide	6
VaB	Vergennes silty clay loam, 3 to 8 percent slopes	Statewide	6
W	Water	NPSL	11
WaA	Whately loam, 0 to 3 percent slopes	NPSL	10

## Prime and Important Farmlands (VT)

This table lists the prime and important farmlands category for the selected map units and gives the Vermont Agricultural Value Group to which each map unit is assigned.

As defined by the U.S. Department of Agriculture, important farmlands consist of prime farmland, unique farmland, and farmland of statewide and local importance. These farmlands are important because they are the best lands for production of the Nation's crops. For the purpose of this table, only the categories of prime farmland, additional farmland of statewide importance, and additional farmland of local importance are used. A designation of "NPSL" indicates that the map unit is not prime farmland, farmland of statewide importance, or farmland of local importance.

**Prime Farmland.**--This category is indicated by a designation of "Prime" in the table. Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, woodland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent.

Location, tract size, and accessibility to markets and support industries are not considered when prime farmland determinations are made.

In Vermont, map units qualify for prime farmland if the dominant soils meet all of the following conditions:

- The soil temperature and the growing season are favorable.
- Soil moisture is adequate to sustain the commonly grown crops throughout the growing season in at least 7 years out of 10.
- Water moves readily through the soils, and the soils have no root-restricting layers within 20 inches of the surface.
- Less than 10 percent of the surface layer consists of rock fragments larger than 3 inches in diameter.
- The soils are neither too acid nor too alkaline for the commonly grown crops, or the soils respond readily to additions of lime.
- The soils are not frequently flooded (flooding occurs less often than once in 2 years) and do not have a seasonal high water table, or the water table can be maintained at a sufficient depth during the growing season for growth of the commonly grown crops.
- The slope is favorable (generally less than 8 percent), and the soils are not subject to severe erosion.
- Typically, the soils are deep (more than 40 inches to bedrock); but if the available water capacity is adequate, moderately deep soils (20 to 40 inches to bedrock) may qualify.

**Additional Farmland of Statewide Importance.**--This category is indicated by a designation of "Statewide" in the table. Some areas other than prime farmland are of statewide importance in the production of food, feed, fiber, forage, and oilseed crops. In Vermont, the criteria used in defining and delineating these areas have been determined by the appropriate State agencies in cooperation with the Natural Resources Conservation Service. Generally, additional farmland of statewide importance includes areas that nearly meet the criteria for prime farmland and that economically produce high yields of crops when treated and managed by acceptable farming methods. Some areas can produce as high a yield as areas of prime farmland if conditions are favorable.

In Vermont, the dominant soils in map units that are designated as additional farmland of statewide importance have limitations resulting from one or more of the following:

- Excessive slope and hazard of erosion
- Excessive wetness or restricted permeability
- A hazard of flooding
- Shallow (less than 20 inches) depth to bedrock or other layers that limit the root zone and the available water capacity
- Moderately low to very low available water capacity

**Additional Farmland of Local Importance.**--This category is indicated by a designation of "Local" in the table. This land consists of areas that are of local importance in the production of food, feed, fiber, forage, and oilseed crops and are not identified as having national or statewide importance. Where appropriate, this land is identified by local agencies. It may include tracts of land that have been designated for agriculture by local ordinance. In Vermont, a few map units have been identified as additional farmland of local importance. These designations were made cooperatively by the local Conservation Districts and the Natural Resources Conservation Service.

In some areas map units that have slopes of less than 15 percent, are somewhat poorly drained to very poorly drained, and have stones covering 0.1 to 3.0 percent of the surface could be identified as additional farmland of local importance if the wetness and the surface stoniness could be overcome. In many of these areas, however, the surface stones have not been cleared because the wetness was too difficult to overcome.

In most cases, determinations of important farmland apply to an entire map unit rather than to individual components of a map unit. On some soils,

## Prime and Important Farmlands (VT)

measures that overcome a hazard or limitation are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

In the "Vermont Important Farmland Rating" column, some of the designations are followed by a lowercase letter in parentheses. These letters indicate certain conditions relative to the important farmland designation. The conditions represented by each lowercase letter are described in the following paragraphs.

(a) If the upper slope class limit for the map unit is between 9 and 15 percent, the areas that have slopes of more than 8 percent do not qualify as prime or important farmland. If the upper slope class limit for the map unit is more than 15 percent, the areas that have slopes of more than 15 percent do not qualify as prime or important farmland.

(b) The soils are limited by wetness, which may be difficult or unfeasible to overcome. The map unit qualifies as prime or important farmland only in areas where artificial drainage is feasible.

(c) Bedrock outcrops commonly cover more than 2 percent of the surface. The map unit qualifies as prime or important farmland only in areas where the bedrock outcrops are not extensive enough to prohibit efficient farming.

"Agricultural Value Groups" are intended to provide information about the relative value of individual map units for agricultural production. The groups can be useful in administering national, State, and local land use programs and regulations.

The groups consist of map units that have similar characteristics, limitations, management requirements, and potential for crop production. Map units assigned to Agricultural Value Group 1 have the most potential for crop production, and map units assigned to Agricultural Value Group 11 have the least potential. Map units in Agricultural Value Group 12 have not been evaluated for potential agricultural use. The groupings are based in part on the system of land capability classification used by the Natural Resources Conservation Service (U.S. Department of Agriculture Handbook 210, 1961). Each group is assigned a relative value, which is an index number ranging from 100 for Group 1 to 0 for Group 11. General descriptions of the Agricultural Value Groups are as follows:

- Map units assigned to Agricultural Value Group 1 are considered to be prime farmland. They are mostly in land capability class 1 or 2. The relative value of this group is 100.
- Map units assigned to Agricultural Value Group 2 are considered to be farmland of statewide importance. They are mostly in land capability class 2. The relative value of this group is 95.
- Map units assigned to Agricultural Value Group 3 are considered to be prime farmland. They are mostly in land capability class 2 or 3. The relative value of this group is 83.
- Map units assigned to Agricultural Value Group 4 are considered to be farmland of statewide importance. They are mostly in land capability class 2, 3, or 4. The relative value of this group is 82.
- Map units assigned to Agricultural Value Group 5 are considered to be farmland of statewide importance. They are mostly in land capability class 3. The relative value of this group is 65.
- Map units assigned to Agricultural Value Group 6 are considered to be farmland of statewide importance. They are mostly in land capability class 2, 3, or 4. The relative value of this group is 63.
- Map units assigned to Agricultural Value Group 7 are considered to be farmland of statewide importance. They are mostly in land capability class 3. The relative value of this group is 57.
- Map units assigned to Agricultural Value Group 8 have limitations for crop production, but the limitations generally can be overcome. The map units are mostly in land capability class 4 or 6. The major limitations are a limited available water capacity and a hazard of erosion. A few map units in this group are considered to be farmland of local importance. The relative value of this group is 50.
- Map units assigned to Agricultural Value Group 9 are generally considered to be unsuitable for crop production. The limitations in areas of these soils are difficult to overcome. They include slope, wetness, surface stones, and bedrock outcrops. Onsite investigation is required to determine the feasibility of corrective measures and of using these soils for crop production. Map units are assigned to this group rather than to Agricultural Value Group 11 only if corrective measures are determined to be feasible. Normally, the cost of overcoming the limitations and the laws governing the installation of corrective measures are not considered when this determination is made. The map units in this group are mostly in land capability class 5, 6, or 7. The relative value of this group is 40.
- Map units assigned to Agricultural Value Group 10 are generally considered to be unsuitable for crop production. The limitations in areas of these soils are very difficult to overcome. They include slope, wetness, surface stones, and bedrock outcrops. The map units in this group can be used as cropland only if intensive and expensive corrective measures are applied. Onsite investigation is required to determine the feasibility of corrective measures and of using these soils for crop production. Map units are assigned to this group rather than to Agricultural Value Group 11 only if corrective measures are determined to be feasible. Normally, the cost of overcoming the limitations and the laws governing the installation of corrective measures are not considered when this determination is made. The map units in this group are mostly in land capability class 5, 6, or 7. The relative value of this group is 26.
- Map units assigned to Agricultural Value Group 11 have very limited potential for crop production. They are mostly in land capability class 7 or 8. They can be converted to agricultural uses in only rare cases and generally only if very expensive corrective measures are applied. The relative value of this group is 0.
- Map units assigned to Agricultural Value Group 12 have generally not been evaluated because they are in areas where access was restricted.

## Prime and Important Farmlands (VT)

Onsite investigation is needed to determine whether these map units could be used for agricultural production. No relative value is assigned to this group.

In the "Vermont Agricultural Value Group" column, some of the numerical designations are followed by a lowercase letter. These letters indicate certain conditions relative to the agricultural value group designation. The conditions represented by each lowercase letter are described as follows:

(d) The soils are limited by wetness, which may be difficult to overcome. The map unit qualifies for placement in the designated group only in areas where artificial drainage is feasible.

(e) Bedrock outcrops cover more than 2 percent of the surface. The map unit qualifies for placement in the designated group only in areas where the bedrock outcrops are not extensive enough to prohibit efficient farming.

The Agricultural Value Group designations can be used for many State and local programs, including:

- Design and implementation of Agricultural Land Evaluation and Site Assessment (LESA) systems;
- Implementation of Public Law 97-98, the Farmland Protection Policy Act (FPPA);
- Rating of agricultural soils for appraisal under Vermont's Use Value Program of Agricultural and Forest Land;
- Rating of agricultural soils for appraisal under Town Tax Stabilization Programs;
- Assessment of agricultural soils by land trusts, landowners, bankers, and real estate agents; and
- Broad resource planning by State agencies and regional planning commissions.