



Agroforestry Plans



Introduction

In Taranaki's eastern hill country, farms include very unstable steep faces where pasture growth and stock numbers are repeatedly depleted by erosion. Even in the ash-mantled frontal hill country, many farms have pockets of steep land, for instance terrace edges, which are unstable and difficult to graze.

The Taranaki Regional Council advocates conversion of steep erodible land to forestry, on faces where trees can be safely grown and harvested, and scrub retention or reversion to stabilise land too unstable for commercial forestry. The Council recognises that wholesale forestry conversion is neither necessary nor desired, and that afforestation is more likely to take the form of farm woodlot establishment on suitable land, enclosed by pasture or by scrub or bush.

Purpose of an agroforestry plan

Agroforestry plans model the effects of a sustained tree planting and felling scheme on a property, while working within the farm's physical and financial constraints.

Land management issues that are tackled in an agroforestry plan include:

- Farm woodlots
- Farm shelter
- Scrub or bush retirement
- Fencing subdivision
- Track layout
- Impact on stock numbers and farm income

The plan is supplied free, because the Council believes it is a co-operative way to help landowners move towards more sustainable use of their land and better protection of the region's environment.

Contents of an agroforestry plan

An agroforestry plan contains:

Objectives - states the owner's objectives; usually to establish woodlots for supplementary income, while retaining sufficient land in pasture to maintain base income from grazing.

Description of property - after a brief summary of tenure, size and location, describes landforms, soils and vegetation.



A farm woodlot on steep terrain.

Land use capability - this section arranges different kinds of land on the farm, according to those properties that determine its capacity for permanent sustained production. They are categorised as 'land use capability units' (LUC units for short). An attached map shows where they lie, with respect to paddock fences, access tracks, and water supply. Stock carrying capacities and pine tree growth indices are given for each LUC unit. So is a general indication of the soil conservation measures that are needed - if any.

Forestry proposal - a schedule for establishing woodlots, and undertaking silviculture if desired. Pine woodlots are usually proposed, with alternative species like cypress, gum or wattle on request. An attached map shows location and size of woodlots, relative to land remaining in pasture.

Estimate of costs - provides cost for each element - land clearance if required, fencing if needed, planting, pruning, thinning, weed and pest control.

Implementation - recommended schedule for implementing each stage, year-by-year.

Cashflow - farm cashflow can be modelled using the AEM computer program, to estimate the impacts of tree planting, lost grazing, silviculture, and eventual timber harvest. This is a hypothetical exercise assuming current costs and prices. It need not always be carried out; a simple check of stock carrying capacity for the residual area in pasture, may suffice to indicate whether there will still be sufficient base income from livestock, if all the proposed woodlots are established.

How to do it - technical advice e.g. radiata compared to alternative species, stand density, planting technique, pruning and thinning regimes to optimise timber yield. This is appended as information sheets about each topic.

Recording progress - a form for keeping track of woodlot establishment, silviculture, weed and pest control, any problems that need fixing.

For further advice or information on sustainable land management contact:

The Land Management Section,
Taranaki Regional Council,
Private Bag 713
Stratford

Ph: 06 765 7127 Fax: 06 765 5097
