

Soil name: **Honeywood**

Overview

Honeywood soils occupy about 700 ha on remnant high terraces in the Mossburn/Castlerock district of northern Southland. They are formed into a thin layer of loess overlying moderately to strongly weathered gravelly alluvium derived from dominantly greywacke rocks. Soils are imperfectly drained, shallow to moderately deep, and have moderate plant available water. Present use is pastoral farming with sheep and beef cattle and some cropping. Climate is temperate with cold winters and occasionally dry summers when soils can be dry.

Physical properties

Honeywood soils have a moderately deep rooting depth (60–90cm) and a moderate plant available water content. The soils are imperfectly drained, with a slowly permeable subsoil that may cause aeration limitations during wet periods. Textures are silty clays, with a topsoil clay content of about 35–45%. Gravel can occur throughout the profile.



Honeywood profile

Fertility properties

Topsoil organic matter values are about 8%; P-retention 30–50% and topsoil pH moderate (high 5s). Subsoil Ph values are low (low 5s). Cation exchange values are moderate with base saturation levels high, grading to low in the subsoil. Available calcium values are high with magnesium and potassium values moderate. Soil reserve phosphorus levels are low. Micrinutrient levels are generally adequate.

Associated and similar soils

Some soils that commonly occur in association with Honeywood soils are:

- Dipton: poorly drained shallow soil on a terrace
- Glenure: poorly drained deep to moderately deep soil on terraces and downlands

Some soils that have similar properties to Honeywood soils are:

- Kaweku: occurs on similar surfaces in the Waimea Plain; are well drained with silt loam topsoil textures
- Benio: on older terraces; generally more leached and gravels are strongly weathered
- Wairaki: occur on high terraces from the Takitimu Mountains
- Oreti: occur on intermediate terraces; gravels only slightly weathered with a cemented pan

Sustainable management indicators

Note: the vulnerability ratings given in the table below are generalised and should not be taken as absolutes for this soil type in all situations. The actual risk depends on the environmental and management conditions prevailing at a particular place and time. Specialist advice should be sought before making management decisions that may have environmental impacts. Where vulnerability ratings of Moderate to Very severe are indicated, advice may be sought from Environment Southland or a farm management consultant.

Vulnerability factor	Rating	Vulnerability compared to other Southland soils
Structural compaction	moderate	These soils have a slight vulnerability to structural degradation by long-term cultivation, or compaction by heavy stocking and vehicles. This rating reflects the imperfect drainage, offset by the moderate to high clay content.
Nutrient leaching	severe	These soils have a slight vulnerability to leaching to groundwater. This rating reflects the moderate water holding capacity, offset by the imperfect drainage and slowly permeable subsoil.
Topsoil erodibility by water	slight	Due to the moderate to high clay content, topsoil erodibility in these soils is slight. Erodibility is highly dependent on management, particularly when there is no vegetation cover.
Organic matter loss	moderate	Vulnerability to long-term decline in soil organic matter levels is partly dependent on soil properties and highly dependent on management practices (e.g., crop residue management and cultivation practices).
Waterlogging	moderate	These soils have a moderate vulnerability to waterlogging during wet periods. This rating reflects the imperfect drainage and slow subsoil permeability.

General landuse versatility ratings

Note: The versatility ratings in the table below are indicative of the major limitations for semi-intensive to intensive land use. These ratings differ from those used in the past in that sustainability factors are incorporated in the classification. Refer to the Topoclimate district soil map or property soil map to determine which of the soil symbols listed below are applicable, then check the versatility ratings for that symbol in the appropriate table.

HjU3 (Honeywood undulating shallow)

HjU2 (Honeywood undulating moderately deep)

Versatility evaluation for soil HjU3,HjU2

Landuse	Versatility rating	Main limitation
Non-arable horticulture	Moderate	Inadequate aeration during wet periods; risk of short-term waterlogging after heavy rainfall
Arable	Moderate	Inadequate aeration during wet periods; risk of short-term waterlogging after heavy rainfall
Intensive pasture	Moderate	Inadequate aeration during wet periods; vulnerability to leaching to groundwater.
Forestry	Moderate	Vulnerability to sustained waterlogging; restricted rooting depth for moderately deep phase.

Management practices that may improve soil versatility

- Careful management after heavy rain and wet periods will reduce the impact of short-term waterlogging.
- Intensive stocking, cultivation and heavy vehicular traffic use should be minimised during these periods.