

## Protecting the Western Cape's biodiversity

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*News of the establishment of the Biodiversity and Wine Initiative that promotes sustainable wine growing practices and protects the enormously varied and rich Cape floral kingdom has been welcomed by Ernst le Roux, whose role includes the overseeing of all viticulture on behalf of Nederburg.*

The smallest and richest plant kingdom on earth, recognised internationally as a World Heritage Site, the Western Cape is faced with the threat of the progressive eradication of indigenous plant, animal and insect life in the face of the increased scale of commercial agriculture and property development.

'The initiative is a critical move given the ecological importance of the Western Cape. It can minimise the further loss of threatened natural habitat, while providing a platform from which to highlight the wealth of biodiversity that contributes to the region's very distinctive wines.'

Nederburg was the first winery evaluated in the pilot study that led to the establishment of the Integrated Production of Wine (IPW) in 1998 and to which now over 95% of the Cape's wine growers subscribe. The wide-ranging set of eco-friendly guidelines that embrace all facets of wine production, from viticulture and winemaking to cellar architecture, bottling, labelling and waste management, is considered one of the most progressive in the world, with IPW serving as the benchmark for many other wine growing countries.

'One of IPW's central tenets is that wine production should proceed in harmony with nature. So the guidelines of the Biodiversity and Wine Initiative, which are set out in the Biodiversity Bill, will soon be incorporated into the IPW code,' says Le Roux.

The bill is scheduled to become law before the end of 2004, he says. However, Nederburg has already been implementing the guidelines and has indicated its willingness to be involved in the ongoing evolution of conservation practices.

'We have been part of the planning of the initiative and are very excited about our collaboration and the role we can play.'

Speaking about what has already been done by greater numbers of Western Cape wine growers, he says: 'Increasingly wine growers are eradicating water thieving-aliens like blue gums, pines and alien grasses.' But he stresses that the methods of alien removal have to be applied with extreme care. 'Heavy machinery often causes even worse environmental damage and can lead to an even faster regrowth of aliens. We have elected to work with the Department of Forestry, and have been doing so for a number of years. Referring to the experts helps to avert potential environmental damage during removal and gives us an additional resource in garnering support from neighbouring farms to avoid re-infestation of unwanted plants.'

Wine growers are also establishing islands of *fynbos* around and even between vineyards to re-introduce indigenous vegetation and re-establish eco-systems where insect life can play a greater role in curbing vine disease. Le Roux says some create natural vegetation buffers around water courses and wetland systems. In the case of newly established vineyards, growers are also taking greater care than in the past when laying out farm roads to bypass sensitive ecological wetlands and rare plant populations, and to minimise soil erosion.

He points out that legislation has already been in place for more than 20 years to ensure landowners

apply to the national Department of Agriculture before establishing vineyards where the natural vegetation, especially *fynbos*, *renosterveld* and succulent *karoo*, has been undisturbed. 'Before planting a single vine in such terrain, you have to undertake an environmental impact study, as most lowland areas, (below 600 metres), with intact natural vegetation in the Western Cape are rated high priority conservation areas.'

Renowned viticulturist Dr Eben Archer says the time is not far off when unproductive vineyards or those planted to varieties ill-suited to location, could be replanted to *fynbos*. 'By using better viticultural management, we can increase yields and quality and reduce pressure on land.'

Landowners with endangered vegetation growing on their farms are encouraged to become involved in the Conservation Stewardship Programme. In return for entering into formal contracts with Cape Nature Conservation to conserve critical sites, they are assisted in removing alien vegetation, in managing their land, granted property rate rebates and offered other incentives.

'Nederburg is already benefiting and we are urging others to do the same,' says Le Roux.

On the subject of integrated pest management, Archer talks of measures to increase the populations of guinea fowl in the Cape's wine growing areas, as these birds, indigenous to Africa, act as a control against the snout beetle that attacks grapes and vines, impacting negatively on fruit quality. But care has to be taken in ensuring their eggs are not vulnerable to crows. 'The greatest success we've seen - and this is anecdotal - is where newly hatched chicks are brought into the vineyards.'

He says it is now increasingly common practice to find ladybirds in vineyards, as they are a natural enemy of the mealy bug, which is a vector of the leafroll virus. This disease delays grape ripening and, depending on the level of infestation, can reduce crop yields and the lifespan of vineyards. In some vineyards, yarrow is planted at the head of each row, because the plant attracts ladybirds.

Wasps are also mealy bug predators, which is why research is currently being conducted into their natural habitat, to determine their potential role in curtailing leafroll.

Le Roux describes how sticky pads containing pheromone capsules are used to attract male mealy bugs as a way of monitoring the extent of infestation in order to determine appropriate eco-friendly eradication measures, with Nederburg pioneering new research in this area.

Archer mentions a project now underway to install perches for owls in trees close to vineyards since they help to combat the incidence of kangaroo (also known as night) mice that eat up the seeds of cover crops, as well as the crops themselves, often leaving what he describes as craterous devastation in their wake. Cover crops help to reduce weed and pest infestation, while restoring soil structure, improving water infiltration, naturally increasing macro-invertebrate and microbial activity, replenishing organic matter and nutrient levels, and combating soil erosion.

Le Roux believes the new initiative will help to harness disparate steps being taken independently by growers and encourage the sharing of information. 'How else will we balance the growth of the Cape's wine industry with conservation of our biodiversity, which is what gives us our internationally competitive edge?' he asks.

In the meantime, Nederburg is continuing with more of its own efforts to conserve the natural habitat. There is a project underway to cultivate Sauvignon Blanc, Chardonnay, Sangiovese and Pinotage organically, as well as a planned eco-tourism programme designed to highlight the rich variety right under our feet.