

Data Dictionary for: Land Use and Cropping Recommendations for Various Soil Types in Iowa, 1937-1938

This data dictionary refers to the files available at <http://dx.doi.org/10.25380/iastate.6333104>

FarmerRecommendedRotationsDataset.csv

CropRotationAssignments.csv

SoilSeriesAssignments.csv

## References

Source of the original data:

Iowa. County Agricultural Planning Committees, & Iowa State College. Extension Service. (1937). *Plan to use your soil and keep it too: Suggestions made by farmers*. Ames, Iowa: Iowa State College, Extension Service.

Available at Iowa State University Library. Call number: S624 I8 Io96p

Related publications that provide additional context:

Folken, H., & Iowa State College. Extension Service. (1937). *County land use planning by Iowa farmers: A first approximation* / summarized by Herbert G. Folken. (Extension circular (Iowa State College. Extension Service) no. 233). Ames, Iowa: Iowa State College, Extension Service.

Available at Iowa State University Library. Call number: S544 Io9b1 no.233

Folken, H., & Iowa. State Committee on County Agricultural Planning. (1938). *Summary of reports of the County Agricultural Planning Committees on questions relating to soil conservation districts* / [compiled by Herbert G. Folken]: State Committee on County Agricultural Planning, Iowa State College, Extension Service and Experiment Station.

Available at Iowa State University Library. Call number: S624 I8 Io96s

**FarmerRecommendedRotationsDataset.csv**

The data table contains 10 columns and 584 rows of information.

Column Heading	Description
County	The specific county pamphlet that was transcribed
PercentLandInCounty	The value from one soil type row of the original table
PercentPermanentCover	The value from one soil type row of the original table
SoilTypeTranscribed	All listed soil types for the original table row transcribed as they appeared in the original table
SoilType1	If more than one soil type was originally listed in a row, the first soil type is listed in this column. In the SoilType columns, only the soil series name is included. Additional information, such as the textural class of the soil series, is not listed in the SoilType columns.
SoilType2	The second soil type is listed in this column
SoilType3	The third soil type is listed in this column
SoilType4	The fourth soil type is listed in this column
SoilType5	The fifth soil type is listed in this column
PositionSoilType1	The landscape position for the SoilType1 value in the same row
PositionSoilType2	The landscape position for the SoilType2 value in the same row
PositionSoilType3	The landscape position for the SoilType3 value in the same row
PositionSoilType4	The landscape position for the SoilType4 value in the same row
PositionSoilType5	The landscape position for the SoilType5 value in the same row
Rotation1	The first listed crop rotation for the SoilTypeTranscribed row in the original table
Rotation2	The second listed crop rotation for the SoilTypeTranscribed row in the original table
Rotation3	The third listed crop rotation for the SoilTypeTranscribed row in the original table
Rotation4	The fourth listed crop rotation for the SoilTypeTranscribed row in the original table
Rotation5	The fifth listed crop rotation for the SoilTypeTranscribed row in the original table
Rotation6	The six listed crop rotation for the SoilTypeTranscribed row in the original table
Rotation7	The seventh listed crop rotation for the SoilTypeTranscribed row in the original table
Rotation8	The eighth listed crop rotation for the SoilTypeTranscribed row in the original table
Rotation9	The ninth listed crop rotation for the SoilTypeTranscribed row in the original table
Rotation10	The tenth listed crop rotation for the SoilTypeTranscribed row in the original table

Values for PositionSoilType1 - PositionSoilType5 can take one of five values that refer to the landscape slope position. These landscape positions were assigned based on a review of the information provided in the original tables and in soil surveys.

B	Bottomland
T	Terrace
US	Upland - sloping
UL	Upland - level
UO	Upland - outcrop

Values for Rotation1 - Rotation10 includes multiple crop options. These codes were provided in the original documents. The values in these columns represent crop rotation schedules suggested by county agricultural committees. Definitions for C, O, W, Cl, A, MH, and (OScl) were provided in the original tables. The majority of recommendation rotations included these described values. Other values occurred less frequently and definitions are suggested.

Rotation Code	Description
C	Corn, soybeans or other intertilled crops
O	Oats or other spring sown small grain
W	Winter wheat or other fall sown small grain
Cl	Clover or sweet clover
A	Alfalfa
MH	Mixed hay or rotation pasture
(OScl)	Oats seeded to sweet clover to be fall or spring plowed for intertilled crops the next year
Truck crops	Refers to general production of fruits or vegetables, may be abbreviated as Tr. Crops, Truck
Special crops	Likely refers to truck crops given the crops already described
(SB-R)	Soybean followed by rye based on the definition of (OScl)
(WScl)	Wheat seeded to sweet clover based on the definition of (OScl)
(SB-plowed under)	Soybean plowed under as a green mulch
onions	Onions
Truck 2 yrs. Green manure crops 1 yr.	Truck crops grown for 2 years following by a green manure crop for 1 year
pastured	The preceding crop can be pastured
or	Unknown, definition not suggested

### CropRotationAssignments.csv

The data table contains 2 columns and 147 rows of information.

Column Heading	Description
CropRotationSequenceGroup	This column groups all listed crop rotations in the FarmerRecommendedRotationsDataset.csv into 13 general categories based on the initial crops used in the rotation and the frequency with which the crop rotations were reported.
SpecificRotation	The column lists the rotation that fits within a given CropRotationSequenceGroup

Values for CropRotationSequenceGroup - The thirteen general categories are as follows:

Crop Rotation Group	Number of Rotations Assigned To The Group
C-C-	7
C-C-C-	13
C-O-	18
C-O-Scl-	9
C-C-O-	32
C-C-W-	12
C-O-A-	11
C-O-Cl-	7
C-W-	13
Truck crops-	8
W-	6
Continuous crop	4
Other	6

The abbreviations used in the CropSequenceGroup follow the same method as described for Values for Rotation1 in the description for the FarmerRecommendedRotationsDataset.csv.

Values For SpecificRotation - These specific rotations are taken from the FarmerRecommendedRotationsDataset.csv and the notation is the same as described for the Values for Rotation1 in the description for the FarmerRecommendedRotationsDataset.csv. In a few instances, some crop rotations were abbreviated. For example, the undefined "or" text was removed from the longer crop rotation as it was not used in the CropSequenceGroup classification.

**SoilSeriesAssignments.csv**

The data table contains 9 columns and 69 rows of information.

Column Heading	Description
LandscapeGroup	One of five landscape groups used to classify the soil series listed from the original soil types listed in FarmerRecommendedRotationsDataset.csv
SoilSeries	The soil series listed in the SoilType columns provided in the FarmerRecommendedRotationsDataset.csv. As noted previously, the soil series information included in this column provides the name of the soil series and does not include additional soil texture information that could be included in the SoilTypeTranscribed column of FarmerRecommendedRotationsDataset.csv. Some of the soil series listed in the original archival document were general categories, such as "bottomland" or "marsh," and these were considered a soil series for this classification.
LandscapePosition	A description of the landscape position for the given soil series assigned to the given landscape group. This position description is based on the noted references in the same table row. Some landscape position information was also gathered from the information provided in the SoilTypeTranscribed column of the FarmerRecommendedRotationsDataset.csv.
ParentMaterial	A description of the parent material for the given soil series assigned to the given landscape group. This description is based on the noted references in the same table row. If no information is provided, parent material descriptions were not readily found using available references.
Slope	A description of the slope, expressed as a percentage or descriptively. This description is based on the noted references in the same table row. If no information is provided, slope descriptions were not readily found using available references.
Reference1	If provided, the first reference used to define the LandscapeGroup for the given Soil Series. The possible values for Reference1-Reference4 columns are indicated below.
Reference2	If provided, the second reference used to define the LandscapeGroup for the given Soil Series.
Reference3	If provided, the third reference used to define the LandscapeGroup for the given Soil Series.
Reference4	If provided, the fourth reference used to define the LandscapeGroup for the given Soil Series.

#### Values for Reference1-Reference4

The data included in columns References1-References4 refer to three types of sources. An example is provided to explain the reference labeling.

Example	Source Type	Description
OSD Cass	Official Series Description (OSD)	The official soil series description provided for the indicated soil series from the United States Department of Agriculture Natural Resources Conservation Service. Currently, these are available online from <a href="https://soilseries.sc.egov.usda.gov/osdname.aspx">https://soilseries.sc.egov.usda.gov/osdname.aspx</a> In the listed example, this refers to the Official Series Description for the Cass soil. Some soils that were classified in the 1930s are not available in the current OSD system because the soils were re-classified into another series.
Crawford 1928	Historic soil surveys for specific Iowa counties	Information for the soil series was gathered from an archival version of the soil survey for a given county in which the soil series occurred. Currently, these are available online from <a href="https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=IA">https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=IA</a> and may also be available in print. In the listed example, this refers to the Crawford County soil survey published in 1928.
Riecken et al. (1948)	Cited journal article	A published journal article that included information about the Carrington soil. This is the only instance of using a journal article rather than the OSDs or the historic soil surveys. The current citation for the article is: Riecken FF, WH Allaway, and GD Smith. 1948. Some soil classification and mapping problems in the Wisconsin Drift Area in Iowa. Soil Science Society of America Journal 12:432-440. doi:10.2136/sssaj1948.036159950012000C0097x When the article was initially published, it was part of Soil Science Society Proceedings from 1947, 432-440.