AQUI-S®

case study: yellowtail kingfish

H_2O_2 BATH TREATMENT

2a

APPLICATION, FINFISH

Monogenean parasite infestations of yellowtail kingfish are commonly treated with hydrogen peroxide immersion baths. This treatment is stressful to the fish and therefore can have negative repercussions with regard to growth and immune response. We investigated the effect of sedation with AQUI-S® to reduce stress during the hydrogen peroxide treatment .

THE PARASITE PROBLEM

Monogenean parasites Zeuxapta seriolae (gill fluke) and Benedenia seriolae (skin fluke) significantly reduce the efficiency and hence economic viability of yellowtail kingfish farming operations. Parasite infections are treated with either a hydrogen peroxide or freshwater bath. These treatments cause considerable stress to the fish resulting in increased mortality and reduced fish growth making them less than an ideal treatment options.

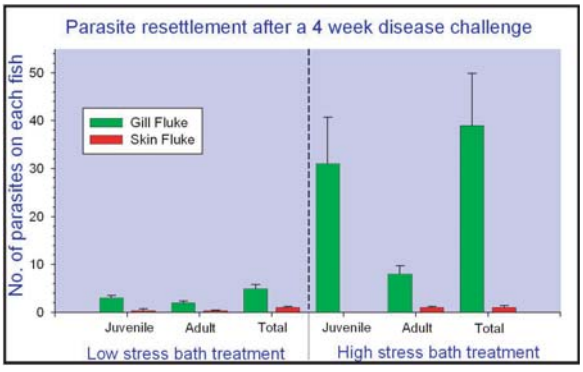
THE TRIAL: AQUI-S® SEDATION INCORPORATED WITH IMMERSION BATH TREATMENT

High stress bath treatment

Low stress bath treatment

Sea-cage reared yellowtail kingfish of approximately 2 kg were cleared of skin and gill fluke infestation and divided into two separate cages of 28 fish each two weeks prior to commencing the experiment.

An immersion bath was created by encircling the cage with a tarpaulin. The first cage was treated with 350 ppm H_2O_2 for 20 minutes and comprised the high stress treatment. The second group was treated with 350 ppm H2O2 in conjunction with AQUI-S® (2.5 ppm) for 20 minutes and comprised the low stress treatment. Both groups of fish were transferred to the same cage for a 4 week disease challenge.



RESULTS

* Gill fluke resettlement reduced by 87 % in low stress treatment.

* Double weight gain in low stress treatment after 7 weeks.

Table. Weight gain 7 weeks post-treatment

	Initial weight (g)	Final weight (g)
Low stress treatment	1905	2021
High stress treatment	1917	1971

CONCLUSION

The use of AQUI-S® in combination with hydrogen peroxide for the treatment of parasites has shown that fish are able to protect themselves against invading pathogens for a longer period, reducing the frequency of bathing and the associated costs for the kingfish operator and. Fish have a more rapid return to normal feeding and food metabolism resulting in an increased growth rate, which impacts on the economic return and long term viability for the fish farm.

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