



Farm Management

Handout 2

Bitter Sweet Case Study

Bitter Sweet

Sugarbirds pay the price of perfection *

By Jennifer Freeman, Africa Birds and Birding

Annually, the fresh cut-flower protea export trade is worth some R62-million to South Africa. Protea farming is viewed as an eco-friendly and sustainable method of farming, but it appears that one of southern Africa's endemic bird families, the sugarbirds, could be paying a high price for its dependence on proteas. Jennifer Freeman reports.

Our farm in the Western Cape includes a section of mountain ground that is potentially suitable for protea production. Having already experienced problems with bird and insect damage to our export fruit crops, we were concerned about facing similar problems with cut-flower farming. The presence of Cape Sugarbirds on our property is unmistakable, as is that of baboons, antelope, small mammals, rodents and a wide variety of insects.

The Fynbos Research Unit at Elsenburg College, outside Paarl, advised us that, along with many environmental elements, birds are a very real factor in protea farming. I then contacted a recommended industry consultant and was more than taken aback when I was advised to use poison to control the birds.

The advice given was to sprinkle a solution of a pesticide, with the active ingredient monocrotophos, onto second-grade protea flowers and attach these to a few bushes in the orchard. I must, however, 'keep it quiet' and be sure to bury the doctored flowers and dead birds afterwards. Monocrotophos is an organophosphate poison with mutagenic effects. Although developed as an insecticide, it is highly toxic to birds.

In effect, cut-flower producers are at liberty to use poison indiscriminately in order to 'sterilise' the growing area. Poison has been and still is used for the control of birds in fruit crops, but it is viewed as completely unacceptable.

Before going ahead with any development on our farm I visited and spoke to many farmers and industry officials in a bid to discover the extent to which bird poisoning is practised within the protea industry, and whether or not the environmentally friendly programme for fruit could also apply to the cut-flower industry. Although many farmers were emphatically anti-poisoning, most of my enquiries were met with suspicion and brought me no closer to establishing what proportion of producers use poison to control birds. Growers were, however, happy to discuss control measures for other 'pests', ranging from baboons to insects.

Although producers are encouraged to grow formally planted protea orchards, flowers and 'greens' are still harvested from the veld. Protea growing may seem relatively trouble-free, but most farmers

struggle against a host of potential setbacks; the strong winds typical of the fynbos region, the large numbers of insects present in protea veld and the scourge of *Phytophthora* (a fungus often present in soil water) all combine to increase investment risk.

Export flowers are subject to inspection by the Perishable Products Export Control Board (PPECB) and for this purpose the protea flower is divided into three sections: the top third, the middle section and the lower third (which includes the stem and leaves). Should any of these sections bear significant 'injuries', the flower will be rejected. Misshapen leaves qualify for rejection, as does a stem which deviates more than 50 millimetres in any direction along its length. 'Injuries' may include rub marks from wind, insect-chewed leaves – or scratch marks from sugarbirds. These scratch marks, which resemble fine brown hairs, are always located on the upper third of the flower. In effect, this means that there is a good chance that any protea bud or flower on which a sugarbird has perched will be considered unsuitable for export.

The sugarbird family, *Promeropidae*, is represented by only two species, both endemic to southern Africa. The Cape Sugarbird *Promerops caffer* is restricted to the fynbos biome, and Gurney's Sugarbird *P. gurneyi* to the eastern escarpment of southern Africa. Both have long brush-tipped tongues and extremely sharp claws which enable them to feed on a variety of nectar-producing plants in even the most inclement weather.

In autumn, when the grey-green protea scrublands of South Africa's fynbos region break into a sumptuous show of pink blooms, the breeding season of the Cape Sugarbird begins. The flowering proteas attract the sugarbirds by offering both a rich supply of nectar and a profusion of nutritious insects. The birds defend breeding territories, but forage communally at rich food sources such as flowering proteas. They form lifelong pair-bonds, raising two broods per year if conditions permit. Juveniles join the throng of other sugarbirds feeding in the nearest protea thickets. A single sugarbird can visit and potentially pollinate as many as 300 protea flowers in one day. The birds probe bowl-shaped proteas, such as the king protea *Protea cynaroides*, as well as chalice-shaped and cup-shaped proteas, *P. neriifolia* and *P. nitida* respectively. They do also feed from pincushion proteas, but do not damage the flowers significantly because the bracts are too narrow to be pierced or scratched by the birds' claws. Various Aloe species, red-hot pokers *Kniphofia*, Cape honeysuckle *Tecomaria capensis*, several *Watsonia* species, and the Australian bottle-brush have also been recorded as food sources. Sugarbirds eat insects as well as nectar, and mostly feed insects to their chicks.

As spring approaches, protea blooms become scarcer and the birds move off to new feeding grounds on higher slopes or in gardens. Cultivated proteas flower extensively in summer, becoming an ideal and irresistible food source for the birds in the months before the breeding season.

Deliberate poisoning of sugarbirds at this time could have severe repercussions, not only due to the deaths but also to the breaking of pair-bonds.

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It is difficult to determine whether or not sugarbird populations are currently decreasing or have done so in the past. We know that neither Cape nor Gurney's Sugarbird is classified as threatened in any way (The Eskom Red Data Book of Birds of South Africa, Lesotho and Swaziland), but further than that, no population statistics are available.

One PPECB inspector, who had 15 years' experience in the Eastern Cape, claimed that growers had 'raped' the fynbos environment by using poison and by encouraging children to kill the birds for pocket money.

The Elsenburg Fynbos Research Unit informed me that organic production of proteas is unrealistic because of the high number of pests in the cut-flower environment, but they did encourage farmers to use environmentally friendly pest controls. The removal of dead flowers, for example, is recommended to prevent possible rodent or ant damage to export-quality blooms. It is not clear, however, how often such advice is put into practice.

It is easy to lay the blame at the feet of the farmers but, as participants in the business cycle, consumers are equally responsible: farmers will supply according to buyer demand. My aim is to highlight the potential for flower buyers to create a demand for 'sugarbird-' or 'fynbos-friendly' proteas. But I also hope that the South African protea industry will take the initiative to promote its valuable product as being authentic, unique and responsibly produced, instead of waiting for consumers to force them to do so.