

Sediment

FALLOW MANAGEMENT

Frequent 'clean' cultivation exposes soil to erosion, destroys soil structure and results in the loss of soil moisture.

Soil cover protects the soil from erosion by reducing the displacement (movement) of soil particles caused by rain or overhead irrigation droplets, and by slowing the movement of water across the site.

Types of soil cover include:

- green manure/cover crops planted between (in space and time) commercial crops
- organic mulches, plastic, slashed inter-row material or crop residues spread over the exposed soil, and
- products such as polyacrylamide (PAM), polyvinyl acetate (PVA) or molasses which bind soil together.

Control measures may include:

- avoiding soil tillage (where possible) during times of the year when heavy rainfall events are likely, especially in tropical areas
- avoiding cultivation of light sandy soils subject to regular flooding
- using minimum tillage systems that minimise mechanical disturbance of the soil
- using permanent bed systems that improve soil structure and soil stability through maintaining or improving soil organic matter levels
- planting green manure or cover crops during the period between commercial crops to cover the soil and increase soil organic matter levels for improved soil structure, stability and fertility
- under sowing or planting in the inter-row area at the same time as commercial crops
- leaving crop residues (where possible) on site until the area is next required
- minimising the time soil is left exposed between harvest and planting of the next crop, and
- establishing permanent grass or vegetation cover on areas that are not cropped.

During the period between successive horticultural crops, green manure crops or cover crops can provide the following benefits:

- protect the soil from erosion
- produce organic matter
- maintain soil biology
- add nitrogen (if they are legumes)
- break disease cycles
- compete against weeds.

*Information in this fact sheet has been obtained from the following resource and is gratefully acknowledged.
Draft Chapter 14 Soil Conservation in Horticulture, Bruce Carey, retired Soil Conservation Officer DSITIA.*

*Disclaimer: This information is provided as a reference tool only.
Please seek professional advice.*

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