

優質白蝦種蝦種苗培育及其生殖調控研究

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池中培育之大蝦經挑選體型及活力佳者，再經病毒檢測，結果皆未帶 WSSV 及 TSV，但感染輕微的 IHNV，用來作為催熟用種蝦，共獲雌蝦 139 尾，雄蝦 53 尾 (表 1)，經人工繁殖至後期幼蟲 (PL30) 分批抽樣檢測病毒後，進行緊迫試驗 (浸泡於 0℃ 海水 10 分鐘) (表 2) 和攻擊試驗 (WSSV、TSV 及溶藻弧菌) (表 3、4 及 5)，再加以篩選出約 30 萬尾未帶 WSSV 及 TSV 之蝦苗供養殖；蝦苗分三批分別養殖於加防鳥網、未加防鳥網及循環系統之養殖池；養殖一個月後抽樣檢測，三池皆有 17% 帶有輕微的 IHNV 感染，WSSV 及 TSV 則無感染情

況；養殖五個月後循環系統養殖的白蝦爆發大量死亡，經檢測嚴重感染 IHNV；養殖於未加防鳥網者 50% 輕微 WSSV 感染；加防鳥網養殖池之大蝦除輕微的 IHNV 感染外，則無感染 WSSV 及 TSV 情況，為持續後者較佳的成長，降低密度進行分養，共獲 1,046 kg，約 40,000 尾左右大蝦。

表 1 F₂ 種蝦 WSSV、TSV 及 IHNV 病毒之檢測

性別	病毒	WSSV	TSV	IHNV
雌 蝦		0/139	01/39	107/139
雄 蝦		0/53	0/53	35/53

表 2 PL30 之蝦苗浸泡 0℃ 海水 10 分鐘後之活存率

編號	時間 (小時)	12	24	36	48
Lv09		77.33±2.33%	53.67±1.45%	43.33±2.03%	30.67±2.40%
11		77.33±1.76%	48.00±3.21%	34.00±3.06%	18.00±1.73%
17		83.33±1.86%	63.67±3.53%	50.67±1.67%	41.33±2.33%
25		57.00±5.13%	38.33±4.33%	19.67±1.20%	11.33±1.45%
29		75.67±2.60%	59.00±2.65%	44.00±2.08%	25.33±6.44%
32		56.00±5.20%	37.67±2.85%	19.00±3.79%	11.67±3.28%
55		78.00±3.79%	63.33±1.45%	48.33±4.33%	38.00±1.53%
78		71.67±2.19%	60.33±1.45%	51.60±1.20%	41.00±3.21%
84		65.00±4.51%	45.67±3.18%	36.67±3.84%	17.33±4.91%
97		84.33±0.88%	72.33±2.33%	44.67±2.33%	32.00±2.31%
98		85.00±4.73%	76.33±5.55%	52.33±2.19%	39.33±4.33%

表 3 PL30 之蝦苗以 WSSV 感染後之活存率

編號	時間 (小時)	24	48	72	96
Lv09		55.67±3.28%	39.67±3.84%	31.67±1.20%	15.33±1.45%
11		43.33±2.03%	20.67±1.76%	8.00±2.89%	1.67±1.67%
17		70.33±1.45%	63.67±3.53%	50.67±1.67%	41.33±2.33%
25		42.33±2.40%	22.23±1.86%	6.67±1.20%	0.00±0.00%
29		57.00±4.36%	30.33±4.81%	12.00±1.15%	3.67±0.67%
32		35.00±2.65%	18.00±3.21%	2.67±2.67%	0.33±0.33%
55		61.33±4.18%	42.00±1.53%	31.67±1.20%	13.67±1.76%

78	54.00±1.53%	40.00±1.53%	26.00±3.61%	14.00±2.89%
84	59.33±2.91%	41.00±1.73%	29.67±0.88%	6.67±2.19%
97	57.00±5.03%	39.00±4.73%	26.33±3.18%	12.00±1.00%
98	66.33±6.39%	38.67±4.63%	29.33±3.38%	13.67±0.88%

表 4 PL30 之蝦苗以 TSV 感染後之存活率

編號	時間 (小時)	24	48	72	96
Lv09		76.67±2.73%	62.33±0.88%	52.33±1.20%	36.00±2.89%
11		51.33±1.86%	34.33±3.84%	21.00±2.08%	10.33±0.88%
17		72.33±1.86%	63.33±3.48%	46.33±2.33%	30.33±3.38%
25		56.67±3.93%	33.00±3.51%	11.00±1.73%	2.00±1.00%
29		54.33±2.03%	34.00±2.08%	19.33±0.88%	11.00±0.58%
32		38.67±7.97%	19.67±4.37%	10.67±1.86%	2.33±1.45%
55		50.67±1.20%	43.00±1.73%	40.00±0.58%	26.00±2.08%
78		66.67±3.18%	47.33±1.76%	33.00±2.52%	20.00±1.15%
84		55.67±3.18%	31.67±3.18%	13.33±2.60%	4.00±1.73%
97		70.67±2.03%	58.67±3.71%	34.67±2.03%	24.00±2.08%
98		68.33±2.91%	49.67±1.86%	33.00±1.15%	22.00±1.00%

表 5 PL30 之蝦苗以溶藻弧菌感染後之存活率

編號	時間 (小時)	12	24	36	48
Lv09		82.67±1.20%	76.00±3.06%	68.67±3.84%	56.67±2.60%
11		76.67±1.76%	71.33±1.45%	57.00±5.69%	39.67±4.67%
17		81.33±1.45%	76.33±1.45%	68.67±1.45%	60.00±2.31%
25		57.00±5.13%	40.00±4.93%	32.67±2.67%	26.67±2.19%
29		65.00±3.51%	51.67±4.91%	30.67±0.88%	24.33±2.73%
32		67.67±3.28%	61.00±2.52%	51.00±1.73%	32.23±3.84%
55		81.33±2.03%	74.00±2.31%	66.67±2.60%	56.33±2.03%
78		83.00±1.73%	73.67±3.18%	64.33±2.03%	56.67±2.03%
84		64.33±2.03%	55.00±1.00%	39.67±3.93%	31.67±1.20%
97		82.67±1.76%	72.67±2.40%	61.00±0.58%	52.67±1.45%
98		77.00±4.58%	67.00±3.46%	52.00±3.06%	39.67±5.55%