

CAN ENVIRONMENTAL ENRICHMENT BOOST LUMPFISH WELL-BEING AND LICE REMOVAL WHEN USED AS CLEANER FISH IN SALMON AQUACULTURE?

FREDRIK STAVEN, PEDER JANSEN, MANUEL GESTO & TORSTEIN KRISTENSEN

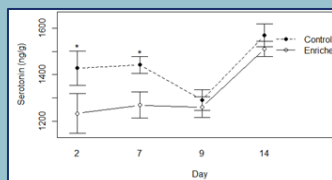
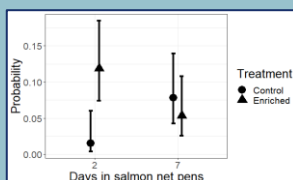
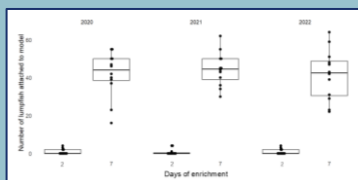
#1 Background

- Lumpfish are used as cleaner fish in salmon aquaculture
- They are reared in a barren tanks before deployed with salmon
- Learning is an important aspect of cleaning behaviour
- We tested if rearing with salmon 3D models improved this transition



#2 Objective

- Study the impact from environmental enrichment on lumpfish well-being and ability to interact with salmon and remove ectoparasites



#3 Results

- Lumpfish habituated to the models after 7 days of rearing
- Brain serotonin dropped during model exposure
- Enriched fish consumed more lice than control group on day 2 post deployment but not after 7 days

#4 Conclusion

- Enrichment has significant effects on the lice consumption behaviour of lumpfish and could be beneficial for commercial salmon farming
- Further research on long-term impacts of EE and its scalability is required

#5 Contact info

Fredrik Staven (+47 48009442) // fst@akvaplan.niva.no