

## **Identification of Important Farmland**

### **I. Prime Farmland**

#### **A. General**

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. The land could be cropland, pastureland, rangeland, forestland, or other land, but not urban built-up land or water. Prime farmland has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed according to modern farming methods.

In general, prime farmlands have an adequate and dependable moisture supply, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time. Typically they do not flood during the growing season or they are protected from flooding.

Examples of soils that qualify as prime farmland are Canton and Charlton soils, 3 to 8 percent slopes; Agawam fine sandy loam, 0 to 3 percent slopes; and Woodbridge fine sandy loam, 0 to 3 percent slopes.

#### **B. Specific Criteria**

Prime farmlands meet the following criteria. Terms used in this section are defined in USDA publications: Soil Taxonomy, Agriculture Handbook 436; Soil Survey Manual, Agriculture Handbook 18; Predicting Rainfall and Erosion Losses: A Guide to Conservation, Agriculture Handbook 537; and Saline and Alkali Soils, Agriculture Handbook 60.

##### **1. The soils have:**

- a) Aquic, udic, ustic, or xeric moisture regimes and sufficient available water capacity within a depth of 40 inches (1 meter), or in the root zone if the root zone is less than 40 inches deep to produce the commonly grown crops in 7 or more years out of 10; or,
- b) Xeric or ustic moisture regimes in which the available water capacity is limited, but the area has a developed irrigation water supply that is dependable (a dependable water supply is one in which enough water is available for irrigation in 8 out of 10 years for the crops commonly grown) and of adequate quality; or,

- c) Aridic or torric moisture regimes and the area has a developed irrigation water supply that is dependable and of adequate quality; and,
- 2. The soils have a temperature regime that is frigid, mesic, thermic, or hyperthermic (pergelic and cryic regimes are excluded). These are soils that, at a depth of 20 inches (50 cm), have a mean annual temperature higher than 32°F (0°C). In addition, the mean summer temperature at this depth in soils with a 0 horizon is higher than 47°F (8°C); in soils that have no 0 horizon, the mean summer temperature is higher than 59°F (15°C); and,
- 3. The soils have a pH between 4.5 and 8.4 in all horizons within a depth of 40 inches (1 meter) or in the root zone if the root zone is less than 40 inches deep; and,
- 4. The soils either have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow cultivated crops common to the area to be grown; and,
- 5. The soils can be managed so that, in all horizons within a depth of 40 inches (1 meter) or in the root zone if the root zone is less than 40 inches deep, during part of each year the conductivity of the saturation extract is less than 4 mmhos/cm and the exchangeable sodium percentage (ESP) is less than 15; and,
- 6. The soils are not flooded frequently during the growing season (less often than once in 2 years); and,
- 7. The product of K (erodibility factor) x percent slope is less than 2.0, and the product of I (soil erodibility) x C (climatic factor) does not exceed 60; and,
- 8. The soils have a permeability rate of at least 0.06 inch (0.15 cm) per hour in the upper 20 inches (50 cm) and the mean annual soil temperature at a depth of 20 inches (50 cm) is less than 59°F (15°C); the permeability rate is not a limiting factor if the mean annual soil temperature is 59°F (15°C) or higher; and,
- 9. Less than 10 percent of the surface layer (upper 6 inches) in these soils consists of rock fragments coarser than 3 inches (7.6 cm).

C. Additional Farmland of Statewide Importance

This is land, in addition to prime and unique farmlands, that is of statewide importance for the production of food, feed, fiber, forage, and oil seed crops. Criteria for defining and delineating this land are to be determined by the appropriate state

agency or agencies. Generally, additional farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce as high a yield as prime farmlands if conditions are favorable. In some states, additional farmlands of statewide importance may include tracts of land that have been designated for agriculture by state laws.

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