

6th Proceedings of the Seminar in Veterinary Sciences, 11 – 14 January 2011:113

Bacterial Analysis of Australian Jade Perch Fry

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Abstract

Fifty-two Jade Perch fry from Australia were sampled for bacterial analysis to determine if any bacteria of pathogenic significance could be cultured. The fry were supplied in two groups: the first batch comprised of 32 fry obtained directly from the hatchery in Queensland, Australia and the second batch comprised of 20 fry from the same source that had been at a farm in the Klang Valley for one week. The kidneys of the fish and accompanying water were sampled for bacterial growth on Tryptic Soya agar (TSA) and Blood agar. Bacteria were identified using conventional biochemical tests and DNA sequencing. Seven known species of bacteria were identified through conventional and sequencing methods. Three of these are known bacterial pathogens of fish, namely *Edwardsiella tarda*, *Vibrio spp.* and *Photobacterium damsela*. Four of the identified bacteria namely *Pleisiomonas shigelloides*, *Vibrio spp.*, *Acinetobacter spp.*, and *Pseudomonas aeruginosa* are of public health significance. In addition, two relatively unknown species of bacteria, *Aquitalea magnusonii* and *Hydrogenophaga spp.*, were successfully identified using the sequencing method.

Keywords: Jade Perch, bacteria, aquaculture, DNA sequencing