



KEY CASE STUDY

NZ KING SALMON

GENETIC IMPROVEMENT PROGRAMMES

NZ King Salmon Co. is the world's major supplier, producing over half of the world's supply. AbacusBio worked with NZ King Salmon Co. To successfully launch a new web application that transforms data systems and management to a whole new level, as part of the company's breeding programme. IT consultants Mark Teviotdale and Chris Li launched this application to evaluate and record the traits of 4,500 fish.


The web application allows users to generate reliable reports and salmon harvest statistics for up to 40,000 fish in real time - recording key information, such as number of fish processed and characteristics, including weight, length, and maturation levels. The highlight of the new system is the adoption of QR codes in factory and barcode scanners.

"This robust technology makes our lives much easier by removing the human element of writing down numbers and more importantly, the associated risk of getting numbers wrong in the process," highlighted by Mark. NZKS freshwater manager Jon Bailey highlighted that "This is definitely the smoothest evaluation harvest we ever had,".

Another advantage of using QR codes is the transition - away from RFID tags - to DNA analysis for progeny identification. "As NZKS wanted to run a production-sized pen of 40,000 fish in the breeding programme, the sheer number of fish has meant RFID tagging technology was no longer feasible - hence DNA analysis was introduced," AbacusBio consultant Fiona Hely explains. In April 2015, the application was used to manage spawning events at the Takaka freshwater farm, where interfaces recorded the stripping of eggs, performed quality checks, and crossed the nucleus and production stock.

Following implementation of the app, AbacusBio explored transitioning data capture processes from computers to tablet devices. The system aimed to encompass a wide range of other processes such as fish assessment, sorting, and fish location management.

Our company has since collaborated with NZ king salmon further to take their business and production processes to the next step.

→ King salmon have the highest oil content of all salmon 

→ King salmon is a rare species of salmon composing only 0.7% of the world's farmed salmon population

→ King salmon are anadromous - they are adapted to fresh and salt water.

"AbacusBio did a really good job, particularly when it comes to efficiency and accuracy with minimal risk for error"

**JON BAILEY,
NZ KING SALMON**