Appendix 8.12-2

Storie Index Classification System Description

Appendix 8.12-2
Storie Index Rating

The soils of the area are rated according to the Storie Index (20, 21). This index expresses numerically the relative degree of suitability, or value, of a soil for general intensive agriculture. The rating is based on soil characteristics only and is obtained by evaluating such factors as depth, texture of the surface soil, intensity of subsoil, drainage, salts and alkali, and relief. Other factors, such as availability of water for irrigation, climate, and distance from markets that might determine the desirability of growing certain plants in a given locality are not considered. Therefore in itself the index cannot be considered as an index of land value. The index rating is given in the "Guide to Mapping Units" section of the Eastern Fresno Soil Survey document.

Four general factors are considered in the Storie Index rating. These factors are (A) the characteristics of the soil profile—particularly permeability and soil depth; (B) the texture of the surface soil; (C) slope; and (X) other factors or limitations, such as nutrient level, flooding, drainage, salts and alkali, erosion, and micro-relief. Each of these four general factors is evaluated on the basis of a "100 percent" rating. A rating of 100 percent expresses the most favorable, or ideal condition; and lower percentage ratings are given for conditions less favorable for crop production.

The Storie Index rating for a soil is obtained by multiplying the four factors, A, B, C, and X; thus, any factor may control the final rating. For example, a soil may have an excellent profile justifying a rating of 100 percent for factor A; excellent texture of the surface soil justifying 100 percent for factor B; a smooth nearly level surface justifying 100 percent for factor C, but a high accumulation of salts of alkali that would give a rating of 10 percent for factor X. Multiplying these four ratings gives an index rating of 10 for this soil. The high accumulation of salts or alkali would dominate in determining the quality of the soil, render it unproductive for crops, and justify the low index rating of 10 consistent with a "most-limiting factor" analysis.