The impact upon fruit growers of a decision to list the Grey-headed Flying-fox as a Vulnerable species under the NSW Threatened Species Conservation Act

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Introduction

In this paper I will describe the impact of crop damage from Grey-headed Flying-foxes on our business, discuss culling as a management tool and I can't help but challenge the decision of the Scientific Committee to list Grey-headed Flying-foxes as vulnerable before I conclude.

The impact of Grey-headed Flying-foxes on my business

Between 9 November and 2 December 2000, I conducted a trial to aid our decisions about the cost/benefit of constructing exclusion netting over a portion of our fruit crop to protect it from flying-fox damage, or to continue using culling to protect our crop. The key results can be summarised as follows.

The trial measured the damage caused by flying-foxes to randomly selected nectarine trees. We extrapolated the results to our whole orchard. Overall, we estimated that flying-foxes either damaged beyond marketability or consumed 20% of the fruit that ripened on our orchard between 15 and 28 November 2000.

This level of damage reduced the profit made from our entire crop in 2000 by 16%. That is the same as a wage earner working without pay for two months of the year.

This damage occurred while we conducted minimum culling under licence. We killed 31 foxes. Our practice was to begin shooting when the first few flying-foxes appeared. I believe that unless these "scouts" are culled or scared they will invite others in to feed.

I know that many people are disturbed about culling. I am too. The difference for me, however, is that last season my very livelihood depended on my ability to at least curtail some feeding by flying-foxes. I don't want to guess what my trial would have revealed if I was unable to conduct minimal and strategic culling.

Culling as a management tool

Culling vs netting

Netting is often suggested as a reasonable alternative to culling. However, despite the losses I suffered in 2000, the value of fruit damaged was only equivalent to about 30% of the annual cost of leasing finance for netting that would have protected my crop. The netting I refer to is of a sufficiently fine gauge to also exclude hail, but I currently insure against hail damage.

I believe that netting has other intrinsic costs. In my opinion, netting of the dimension I require (hail netting) creates a microclimate and shading under the net that is deleterious to fruit production. There have been some reports from growers that have netting, of "rangy" growth, poor bud development and reduced fruit colour.

For me flying-fox damage has been sporadic with only one year in ten being disastrous. As a result I require a low-cost, swift and adaptable system to warn off flying-foxes. Netting is too costly and there are no reliable non-lethal deterrents available. Therefore, for this orchardist, culling remains the most financially responsible approach to limiting flying-fox damage.

Licensed culling

Last year there were many more problems with flying-foxes than in the previous nine years. It would be wrong to say that there had been no damage from flying-foxes in those previous nine years. But as with netting, a decision to cull has its own costs, most importantly in the form of wear and tear on the culler – the farmer – during the most hectic period of the year, and late at night to boot! For this reason an amount of damage is always tolerated until the point of significant financial impact.

Pages 53 - 55 in *Managing the Grey-headed Flying-fox as a Threatened Species in New South Wales*, edited by Peggy Eby and Daniel Lunney, 2002. Royal Zoological Society of New South Wales, Mosman NSW.

This point can vary from business to business depending upon a range of factors like the scale of debt or the market value of the crop. Such factors are also variables in individual decisions about constructing netting. In extreme cases, for example, a financier might require that a farmer construct netting to hedge credit risk.

I think it is clear that to either remove or restrict any of the various options for the control of flying-foxes adds unjustifiable burdens on the business of orcharding. Specifically, to exclude the option of licensed culling would, in my opinion, give the Grey-headed Flying-fox an unwarranted priority over a legitimate human enterprise, in this case, fruit-growing. Onerous licensing provisions that bog the farmer down would achieve the same result. Indeed, this is my biggest fear now that licensing will occur under the *Threatened Species Conservation Act*.

Between 6 and 11 November the population of flying-foxes visiting our property went from "the usual few" to very damaging numbers. Within a day of my request for a licence the local NPWS manager was on my property, inspected, assessed and photographed the damage, and issued a licence to cull up to 50 foxes. The speed and simplicity of this process, given the hectic nature of my harvest, which was occurring at the same time, is something for which I remain most grateful.

In one sense, it is fortunate that the damage caused by foxes is so obvious. Broken branches, clawed fruit and remnants of fruit under nearby native trees make it easy to prove the need for a licence. This ease should translate into corresponding ease of obtaining a licence because the damage is always graphic. Delay in issuing a licence would only make these impacts more graphic.

While I appeal to those designing the new licensing rules to replicate the simplicity and speed that I experienced last season I also urge the NPWS to get out and talk to growers.

There are a lot of ideas around amongst those growers who have been dealing with flying-foxes for years. All have been trying to minimise culling or, ideally, replace it. Now the NPWS is in a unique position from which it can choose to either complicate the grower's life or assist. Any co-ordination that the NPWS can do aimed at helping growers to deal with the flying-fox problem effectively will be welcomed.

The decision of the NSW Scientific Committee

Finally, I feel compelled to challenge the decision of the NSW Scientific Committee to list the Grey-headed Flying-fox as vulnerable.

I put in a submission to the Scientific Committee arguing against the listing. In response to my submission I believe the Scientific Committee was dismissive. I had argued a socio-economic case, which they were not required by law, nor morally it would seem, to consider. The Committee did say that in 1998 rain had depleted native food for flying-foxes causing them to move on to orchards. My worst damage occurred a week before any rain began to fall!

I argue that the credibility of the Scientific Committee's processes is in doubt. At the very least, the Threatened Species Conservation Act should be amended to compel the Committee to take socio-economic factors into consideration in its decision-making. One would imagine that any species at risk of endangerment would scarcely exist in numbers able to cause much socio-economic impact at all! I believe that measuring this impact would be a useful indicator of vulnerability.

I believe that the socio-economic impact of the Grey-headed Flying-fox is extensive and escalating. Critically though, listing will lead to a Recovery Plan which will by definition, aim to increase populations thereby increasing the socio-economic impact on people like me.

I have reviewed several of the references that accompanied the notice of Final Determination by the Committee. At best, I believe the details in these references are qualitative assertions. In may cases, data is restricted to certain regions of the state and most studies are either inconclusive or incomplete by their own admission. In fact, some references seem to say that the Grey-headed Flying-fox is far from vulnerable and in need of further study before any accurate status can be assessed. An "official" study conducted under the auspices of the NPWS is needed. In my opinion, such studies should have been a precursor rather than a postscript to listing.

Right now growers feel vulnerable as a result of what I believe is a poor decision of the Scientific Committee. As we all move forward I can only hope that those who are in control of the decisions are pragmatic and reasonable people.

QUESTIONS & ANSWERS

DAN LUNNEY: Thank you indeed, Peter. Questions?

SONYA STANVIC: I could go into the passenger pigeon here but I won't. I would like to ask you, have you tried the wailer or other methods?

PETER COMENSOLI: Over those previous seasons that I described, and early last season as well, we did all sorts of things from knocking together a couple of bits of four by two to driving around blasting a horn on the ute. Usually, that sort of thing just made them think again and go on to someone else's property, a bigger orchard, perhaps. Last season, I believe as a result of the removal of an orchard to the east of us, and also some rain, we ended up with the damage that would otherwise have occurred on other orchards, or the feeding that would have been accommodated in the bush. And so, we've got a sporadic problem, we can control it sometimes with a bit of a scare, but there are critical times when we can't.

KATHY DAVIS: (Newcastle University) The last two speakers have tended to indicate that they consider that the numbers are increasing. Perhaps some of the camps are being depleted and you've got the impression that the numbers are increasing but the overall numbers are in fact declining. We don't know as yet what the critical population size is.

PETER COMENSOLI: Well, I think that your question is critical in what it says, because we don't know. I'd argue that a decision to list, which brings on the grower all of these complications caused by the Threatened Species Act and the way that it works, is something that is pretty unimaginable and I don't know how the NPWS is going to move forward. I hope they get something out of today but the fact that we don't know is something that should have been studied before listing rather than after.

DAN LUNNEY: Thank you indeed, thank you.