	Aquatic_Animal				Clinical/Human	Land_Anima	Plants					
Characteristic	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value
USregion												
northeast												
midwest	0.09	0.01, 0.88	0.038	2.14	0.54, 8.44	0.3	0.10	0.01, 0.89	0.039	0.01	0.00, 0.09	<0.001
west	2.20	1.22, 3.98	0.009	0.41	0.10, 1.70	0.2	1.99	1.05, 3.79	0.036	1.24	0.65, 2.35	0.5
south	4.64	2.50, 8.58	<0.001	7.53	2.44, 23.3	<0.001	1.88	0.92, 3.85	0.083	2.26	1.14, 4.47	0.020
other	16.8	2.19, 129	0.007	1.20	0.00, 348	>0.9	1,918	421, 8,741	<0.001	11.1	1.59, 77.7	0.015
season												
spring												
summer	1.67	1.36, 2.05	<0.001	1.50	0.88, 2.56	0.14	0.56	0.45, 0.70	<0.001	1.25	0.97, 1.61	0.089
autumn	3.40	2.72, 4.24	<0.001	6.42	3.84, 10.7	<0.001	0.56	0.45, 0.71	<0.001	1.50	1.14, 1.97	0.004
winter	1.10	0.87, 1.39	0.4	1.02	0.55, 1.87	>0.9	0.69	0.55, 0.86	<0.001	0.43	0.31, 0.61	<0.001
collection.yr												
2010												
2011	7.63	4.79, 12.1	<0.001	0.62	0.25, 1.52	0.3	1.97	1.10, 3.52	0.022	0.93	0.51, 1.70	0.8
2012	8.16	4.55, 14.6	<0.001	0.27	0.05, 1.46	0.13	3.00	1.56, 5.79	0.001	2.16	1.12, 4.17	0.021
2013	43.5	25.9, 73.2	<0.001	10.5	5.29, 20.7	<0.001	1.55	0.79, 3.07	0.2	3.99	2.20, 7.23	<0.001
2014	7.23	4.55, 11.5	<0.001	0.89	0.42, 1.89	0.8	3.74	2.14, 6.55	<0.001	5.22	3.16, 8.61	<0.001
2015	0.00	0.00, 0.07	0.001	0.33	0.16, 0.68	0.002	1.00	0.58, 1.73	>0.9	0.84	0.51, 1.38	0.5
2016	0.00	0.00, 0.38	0.026	0.03	0.01, 0.09	<0.001	0.33	0.19, 0.59	<0.001	0.08	0.04, 0.16	<0.001
2017	0.20	0.12, 0.32	<0.001	0.04	0.02, 0.13	<0.001	0.80	0.48, 1.34	0.4	0.38	0.23, 0.64	<0.001
2017	0.20	0.12, 0.32	<0.001	0.04	0.02, 0.13	<0.001	0.80	0.48, 1.34	0.4	0.38	0.23, 0.64	<0.001
2018	1.23	0.81, 1.87	0.3	0.33	0.16, 0.68	0.003	0.69	0.41, 1.18	0.2	0.72	0.45, 1.15	0.2
2019	1.71	1.14, 2.58	0.010	0.25	0.13, 0.49	<0.001	0.69	0.41, 1.15	0.2	0.36	0.22, 0.59	<0.001
2020	2.77	1.38, 5.55	0.004	0.10	0.00, 2.25	0.15	7.33	3.47, 15.5	<0.001	1.99	0.84, 4.71	0.12
2021	0.97	0.58, 1.62	0.9	0.08	0.02, 0.45	0.004	1.65	0.95, 2.86	0.077	0.44	0.23, 0.82	0.010
2022	5.89	3.72, 9.34	<0.001	0.11	0.02, 0.57	0.008	1.55	0.89, 2.69	0.12	0.14	0.06, 0.33	<0.001
SNP.cluster.group												
other												
PDS000000270.29	0.05	0.01, 0.31	0.001	9.57	4.12, 22.2	<0.001	14.8	10.9, 20.2	<0.001	0.00	0.00, 0.13	0.002
PDS000000366.504	1.79	1.56, 2.06	<0.001	0.59	0.45, 0.79	<0.001	0.56	0.48, 0.65	<0.001	0.09	0.07, 0.11	<0.001
PDS000003277.110	0.04	0.01, 0.20	<0.001	6.95	3.15, 15.3	<0.001	0.63	0.34, 1.15	0.13	6.65	4.85, 9.10	<0.001
PDS000003294.17	0.02	0.00, 0.20	0.001	0.17	0.03, 0.97	0.046	0.00	0.00, 0.00	<0.001	1.40	1.04, 1.89	0.028
PDS000005985.27	0.04	0.00, 6.52	0.2	0.01	0.00, 2.25	0.090	0.12	0.00, 27.3	0.4	0.01	0.00, 3.28	0.12
PDS000024311.16	0.00	0.00, 0.16	0.003	0.34	0.09, 1.31	0.12	0.17	0.12, 0.24	<0.001	0.00	0.00, 0.34	0.020
PDS000024349.25	0.00	0.00, 0.06	<0.001	0.10	0.04, 0.21	<0.001	1.43	1.08, 1.90	0.012	0.00	0.00, 0.05	<0.001
PDS000024645.152	0.54	0.39, 0.76	<0.001	0.02	0.00, 0.17	<0.001	0.15	0.10, 0.24	<0.001	0.01	0.00, 0.06	<0.001
PDS000024647.66	0.01	0.00, 0.04	<0.001	0.04	0.02, 0.08	<0.001	0.30	0.19, 0.48	<0.001	0.00	0.00, 0.04	<0.001
PDS000024856.163	0.03	0.01, 0.08	<0.001	1.80	1.07, 3.04	0.028	2.17	1.56, 3.02	<0.001	0.83	0.58, 1.19	0.3
PDS000024934.86	0.02	0.01, 0.05	<0.001	1.87	1.29, 2.72	<0.001	0.49	0.36, 0.66	<0.001	1.24	1.04, 1.49	0.017
PDS000024989.120	0.13	0.10, 0.17	<0.001	0.49	0.33, 0.72	<0.001	0.59	0.49, 0.71	<0.001	0.34	0.28, 0.41	<0.001
PDS000025154.24	0.01	0.00, 0.38	0.011	0.44	0.03, 6.60	0.5	0.00	0.00, 68,100	0.4	0.00	0.00, 0.78	0.041
DDC000025222.7												

25.2 15.5, 40.9

<0.001 0.57 0.21, 1.58

0.3

0.006

Clinical/Human

Land_Animal

Plants

Aquatic_Animal

PDS000025233.7

0.61

0.17, 2.12 0.4

0.20

0.07, 0.63

PDS000025311.254	0.95	0.66, 1.37	0.8	1.51	0.83, 2.74	0.2	1.59	1.12, 2.25	0.009	0.99	0.67, 1.46	>0.9
PDS000025433.69	0.00	0.00, 0.02	<0.001	0.22	0.10, 0.49	<0.001	0.09	0.06, 0.15	<0.001	0.11	0.07, 0.18	<0.001
PDS000025466.70	0.00	0.00, 0.09	0.002	0.90	0.22, 3.65	0.9	1.12	0.71, 1.78	0.6	3.15	2.10, 4.73	<0.001
PDS000058419.26	0.02	0.00, 0.06	<0.001	5.58	2.59, 12.0	<0.001	0.09	0.02, 0.42	0.002	0.63	0.44, 0.90	0.012
PDS000058430.33	0.01	0.00, 0.03	<0.001	0.42	0.25, 0.71	0.001	0.01	0.00, 0.09	<0.001	0.19	0.14, 0.26	<0.001
PDS000083553.8	0.00	0.00, 0.04	<0.001	0.33	0.14, 0.78	0.012	0.70	0.50, 0.99	0.044	0.19	0.13, 0.30	<0.001
Min.diff	1.01	1.00, 1.01	0.050	1.03	1.03, 1.04	<0.001	0.96	0.96, 0.97	<0.001	0.97	0.96, 0.97	<0.001
USregion * season												
midwest * summer	1.27	0.75, 2.17	0.4	2.17	0.72, 6.53	0.2	1.19	0.87, 1.62	0.3	11.1	7.68, 16.0	<0.001
west * summer	2.62	2.00, 3.43	<0.001	1.82	0.82, 4.04	0.14	1.33	0.94, 1.89	0.11	1.81	1.34, 2.46	<0.001
south * summer	0.63	0.47, 0.86	0.003	0.32	0.14, 0.75	0.009	1.47	1.10, 1.97	0.009	0.81	0.58, 1.12	0.2
other * summer	0.05	0.03, 0.09	<0.001	0.48	0.26, 0.90	0.021	0.42	0.26, 0.69	<0.001	0.49	0.32, 0.75	<0.001
midwest * autumn	0.02	0.01, 0.05	<0.001	0.15	0.04, 0.60	0.007	2.18	1.58, 3.02	<0.001	2.73	1.84, 4.07	<0.001
west * autumn	0.15	0.11, 0.20	<0.001	0.26	0.12, 0.54	<0.001	2.32	1.66, 3.26	<0.001	0.80	0.58, 1.12	0.2
south * autumn	1.08	0.79, 1.47	0.6	0.08	0.03, 0.19	<0.001	0.87	0.63, 1.21	0.4	0.62	0.43, 0.90	0.011
other * autumn	0.15	0.09, 0.24	<0.001	0.14	0.08, 0.25	<0.001	0.73	0.45, 1.18	0.2	0.33	0.21, 0.51	<0.001
midwest * winter	0.04	0.01, 0.09	<0.001	0.91	0.24, 3.47	0.9	1.34	0.99, 1.84	0.062	11.7	7.54, 18.1	<0.001
west * winter	0.52	0.38, 0.70	<0.001	0.28	0.11, 0.76	0.012	0.95	0.68, 1.33	0.8	1.68	1.15, 2.48	0.008
south * winter	0.29	0.20, 0.40	<0.001	0.14	0.04, 0.42	<0.001	1.47	1.08, 2.01	0.014	0.82	0.53, 1.26	0.4
other * winter	3.66	2.20, 6.08	<0.001	1.39	0.68, 2.85	0.4	3.74	2.28, 6.15	<0.001	0.19	0.10, 0.36	<0.001
USregion * collection.yr												

midwest * 2011	0.04	0.00, 1.16	0.061	0.02	0.00, 0.69	0.031	0.56	0.05, 5.95	0.6	2.56	0.36, 18.1	0.3
west * 2011	0.34	0.18, 0.63	<0.001	5.97	1.38, 25.9	0.017	0.09	0.04, 0.18	<0.001	1.26	0.60, 2.67	0.5
south * 2011	1.29	0.66, 2.53	0.5	0.24	0.05, 1.11	0.068	0.37	0.16, 0.84	0.017	1.78	0.79, 4.05	0.2
other * 2011	0.00	0.00, 0.00	<0.001	60,847	2,110, 1,754,990	<0.001	9.16	0.00, 45,198	0.6	0.22	0.01, 8.54	0.4
midwest * 2012	0.05	0.00, 1.02	0.051	1.26	0.17, 9.67	0.8	4.94	0.50, 49.0	0.2	8.85	1.33, 58.8	0.024
west * 2012	0.00	0.00, 0.00	<0.001	1.58	0.18, 13.5	0.7	0.02	0.01, 0.04	<0.001	0.33	0.15, 0.75	0.007
south * 2012	0.05	0.02, 0.11	<0.001	1.33	0.20, 8.80	0.8	0.50	0.22, 1.16	0.11	1.36	0.60, 3.12	0.5
other * 2012	7.99	0.07, 946	0.4	12,814	9.21, 17,820,629	0.010	0.00	0.00, 0.10	0.004	17.4	0.15, 2,047	0.2
midwest * 2013	0.02	0.00, 0.36	0.007	0.01	0.00, 0.06	<0.001	5.35	0.54, 53.3	0.2	16.5	2.56, 106	0.003
west * 2013	0.02	0.01, 0.04	<0.001	0.01	0.00, 0.08	<0.001	0.03	0.01, 0.06	<0.001	0.16	0.07, 0.34	<0.001
south * 2013	0.16	0.08, 0.35	<0.001	0.16	0.04, 0.58	0.006	0.78	0.31, 1.95	0.6	1.96	0.85, 4.56	0.12
other * 2013	0.40	0.04, 3.99	0.4	228	0.72, 72,252	0.065	0.01	0.00, 0.06	<0.001	0.09	0.01, 1.07	0.057
midwest * 2014	0.06	0.00, 0.95	0.045	0.05	0.01, 0.33	0.002	1.93	0.20, 18.5	0.6	8.95	1.44, 55.5	0.019
west * 2014	0.03	0.01, 0.05	<0.001	0.28	0.06, 1.29	0.10	0.04	0.02, 0.09	<0.001	0.65	0.33, 1.25	0.2
south * 2014	0.11	0.06, 0.20	<0.001	0.13	0.04, 0.48	0.002	0.72	0.34, 1.55	0.4	0.62	0.30, 1.26	0.2
other * 2014	0.11	0.01, 1.25	0.076	4,276	13.4, 1,369,198	0.005	0.00	0.00, 0.03	<0.001	0.34	0.03, 3.23	0.3
midwest * 2015	583	4.69, 72,356	0.010	0.14	0.03, 0.68	0.015	5.89	0.63, 55.3	0.12	30.0	4.85, 185	<0.001
west * 2015	767	11.2, 52,793	0.002	0.88	0.21, 3.65	0.9	0.22	0.11, 0.42	<0.001	0.42	0.21, 0.82	0.011
south * 2015	173	2.48, 11,993	0.017	0.14	0.04, 0.55	0.005	0.79	0.37, 1.69	0.6	0.52	0.25, 1.07	0.074
other * 2015	208	1.89, 22,912	0.026	2,533	8.60, 745,764	0.007	0.01	0.00, 0.03	<0.001	3.44	0.46, 25.6	0.2
midwest * 2016	283,038	148, 542,934,983	0.001	1.05	0.10, 11.2	>0.9	12.3	1.28, 117	0.030	136	20.2, 923	<0.001
west * 2016	1,916	1.38, 2,660,807	0.041	5.48	0.78, 38.4	0.087	0.40	0.20, 0.81	0.012	2.47	1.05, 5.83	0.039

south * 2016	1,843	1.32, 2,569,406	0.042	2.17	0.32, 14.9	0.4	7.35	3.39, 15.9	<0.001	3.73	1.46, 9.55	0.006
other * 2016	487	0.27, 868,624	0.11	1,400	4.42, 443,682	0.014	0.00	0.00, 0.00	<0.001	4.30	0.58, 31.7	0.2
midwest * 2017	2.71	0.24, 30.1	0.4	0.78	0.13, 4.60	0.8	7.48	0.80, 69.7	0.077	32.9	5.31, 204	<0.001
west * 2017	6.54	3.44, 12.4	<0.001	5.93	1.02, 34.6	0.048	0.10	0.05, 0.20	<0.001	0.96	0.48, 1.92	>0.9
south * 2017	1.85	0.96, 3.57	0.066	0.77	0.16, 3.77	0.7	0.34	0.16, 0.72	0.005	0.46	0.22, 0.98	0.044
other * 2017	0.09	0.01, 0.79	0.029	2,680	8.85, 811,741	0.007	0.00	0.00, 0.00	<0.001	1.92	0.27, 13.4	0.5
midwest * 2018	4.11	0.45, 37.8	0.2	0.19	0.05, 0.74	0.017	25.6	2.75, 238	0.004	38.0	6.23, 232	<0.001
west * 2018	0.94	0.50, 1.77	0.9	0.32	0.03, 3.18	0.3	0.00	0.00, 0.05	<0.001	0.64	0.32, 1.29	0.2
south * 2018	1.21	0.64, 2.29	0.5	0.23	0.05, 1.08	0.062	1.45	0.68, 3.09	0.3	1.05	0.50, 2.18	>0.9
other * 2018	0.22	0.03, 1.87	0.2	3,268	11.1,960,767	0.005	0.01	0.00, 0.04	<0.001	16.7	2.29, 122	0.006
midwest * 2019	0.48	0.05, 4.89	0.5	0.20	0.05, 0.86	0.030	37.0	4.00, 343	0.001	54.2	8.83, 333	<0.001
west * 2019	0.12	0.06, 0.22	<0.001	0.43	0.05, 3.46	0.4	0.03	0.01, 0.08	<0.001	2.78	1.40, 5.53	0.003
south * 2019	0.04	0.02, 0.08	<0.001	0.10	0.02, 0.50	0.005	0.42	0.20, 0.88	0.022	1.03	0.50, 2.12	>0.9
other * 2019	0.91	0.11, 7.54	>0.9	0.17	0.00, 6,058	0.7	0.00	0.00, 0.10	0.014	0.00	0.00, 2,842	0.4
midwest * 2020	0.29	0.02, 3.54	0.3	0.48	0.02, 14.5	0.7	0.61	0.06, 6.19	0.7	33.5	4.76, 236	<0.001
west * 2020	1.34	0.52, 3.43	0.5	0.06	0.00, 2,072,775,462	0.8	0.00	0.00, 0.42	0.028	2.54	0.86, 7.47	0.090
south * 2020	0.31	0.13, 0.73	0.007	0.28	0.01, 9.29	0.5	0.01	0.00, 0.02	<0.001	0.21	0.08, 0.60	0.003
other * 2020	0.32	0.04, 2.54	0.3	9.13	0.02, 5,470	0.5	0.00	0.00, 0.01	<0.001	0.08	0.01, 0.66	0.019
midwest * 2021	2.30	0.14, 37.5	0.6	0.51	0.02, 12.0	0.7	4.78	0.48, 47.6	0.2	253	38.4, 1,661	<0.001
west * 2021	2.62	1.25, 5.47	0.011	1.47	0.03, 66.7	0.8	0.46	0.21, 0.98	0.045	13.5	5.93, 30.9	<0.001
south * 2021	0.00	0.00, 0.07	0.001	0.17	0.01, 4.07	0.3	0.74	0.33, 1.63	0.4	1.08	0.45, 2.59	0.9

other * 2021	0.02	0.00, 0.20	0.001	152	0.42, 54,906	0.095	0.00	0.00, 0.01	<0.001	6.41	0.82, 50.0	0.076
midwest * 2022	0.03	0.00, 2.24	0.11	0.82	0.05, 14.4	0.9	5.82	0.59, 57.5	0.13	1,308	182, 9,408	<0.001
west * 2022	0.58	0.27, 1.23	0.2	6.30	0.57, 69.7	0.13	0.04	0.01, 0.19	<0.001	115	42.8, 309	<0.001
south * 2022	0.00	0.00, 0.01	<0.001	0.23	0.02, 3.21	0.3	0.46	0.21, 1.00	0.050	5.77	2.12, 15.7	<0.001
other * 2022	0.04	0.00, 1.65	0.089	11,140	23.4, 5,306,925	0.003	0.04	0.00, 0.43	0.009	132	7.49, 2,321	<0.001

 $^{^{\}rm a}$ Covariate SNP.cluster.group and interactions USregion:season are shown $^{\rm 1}$ OR = Odds Ratio, CI = Confidence Interval $^{\rm a}$ Reference level is represented as -