

Extra
file

CLASSIFICATION AND CORRELATION
OF
THE SOILS OF
DEARBORN AND OHIO COUNTIES
INDIANA

APRIL 1979



U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
MIDWEST TECHNICAL SERVICE CENTER
LINCOLN, NEBRASKA

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service
Midwest Technical Service Center
Lincoln, Nebraska 68508

Classification and Correlation
of the Soils of
Dearborn and Ohio Counties, Indiana

This correlation was prepared by G. J. Post in phone consultation with DeWayne Williams, State Soil Specialist, during February and March 1978. The final correlation is based on the descriptive legend, correlation samples, laboratory data, and field notes. The descriptive legend, field sheets, and field descriptions were thoroughly reviewed by Williams and Post with the field party at the comprehensive field review, November 29 through December 3, 1976. Many of the mapping units were firmed up at that time.

Map symbols consist of numbers or a combination of numbers and letters. The initial numbers represent the kind of soil. A capital letter following these numbers indicates the class of slope. Symbols without a slope letter are for nearly level soils or miscellaneous areas. A final number of 2 following the slope letter indicates that the soil is eroded and 3 that it is severely eroded.

SOIL CORRELATION OF
DEARBORN AND OHIO COUNTIES, INDIANA
DEC 1978

| Field symbols | Field mapping unit name | Publi- cation symbol | Approved mapping unit name |
|-----------------------|--|----------------------------|--|
| AvA | Avonburg silt loam, 0 to 2 percent slopes | AvA | Avonburg silt loam, 0 to 2 percent slopes |
| BaA, PeB, SCA, WbA | Bartle silt loam, 0 to 3 percent slopes | BaA | Bartle silt loam, 0 to 3 percent slopes |
| HhC2 | Hickory silt loam, 6 to 12 percent slopes, eroded | BeC2 | Bonnell silt loam, 6 to 12 percent slopes, eroded |
| HhC3 | Hickory silt loam, 6 to 12 percent slopes, severely eroded | BeC3 | Bonnell silt loam, 6 to 12 percent slopes, severely eroded |
| HhD2, CoD2 | Hickory silt loam, 12 to 18 percent slopes, eroded | BeD2 | Bonnell silt loam, 12 to 18 percent slopes, eroded |
| HhD3, CoD3, SWD3 | Hickory silt loam, 12 to 18 percent slopes, severely eroded | BeD3 | Bonnell silt loam, 12 to 18 percent slopes, severely eroded |
| HhE | Hickory silt loam, 18 to 35 percent slopes | BeE | Bonnell silt loam, 18 to 35 percent slopes |
| LoC2 | Lowell silt loam, 6 to 12 percent slopes, eroded | CaC2 | Carmel silt loam, 6 to 12 percent slopes, eroded |
| LoD2, EdD2 | Lowell silt loam, 12 to 18 percent slopes, eroded | CaD2 | Carmel silt loam, 12 to 18 percent slopes, eroded |
| LoE2, EdE2 | Lowell silt loam, 18 to 25 percent slopes, eroded | CaE2 | Carmel silt loam, 18 to 25 percent slopes, eroded |
| LpC3 | Lowell silty clay loam, 6 to 12 percent slopes, severely eroded | CcC3 | Carmel silty clay loam, 6 to 12 percent slopes, severely eroded |

DEARBORN AND OHIO COUNTIES, INDIANA --Continued

| Field symbols | Field mapping unit name | Publi- cation symbol | Approved mapping unit name |
|------------------------|---|----------------------------|---|
| LpD3 | Lowell silty clay loam, 12 to 18 percent slopes, severely eroded | CcD3 | Carmel silty clay loam, 12 to 13 percent slopes, severely eroded |
| LpE3 | Lowell silty clay loam, 18 to 25 percent slopes, severely eroded | CcE3 | Carmel silty clay loam, 18 to 25 percent slopes, severely eroded |
| Ge | Genesee loam | Ch | Chagrin silt loam |
| CnB2 | Cincinnati silt loam, 2 to 6 percent slopes, eroded | CnB2 | Cincinnati silt loam, 2 to 6 percent slopes, eroded |
| CnC2, CnD2 | Cincinnati silt loam, 6 to 12 percent slopes, eroded | CnC2 | Cincinnati silt loam, 6 to 12 percent slopes, eroded |
| CnC3, CnD3 | Cincinnati silt loam, 6 to 12 percent slopes, severely eroded | CnC3 | Cincinnati silt loam, 6 to 12 percent slopes, severely eroded |
| Ct | Clermont silt loam | Ct | Clermont silt loam |
| Bn | Boonesboro loam | De | Dearborn silt loam |
| Bo | Boonesboro flaggy loam | Df | Dearborn flaggy loam |
| EcE2, FaE2, FaD2 | Eden silty clay loam, 15 to 25 percent slopes, eroded | EcE2 | Eden silty clay loam, 15 to 25 percent slopes, eroded |
| EdE3, FbE3, FaD3, EdD3 | Eden flaggy silty clay loam, 15 to 25 percent slopes, severely eroded | EdE3 | Eden flaggy silty clay loam, 15 to 25 percent slopes, severely eroded |
| EdF, FbF | Eden flaggy silty clay loam, 25 to 50 percent slopes | EdF | Eden flaggy silty clay loam, 25 to 50 percent slopes |
| EKA | Elkinsville silt loam, 0 to 2 percent slopes | EKA | Elkinsville silt loam, 0 to 2 percent slopes |

DEARBORN AND OHIO COUNTIES, INDIANA --Continued

| Field symbols | Field mapping unit name | Publi- cation symbol | Approved mapping unit name |
|--|---|----------------------------|---|
| EKB2, JnB2 | Elkinsville silt loam, 2 to 6 percent slopes, eroded | EKB2 | Elkinsville silt loam, 2 to 6 percent slopes, eroded |
| EKC2, UnC2, UnC3 | Elkinsville silt loam, 6 to 12 percent slopes, eroded | EKC2 | Elkinsville silt loam, 6 to 12 percent slopes, eroded |
| FoB2, FoC2, FxC3 | Fox silt loam, 1 to 4 percent slopes, eroded | FoB2 | Fox silt loam, 1 to 4 percent slopes, eroded |
| HcG | Hennepin loam, 40 to 60 percent slopes | HcG | Hennepin loam, 40 to 60 percent slopes |
| Hu, Wo, Ln | Huntington silt loam | Hu | Huntington silt loam |
| Ju, Ha | Jules silt loam | Ju | Jules silt loam |
| MaB2, MaC2 | Markland silt loam, 2 to 12 percent slopes, eroded | MaB2 | Markland silt loam, 2 to 12 percent slopes, eroded |
| MaF2, MaE2 | Markland silt loam, 18 to 35 percent slopes, eroded | MaF2 | Markland silt loam, 18 to 35 percent slopes, eroded |
| MbD3, MaD2, MbC3, JnD2, MaD3 | Markland silty clay loam, 12 to 18 percent slopes, | MbD3 | Markland silty clay loam, 6 to 18 percent slopes, severely eroded |
| Ne | Newark silt loam | Ne | Newark silt loam |
| OcA, RuA, MdA, PrA, BnC | Ockley loam, 0 to 3 percent slopes | OcA | Ockley silt loam, 0 to 3 percent slopes |
| Sh, Ee, Wa, Wf | Shoals silt loam | Or | Orrville silt loam |
| PaD2, PaD3, EcD2, EcD3, WuB, WuC, WuD, WuD3 | Pate silt loam, 12 to 18 percent slopes, eroded | PaD2 | Pate silt loam, 12 to 18 percent slopes, eroded |

DEARBORN AND OHIO COUNTIES, INDIANA --Continued

| Field symbols | Field mapping unit name | Publication symbol | Approved mapping unit name |
|------------------------------------|---|--------------------|---|
| PaE2, PaE3, Ece3, WuE2, WuE3 | Pate silt loam, 18 to 25 percent slopes, eroded | PaE2 | Pate silt loam, 18 to 25 percent slopes, eroded |
| Pg | Pits, gravel | Pg | Pits, gravel |
| Ra, HeA, Mo, MgA | Rahm silt loam | Ra | Rahm silt loam |
| RdG | Rodman gravelly loam, 40 to 60 percent slopes | RdG | Rodman sandy loam, 40 to 60 percent slopes |
| RoA | Rossmoyne silt loam, 0 to 2 percent slopes | RoA | Rossmoyne silt loam, 0 to 2 percent slopes |
| RoB2, AvB2, RoB3 | Rossmoyne silt loam, 2 to 6 percent slopes, eroded | RoB2 | Rossmoyne silt loam, 2 to 6 percent slopes, eroded |
| RxB, FcA, RxB2 | Russell-Fincastle silt loams, 1 to 4 percent slopes | RxB | Russell-Fincastle silt loams, 1 to 4 percent slopes |
| St | Stonelick sandy loam | St | Stonelick sandy loam |
| SwB2, NhA, NhB2 | Switzerland silt loam, 2 to 6 percent slopes, eroded | SwB2 | Switzerland silt loam, 2 to 6 percent slopes, eroded |
| SwC2 | Switzerland silt loam, 6 to 12 percent slopes, eroded | SwC2 | Switzerland silt loam, 6 to 12 percent slopes, eroded |
| SwC3 | Switzerland silt loam, 6 to 12 percent slopes, severely eroded | SwC3 | Switzerland silt loam, 6 to 12 percent slopes, severely eroded |
| SwD2 | Switzerland silt loam, 12 to 13 percent slopes, eroded | SwD2 | Switzerland silt loam, 12 to 18 percent slopes, eroded |

DEARBORN AND OHIO COUNTIES, INDIANA --Continued

| Field symbols | Field mapping unit name | Publication symbol | Approved mapping unit name |
|-----------------------------|--|--------------------|---|
| Or | Orthents | Ud | Udorthents, loamy |
| CoB2 | Cincinnati silt loam, clayey substratum, 2 to 6 percent slopes, eroded | wbB2 | Weisburg silt loam, 2 to 6 percent slopes, eroded |
| CoC2 | Cincinnati silt loam, clayey substratum, 6 to 12 percent slopes, eroded | wbC2 | Weisburg silt loam, 6 to 12 percent slopes, eroded |
| CoC3 | Cincinnati silt loam, clayey substratum, 6 to 12 percent slopes, severely eroded | wbC3 | Weisburg silt loam, 6 to 12 percent slopes, severely eroded |
| WhA, WhB2, WhC2, WhC3, WhD3 | Wheeling silt loam, 0 to 2 percent slopes | WhA | Wheeling silt loam, 0 to 2 percent slopes |

Dearborn and Ohio Counties, Indiana

Series Established by This Correlation:

Bonnell (Ohio County)
Carmel (Ohio County)
Dearborn (Dearborn County)
Pate (Ohio County)
Weisburg (Dearborn County)

Series Dropped or Made Inactive:

Hogan (tentative)

Certification Statement:

Dearborn and Ohio Counties do not join any modern published soil surveys.

All typical pedon descriptions are located in a delineation of the named soil.

All field mapping has been completed in the survey area.

Verification of Cooperator Names:

On the front cover the cooperator citation will read:

United States Department of Agriculture
Soil Conservation Service
in cooperation with
Purdue University
Agricultural Experiment Station
and
Indiana Department of Natural Resources
Soil and Water Conservation Committee

In the box on the inside of the front cover the statement will include the above as well as the following:

"Financial assistance was made available by the Dearborn and Ohio Counties Boards of County Commissioners."

Prior Soil Survey Publications:

A reference to the 1930 Ohio and Switzerland Counties soil survey should be in the introduction of this publication. The prior published soil survey will be a literature citation. For example: "The first soil survey of Ohio County was completed in 1930 and published in 1935 (ref. citation, see below)." This survey updates the first survey and provides additional information and larger maps that show the soils in greater detail.

Soil survey of Ohio and Switzerland Counties, Indiana. Hendrickson, B. H., Bushnell, T. M., Ulrich, H. P., and Kunkel, D. R. U.S. Department of Agriculture, Bureau of Chemistry and Soils in cooperation with the Purdue University Agricultural Experiment Station, 60 pp., illus., 1935.

Dearborn and Ohio Counties, Indiana

Disposition of Field Sheets:

The original field sheets are retained in the survey area to be used in map finishing which is being done by the field party.

Instructions For Map Compilation and Finishing:

The conventional and special symbols used in field mapping will be compiled using the appropriate symbols from SCS-SOILS-37A.

Dearborn and Ohio Counties, Indiana

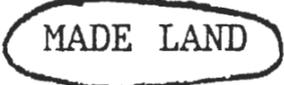
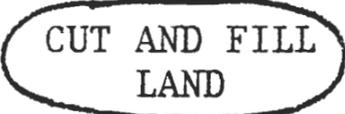
LEGEND OF CONVENTIONAL AND SPECIAL SYMBOLS

| <u>Description</u> | <u>Symbol</u> | <u>Disposition</u> |
|--------------------------------------|---------------|------------------------|
| HIGHWAYS AND ROADS | | |
| Divided (wide or variable median) | | } Retain |
| Dual (with no median; label) | | |
| Good Motor | | |
| Poor Motor | | |
| INTERCHANGES | | |
| Existing (to scale; per photo image) | | Delete |
| Overpass, Underpass | | Delete |
| ROUTE DESIGNATIONS | | |
| Interstate, U.S., state | | Retain |
| RAILROADS | | |
| Single track | | Retain |
| Double track | | Retain as single track |
| PIER, DOCK, OR WHARF | | Delete |

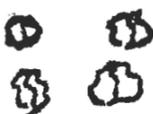
Dearborn and Ohio Counties, Indiana

| <u>Description</u> | <u>Symbol</u> | <u>Disposition</u> |
|---------------------------------------|---------------|--------------------|
| Intermittent | | |
| Crossable with tillage implements | | Retain as |
| Not crossable with tillage implements | | |
| Gully | | Retain |
| Drainage and/or alluvial fan | | Retain |
| Lakes, ponds, and reservoirs | | |
| Perennial | | Retain |
| Spring | | Delete |
| Wet spot | | Retain |
| DAMS | | |
| Medium (not to scale) | | Retain |
| Small, stock or farm pond | | Retain |
| RELIEF FEATURES | | |
| Escarpments | | |
| Other than bedrock | | Retain |
| Short steep slope | | Retain |

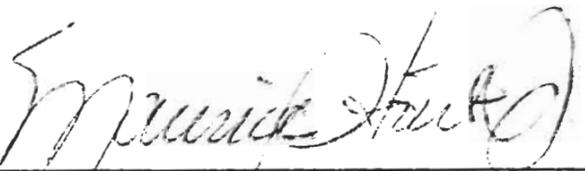
Dearborn and Ohio Counties, Indiana

| <u>Description</u> | <u>Symbol</u> | <u>Disposition</u> |
|-----------------------------------|---|--|
| Depressions | | |
| Crossable with tillage implements |  | Delete |
| Gravel pit |    | Retain as or Pg.  |
| Made land |   | Retain as Ud |
| Cut and fill land |   | Retain as Ud |
| Sand wash or river wash |  or  | Delete |

SPECIAL SOIL SYMBOLS

| | | |
|----------------------|---|--------|
| Gravel spot, area |  | Retain |
| Outcrops | | |
| Rock |  | Delete |
| Sand spot, area |  | Retain |
| Severely eroded spot |  | Retain |
| Slide or slip |  | Delete |
| Stony, very stony |  | Delete |

Approved: April 11, 1979


 Maurice Stout, Jr.
 Head, Soils Staff
 Midwest TSC

CONVERSION LEGEND FOR
DEARBORN AND OHIO COUNTIES, INDIANA
MAY 1978

| Field symbol | Publication symbol |
|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|
| AvA | AvA | FoC2 | FoB2 | PaE3 | PaE2 | | |
| AvE2 | RoB2 | FxC3 | FoB2 | PeB | BaA | | |
| BaA | BaA | Ge | Ch | Pg | Pg | | |
| BmC | OcA | Ha | Ju | PrA | OcA | | |
| Bn | De | HcG | HcG | Ra | Ea | | |
| | | | | | | | |
| Bo | Df | HeA | Ra | RdG | EdG | | |
| CnB2 | CnB2 | HhC2 | BeC2 | RoA | RoA | | |
| CnC2 | CnC2 | HhC3 | BeC3 | RoB2 | RoB2 | | |
| CnC3 | CnC3 | HhD2 | BeD2 | RoB3 | RoB2 | | |
| CnD2 | CnC2 | HhD3 | BeD3 | RuA | OcA | | |
| | | | | | | | |
| CnD3 | CnC3 | HhE | BeE | RxB | RxB | | |
| CoB2 | WbB2 | Hu | Hu | RxB2 | RxB | | |
| | | Ju | Ju | ScA | BaA | | |
| CoC2 | WbC2 | Ln | Hu | Sh | Or | | |
| | | LoC2 | CaC2 | | | | |
| | | | | | | | |
| CoC3 | WbC3 | LoD2 | CaD2 | St | St | | |
| | | LoE2 | CaE2 | SwB2 | SwB2 | | |
| CoD2 | BeD2 | LpC3 | CcC3 | SwC2 | SwC2 | | |
| CoD3 | BeD3 | LpD3 | CcD3 | SwC3 | SwC3 | | |
| Ct | Ct | LpE3 | CcE3 | SwD2 | SwD2 | | |
| | | | | | | | |
| EcD2 | PaD2 | MaB2 | MaB2 | SwD3 | BeD3 | | |
| EcD3 | PaD2 | MaC2 | MaB2 | UnB2 | EkE2 | | |
| EcE2 | Ece2 | MaD2 | MbD3 | UnC2 | EkC2 | | |
| EcE3 | PaE2 | MaD3 | MbD3 | UnC3 | EkC2 | | |
| EdD2 | CaD2 | MaE2 | MaF2 | Und2 | MbD3 | | |
| | | | | | | | |
| EdD3 | EdE3 | MaF2 | MaF2 | Wa | Or | | |
| EdE2 | CaE2 | MbC3 | MbD3 | WbA | BaA | | |
| EdE3 | EdE3 | MbD3 | MbD3 | WhA | WhA | | |
| EdF | EdF | MdA | OcA | WhB2 | WhA | | |
| Ee | Or | MgA | Ra | WhC2 | WhA | | |
| | | | | | | | |
| EKA | EKA | Mo | Ra | WhC3 | WhA | | |
| EkE2 | EkB2 | Ne | Ne | WhD3 | WhA | | |
| EkC2 | EkC2 | NhA | SwB2 | Wo | Hu | | |
| PaD2 | Ece2 | NhB2 | SwB2 | Wr | Or | | |
| PaD3 | EdE3 | OcA | OcA | WuB | PaD2 | | |
| | | | | | | | |
| PaE2 | Ece2 | Or | Ud | WuC | PaD2 | | |
| FbE3 | EdE3 | | | WuD | PaD2 | | |
| FbF | EdF | PaD2 | PaD2 | WuD3 | PaD2 | | |
| FcA | RxB | PaD3 | PaD2 | WuE2 | PaE2 | | |
| FoB2 | FoB2 | PaE2 | PaE2 | WuE3 | PaE2 | | |

Dearborn and Ohio Counties, Indiana

CLASSIFICATION OF PEDONS SAMPLED FOR LABORATORY ANALYSIS

| <u>Series Name Sampled As</u> | <u>File or Lab No.</u> | <u>Series Name Approved</u> | <u>Pub. Symbol</u> |
|-----------------------------------|------------------------|---------------------------------|------------------------|
| Pate | S75IN-115-2 | Pate | PaE2 |
| Lowell | S75IN-115-3 | Carmel | CaD2 |
| Switzerland | S75IN-115-4 | Switzerland | SwC2 |
| Fairmount | S75IN-115-5 | Eden | EdF |
| Cincinnati | S75IN-29-3 | Weisburg | WbB2 |
| Switzerland | S75IN-29-4 | Switzerland | SwC2 |
| Fairmount | S75IN-29-5 | Eden Variant | EdF |
| Lowell | S75IN-29-6 | Carmel | CaD2 |

In addition to the above, there are considerable more data available from a number of pedons in this survey area. However, these data are for partial pedons where only a few determinations were made rather than complete data as the above are. These data are being reviewed and proper classification determined, and it will be stored on the Purdue Computer System.

Dearborn and Ohio Counties, Indiana

Notes to Accompany
Classification and Correlation
of the Soils of
Dearborn and Ohio Counties, Indiana

by
Gerald J. Post

BONNELL SERIES

This series is established by this correlation. These soils were previously included in the Hickory series, but they are in the fine textural family rather than fine-loamy. There is over 16,000 acres of this soil in this survey area. Indiana has need for this soil in a number of other southeastern counties.

CARMEL SERIES

This series is established by this correlation. These soils were tentatively included with the Lowell series, but they have vermiculitic mineralogy and exhibit much more shrink-swell properties than does the Lowell. Over 30,000 acres of this soil is in this survey area, and there will be significant additional acreage in several other nearby counties.

CHAGRIN SERIES

These soils were previously included with the Genesee series. However, they are leached carbonate free to a depth of more than 40 inches, and they fit the Chagrin series concept.

DEARBORN SERIES

This series is established by this correlation. These soils were previously included in the Boonesboro series, but they are loamy-skeletal rather than fine-loamy. There is about 4,000 acres of this soil in this survey area, and it is known to occur in at least three additional Indiana counties.

MARKLAND SERIES

The 18 to 35 percent slopes, eroded, and the 6 to 18 percent slopes, severely eroded, mapping units are taxadjuncts because the solum is slightly thinner than allowed in the Markland series.

ORRVILLE SERIES

These soils are taxadjuncts to the Orrville series because they have a slightly thinner solum, the pH is slightly higher than defined for the series, and they appear to have a weakly developed cambic horizon. The tentative Hogan series was proposed for these soils.

PATE SERIES

This series is established by this correlation. This soil formed in colluvial material from stratified shale and limestone. About 6,000 acres is in this survey area, and it will occur in a number of other Indiana and Ohio counties.

Dearborn and Ohio Counties, Indiana

SWITZERLAND SERIES

The type location for this series is now in this survey area, and the classification is changed from the fine textural family to fine-silty over clayey.

WEISBURG SERIES

This series is established by this correlation. These soils were previously included in the Cincinnati series, clayey substratum. These soils have Bt horizons developed in residuum underlying the fragipan. Over 26,000 acres of this soil is in this survey area, and it occurs in a number of other nearby counties.

CLASSIFICATION OF THE SOILS

[An asterisk in the first column indicates a taxadjunct to the series. See notes for a description of those characteristics of this taxadjunct that are outside the range of the series]

| Soil name | Family or higher taxonomic class |
|----------------|---|
| Avonburg----- | Fine-silty, mixed, mesic Aeric Fragiqualfs |
| Bartle----- | Fine-silty, mixed, mesic Aeric Fragiqualfs |
| Bonnell----- | Fine, mixed, mesic Typic Hapludalfs |
| Carnel----- | Fine, vermiculitic, mesic Typic Hapludalfs |
| Chagrin----- | Fine-loamy, mixed, mesic Dystric Fluventic Eutrochrepts |
| Cincinnati--- | Fine-silty, mixed, mesic Typic Fragiudalfs |
| Clermont----- | Fine-silty, mixed, mesic Typic Ochraqualfs |
| Dearborn----- | Loamy-skeletal, mixed, mesic Fluventic Hapludolls |
| Eden----- | Fine, mixed, mesic Typic Hapludalfs |
| Elkinsville | Fine-silty, mixed, mesic Ultic Hapludalfs |
| Fincastle---- | Fine-silty, mixed, mesic Aeric Ochraqualfs |
| Fox----- | Fine-loamy over sandy or sandy-skeletal, mixed, mesic Typic Hapludalfs |
| Hennepin----- | Fine-loamy, mixed, mesic Typic Eutrochrepts |
| Huntington--- | Fine-silty, mixed, mesic Fluventic Hapludolls |
| Jules----- | Coarse-silty, mixed (calcareous), mesic Typic Udifulvents |
| Markland----- | Fine, mixed, mesic Typic Hapludalfs |
| Newark----- | Fine-silty, mixed, nonacid, mesic Aeric Fluvaquents |
| Ockley----- | Fine-loamy, mixed, mesic Typic Hapludalfs |
| *Orrville----- | Fine-loamy, mixed, nonacid, mesic Aeric Fluvaquents |
| Pate----- | Fine, illitic, mesic Typic Hapludalfs |
| Rahn----- | Fine-silty, mixed, nonacid, mesic Aeric Fluvaquents |
| Rodman----- | Sandy-skeletal, mixed, mesic Typic Hapludolls |
| Rossmoyne---- | Fine-silty, mixed, mesic Aquic Fragiudalfs |
| Russell----- | Fine-silty, mixed, mesic Typic Hapludalfs |
| Stonelick---- | Coarse-loamy, mixed (calcareous), mesic Typic Udifulvents |
| Switzerland | Fine-silty over clayey, mixed, mesic Typic Hapludalfs |

CLASSIFICATION OF THE SOILS--Continued

| Soil name | Family or higher taxonomic class |
|---------------|---|
| Udorthents. | Loamy, mixed, nonacid, mesic Typic Udorthents |
| Weisburg----- | Fine-silty, mixed, mesic Typic FragiudalFs |
| Wheeling----- | Fine-loamy, mixed, mesic Ultic HapludalFs |