

Selective breeding set to double commercial gains

A Seafood CRC funded project within the Pacific oyster breeding program will reduce grower production costs by up to four percent by selecting traits with the greatest calculated economic value.

Seafood CRC project: 2006/227: Enhancement of the Pacific oyster selective breeding program.

The program has expanded to include more traits which will double production cost savings from a previous two percent to four percent.

Production cost savings were mainly achieved by breeding from oysters with traits that have the greatest economic return. The following table shows the reduction in production cost/dozen by trait, for each ten percent genetic improvement in that trait:

Trait	Economic weight Cost of production change per 10 percent gain* (\$ per dozen)
Shell growth time	\$0.09
Condition time	\$0.13
Shell shape (width)	\$0.11
Survival	\$0.13
Uniformity	\$0.15

*Average cost of production/dozen is \$3.90/dozen. Annual genetic improvement is approximately 4.5 percent (66 percent over 15 years).

The project also reduced the time from selection to commercial production of a breeding line by 18 months, providing growers with faster access to higher returns.

The previous breeding strategy had a risk of inbreeding, and took four years from the time of selection to commercial production of a breeding line.

The new strategy has doubled the number of families and uses hatcheries in the selection process. This has reduced time from selection to commercial production to 30 months.

For more information please contact: Matt Cunningham; Ph: (03) 6274 1797;
E-mail: mattasi@bigpond.com.

