TECHNICAL REPORT

Larval Diet Experiment

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1 Background

2 Methods

3 Results

3.1 Egg survival

	treatment	unhatched	hatched	proportion_hatched
3	peat moss	18	27	0.600000
2	manure	9	37	0.804348
0	fecal pellets	8	33	0.804878
1	frass	7	34	0.829268

Figure 1: Egg survival.

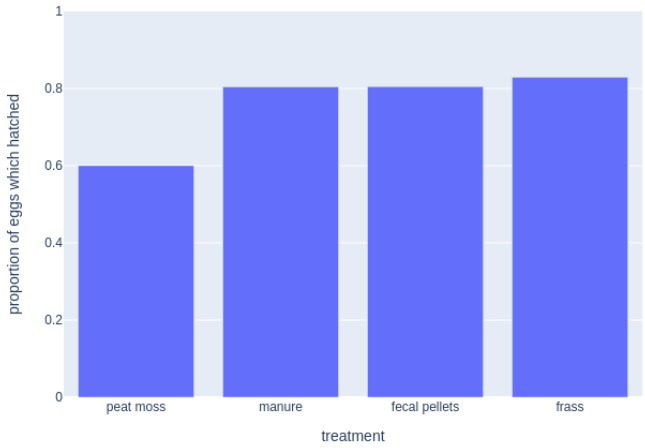

Figure 2: Egg survival. Chi2 result of the contingency table: 8.2706, p-value: 0.0407. Post-hoc tests did not indicate any pair-wise differences.

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Chi2 result of the contingency table: 8.270648694989156, p-value: 0.04073715987248983

Post-hoc chi2 tests results:
('fecal pellets', 'frass'): p_value: 1.000000; corrected: 1.000000 (ns) reject: False
('fecal pellets', 'manure'): p_value: 0.791311; corrected: 1.000000 (ns) reject: False
('fecal pellets', 'peat moss'): p_value: 0.067072; corrected: 0.134144 (ns) reject: False
('frass', 'manure'): p_value: 0.982206; corrected: 1.000000 (ns) reject: False
('frass', 'peat moss'): p_value: 0.035652; corrected: 0.134144 (*) reject: False
('manure', 'peat moss'): p_value: 0.056902; corrected: 0.134144 (ns) reject: False
```

3.2 Larval survival

	treatment	dead	alive	proportion_alive
3	peat moss	27	0	0.000000
0	fecal pellets	31	2	0.060606
2	manure	11	26	0.702703
1	frass	0	34	1.000000

Figure 3: Larval survival.

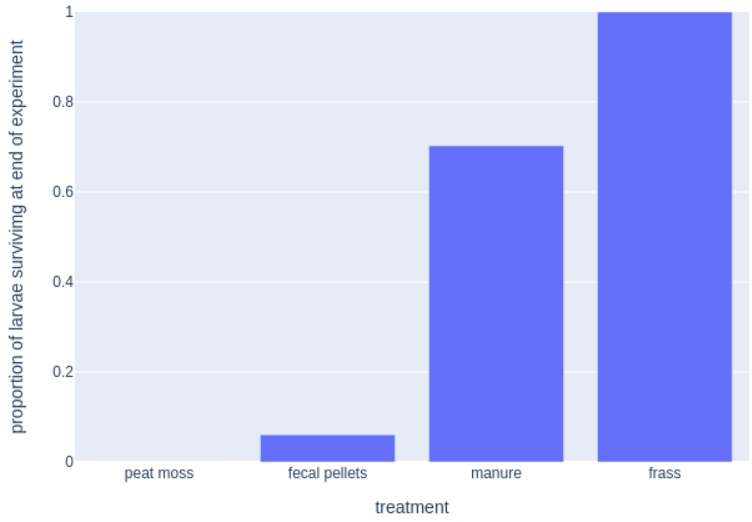

Figure 4: Larval survival.

```
Chi2 result of the contingency table: 92.45587408140003, p-value: 6.501188043511334e-20

Post-hoc chi2 tests results:
('fecal pellets', 'frass'): p_value: 0.000000; corrected: 0.000000 (****) reject: True
('fecal pellets', 'manure'): p_value: 0.000000; corrected: 0.000000 (****) reject: True
('fecal pellets', 'peat moss'): p_value: 0.563092; corrected: 0.563092 (ns) reject: False
('frass', 'manure'): p_value: 0.001747; corrected: 0.002096 (**) reject: True
('frass', 'peat moss'): p_value: 0.000000; corrected: 0.000000 (****) reject: True
('manure', 'peat moss'): p_value: 0.000000; corrected: 0.000000 (****) reject: True
```

3.3 Larval mass

	treatment	N	mean	min	max
0	fecal pellets	2	171.000000	141	201
1	manure	26	2462.038462	108	7335
2	frass	34	4777.500000	1965	7592

Figure 5: Larval mass.

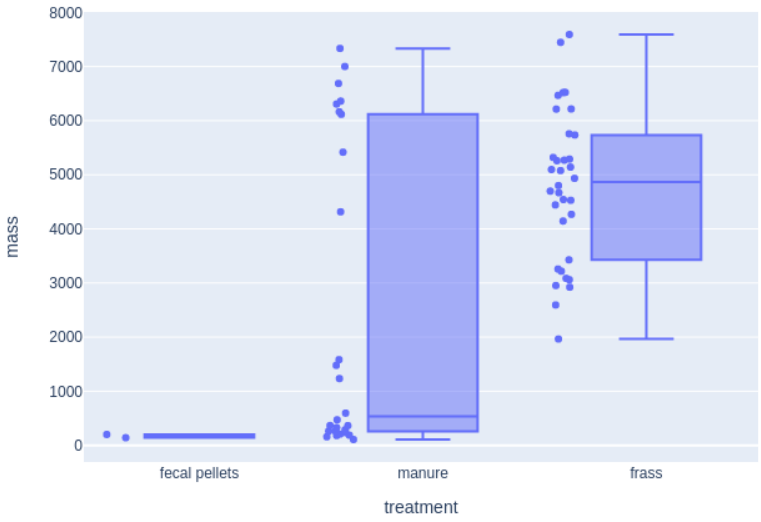

Figure 6: Larval mass.