

Use and Management of the Soils

This section discusses use and management of the soils for crops and pasture, as woodland, for wildlife, and for recreation and engineering purposes. It does not give detailed information about management of individual soils. For specific suggestions about management of individual soils, consult a representative of the local office of the Soil Conservation Service, the Extension Service, or the Agricultural Experiment Station.

Use of Soils for Crops and Pasture³

This section has three main parts. The first part discusses the capability grouping of soils in the capability classification system. The second describes the capability units in Pitt County and gives general management suggestions for the soils in each capability unit. The third gives estimated yields of specific crops grown under intensive management.

Capability grouping

Capability grouping shows, in a general way, the suitability of soil for most kinds of fields' crops. The soils are grouped according to their limitations when used for field crops, the risk of damage when they are so used, and the way they respond to treatment. The grouping does not take into account major and generally expensive landforming that would change slope, depth, or other characteristics of the soils; does not take into consideration possible but unlikely major reclamation projects; and does not apply to rice, cranberries, horticultural crops, or other crops requiring special management.

Those familiar with the capability classification can infer from it much about the behavior of soils when used for other purposes, but this classification is not a substitute for interpretations designed to show suitability and limitations of groups of soil for range, for forest trees, or for engineering.

In the capability system, the kinds of soils are grouped at three levels: the capability class, subclass, and unit. These are discussed in the following paragraphs.

Capability Classes, the broadest groups, are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use, defined as follows:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants, require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use largely to pasture, range, woodland, or wildlife. (None in Pitt County)

Class VI soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife. (None in Pitt County)

Class VII soils have very severe limitations that make them suited to cultivated and that restrict their use largely to pasture or range, woodland, or wildlife.

Class VIII soils and landforms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, water supply, or to esthetic purposes. (None in Pitt County)

Capability Subclasses are soil groups within one class; they are designated by adding a small letter, *e*, *w*, *s*, or *c*, to the class numeral, for example, II*e*. The letter *e* shows that the main limitation is risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, sandy and droughty, or stony; and *c*, used in

only some parts of the United States but not in Pitt County, shows that the chief limitation is climate that is too cold or too dry.

In class I there are no subclasses, because the soils of this class have few limitations. Class V can contain, at the most, only the subclasses indicated by *w*, *s*, and *c*, because the soils in class V are subject to little or no erosion, though they have other limitations that restrict their use largely to pasture, range, woodland, wildlife, or recreation.

Capability Units are soil groups within the subclass. The soils in one capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity and other responses to management. Thus, the capability unit is a convenient grouping for making many statements about management of soils. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, Iie-3, or IIIw-4. Thus, in one symbol, the Roman numeral designates the capability class, or degree of limitation; the small letter indicates the subclass, or kind of limitation, as defined in the foregoing paragraph; and the Arabic numeral specifically identifies the capability unit within each subclass.

Management by capability units

In the following pages, the capability units in Pitt County are described and suggestions for the use and management of the soils are given. The capability units are not numbered consecutively, because not all the units used in the Coastal Plain resource area of North Carolina are in this county. For the names of the soils in any given unit, refer to the "Guide to Mapping Units" at the back of this soil survey.

CAPABILITY UNIT I-1

This unit consists of well-drained, nearly level soils on uplands. These soils have a surface layer of fine sandy loam or sandy loam. Their subsoil is friable sandy loam or sandy clay loam to silty clay loam. Natural fertility and the content of organic matter are low. Available water capacity is medium to high. Permeability is moderate.

These soils are easy to keep in good tilth can be satisfactorily worked throughout a wide range of moisture content. They are well suited to all the locally grown crops. Most of the acreage is in cultivated crops or pasture. The rest is chiefly in forest or in housing developments or other nonfarm uses. The cultivated areas are used mainly for row crops, especially for tobacco, peanuts, and truck crops.

These soils have no serious limitations to intensive use for cultivated crops. Returning all crop residue to the soils provides regular additions of organic matter and helps to keep the soils in good tilth. Including perennial grasses in the cropping system is an effective way of reducing losses of soil and water caused by erosion. Crops grown on these soils respond well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IIe-1

This unit consists of well-drained soils that are nearly level and gentle sloping. These soils have a surface layer of fine sandy loam or sandy loam and a subsoil of friable sandy loam to silty clay loam. In places the plow layer is a mixture of material from the remaining original surface layer and the subsoil. In some areas the subsoil is exposed. Natural fertility and the content of organic matter are low. Available water capacity is medium to high, and permeability is moderate.

Areas of these soils that are not eroded are easy to keep in good tilth and can be satisfactorily worked throughout a wide range of moisture content. Eroded areas are rather difficult to keep in good tilth, but they can be satisfactorily worked throughout a fairly wide range of moisture content. Crusts and clods tend to form in eroded areas unless these soils are worked when the content of moisture is optimum. Even when the amount of rainfall is normal, stands of crops on the eroded soils are less uniform than those on uneroded soils. These soils are suited or well suited to all the locally grown crops. Most of the acreage is cultivated crops or pasture. The rest is chiefly in forest and in housing developments or other nonfarm uses. The cultivated areas are used mainly for row crops, chiefly for tobacco, peanuts, and truck crops.

Erosion is a moderate hazard in cultivated areas. Run-off and erosion can be reduced by properly managing all crop residue, by protecting the soil surface with close-growing crops 25 – 50 percent of the

time, and by tilling on the contour. Diversions, terraces, and stripcropping are desirable where contour tillage is practiced. A type, is needed in natural draws, field borders, and other outlets used for disposing of excess surface water. Crops grown on these soils respond well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IIe-2

This unit consists of moderately well drained, nearly level and gently sloping soils on uplands. These soils have a surface layer of fine sandy loam or sandy loam and subsoil of friable sandy loam to silty clay loam. Natural fertility and the content of organic matter are low. Available water capacity is medium to high, and permeability is moderate.

These soils are easy to keep in good tilth and can be satisfactorily worked throughout a wide range of moisture content. They are well suited to all the locally grown crops. Most of the acreage is cultivated or in pasture. The rest is chiefly in forest and in housing developments of other nonfarm uses. The cultivated areas are used mainly for row crops, especially for tobacco, peanuts, and truck crops.

Erosion is a moderate hazard in cultivated areas. Run-off and erosion can be reduce by returning all crop residue to the soils, by protecting the soil surface with close-growing crops 25 to 50 percent of the time, and by tilling on the contour. Diversions, terraces, and stripcropping are desirable where contour tillage is practiced. A cover of perennial grasses is needed in natural draws, field borders, and other outlets used for disposing of excess surface water. Preferably, the grasses should be of a sod-forming type. Crops grown on these soils respond well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IIe-3

This unit consists of moderately well drained, nearly level and gently sloping soils on the uplands. These soils have a surface layer of fine sandy loam and subsoil that is mainly very firm clay. In places the plow layer is a mixture of material from the remaining original surface layer and the subsoil. The subsoil is exposed in some areas. Natural fertility and available water capacity are medium, and the content of organic matter is low. Permeability is slow.

Areas of these soils that are not eroded are easy to keep in good tilth and can be satisfactorily worked throughout a wide range of moisture content. Eroded areas are difficult to keep in good tilth and can be satisfactorily worked only within a narrow range of moisture content. After hard rains, crusts and clods tend to form in the more eroded spots if the soils are worked when too wet. These soils are well suited or fairly well suited to most of the locally grown crops. Most of the acreage is cultivated or in pasture, and the rest is chiefly in forest and in housing developments or other nonfarm uses.

Erosion is a moderate hazard in cultivated areas. Runoff and erosion can be reduced and soil tilth can be improved by returning all crop residue to the soils, by protecting the soil surface with close-growing crops 35 to 50 percent of the time, and by tilling on the contour. Diversions, terraces, and stripcropping are desirable where contour tillage is practiced. Minimum tillage tends to maintain good soil structure in these soils, and it reduces losses of soil and water. A cover of perennial grasses, preferably of a sad-forming type, is needed in natural draws, field borders, and other outlets used for disposing of excess surface water. Crops grown on these soils respond well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IIw-1

This unit consists of moderately well drained, nearly level soils on uplands. These soils have a surface layer of sandy loam or fine sandy loam. Their subsoil is friable sandy loam or sandy clay loam to very firm clay. Natural fertility is low to medium and the content of organic matter is low. Available water capacity is medium to high, and permeability is moderate to low.

These soils are easy to keep in good tilth and can be satisfactorily worked throughout a wide range of moisture content. They are dominant well suited to all the locally grown crops. Most of the acreage is cultivated or in pasture. The rest is chiefly in forest and in housing developments to other nonfarm uses.

These soils have no serious limitations to intensive use for clean-tilled crops. Wetness caused by the seasonal high water table is a moderate limitation, however, and should be considered in planning use and management of the soils. In places drainage is needed for tobacco and other crops that require a well-drained soil. If all crop residue is returned to the soils row crops can be grown every year. Regular

additions of organic matter will be provided and good soil tilth can be maintained if soil-conserving crops, preferable perennial grasses, are grown every other year or 1 year out of 3. Crops respond well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IIw-2

This unit consists of moderately well drained or somewhat poorly drained, nearly level and gently sloping soils on uplands and stream terraces. These soils have a surface layer of sandy loam to silty clay loam. Natural fertility and the content of organic matter are low, and available water capacity is medium to high. Permeability is moderate.

These soils are easy to keep in good tilth and can be satisfactorily worked throughout a wide range of moisture content. If properly drained, they are suited or well suited to most locally grown crops. Most of the acreage is cultivated or in pasture. The rest is chiefly in forest and in housing developments or other nonfarm uses.

Wetness is a moderate limitation to use of these soils. Artificial drainage is needed for most cultivated crops. If all crop residue is properly managed, row crops can be grown every year. Regular additions of organic matter will be provided and good soil tilth can be maintained if soil-conserving crops, preferable perennial grasses, are grown every other year or 1 year out of 3. Crops grown on these soils respond well to recommended applications of lime and fertilizer.

CAPABILITY UNIT IIs-1

Only one soil, Wagram loamy sand, 0 to 6 percent slopes, is in this unit. This soil is well drained and is nearly level gently sloping. It has a surface layer of loamy sand and subsoil of friable sandy clay loam to sandy loam. Natural fertility and the content of organic matter are low or very low. Available water capacity is low, and permeability is moderately rapid.

This soil is fairly easy to keep in good tilth and can be satisfactorily worked throughout a wide range of moisture content. It is suited to most locally grown crops. Most of the acreage is cultivated or in pasture. The rest is chiefly in forest and in housing developments or other nonfarm uses.

Droughtiness is a moderate limitation to use of this soil, and moderate leaching of plant nutrients occurs. Soil blowing is also a moderate hazard that affects use and management. In addition, crop residue and organic matter rapidly burn out of this soil. Organic matter can be provided and losses of soil and water reduced if all crop residue is returned to the soil and if the soil surface is protected with soil-conserving crops 25 to 50 percent of the time. In the gently sloping areas, tilling on the contour also helps to conserve soil and water. Field borders, diversions, and stripcropping are desirable where contour tillage is practiced. Minimum tillage is a good practice that helps to keep crop residue on or near the soil surface.

Wind stripcropping and field windbreaks are needed in large cultivated fields to control soil blowing. A cover of perennial grasses, preferably of a sod-forming type, is needed in natural draws and other outlets used for disposal of excess surface water. A liberal amount of fertilizer, added in split applications, is needed to maintain productivity of this soil. Crops respond well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IIe-2

The only soil in this unit is Craven fine sandy loam, 6 to 10 percent slopes. This soil is moderately well drained. It has a surface layer of fine sandy loam and subsoil of very firm clay. Natural fertility and available water capacity are medium, and the content of organic matter is low. Permeability is slow.

This soil is easy to keep in good tilth and can be satisfactorily worked throughout a wide range of moisture content. It is fairly well suited to most locally grown crops. Most of the acreage is in forest, however, though some areas are used primarily for growing grasses and legumes for pasture or are in small grain. Because of its slopes, this soil is generally not used for row crops.

Erosion is a severe hazard if this soil is cultivated. In cultivated area losses of soil and water can be reduced, soil tilth improved, and a regular supply of organic matter added by returning all crop residue to this soil, by protecting the soil surface with close-growing crops 50 to 75 percent of the time, and by tilling on the contour. Stripcropping terraces and diversions are desirable in areas tilled on the contour. A cover of perennial grasses, preferably of a sod-forming type, is needed in natural draws, field borders, and

other outlets used for disposing of excess surface water. Crops grow on this soil respond well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IIIe-3

The only soil in this unit is Wagram loamy sand, 6 to 10 percent slopes. This is a well-drained, sloping soil on uplands and stream terraces. It has a surface layer of loamy sand and subsoil of friable sandy clay loam to sandy loam. Natural fertility and the content of organic matter are low or very low. Available water capacity is low, and permeability is moderately rapid.

This soil is fairly easy to keep in good tilth and can be satisfactorily worked throughout a wide range of moisture content. It is fairly well suited to most of the locally grown crops. Most of the acreage is cultivated or in pasture, and the rest is chiefly in forest. Because of the short slopes this soil is generally not used for row crops.

Erosion is a severe hazard in cultivated areas. Leaching of plant nutrients occurs, and droughtiness and susceptibility to soil blowing are limitations to be considered in planning use and management of this soil. Losses of soil and water can be reduced and regular additions of organic matter will be provided if soil-conserving crops are grown 50 to 75 percent of the time and if contour tillage and strip cropping are practiced. A cover of perennial grasses, preferably of a sod-forming type, is needed in natural draws, field borders, and other outlets used for disposal of excess surface water. A liberal amount of fertilizer, added in split applications, is needed to maintain productivity of this soil. Crops respond well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IIIw-1

This unit consists of nearly level and gently sloping soils on uplands and stream terraces. Some of these soils are moderately well drained and consist of layers of coarse sand to loamy fine sand 80 or more inches thick. Others are somewhat poorly drained and have a surface layer, 20 to 40 inches thick, that is underlain by a subsoil of friable sandy loam to sandy clay loam. Natural fertility, the content of organic matter, and available water capacity are all low or very low. Permeability is moderate to rapid.

These soils are fairly easy to keep in good tilth and can be satisfactorily worked throughout a wide range of moisture content. They are suited or fairly well suited to most locally grown crops. Most of the acreage is cultivated or in pasture. The rest is chiefly in forest or in housing developments or other nonfarm uses.

Wetness is a severe limitation to use of these soils. In addition, a tendency to lose plant nutrients readily and the low or very low natural fertility are limitations. Artificial drainage is needed for most crops. A drainage system is difficult to install and maintain, however, in areas where the soils are sandy to a depth of 80 inches or more. Regular additions of organic matter can be supplied by returning a large amount of crop residue to the soils. Fertilizer, especially nitrogen, should be added in split applications. Crops grown on these soils respond fairly well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IIIw-2

This unit consists of poorly drained and very poorly drained, nearly level soils on uplands and stream terraces. These soils have a surface layer of fine sand loam to silt loam. Their subsoil is firm sandy clay or clay loam to very firm silty clay or clay. Natural fertility is medium, and the content of organic matter is medium to low. Available water capacity is medium to high. Permeability is moderately slow or slow.

Most of these soils are fairly easy to keep in good tilth, but they can be satisfactorily worked only within a fairly narrow range of moisture content. Where properly drained, they are suited to a few of the locally grown crops and are used mainly for corn, soybeans, and fescue. Most of the acreage is in forest, and the rest is chiefly in cultivated crops or pasture.

Wetness is severe limitation because of the seasonal high water table and the moderately slow or slow permeability. Drainage is needed for most uses. Regular additions of organic matter can be provided and soil structure improved by returning all crop residues to the soils. Crops grown on these soils respond well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IIIw-3

This unit consists of poorly drained and very poorly drained, nearly level soils on uplands and stream terraces. These soils have a surface layer of fine sandy loam, sandy clay loam, or clay loam. Their subsoil is friable sandy loam, sandy clay loam, or clay loam. Natural fertility is low, the content of organic matter is medium to low, and available water capacity is medium. Permeability is moderate.

These soils are easy to keep in good tilth and can be satisfactorily worked in throughout a wide range of moisture content. Where properly drained, they are dominantly well suited to a few locally grown crops. Most of the acreage is in forest, and the rest is chiefly cultivated or in pasture. Areas that are farmed are used mainly for corn, soybeans, and fescue.

A seasonal high water table causes wetness to be a severe limitation, and drainage is needed for most uses. All crop residue should be returned to the soils. Regular additions of organic matter can be provided and good soil tilth can be maintained by using a cropping system that includes perennial grasses and legumes grown 25 to 50 percent of the time. Crops grown on these soils respond well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IIIw-4

This unit consists of somewhat poorly drained, nearly level and gently sloping soils on uplands and stream terraces. These soils have a surface layer of fine sandy loam to loam. Their subsoil is very firm or firm clay to silty clay or sandy clay. Natural fertility is medium, and the content of organic matter is low. Available water capacity is high. Permeability is slow.

These soils are fairly easy to keep in good tilth, but they can be satisfactorily worked only within a fairly narrow range of moisture content. Where properly drained, they are fairly well suited to most locally grown crops. About half of the acreage is cultivated or in pasture, and the rest is chiefly in forest. Areas that are farmed are used mainly for corn, soybeans, and fescue.

Because of a seasonal high water table and slow permeability, wetness is a severe limitation. Drainage is needed for most uses. In most places row crops can be grown every year, but practices that help to control erosion are needed in small sloping areas. All crop residues should be returned to the soils. Regular additions of organic matter can be supplied and good soil tilth can be maintained by using a cropping system that includes grasses and legumes grown to 25 to 50 percent of the time. Crops grown on these soils respond well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IIIs-1

The only soil in this unit is Alaga loamy sand, banded substratum, 0 to 6 percent slopes. This is a somewhat excessively drained, nearly level and gently sloping, sandy soil on uplands and stream terraces. It has a surface layer of loamy sand. The underlying layers are mainly very friable or loose loamy sand or loamy fine sand, but they also contain thin bands (less than one-half inch thick) of sandy loam at depths below 72 inches. The sandy layers extend to a depth of more than 80 inches. Natural fertility and the content of organic matter are very low, and available water capacity is low. Permeability is rapid.

This soil is fairly easy to keep in good tilth and can be satisfactorily worked throughout a wide range of moisture content. It is fairly well suited to most locally grown crops. Most of the acreage is cultivated or in pasture, and the rest is in forest and in housing developments or other nonfarm uses.

Severe limitations to use of this soil are the very low natural fertility, the very low content of organic matter, and droughtiness. In addition, plant nutrients leach out readily, soil blowing is a severe hazard, and crop residue and organic matter rapidly burn out of the soil. Soil blowing can be reduced, soil tilth can be improved, and regular additions of organic matter can be supplied by returning all crop residue to the soil. The surface layer should be protected by using a cropping system that includes soil-conserving crops, preferably perennials, grown 50 percent or more of the time. Planting row crops in sod or in crop residue helps to reduce soil blowing.

A cover of perennial grasses, preferably of a sod forming type is needed in all major draws and field borders used for the disposal of excess surface water. Bermudagrass, bahiagrass, and sericea lespedeza are suggested plants to use for hay or pasture. Fertilizer, especially nitrogen, should be added in split applications. Crops grown on this soil respond fairly well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IVw-1

This unit consists of poorly drained or very poorly drained, nearly level soils on uplands and stream terraces. These soils have a surface layer of loamy sand. The underlying layers are very friable or loose loamy sand to coarse sand. Total thickness of the sandy layers is 80 inches or more. Natural fertility is very low, and the content of organic matter is low to medium. Available water capacity is low. Permeability is rapid.

These soils are fairly easy to keep in good tilth and can be satisfactorily worked throughout a wide range of moisture content. They are fairly well suited to a few of locally grown crops. Most of the acreage is on forest, and the rest is chiefly in cultivated crops or pasture. Areas that are farmed are used mainly for corn, soybeans, and pasture.

Because of the seasonal high water and frequent flooding, wetness is a very severe limitation. Other limitations are the tendency of these soils to lose plant nutrients readily as the result of leaching, and the very low natural fertility. Artificial drainage is needed for most crops. A drainage system is difficult to install and maintain, however, because of the sandy texture of the soil material. Regular additions of organic matter can be supplied by returning a large amount of crop residue to the soils. Fertilizer, especially nitrogen, should be added in split applications. Crops grown on these soils respond fairly well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IVw-2

This unit consists of poorly drained or very poorly drained, nearly level soils on stream terraces. These soils have a surface layer of loam or silt loam and subsoil of very firm clay to firm clay loam. Sandy material commonly underlies the subsoil at a depth of about 40 inches. Natural fertility and available water capacity are medium, and the content of organic matter is medium to low. Permeability is slow.

These soils are easy or fairly easy to keep in good tilth, but they can be satisfactorily worked only within a fairly narrow range of moisture content. Where properly drained, they are suited to a few of the locally grown crops. Most of the acreage is in forest, and the rest is chiefly cultivated or in pasture. Areas that are farmed are used mainly for corn, soybeans, and pasture.

Wetness is a very severe limitation. The seasonal high water table, lack of suitable outlets for drainage, and frequent flooding are all to be considered in planning use and management. Soil structure and tilth can be improved by returning all crop residues to the soils. Where crops are grown, response is good to recommended applications of fertilizer and lime.

CAPABILITY UNIT IVw-4

This unit consists of poorly drained, nearly level soils on uplands and stream terraces. These soils have a surface layer of fine sandy loam and a subsoil or underlying layers of very friable sandy loam to friable sandy clay loam. Below a depth of about 36 inches, the soil material is commonly sandy. Natural fertility and the content of organic matter are low. Available water capacity is medium. Permeability is moderate.

These soils are easy to keep in good tilth and can be satisfactorily worked throughout a fairly wide range of moisture content. Artificial drainage is necessary for cultivated crops, hay, or pasture. Where properly drained, however, these soils are fairly well suited to few of the locally grown crops. Most of the acreage is in forest, and the rest is chiefly in cultivated crops or pasture. Areas that are farmed are used mainly for corn, soybeans, and pasture.

Because of the seasonal high water table, wetness is a severe limitation. These soils are also subject to flooding and lack suitable outlets for removing excess surface water. In cultivated areas regular additions of organic matter can be supplied and soil structure and tilth can be improved by properly managing all crop residue. Crops grown on these soils respond fairly well to recommended applications of fertilizer and lime.

CAPABILITY UNIT IVs-1

The only soil in this unit is Lakeland sand 0 to 6 percent slopes. This is an excessively drained, nearly level and gently sloping, sandy soil on uplands and stream terraces. The surface layer is sand, and the underlying layers are loose fine sand to coarse sand. Total thickness of the sandy layers is more than 80 inches. Natural fertility, the content of organic matter, and available water capacity are all very low. Permeability is rapid.

This soil is fairly easy to keep in good tilth and can be satisfactorily worked throughout a wide range of moisture content. It is fairly well suited to a few of the locally grown crops, but the crops are likely to be severely damaged by lack of moisture during long dry periods. About half of the acreage is cultivated or in pasture. The rest is in forest and in housing developments or other nonfarm uses.

Very low available water capacity, droughtiness, very low content of organic matter, and very low natural fertility are all very severe limitations. In addition, this soil loses plant nutrients readily as the result of leaching, and it is subject to soil blowing. Organic matter can be added and the leaching of plant nutrients can be slowed by properly managing all crop residue. The surface layer should be protected with a cover of close-growing crops 50 percent or more of the time. A desirable cropping system is one that adds a large amount of durable residue to the soil. A liberal amount of fertilizer, added in split applications, is necessary to maintain productivity. In areas used for crops, response is rather poor to recommended applications of fertilizer and lime.

CAPABILITY UNIT VIIw-1

Only the mapping unit Swamp is in this unit. It is poorly drained or very poorly drained and is on flood plains. This land type consists of soil material that is variable in texture, color and consistence. Water stands on the surface much of the time.

Because of the very severe limitation of wetness, the very frequent flooding and ponding, and the difficulty and impracticability of providing drainage, this mapping unit is not suitable for cultivated crops. It is suitable for growing forest trees and for wildlife habitat. All of the acreage is in blackgum, tupelo, sweetgum, cypress, and other native hardwoods.

Estimated yields

Table 2 gives estimates of yields of the principal crops grown in Pitt County. The yields depend upon a combination of soil and climate, on the kind of crop that is grown, and on the level of management. The estimate in table 2 are those that can be expected under intensive management. Yields are substantially lower under less intensive management.

The estimates given in table 2 were made by technicians who have had considerable experience in managing crops and soils in this county. They are also based on the assumption that the average amount of rainfall will be received over a long period of time, that adequate drainage will be provided, that no supplemental irrigation will be used, and that no flooding or ponding will take place. Following are practices generally considered necessary to obtain the yields given in table 2:

1. Fertilizer and lime applied according to the needs indicated by soil tests.
2. High-yielding varieties of crops are grown.
3. Legumes are inoculated.
4. The soils are properly tilled, and the crops are properly cultivated.
5. Weeds, insects, and diseases are controlled.
6. Rotations that conserve moisture and that protect the soils from erosion are used.
7. Runoff is adequately controlled.
8. Overgrazing is avoided, and pastures are well managed.