

SECTION III - GUIDANCE DOCUMENTS

Cropland

Planning Resource Management Systems (RMS)

Successful resource management on cropland is the correct application of a combination of practices that will meet the needs of the total cropland ecosystem--the soil, water, air, plant, and animal (SWAPA+H) resources--and the objectives of the land user. The land user's objective must be consistent with the potential production capabilities of the resources.

The minimum criteria that must be met on cropland for each of the resource concerns is explained in Section III Quality Criteria of the Field Office Technical Guide (FOTG).

In planning a cropland RMS, Conservation Crop Rotation is the foundation on which the RMS is built. In other words, a sequence of crops such as row, grain, grass, and/or legumes that produce adequate amounts of organic residue for soil maintenance or improvement and their management is ESSENTIAL. The management of crop residues through the use of Residue Management on dry cropland is also an ESSENTIAL component of a cropland RMS. They provide the minimum guidelines necessary for erosion control and management of crop residues. Pest and Nutrient Management if pesticides and/or nutrients are being applied, and Irrigation Water Management on irrigated cropland are also ESSENTIAL components of a cropland RMS.

All other practices planned on cropland are to both facilitate the application of the ESSENTIAL practices, and are identified as FACILITATIVE, or to treat an identified problem, and are identified as ADDITIONAL practices. These ADDITIONAL practices are planned when necessary to treat specific resource problems to meet the criteria for managing the SWAPA+H resources.

Resource Management Systems include a combination of practices that are:

1. **ESSENTIAL:** These practices are recommended to successful management of cropland and are generally planned in the RMS. ESSENTIAL practices are Conservation Crop Rotation, Pest and Nutrient Management if pesticides and/or nutrients are being applied, Residue Management on Dry Cropland, and Irrigation Water Management on Irrigated Cropland.
2. **FACILITATIVE:** These practices enhance the ESSENTIAL practices on cropland.
3. **ADDITIONAL:** These practices become ESSENTIAL when conditions make their application necessary to achieve the quality criteria for the resource, and the landowner's objective.

A RMS on cropland is developed with the landowner through the planning process. A RMS generally includes the ESSENTIAL practices plus a combination of FACILITATIVE and/or ADDITIONAL practices whose combined effects will meet the criteria established for each resource (SWAPA+H). When multiple land use is an objective, the needs of each use and effects of each practice must be considered in the selection, application, and design of each practice to ensure compatibility. The RMS must also meet the quality level of cropland. The quality level is defined as: Soil loss values for sheet, rill, and wind erosion will not exceed "T" and, the soil condition rating index will reflect a positive soil condition.

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Following is a listing of conservation practices divided in ESSENTIAL, FACILITATIVE, and ADDITIONAL categories. This list is not intended to be all-inclusive. See FOTG Section IV for a complete list of practices and individual practice standards for applicable land use.

ESSENTIAL

Conservation Crop Rotation
Residue Management¹
Irrigation Water Management²
Pest/Nutrient Management³

FACILITATIVE

Mulching
Cover Crop
Field Border
Windbreak/Shelterbelt Establishment

ADDITIONAL

Filter Strip
Deep Tillage
Waste Utilization
Irrigation System
Conservation Cover
Nutrient Management
Pasture and Hay Planting
Surface Roughening
Toxic Salt Reduction
Erosion Control Structures
Field/Cross Wind Stripcropping
Surface and Subsurface Drainage
Riparian/Herbaceous Forest Buffer
Upland Wildlife Habitat Management
Anionic Polyacrylamid (PAM) Erosion Control

¹ On dry cropland

² On irrigated cropland

³ If pesticides and/or nutrients are used

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The following Guide Sheets give examples of a RMS on cropland. Resource settings and problems are described and combinations of practices outlined to develop a RMS to meet the cooperators objectives and the quality criteria for the resource problems identified.

The Guide Sheets are to be used as guides only to help understand the thought process used during the planning process and to assess the effects of conservation practices on the considerations and problems associated with the five resources.