

# Managing soil erosion in vegetables

## See what's working for South East Queensland growers

### Why control soil erosion?

Losing topsoil from your farm is like losing money down the drain—it's gone forever. The topsoil is the most fertile part of the soil and the first part lost through erosion. Most growers are aware of the effects of soil erosion on farm productivity.

But there's another side to the erosion story. What happens to the soil and its nutrients if lost through water erosion? It can damage the environment—both on or near your farm, and even kilometres away downstream or out to sea.

Silt and nutrients can upset the ecological balance of streams, wetlands, marine grass beds and reefs. This can result in algal blooms, aquatic weed infestations, reduced populations of fish and other aquatic and marine species, and reef damage.

Concerns about these issues may eventually affect your farming operations in ways such as increased regulation, restricted access to resources and increased demand for environmental responsibility from banks and your customers.

The best way to deal with these community pressures is to improve practices to prevent soil and nutrients leaving your farm.

### Ways to reduce soil loss from your farm

Reduce the potential of water to cause erosion by:

- stopping external water flowing onto and through your paddocks
- removing water safely from paddocks
- reducing water speed flowing across the land
- creating stable seedbeds that resist erosion
- maintaining a protective ground cover.



# Fact sheet

See what other vegetable growers in South East Queensland are doing to reduce erosion.

## Examples of good practices



This area has been cultivated to prepare for planting. The grower avoids cultivating through low drainage areas and maintains a grass cover over these areas.

Water rushes through this corridor during heavy rain and would erode large quantities of soil if left bare. The grass cover also traps silt in water flowing from the cultivated areas.



Diversion banks were established here to prevent water from the slope flowing across the paddocks and carrying topsoil into creeks and rivers. The grower maintains grassed headlands and drainage areas to divert storm water safely from the farm.

The paddock in this photo has a lucerne crop, which is often grown in rotation with vegetables in this region.



The two pipes and overfill of soil allow machinery to travel over this drainage area, not through it.

This simple, inexpensive 'bridge' provides all-weather access for vehicles and equipment, protects vegetation cover over the drainage area and so reduces soil loss to creeks and streams during water flow.



A mulch crop has been sown between crop rows after laying plastic mulch. The grower uses oats or barley for the autumn mulch crop, relying on rainfall to germinate and grow it. One of the risks is lack of rain at the right time.

The mulch crop is sprayed out with herbicide before it seeds, and the dead material forms an ongoing mulch blanket in the inter-row area.

Note the eroded bare patch in the foreground.



Here, the grower has created a diversion bank and grassed headland. Water is directed along the headland and safely into a creek running adjacent to the property. This prevents water flowing down and eroding the sloping land on the left.

When preparing land for vegetables, this grower does not rip or cultivate through the headland.





A millet crop is grown during the fallow period between vegetable crops.

The fallow crop provides soil cover for erosion control and adds organic matter to improve soil health. Organic matter also helps to bind soil particles and improve water infiltration, making the soil less susceptible to erosion.



A grassed drain and diversion bank have been constructed on the uphill side of this track.

The drain prevents water flowing onto the track and cultivated area below. Water flows along the grassed drain to the creek in the background.



This dam collects runoff water from the vegetable farm on the right. It also acts as a silt trap. The grower can collect trapped silt from the dam when it's empty and return it to his paddocks.

Silt traps are really a backup and are most useful in combination with other erosion-preventing strategies.

The best strategy is to prevent soil loss from your paddocks in the first place.



This grower prevents erosion through permanent mulch and no cultivation. The first mulch crop is grown and sprayed off with herbicide. Future bean and mulch crops are then seeded into the annually replenished mulch mat (as seen in this photo). As a result the soil is never bare.

This system requires special management and machinery adapted for sowing into the mulch.

## More information

- See how you rate in your erosion control practices: 'Managing soil erosion in vegetables—how well am I doing?' is available from the Department of Primary Industries and Fisheries (DPI&F). This fact sheet discusses the practices featured here plus other ways to control soil erosion in vegetable cropping.
- *Healthy soils for sustainable vegetable farms* – Ute Guide (AUSVEG Ltd 2007)  
Contact AUSVEG:  
Tel: (03) 9544 8098  
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Email: info@ausveg.com.au
- Soil erosion fact sheets from NSW Department of Primary Industries are available at [www.agric.nsw.gov.au](http://www.agric.nsw.gov.au) (go to 'Natural resources, environment and climate', then 'Soil health and fertility', then 'Soil erosion').

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