

Response percentsurvival**Effect Summary**

Source	Logworth	PValue
vpos	5.347	0.00000
vpos*hpos	1.591	0.02566
hpos	0.425	0.37626 ^

Summary of Fit

RSquare	0.209945
RSquare Adj	0.17979
Root Mean Square Error	32.6765
Mean of Response	63.13869
Observations (or Sum Wgts)	137

Parameter Estimates

Term	Estimate	Std Error	DFDen	t Ratio	Prob> t
Intercept	63.899039	2.79675	130	22.85	<.0001*
vpos[buried]	13.39403	2.796983	130	4.79	<.0001*
hpos[down]	-4.818252	3.972171	130	-1.21	0.2273
hpos[mid]	0.0596817	3.977757	130.2	0.02	0.9881
vpos[buried]*hpos[down]	8.5845256	3.972171	130	2.16	0.0325*
vpos[buried]*hpos[mid]	1.3791262	3.977757	130.2	0.35	0.7294

REML Variance Component Estimates

Random Effect	Var				95% Lower	95% Upper	Wald p-Value	Pct of Total
	Var Ratio	Component	Std Error	95% Lower				
nest	0.000871	0.9300161	2.2368189	-3.454068	5.3141006	0.6776	0.087	
Residual		1067.7536	132.43853	849.22174	1383.4967			99.913
Total		1068.6836	132.3767	850.20653	1384.191			100.000

-2 Residual Log Likelihood = 1313.4654856

Note: Total is the sum of the positive variance components.

Total including negative estimates = 1068.6836

Fixed Effect Tests

Source	Nparm	DF	DDFDen	F Ratio	Prob > F
vpos	1	1	130.0	22.9321	<.0001*
hpos	2	2	130.1	0.9849	0.3763
vpos*hpos	2	2	130.1	3.7677	0.0257*

Effect Details**vpos****Least Squares Means Table**

Level	Least		0	20	40	60	80	100
	Sq Mean	Std Error						
buried	77.2931	4.057					●	
unburied	50.5050	3.851				●	●	

Response percentsurvival**Effect Details****hpos****Least Squares Means Table**

Level	Least		0	20	40	60	80	100
	Sq Mean	Std Error						
down	59.0808	4.882				●		
mid	63.9587	4.884				●		
up	68.6576	4.768				●		

vpos*hpos**Least Squares Means Table**

Level	Least		0	20	40	60	80	100
	Sq Mean	Std Error						
buried,down	81.0593	7.131				●		
buried,mid	78.7319	7.135				●		
buried,up	72.0880	6.814				●		
unburied,down	37.1022	6.670	●					
unburied,mid	49.1856	6.670		●				
unburied,up	65.2272	6.670		●				

LSMeans Differences Tukey HSD $\alpha = 0.050$ $Q = 2.89266$

Response percentsurvival**Effect Details****vpos*hpos****LSMeans Differences Tukey HSD**

		LSMean[j]					
Mean[i]-Mean[j]		buried,d own	buried,m id	buried,u p	unburied ,down	unburied ,mid	unburied ,up
Std Err Dif							
Lower CL Dif							
Upper CL Dif							
buried,down		0	2.327465	8.971355	43.95711	31.87378	15.83211
		0	10.10783	9.86261	9.765033	9.765033	9.765033
		0	-26.9111	-19.5578	15.71023	3.626898	-12.4148
		0	31.56595	37.50049	72.20399	60.12066	44.07899
buried,mid		-2.32747		0	6.643889	41.62965	29.54631
		10.10783		0	9.889587	9.779284	9.779284
		-31.566		0	-21.9633	13.34154	1.258208
		26.91102		0	35.25106	69.91775	57.83442
LSMean[i]	buried,up	-8.97135	-6.64389		0	34.98576	22.90242
		9.86261	9.889587		0	9.536648	9.536648
		-37.5005	-35.2511		0	7.399514	-4.68382
		19.55778	21.96328		0	62.572	50.48867
unburied,down	unburied,down	-43.9571	-41.6296	-34.9858		0	-12.0833
		9.765033	9.779284	9.536648		0	9.432893
		-72.204	-69.9177	-62.572		0	-39.3694
		-15.7102	-13.3415	-7.39951		0	15.20278
unburied,mid	unburied,mid	-31.8738	-29.5463	-22.9024	12.08333		0
		9.765033	9.779284	9.536648	9.432893		0
		-60.1207	-57.8344	-50.4887	-15.2028		0
		-3.6269	-1.25821	4.68382	39.36945		0
unburied,up	unburied,up	-15.8321	-13.5046	-6.86076	28.125	16.04167	0
		9.765033	9.779284	9.536648	9.432893	9.432893	0
		-44.079	-41.7927	-34.447	0.838887	-11.2444	0
		12.41477	14.78346	20.72549	55.41111	43.32778	0

Level	Least		
	Sq Mean	Std Error	
buried,down	A	81.059	7.1312
buried,mid	A	78.732	7.1355
buried,up	A B	72.088	6.8144
unburied,up	A B	65.227	6.6701
unburied,mid	B C	49.186	6.6701
unburied,down	C	37.102	6.6701

Levels not connected by same letter are significantly different.

Response percentsurvival**Effect Details****vpos*hpos****LSMeans Differences Tukey HSD**

Level	- Level	Difference	Std Err Dif	Lower CL	Upper CL	p-Value	
buried,down	unburied,down	43.95711	9.76503	15.7102	72.20399	0.0002*	
buried,mid	unburied,down	41.62965	9.77928	13.3415	69.91775	0.0006*	
buried,up	unburied,down	34.98576	9.53665	7.3995	62.57200	0.0047*	
buried,down	unburied,mid	31.87378	9.76503	3.6269	60.12066	0.0173*	
buried,mid	unburied,mid	29.54631	9.77928	1.2582	57.83442	0.0351*	
unburied,up	unburied,down	28.12500	9.43289	0.8389	55.41111	0.0392*	
buried,up	unburied,mid	22.90242	9.53665	-4.6838	50.48867	0.1634	
unburied,up	unburied,mid	16.04167	9.43289	-11.2444	43.32778	0.5339	
buried,down	unburied,up	15.83211	9.76503	-12.4148	44.07899	0.5861	
buried,mid	unburied,up	13.50465	9.77928	-14.7835	41.79275	0.7384	
unburied,mid	unburied,down	12.08333	9.43289	-15.2028	39.36945	0.7949	
buried,down	buried,up	8.97135	9.86261	-19.5578	37.50049	0.9434	
buried,up	unburied,up	6.86076	9.53665	-20.7255	34.44700	0.9793	
buried,mid	buried,up	6.64389	9.88959	-21.9633	35.25106	0.9847	
buried,down	buried,mid	2.32747	10.10783	-26.9110	31.56595	0.9999	

nest

