PEEL-HARVEY

The Decline and Rescue of an Ecosystem

Excerpt from book by Keith Bradby

1997

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Fertilising Farms, Not the Estuary

Excerpts from Chapter 6, 'Fumbling Forward: Tackling the problem, 1980s', pp. 114-115, 120-121.

By 1980, scientists working on the Peel-Harvey problem had established that large amounts of phosphorous and nitrogen were finding their way from the coastal plain into the estuary each year. Agricultural studies of fertiliser use, which had been conducted during the late 1970s, had reinforced these findings.

These two separate threads were brought together formally in January 1980, when discussions were held between the Department of Agriculture and the Department of Conservation and Environment. Both agencies soon agreed on a common goal: the reduction of phosphorous loads reaching the estuary by decreasing the amount of wasted fertiliser leaving farms in the catchment.

Between 1981 and 1984, the Department of Conservation and Environment funded research into less wasteful use of fertiliser on the coastal plain. This research led to a truly astounding conclusion, published in early 1983: that on many soils, little of the fertiliser applied actually reached the pasture. Often, more than 30 per cent was lost to drainage, and more than 50 per cent was unaccounted for in the surface soil, or the pastures, or the run-off water.

In 1981, the Department of Agriculture implemented a marketing campaign to sell its fertiliser efficiency program to the farmer audience. The main techniques promoted were changes in the timing of fertiliser application, widespread adoption of soil testing, which enabled farmers to define more precisely their fertiliser needs, and the use of new fertilisers.

Despite difficulties, the available statistical evidence shows a significant reduction in fertiliser use in the catchment since 1975. In 1974, farmers applied over 27,000 tonnes of superphosphate to their pastures. This had dropped to 17,000 tonnes by 1979, largely as a result of price increases, and to less than 9,500 tonnes by 1987. This major overall reduction was the significant achievement of the 1980s. Unfortunately, many of these early gains were offset by increased input from other sources of phosphorous, such as piggeries, feed lots and sewerage treatment works.

Notwithstanding this, the rapid success of the fertiliser efficiency program should have been the cause for considerable celebration. But looming over the program was the almost total reliance being placed on fertiliser management as the means of reducing nutrient flow from the catchment. This was unlikely to produce rapid change in the state of the estuary, or to satisfy the concerns of a population frustrated by nearly two decades of rotting and putrid weed banks. With the Burke Government giving the issue a higher political profile, and the open discussion of legal restrictions on fertiliser use and farming, apprehension in the farming community was steadily increasing. By 1987, many people recognised that changes in fertiliser use had achieved about as much as they were likely to, yet the estuary remained polluted, and both the government and the Mandurah public were still seeking short-term improvements.

The farming community was pulling its weight, but it remained an easy target for politicians and policy-makers.

Fertiliser application in West Pinjarra, 2008. Photo courtesy K. Gregory.

Chronology

19 June 1981: *Mandurah Advertiser* front page story: 'Weed Build-up Worst in Ten Years'.

4 Aug 1982: Department of Agriculture and Apex Club of Harvey held: 'Fertilising Sandy Soils - A Seminar on the Problems in the Peel-Harvey Estuary', the first formal contact between estuarine researchers and farmers.

By June 1984: Almost every farm on the coastal plain catchment had been soil tested, with some 3800 samples taken from 480 farms.

2011: 'In recent soil testing as part of the Fertiliser Action Plan, many farms have been shown to not need superphosphate, but are now applying lime because acidity is limiting production.' Heidi Blackburn of the Department of Agriculture and Food, WA, Waroona.