

## Natural capital grows resilient farm landscapes in Starborough-Flaxbourne



Farmers can develop resilient farm landscapes and adapt their farm management to meet the challenges of drought and the prospect of other severe climatic changes.

Resilient farm landscapes are based on the sustainable use of the farm's natural resources (the climate, soil and water) to grow natural capital (plants and animals), adapted to the farm environment.

The sustainable use of natural resources to produce natural capital is the basis for sustainable farming.

### Opportunities to grow natural capital

**Match pasture production to climate and soils**

**Match stock production to pasture production**

**Reduce stock pressure by reducing numbers and/or increased subdivision**

**Irrigate fertile land**

Opportunities for irrigation are being investigated for the Starborough-Flaxbourne area. Sustainable water sources can be drawn on to diversify farm production by irrigating vineyards, horticultural crops, or high producing pastures.

**Plant fodder shrubs to combat erosion with good vegetative cover**

Plant eroding hill slopes with stock fodder plants like saltbush and tagasaste. These have rapid growth rates and develop deep root systems. Well established plants intercept rainfall and slow surface runoff. They shade the soil, reduce ground temperatures and minimise evaporation. Over a period of time, leaf litter and soil organic matter build up, which increases soil moisture holding capacity and stabilises eroding hill slopes. Once established, these plants can be grazed and provide stock shelter and shade.

**Plant shelterbelts and shade trees**

A framework of shelter and shade trees will benefit stock throughout all seasons. Shelter reduces lambing losses in early spring while shade in summer improves animal welfare. Shelter also enhances pasture and crop production and reduces soil loss from wind erosion.

Establish permanent shelterbelts and groups of trees using long-living species, for example oaks and ashes, possibly totara. If quick growing shelter is required then tagasaste or eucalypts can be used.

**Manage native scrub to provide shelter and shade and protect hill slopes**

On some hill country, regenerating native grey scrub and silver tussock can provide valuable stock shelter and shade. This woody vegetation cover will protect hill slopes from erosion. Where scrub becomes too extensive, clear areas selectively by root-raking and/or chemical spraying rather than burning.



**Trees, shrubs and native vegetation could transform the Starborough - Flaxbourne landscape.**

## Create farm reserves to protect and restore natural biodiversity

South Marlborough's native vegetation has many special features due to a wide diversity of natural habitats with some unique endemic plant species that are adapted to surviving the dry conditions.

Significant natural areas can be rocky bluffs or coastal cliffs; riverbeds and dunelands; remnant or regenerating gully or hill forest; or riparian vegetation along streams and around wetlands.

These natural areas can be protected and restored by creating farm reserves in partnership with the Marlborough District Council under the Significant Natural Areas (SNA)

project. The Council offers advice and field assistance as well as financial support. Support can also be sought from Government's Biodiversity Fund, the QEII National Trust, and the Department of Conservation.



**The Avery family has protected this wetland area, in partnership with the Marlborough District Council under the Significant Natural Areas programme.**

## Plant woodlots to produce timber suitable for on farm use or sale.

Where there is good access and suitable sheltered sites, establish small-scale farm woodlots to produce naturally durable farm timber that can be sawn on site. Suitable durable timber species that are adapted to drylands include stringybarks, ironbarks and box eucalypts. These mature in the medium term (25 – 50 years). Oak, and possibly totara could also be planted to mature over a longer term (50+ years). Woodlots require fencing to protect new plantings and with pruning and thinning, can produce valuable timber. Once established, these woodlots also provide shelter and shade.

## Develop farm tourism

Tourism offers the wider farm community the opportunity to diversify its economy and provide an alternative income source. Starborough and Flaxbourne are well positioned, being located on SH 1. When high evapotranspiration as well low rainfall is taken into account, this is one of New Zealand's driest districts and oldest farm landscapes, with unique biodiversity and coastline. Successful farm tourism could be based on telling the stories of the district's fascinating natural and cultural history; opening the doors to historic homesteads and gardens; and developing walking and cycling routes, in partnership with others in the community.

## Successful farm development and management requires skills and knowledge to utilise unique natural resources to create an adaptable and resilient farm operation

The various opportunities outlined above are better suited to some properties than others ... and to some farmers and not others. Farm development and management decisions will therefore differ from one property to the next. Farmers need to select the opportunities that suit their skills and knowledge, and the unique natural resources of their property, to create a successful dryland farming operation that is adaptable, resilient and can grow their natural capital.

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