

合浦珠母贝3个地理群体杂交后代生长性状和闭壳肌拉力的比较分析

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Comparative analysis of growth traits and shell-closing strength among hybrid populations from three geographical groups of pearl oyster (*Pinctada fucata*)NIU Zhikai^{1, 2}, LIU Baosuo¹, ZHANG Dongling³, TAN Caigang^{1,2}, ZHANG Bo¹, CHEN Mingqiang¹, FAN Sigang¹, JIANG Song¹, HUANGGuiju¹, LI Youning¹, YU Dahui¹

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摘要

利用采自海南三亚 (SY)、广东深圳 (SZ) 和越南 (YN) 的3个合浦珠母贝 (*Pinctada fucata*) 地理群体, 按照完全双列杂交构建了9个选育群体。在养殖到20月龄时, 从每个群体中随机挑选100个贝, 测量4个形态性状 (壳长、壳高、壳宽和绞合线长)、4个质量性状 (体质量、壳质量、软体部质量和闭壳肌质量) 和闭壳肌拉力。相关性分析显示, 各性状与闭壳肌拉力均为正相关, 与闭壳肌拉力相关系数最大的是壳质量 (0.601), 体质量 (0.564) 次之, 壳宽 (0.320) 最小。综合比较形态性状, 较优群体是YNSY、SYSZ和YNSZ; 综合比较质量性状, 较优群体是YNSY、SYSZ和YNSZ; 综合比较闭壳肌拉力, 较优的群体是YNSY、YNSZ和SZYN; 综合筛选出生长性状和闭壳肌拉力都较优的YNSY和YNSZ群体可作为进一步的选育材料。

关键词 : 合浦珠母贝, 杂交, 生长性状, 闭壳肌拉力**Abstract :**

We collected three geographical pearl oyster (*Pinctada fucata*) populations from Sanya (SY), Shenzhen (SZ) and Vietnam (YN) to establish nine breeding populations by using complete diallel crosses. Then we chose 100 twenty-month-old individuals randomly from each breeding population to measure four morphological traits (shell length, shell height, shell width and hinge length), four qualitative traits (body weight, shell weight, viscera weight and adductor muscle weight) and shell-closing strength trait. The correlation analysis showed positive correlation between shell-closing strength and the other various traits. The largest correlation coefficient was 0.601 between shell-closing strength and shell weight, followed by body weight (0.564), and the smallest was 0.320 for shell width. With comparison of morphological traits and qualitative traits, the elite populations were YNSY, SYSZ and YNSZ. Based on shell-closing strength, the elite populations were YNSY, YNSZ and SZYN. Based on growth traits and shell-closing strength, two elite populations (YNSY and YNSZ) had good potential for further selection as breeding materials.

Key words : *Pinctada fucata* hybridization growth trait shell-closing strength

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