The economic impact of low cost imported Asian prawns on the NSW aquaculture industry

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The NSW prawn industry is concentrated in Palmers Island, near Yamba, in the Northern Rivers region, and is the state’s most valuable land-based aquaculture sector. However, in the last five years imports of cheaper and smaller prawns from South East Asia, particularly China, have increased dramatically, seriously impacting the industry (Figure 1).

Driving this shift has been the strong appreciation of the Australian dollar, which has made imports more attractive to Australian consumers, and the massive expansion of lower cost Penaeus monodon culture in Asia. In this paper we examine production output, cost structures and viability of the NSW industry before 2002-2003 and after the influx of competing imports (2006-2007).

Nationally, there are strong and growing pressures on the Australian prawn farming industry to diversify because of Asian low-cost commodity competitors. At present, NSW prawners are reluctant to partially or completely convert their farms to marine fish until the cost of production, viability and market are verified. In 2008 NMDC, with RIRDC funding, began investigating the potential of Mulloway or jewfish (Acanthopagrus butcheri) farming in northern NSW prawn ponds (Figure 3).

In NSW, the response to cheaper and smaller imported farmed prawns was to scale back production in 2003 and focus on a larger, high quality product. Larger size grades (>25g) rarely face competition from imported product, and gain a substantial price premium over smaller size grades. To achieve this, stocking densities were lowered from 45 to 10 post-larvae per square metre resulting in a massive reduction in output (Figure 2). Production in 2002-2003 was 408.82 tonnes, but by 2006-2007 this had dropped by 50% to 198.67 tonnes. An economic analysis (McLigorm and Guy, in prep.) indicates that prawn farming was profitable in 2002-2003, returning 16.4% to capital (full equity), but by 2006-2007 this had fallen to -9.5%. The NSW prawn farming Gross Value of Production (GVP) also dropped from $6.12 million in 2003-2004 to $2.58 million in 2006-2007. This downturn represents an overall loss of GVP of $3.54 million, and at least 26 direct jobs in the Northern Rivers community. Diversification into marine fish culture may reinvigorate this region.

Figure 1. Australian imports of fresh, chilled or frozen shrimp from China 2001-2007 (Source: ABARE Australian Fisheries Statistics 2004, 2006, 2008).

Figure 2. Production and value of farmed black tiger prawn (Penaeus monodon) in NSW 2001-2007 (Source: NSW DPI Aquaculture Production Reports 2001-2007).

Figure 3. Mulloway are ideally suited to northern NSW growing conditions and are a potential new culture industry that could be rapidly developed.