

Table 24. Analysis of variance on mean survival of cultured Arctic surfclams per growout box at Mud Hole Cove, Beals, Maine from 16-17 June 2022 to 3 August 2023. Factors included size of box (2 ft² vs. 4 ft²), clam size (Small: 9.6 ± 0.4 mm vs. Large: 12.4 ± 0.4 mm, and stocking density that was unique to a given clam size and box size. The source of variation involving stocking density (#/ft²) is decomposed into its four, orthogonal 2 df sums of squares to test specific hypotheses about the effect of density on surfclam survival. These additional sums of squares are indented below the Stocking Density source of variation.

Source of Variation	DF	Sum of Squares	Mean Square	F Value	Pr > F
Box Size	1	0.77953835	0.77953835	7.58	0.0083
Clam Size	1	0.04208349	0.04208349	0.41	0.5253
Box Size x Clam Size	1	0.00090849	0.00090849	0.01	0.9255
Density(Box Sz, Clam Sz)	8	0.34219506	0.04277438	0.42	0.9057
Sm Box Sm Clam : 30, 60, 90	2	0.15006481	0.07503241	0.73	0.4872
Sm Box Lg Clam : 30, 50, 80	2	0.05020947	0.02510474	0.24	0.7843
Lg Box Sm Clam : 30, 45, 60	2	0.05732819	0.02866409	0.28	0.7579
Lg Box Lg Clam : 7.5, 30, 50	2	0.08459259	0.04229629	0.41	0.6649
Error	48	4.93393134	0.10279024		
Corrected Total	59	6.09865673			

Table 25. Analysis of variance on mean number of invasive green crabs per growout box at Mud Hole Cove, Beals, Maine from 20 January 2023 to 3 August 2023. Factors included size of box (2 ft² vs. 4 ft²), clam size (Small: 9.6 ± 0.4 mm vs. Large: 12.4 ± 0.4 mm, and stocking density that was unique to a given clam size and box size. The source of variation involving stocking density (#/ft²) is decomposed into its four, orthogonal 2 df sums of squares to test specific hypotheses about the effect of density on surfclam survival. These additional sums of squares are indented below the Stocking Density source of variation. In addition, further decomposition of the Large Box|Lg Clam source of variation into two single degree of freedom contrasts is presented to examine effects of increasing clam density on green crab density.

Source of Variation	DF	Sum of Squares	Mean Square	F Value	Pr > F
Box Size	1	244.0166667	244.0166667	8.64	0.0050
Clam Size	1	0.4166667	0.4166667	0.01	0.9038
Box Size x Clam Size	1	10.4166667	10.4166667	0.37	0.5464
Density(Box Sz,Clam Sz)	8	294.9333333	36.8666667	1.31	0.2634
Sm Box Sm Clam : 30, 60, 90	2	25.7333333	12.8666667	0.46	0.6367
Sm Box Lg Clam : 30, 50, 80	2	62.5333333	31.2677777	1.11	0.3387
Lg Box Sm Clam : 30, 45, 60	2	17.7333333	8.8677777	0.31	0.7319
Lg Box Lg Clam : 7.5, 30, 50	2	188.9333333	94.4677777	3.35	0.0436
(7.5 & 30 vs. 50)	1	163.3333333	163.3333333	5.79	0.0201
(7.5 vs. 30)	1	25.6000000	25.6000000	0.91	0.3458
Error	48	1355.200000	28.2333333		
Corrected Total	59	1904.983333			

Table 26. Analysis of covariance on ln-transformed relative growth vs. ln-transformed initial SL for live surfclams from growout boxes at Mud Hole Cove, Beals, Maine from 16-17 June 2022 to 3 August 2023. Box size refers to small (2 ft²) and large (4 ft²) wooden boxes that held two sizes of Arctic surfclams (Small: 9.6 ± 0.4 mm vs. Large: 12.4 ± 0.4 mm) that were seeded at a stocking density (#/ft²) that was unique to the combination of box size and surfclam size. The source of variation associated with density nested within box size and clam size (8 df) is decomposed into four 2 df orthogonal sums of squares, and is indented below the main factor. Two additional contrasts are presented for the Small Box | Large Clam source of variation that examines two lower- vs. higher-density comparisons. (n = 5)

Source of Variation	DF	Sum of Squares	Mean Square	F Value	Pr > F
Initial SL	1	35.16213748	35.16213748	323.19	<.0001
Box Size	1	0.02543105	0.02543105	0.23	0.6290
Clam_Size	1	3.99339472	3.99339472	36.70	<.0001
Box × Clam_Size	1	0.00010010	0.00010010	0.00	0.9758
Density(Box Sz, Clam Sz)	8	1.66645894	0.20830737	1.91	0.0565
Sm Box Sm Clam : 30, 60, 90	2	0.11792166	0.05896083	0.54	0.5821
Sm Box Lg Clam : 30, 50, 80	2	1.09756019	0.54878009	5.04	0.0069
(30 & 50 vs. 80)	1	0.62938372	0.62938372	5.78	0.0033
(30 vs. 50)	1	0.46047811	0.46037811	4.23	0.0152
Lg Box Sm Clam : 30, 45, 60	2	0.44102629	0.22051315	2.03	0.1331
Lg Box Lg Clam : 7.5, 30, 50	2	0.16769886	0.08384943	0.77	0.4634
Error	396	43.0840820	0.1087982		
Corrected Total	408	83.9316043			