



What chance for the natives?

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Over the past 200 years, native biodiversity in lowland New Zealand has been largely replaced by exotic crops, grasses, trees, and weeds.

Farm development for intensive production systems, such as dairying, grape-growing and horticulture, has also removed most native organisms. Only a few tough, weedy natives – for example, flax, raupo, bracken, grassgrub and pukeko – tend to survive.

Extensive pastoral farming, such as on hill country, leaves more native biodiversity than intensive farming, but even there fire, heavy grazing, pests and weeds have reduced many of the more abundant natives, such as native grasses, and eradicated less resilient native plants, insects, birds and reptiles.

It's not surprising then that monitoring of New Zealand's biodiversity over the past 30 years shows that intensification of land use has further reduced the amount of native flora and fauna. Reversing or even stabilising this loss will come at a cost, raising the question as to what biodiversity is worth to an individual farmer.

We have to be realistic. At present, native biodiversity on intensively farmed landscapes is not worth much in terms of operating profit but it can contribute considerably to the asset value of the farm (a stand of native bush adds aesthetic and other value, which is appealing to farm purchasers).

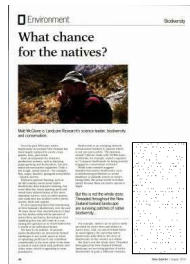
Biodiversity is an emerging element in businesses freedom to operate which is not just euro-centric. The Japanese-owned 7-Eleven chain with 34,200 stores worldwide, for example, expects suppliers to "Conserve biodiversity by being actively engaged in conservation activities".

While some research suggests benefits from native biodiversity, such as maintaining pollinators or useful predatory or parasitic insects or insect-eating birds, the actual worth in dollars purely because these are native species is slight.

But this is not the whole story. Threaded throughout the New Zealand lowland landscape are surviving patches of native biodiversity...

For example, shelter can be just as easily provided by exotic trees and shrubs as native trees. And, on most lowland farms in most regions, the surviving native biodiversity adds little to the store of biodiversity in the country as a whole.

But this is not the whole story. Threaded throughout the New Zealand lowland landscape are surviving patches of native biodiversity of quite a different character.



These include not only the obvious stands of bush, reed-edged lakes or swamps, but also sites with inconspicuous, low-growing shrubs, sparse dry grassland, crumbling cliff edges, barely wet hollows, road verges under a stand of pines and many others.

While these areas typically have little production potential and so are barely or not worth developing, they often contain an abundance of plants and animals seen nowhere else. As development pressure increases, great care is needed to ensure these refuges are not trimmed, ploughed, drained, or burned.

A lot can be gained simply by ensuring they are fenced off and the pests and weeds controlled. If these areas are sufficiently large, farmers may be able to

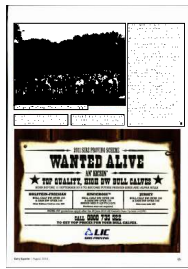
benefit from payments for carbon storage (see for example, the Landcare Research EBEX 21 programme for land owners at www.ebex21.co.nz).

So what is the intrinsic value of this on-farm biodiversity, which is usually at the heart of the tension between farmers and conservationists?

From the viewpoint of a farmer who is denied use of a portion of their land because of a rare insect, plant or lizard, native biodiversity has a negative value – that is, the profit foregone by not developing or using fully that particular piece of land.

In stark contrast, some conservationists act as though the value of on-farm





biodiversity is infinite and refuse to accept it can have any price at all. They're concerned that piece-meal management of endangered native biodiversity as a result of thousands of individual farm-centred decisions will result in its further loss (and possible extinction). So it's not surprising that impasses arise between farmers and those concerned with conservation.

There are ways in which these tensions can be lessened with a better outcome for all.

Unfortunately, there are few cost-free solutions at the moment, with most of the cost and decision-making at farm level.

But the survival of biodiversity is a collective responsibility and not just that of landowners. The whole community benefits from farming, and so has a

responsibility to contribute towards the survival of biodiversity.

In the lowlands, in particular where farms are generally smaller than 250ha, this means in some districts and catchments we need to think beyond the farm to the wider landscape.

If we take this approach voluntarily, and engage the resources of the whole community and those of farmers (and the milk processors), we will be able to work together to achieve what would be impossible farm by farm. A lot could be achieved for biodiversity, the image of farming and the wider public.

It will not necessarily be easy, but if we all contribute in a coordinated manner native biodiversity and profitable farming can co-exist. ■



There are significant areas of native bush on many dairy farms