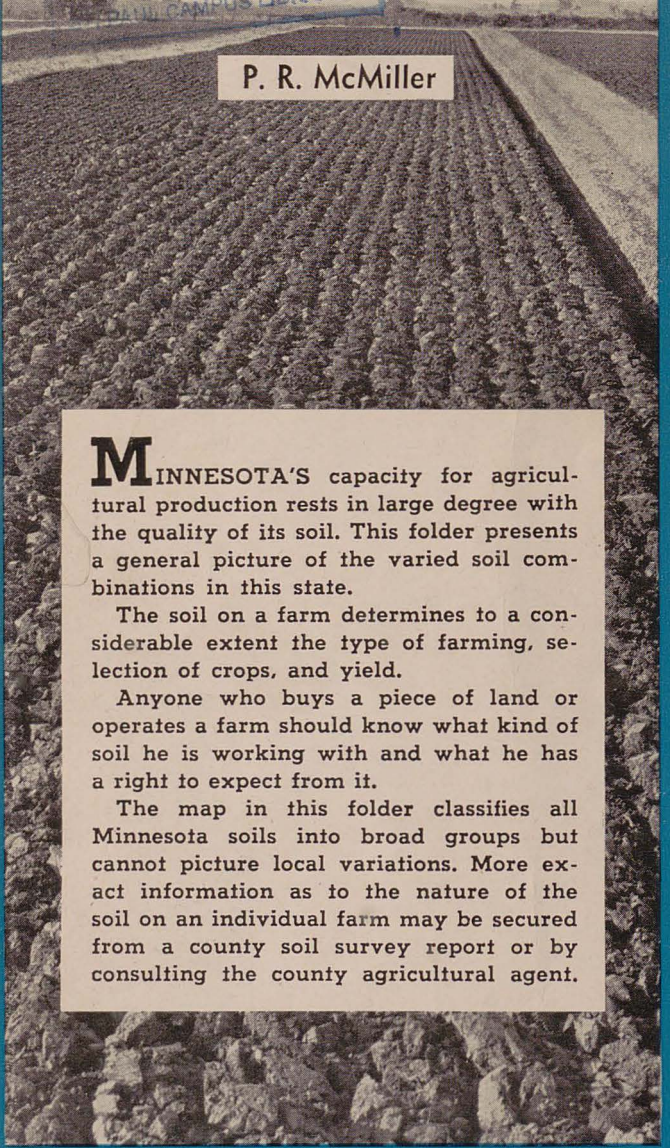
SOILS OF MINNESOTA

P. R. McMiller



MINNESOTA'S capacity for agricultural production rests in large degree with the quality of its soil. This folder presents a general picture of the varied soil combinations in this state.

The soil on a farm determines to a considerable extent the type of farming, selection of crops, and yield.

Anyone who buys a piece of land or operates a farm should know what kind of soil he is working with and what he has a right to expect from it.

The map in this folder classifies all Minnesota soils into broad groups but cannot picture local variations. More exact information as to the nature of the soil on an individual farm may be secured from a county soil survey report or by consulting the county agricultural agent.

UNIVERSITY OF MINNESOTA
Agricultural Extension Service
U. S. DEPARTMENT OF AGRICULTURE

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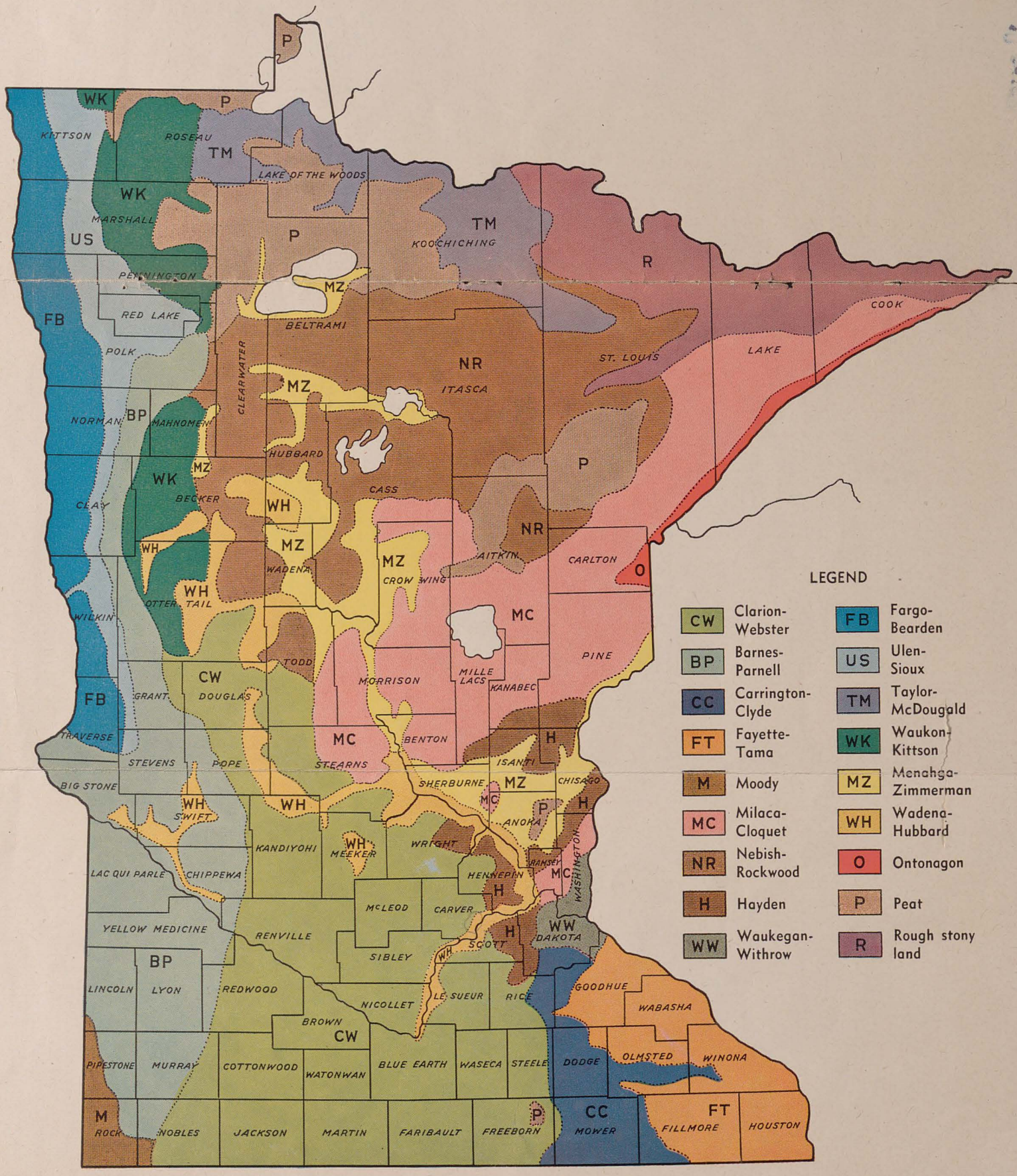

THE colored map on the other side of this folder shows the soils of Minnesota arranged in 18 large groups. On such a small scale map it has not been possible to show the great number of soil types in each group, but the soils in each association are closely related and have common features. Brief descriptions of the soil associations follow.

Clarion-Webster (CW)—Highly productive dark-colored medium- and fine-textured prairie soils generally well supplied with lime. The surface ranges from nearly level to rolling. It is an area of cash grain and intensive livestock production. The soils are unsurpassed for corn, small grains, and hay.

Barnes-Parnell (BP)—Dark-colored medium- and fine-textured prairie soils high in lime. The surface ranges from undulating to strongly rolling. The sale of livestock products and grain crops constitutes the principal source of income in this area.

Carrington-Clyde (CC)—Very dark brown to black loams and silty clay loams. The surface ranges from nearly level to gently rolling. Lime is deficient in some areas. Livestock and dairy farming predominates.

Fayette-Tama (FT)—Both dark- and light-colored silt loams on the uplands and in the valleys. The surface ranges from undulating to hilly. The upland soils are very susceptible to erosion but are highly productive when good soil management is practiced. On the upland soils, lime is needed for alfalfa. Dairy production is the principal type of farming.

Moody (M)—Dark silt loams derived from stone-free silty material. The surface ranges from undulating to rolling. Lime is generally abundant. Beef production predominates.

Milaca-Cloquet (MC)—Light-colored wooded soils of the cutover region ranging from sandy loams to loams with reddish brown sandy clay subsoils. The surface is gently rolling. Stones are abundant. The lime supply is variable. Dairy farming predominates.

Nebish-Rockwood (NR)—Gray wooded soils consisting of sandy loams and silt loams. The surface ranges from undulating to strongly rolling; many peat bogs occupy the depressions. Lime is plentiful. Agricultural development is limited; dairying prevails.

Hayden (H)—Grayish-brown forest soils with textures ranging from sandy loams to heavy loams. The surface is gently rolling to hilly. Erosion is severe on the steeper slopes. Lime is generally adequate. Mixed livestock farming, chiefly dairying, prevails. Near the Twin Cities potatoes and truck crops as well as apples and small fruits are grown extensively.

Waukegan-Withrow (WW)—Extremely variable in surface relief, color, and texture of both the surface soil and subsoil. The productivity ranges from poor to excellent. Erosion is serious on sloping lands. The lime supply is variable. Production of whole milk and truck crops for Twin City markets is important.

Fargo-Bearden (FB)—Black heavy silt loams and clays, derived from lake-laid deposits. The surface is nearly level and drainage is often inadequate. Lime is plentiful everywhere. The soils are very productive where well drained and are adapted to the production of small grains, sweet clover, corn (in the southern part), sugar beets, and potatoes

Ulen-Sioux (US)—Black sandy loams with sand or gravel subsoils. The surface ranges from nearly level to undulating. Gravel ridges, sand plains, and many poorly drained depressions occur. Some of the soils are drouthy and drift badly. Corn, rye, oats, wheat, and potatoes are grown extensively.

Taylor-McDougald (TM)—Gray wooded soils, ranging from sandy loams to clay loams, with many peat bogs and poorly drained areas of mineral soils associated with the better-drained uplands. The surface ranges from nearly level to undulating. Lime is plentiful. Dairying is the principal enterprise. Hay is an important crop and legume seed is produced.

Waukón-Kittson (WK)—Dark-colored soils derived from limy glacial material. The surface ranges from undulating to rolling. Rainfall is less abundant than in regions to the east and south. A large proportion of the land is devoted to small grains and tame hay. Livestock and dairy farming predominates.

Menahga-Zimmerman (MZ)—Light-colored sandy surface soils with sand or gravel subsoils. The surface ranges from undulating to gently rolling. The soils are acid and are not regarded as good for farming, owing to their drouthy nature and tendency to drift. Rye, oats, corn, and tame hay are the common crops.

Wadena-Hubbard (WH)—Dark-colored sandy soils. The surface soil and upper subsoil are fairly retentive of moisture but the sandy subsoil causes them to be drouthy. The surface ranges from gently undulating to rolling. Wind erosion is often serious. The lime supply is variable. Dairy farming prevails.

Ontonagon (O)—Gray wooded soils with heavy red clay subsoils. The surface ranges from undulating to rolling. Agricultural development is very limited.

Peat (P)—Plant remains in various stages of decomposition. Peat soils occur in low-lying wet situations and are not suitable for farming unless adequately drained and treated with fertilizers. Frost, flooding, and fires are crop hazards.

Rough stony land (R)—Includes rough stony land with outcrops of bedrock. Much of the soil is shallow and stony, unsuitable for farming.

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