

Appendix 1. Additional information including summary statistics of landscape variables and their correlations, and the full model selection results.

Table A1.1. Summary statistics (%) for the landscape variables within a 2, 5, and 10 km buffer around each nest, collated for 463 Bobolink nests.

Buffer distance	Land cover type (%)	Mean	Median	Min.	Max.
2 km	Grassland [†]	32	27	9	68
	Cropland [†]	21	17	0	61
	Forest [†]	21	19	4	54
	Wetland	14	7	0	63
	Shrubland	6	5	1	29
5 km	Grassland	26	24	9	51
	Cropland	25	20	0	54
	Forest [†]	22	21	10	46
	Wetland	11	5	0	55
	Shrubland	6	4	1	20
10 km	Grassland [†]	23	22	10	57
	Cropland	25	14	1	54
	Forest	28	28	11	57
	Wetland	9	6	0	37
	Shrubland	6	5	2	16

[†] Indicates landscape variables included in the analysis.

Table A1.2. Correlation matrix between percent land cover types at 10, 5, and 2 km buffers around Bobolink nests ($n = 463$). Variables were considered highly correlated when $|r| \geq 0.60$.

	Crop 10	Forest 10	Pasture 10	Shrub 10	Wetland 10	Crop 5	Forest 5	Pasture 5	Shrub 5	Wetland 5	Crop 2	Forest 2	Pasture 2	Shrub 2	Wetland 2	
Crop10	1.00															
Forest10	-0.75	1.00														
Pasture10	0.23	-0.01	1.00													
Shrub10	-0.74	0.27	-0.24	1.00												
Wetland10	-0.43	-0.18	-0.54	0.68	1.00											
Crop5	0.93	-0.57	0.32	-0.76	-0.59	1.00										
Forest5	-0.60	0.82	0.05	0.12	-0.28	-0.52	1.00									
Pasture5	-0.30	0.64	0.53	-0.08	-0.59	-0.10	0.47	1.00								
Shrub5	-0.71	0.21	-0.30	0.95	0.70	-0.79	0.15	-0.16	1.00							
Wetland5	-0.39	-0.21	-0.54	0.66	0.99	-0.57	-0.34	-0.61	0.70	1.00						
Crop2	0.66	-0.34	0.32	-0.58	-0.54	0.82	-0.37	0.02	-0.65	-0.55	1.00					
Forest2	-0.13	0.15	0.06	-0.07	-0.13	-0.21	0.50	0.05	0.04	-0.09	-0.51	1.00				
Pasture2	-0.34	0.73	0.25	-0.05	-0.48	-0.17	0.49	0.86	-0.15	-0.51	0.00	-0.19	1.00			
Shrub2	-0.54	0.06	-0.17	0.81	0.57	-0.65	0.16	-0.19	0.88	0.55	-0.64	0.26	-0.30	1.00		
Wetland2	-0.19	-0.35	-0.50	0.52	0.87	-0.41	-0.37	-0.69	0.59	0.09	-0.58	0.06	-0.63	0.53	1.00	

Table A1.3. Full model selection results for daily survival rate of Bobolink nests explained by local, landscape, and temporal covariates, ranked by Akaike's Information Criterion (AICc) for 463 nests. The table includes all 53 models (including null = model 39).

No.	Nest survival models	K [†]	ΔAICc [‡]	AICc weight	Dev [§]
1	Date + Stocking rate [*]	3	0.00	0.16	1120.54
2	Date + Stocking rate + Forest2 + Forest5 [#]	5	0.02	0.15	1116.55
3	Date + Stocking rate + Forest2	4	0.33	0.13	1118.87
4	Date + Stocking rate + Grassland2 ^{††}	4	0.85	0.10	1119.39
5	Date + Stocking rate + Grassland10 ^{‡‡}	4	1.17	0.09	1119.71
6	Date + Stocking rate + Forest5	4	1.28	0.08	1119.81
7	Date + Stocking rate + Crop2 ^{§§}	4	1.97	0.06	1120.51
8	Date + Stocking rate + Crop2 + Forest2 + Grassland10	6	2.16	0.05	1116.68
9	Date + Stocking rate + Grassland2 + Grassland10	5	2.35	0.05	1118.88
10	Date + Stocking rate + Crop2 + Forest2 + Forest5 + Grassland2 + Grassland10	8	3.50	0.03	1114.01
11	Date + Stocking rate + Crop2 + Forest2 + Grassland2	6	3.54	0.03	1118.06
12	Date + Stocking rate + Field use	8	3.76	0.02	1114.28
13	Date + Stocking rate + Region ^{¶¶}	6	4.13	0.02	1118.66
14	Date + Stocking rate + Crop2 + Forest5 + Grassland10	6	4.51	0.02	1119.04
15	Date + Stocking rate + Crop2 + Forest5 + Grassland2	6	4.64	0.02	1119.16
16	Date + Field use	7	13.25	0.00	1125.77
17	Date + Field use + Forest2	8	14.15	0.00	1124.66
18	Date + Field use + Grassland10	8	14.31	0.00	1124.82
19	Date + Field use + Crop2	8	14.32	0.00	1124.83
20	Date + Field use + Forest5	8	15.08	0.00	1125.59
21	Date + Field use + Grassland2	8	15.18	0.00	1125.69
22	Date + Field use + Forest2 + Forest5	9	16.12	0.00	1124.63
23	Date + Field area + Forest2 + Forest5	5	16.27	0.00	1132.80
24	Date + Field use + Grassland2 + Grassland10	9	16.30	0.00	1124.80
25	Date + Field use + Crop2 + Forest2 + Grassland10	10	17.07	0.00	1123.57
26	Date + Field use + Crop2 + Forest2 + Grassland2	10	17.89	0.00	1124.38
27	Date + Field area + Forest5	4	19.15	0.00	1137.69
28	Date + Field area + Crop2 + Forest2 + Forest5 + Grassland2 + Grassland10	8	19.40	0.00	1129.92
29	Date + Field area + Grassland2	4	20.05	0.00	1138.59
30	Date + Region	4	20.60	0.00	1139.14
31	Date + Crop2 + GrassFor2 + GrassFor10 + Forest2 + Forest5	7	20.70	0.00	1133.22
32	Date + Field use + Crop2 + Forest2 + Forest5 + Grassland2 + Grassland10	12	20.73	0.00	1123.21
33	Date + Forest5	3	20.78	0.00	1141.32
34	Date + Field area + Grassland2 + Grassland10	5	20.99	0.00	1137.52

35	Date + Grassland2	3	22.24	0.00	1142.78
36	Date + Field area + Crop2 + Forest2 + Grassland2	6	24.02	0.00	1138.54
37	Date + Crop250 ^{##}	3	24.18	0.00	1144.72
38	Region	3	26.33	0.00	1146.87
39	Date	2	27.57	0.00	1150.11
40	Date + Field area + Grassland10	4	27.68	0.00	1146.21
41	Date + Field area	3	28.01	0.00	1148.55
42	Date + Grassland250 ^{†††}	3	28.26	0.00	1148.80
43	Date + Grassland10	3	28.58	0.00	1149.12
44	Date + Water250 ^{‡‡‡}	3	28.92	0.00	1149.46
45	Date + Forest2	3	29.00	0.00	1149.54
46	Date + Crop2	3	29.16	0.00	1149.70
47	Date + Forest250 ^{§§§}	3	29.34	0.00	1149.88
48	Date + Distance to forest edge	3	29.38	0.00	1149.92
49	Date + Shrubland250	3	29.47	0.00	1150.01
50	Date + Field area + Crop2 + Forest2 + Grassland10	6	29.48	0.00	1144.01
51	Date + Field area + Forest2	4	29.62	0.00	1148.16
52	Date + Field area + Crop2	4	29.98	0.00	1148.52
53	Date + Grassland250 + Forest250 + Crop250 + Shrubland250 + Water250	7	31.49	0.00	1144.01

† Number of parameters in the model.

‡ Difference in AICc values compared to the best-supported model. AICc = 1126.55 for the best supported model.

§ Model deviance.

| Number cattle × days grazed/area grazed.

¶ % forest within 2 km buffer around each nest.

% forest within 5 km buffer around each nest.

†† % pasture, forage, and grassland within 2 km buffer around each nest.

‡‡ % pasture, forage, and grassland within 10 km buffer around each nest.

§§ % crop within 2 km buffer around each nest.

|| grazed pasture (rotational and continuous), un-grazed pasture, hayfield, fallow field, restored grassland.

¶¶ Carden, Dufferin, and Renfrew region.

% cropland within a 250 m buffer around each nest.

††† % pasture, forage, and grassland within a 250 m buffer around each nest.

‡‡‡ % water within a 250 m buffer around each nest.

§§§ % forest within a 250 m buffer around each nest.

||| % shrubland within a 250 m buffer around each nest.

* Indicates best-supported model.