



Good riparian management enhances wildlife habitat.

DOES IT BENEFIT THE ENVIRONMENT?

Riparian management has been implemented, to a greater or lesser extent, in many countries besides New Zealand. Its environmental effects have been the subject of much scientific study. Here are some of the findings.

Improving water quality

Dense ground cover on banks (such as ungrazed or laxly grazed pasture) filters sediment out of surface runoff. Sediment levels in waterways are thereby reduced.

Swamp vegetation (such as rush or sedge) on or near streambanks helps remove nutrients, particularly nitrogen, from emerging groundwater before it enters streams.

Where fences deny or restrict stock access, animal dung and urine are eliminated from waterways. Water contamination by organic pollutants, and also by associated pathogens, is minimised.

Tall-growing riparian vegetation (such as trees) minimises daily temperature fluctuations by reducing solar energy input to waterways. Water temperatures are kept cool and less algal growth occurs.

Controlling streambank erosion

Shrubs and trees with extensive fibrous root systems stabilise streambanks. Bank collapse is greatly reduced, and channel migration largely controlled, thereby protecting adjacent farmland and buildings.

Dense vegetation, for instance rank grass or low shrub cover, traps silt and stores it temporarily on banks. Eventually, the build-up is scoured away and transported out to sea by a large flood.

Reducing flood impact

Removal of inappropriate vegetation, like crack willows or blackberry, enables freer passage of water through floodplains. This

reduces overbank flooding and siltation on adjacent river terraces.

Enhancing habitat

Restoring riparian vegetation - whether indigenous or exotic - creates habitats for wildlife. Corridors for bird and fish migration can be formed from the mountains to the sea, if continuous riparian vegetation is restored. Food, shelter and seclusion are created for waterfowl, fish, crustaceans and insects.

DOES IT BENEFIT THE FARM?

Whatever is spent on it, riparian management gives a return on investment. Here are some of the ways.

Clean water brings fewer blockages in the pipes that draw water for stock, irrigation or dairy sheds, with less wear and tear on pumps and spray-lines.

If cattle are not able to drink directly from the stream then they will not be exposed to liver fluke.

Streambank fences enable easier stock control when mustering, keep sick stock out of streams, and reduce stock deaths by drowning, falling down steep banks, or getting bogged.

Trees on banks, as well as shading and sheltering stock in the adjacent paddock, provide timber for on-farm use if they're silviculturally managed.

Farmers and their families don't just get a farm landscape that's enhanced by trees and shrubs. They also have a better environment for sports such as fishing and shooting, and also for recreational pursuits like boating, swimming or picnics.

Perhaps most importantly, streambank management gives better product quality, together with the marketing advantage of a 'clean green image'. Improved milk grades are obtained where dairy sheds no longer draw water from contaminated streams. On sheep and beef properties, stock are in better health and have faster weight gain

For further advice or information about sustainable land management contact:

TARANAKI REGIONAL COUNCIL

Land Management Section
Private bag 713, Stratford
Ph: 06 765 7127
Fax: 06 765 5097 www.trc.govt.nz

when water sources are no longer contaminated by pathogens. Processing plants are increasingly likely to pay a premium for produce from farms demonstrably managed in a way that doesn't damage the environment. In future years it will be easier for them to export it, now that overseas markets are starting to demand evidence that what's being purchased is contaminant-free and environment-friendly.

DOES IT HAVE BENEFITS OFF THE FARM?

Yes. Here are some of the places and people who'll benefit.

Downstream neighbours will have cleaner water, if stock are kept out of watercourses on the farm. Upstream neighbours will have less flooding, if fallen trees and other obstructions are removed. Neighbours on opposite banks will have less bank erosion, if the channel inbetween is kept clear.

Anglers and hunters will have a better chance of catching a fish or shooting a duck, as wildlife habitat improves.

Recreational users - at swimming holes, picnic spots and reserves downstream - will have a more pleasant and healthier environment, once entry of sediment, dissolved chemicals and organic pollutants into the water is minimised.



Clean reticulated water is better for stock health

WHAT DOES IT COST?

No gain without pain - management of streambanks obviously doesn't come cheap.

The single greatest cost is fencing. This can be as great as \$16 a metre for a standard post, batten and wire fence - but can also be as little as \$2 a metre, if a farmer builds low-cost systems himself.

Alternative water supply can cost more than \$1000 a paddock, if a pump, pipe and trough are installed in each - but less than \$100 a paddock by gravity-feeding a trough that can be shared between paddocks by innovative fence design.

Revegetation costs as much as \$1000 a hectare for close-planting of commercial timber species by contract labour - or virtually nothing by waiting for natural regeneration of native shrubs.

A question that is often asked, is 'How much grazing will I lose?'. The answer is 'Less than you think'.

A kilometre of stream, retired to a width of 5 metres on both banks, amounts to 1 hectare of land - about enough to support less than two dairy cows, or a dozen sheep through the year. The pasture that's lost is of moderate quality, due to wetness and weed infestation along the banks.

WHERE IS STREAMBANK MANAGEMENT FEASIBLE?

The banks of streams that flow year-round, through valley bottoms, river terraces, floodplains and wetlands, can be easily managed. They occupy just a small part of farms, are accessible, and can be fenced without inordinate expense or undue disruption to grazing management.



Water-based recreation is more fun where the water is clean.

For further advice or information about sustainable land management contact:

TARANAKI REGIONAL COUNCIL

Land Management Section

Private bag 713, Stratford

Ph: 06 765 7127

Fax: 06 765 5097 www.trc.govt.nz