

# Analysis of crop consumption using scatological samples from red-crowned crane *Grus japonensis* in eastern Hokkaido, Japan

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Table S1. Individual information on intestinal contents of flying red-crowned cranes used in this study

No. in Figure 1A	Stock No.	Stage	Sex	Collection date	Collection site	Reg. Promo. Bureau	No. in Figure 1A	Stock No.	Stage	Sex	Collection date	Collection site	Reg. Promo. Bureau
1	R134	Adult	Male	22-Mar-06	Akan	Kushiro	31	R269	Subadult	Female	28-Mar-11	Teshikaga	Kushiro
2	R136	Subadult	Female	2-May-06	Urahoru	Tokachi	32	R272	Adult	Female	7-May-11	Abashiri	Okhotsk
3	R143	Adult	Male	28-Jun-06	Shibecha	Kushiro	33	R275	Subadult	Male	25-Jun-11	Toyokoro	Tokachi
4	R146	Subadult	Male	19-Oct-06	Bekkai	Nemuro	34	R281	Subadult	Male	2-Nov-11	Taiki	Tokachi
5	R147	Subadult	Female	22-Oct-06	Tsurui	Kushiro	35	R287	Adult	Female	1-Jan-12	Shibecha	Kushiro
6	R148	Subadult	Female	23-Oct-06	Nemuro	Nemuro	36	R317	Adult	Female	2-May-13	Nemuro	Nemuro
7	R157	Adult	Male	19-Mar-07	Shibecha	Kushiro	37	R474	Adult	Male	3-Sep-18	Urahoru	Tokachi
8	R158	Adult	Male	30-Mar-07	Akkeshi	Kushiro	38	R475	Adult	Female	3-Sep-18	Urahoru	Tokachi
9	R160	Adult	Male	4-Apr-07	Hamanaka	Kushiro	39	R476	Juvenile	Female	3-Sep-18	Urahoru	Tokachi
10	R161	Adult	Male	9-May-07	Nakashibetsu	Nemuro	40	R542	Adult	Male	30-Apr-20	Shiranuka	Kushiro
11	R165	Subadult	Male	10-Jul-07	Shibecha	Kushiro	41	R547	Adult	Female	29-Jul-20	Akkeshi	Kushiro
12	R175	Adult	Female	16-Nov-07	Urahoru	Tokachi	42	R548	Juvenile	Female	19-Aug-20	Ikeda	Tokachi
13	R176	Adult	Female	20-Nov-07	Tsurui	Kushiro	43	R549	Adult	Male	8-Sep-20	Ikeda	Tokachi
14	R178	Adult	Female	27-Nov-07	Kushiro City	Kushiro	44	R550	Subadult	Female	8-Sep-20	Ikeda	Tokachi
15	R183	Adult	Female	11-Jan-08	Shibecha	Kushiro	45	R551	Adult	Male	4-Oct-20	Shibecha	Kushiro
16	R184	Adult	Female	14-Feb-08	Hamanaka	Kushiro	46	R552	Subadult	Female	7-Oct-20	Tsurui	Kushiro
17	R187	Adult	Female	11-Mar-08	Hamanaka	Kushiro	47	R553	Adult	Male	9-Oct-20	Tsurui	Kushiro
18	R196	Subadult	Female	21-Jul-08	Bekkai	Nemuro	48	R555	Adult	Male	18-Oct-20	Tsurui	Kushiro
19	R221	Adult	Male	27-Feb-09	Shibecha	Kushiro	49	R556	Subadult	Female	26-Oct-20	Tsurui	Kushiro
20	R223	Adult	Female	20-Mar-09	Akkeshi	Kushiro	50	R558	Juvenile	Male	12-Nov-20	Makubetsu	Tokachi
21	R225	Adult	Male	21-May-09	Honbetsu	Tokachi	51	R560	Adult	Female	4-Dec-20	Tsurui	Kushiro
22	R226	Adult	Male	2-Jun-09	Bekkai	Nemuro	52	R561	Subadult	Male	5-Dec-20	Ikeda	Tokachi
23	R241	Subadult	Male	22-Nov-09	Teshikaga	Kushiro	53	R562	Adult	Female	8-Dec-20	Nemuro	Nemuro
24	R243	Adult	Female	27-Jan-10	Nemuro	Nemuro	54	R563	Juvenile	Male	17-Dec-20	Tsurui	Kushiro
25	R245	Adult	Male	25-Feb-10	Shibetsu	Nemuro	55	R564	Juvenile	Male	30-Dec-20	Shiranuka	Kushiro
26	R246	Adult	Male	18-Mar-10	Shibecha	Kushiro	56	R566	Adult	Male	10-Feb-21	Onbetsu	Kushiro
27	R251	Adult	Male	24-May-10	Shiranuka	Kushiro	57	R567	Adult	Male	2-Mar-21	Shibecha	Kushiro
28	R262	Adult	Female	29-Nov-10	Akkeshi	Kushiro	58	R569	Adult	Female	18-Mar-21	Kushiro City	Kushiro
29	R264	Subadult	Male	16-Dec-10	Teshikaga	Kushiro	59	R580	Adult	Male	5-Jun-21	Ikeda	Tokachi
30	R265	Subadult	Male	20-Dec-10	Kushiro City	Kushiro	60	-	Adult	-	1-Aug-21	Erimo	Hidaka

Numbers for each crop indicate % of total reads from high-throughput sequencing. Reads less than 0.1% of the total read count were discarded. The numbers in the leftmost column number indicate the numbers in Figure 1A (Figure 1A No.). “Stock No.” is used for each crane body in the freezer at Kushiro Zoo. “Reg. Promo. Bureau” (Regional Promotion Bureau) is one of the 14 promotion bureaus in Hokkaido Prefecture as an administrative unit covering some cities and towns.

Table S2. Individual information on red-crowned chick feces used in this study

No. in Figure 1B	Stock No.	Stage	Sex	Collection date	Collection site	Reg. Promo. Bureau
1	267	Chick	Male	25-Jun-16	Ikeda	Tokachi
2	268	Chick	Female	26-Jun-16	Toyokoro	Tokachi
3	270	Chick	Female	2-Jul-16	Shiranuka	Kushiro
4	271	Chick	Male	2-Jul-16	Shiranuka	Kushiro
5	272	Chick	Male	2-Jul-16	Onbetsu	Tokachi
6	280	Chick	Female	10-Jul-16	Bekkai	Nemuro
7	285	Chick	Female	16-Jul-16	Hamanaka	Kushiro
8	286	Chick	Male	16-Jul-16	Hamanaka	Kushiro
9	295	Chick	Male	24-Jun-17	Ikeda	Tokachi
10	296	Chick	Female	24-Jun-17	Ikeda	Tokachi
11	297	Chick	Male	24-Jun-17	Ikeda	Tokachi
12	299	Chick	Female	25-Jun-17	Toyokoro	Tokachi
13	305	Chick	Female	4-Jul-17	Kushiro City	Kushiro
14	306	Chick	Male	4-Jul-17	Shiranuka	Kushiro
15	307	Chick	Female	5-Jul-17	Shibecha	Kushiro
16	308	Chick	Male	5-Jul-17	Shibecha	Kushiro
17	309	Chick	Male	5-Jul-17	Schibecha	Kushiro
18	311	Chick	Male	7-Jul-17	Bekkai	Nemuro
19	316	Chick	Male	8-Jul-17	Hamanaka	Kushiro
20	317	Chick	Female	9-Jul-17	Shintoku	Tokachi
21	324	Chick	Female	13-Jul-18	Kushiro City	Kushiro
22	326	Chick	Female	7-Jul-18	Shiranuka	Kushiro
23	334	Chick	Female	14-Jul-18	Teshikaga	Kushiro
24	336	Chick	Female	14-Jul-18	Teshikaga	Kushiro
25	339	Chick	Female	15-Jul-18	Shintoku	Tokachi

Numbers for each crop indicate % of total reads from high-throughput sequencing. Reads less than 0.1% of the total read count were discarded. The numbers in the leftmost column number indicate the numbers in Figure 1B (Figure 1B No.). Banding No. is used for each crane body in the freezer at Kushiro Zoo. “Reg. Promo. Bureau” (Regional Promotion Bureau) is one of the 14 promotion bureaus in Hokkaido Prefecture as an administrative unit covering some cities and towns.

# Table S3. Specific primers for crops

	Primer	Crop	Scientific name	Sequence	Purpose
1	Azuki F1	Azuki bean	<i>Vigna angularis</i>	5'-AGA ATC CTT TCA CCA AAA TTA CAG GAA-3'	First-PCR
2	Azuki R1			5'-ATC TAT TAC AAA ACT AGT CCC TTG TCA-3'	First-PCR
3	Azuki F2			5'-CAA TTC GAA GTT GAA GAA ACG ATG GA-3'	Nested-PCR
4	Azuki R2			5'-TAG GAA ATT GAT GAA AAT ACA AAT TCC-3'	Nested-PCR
5	Beet F2	Sugar beet	<i>Beta vulgaris ssp. vulgaris</i>	5'-TTA GAA TCG ATG AAC TCC GGA T-3'	First/Nested-PCR
6	Beet R1			5'-TAG TGT GAT GTC CTT CCC CGT T-3'	First-PCR
7	Beet R2			5'-TCT CTA TCG GAA GTC TAT ATC TTC AT-3'	Nested-PCR
8	Cabbage F1	Cabbage	<i>Brassica oleracea var. capitata</i>	5'-GAA CTT CAA ATC TAC GAA GTA GA-3'	First-PCR
9	Cabbage R1			5'-AAA AGG GTA AGG TGT CAA ACA GAC-3'	First-PCR
10	Cabbage F2			5'-GAC TTA TAA TCT TTT TAC ATT GCA CAT-3'	Nested-PCR
11	Cabbage R2			5'-ACT CTG TTT TGT TCG CGT AAC CCA-3'	Nested-PCR
12	Carrot F1	Carrot	<i>Daucus carota subsp. sativus</i>	5'-AAA GCC CAT TCA ACT CCT TAT TAT CT-3'	First-PCR
13	Carrot R1			5'-TTA TGG ATC GGC TAA CAA CTA ATT TAA-3'	First-PCR
14	Carrot F2			5'-AGA GCA CAA TTT TTC TCT TAT GAC AA-3'	Nested-PCR
15	Carrot R02			5'-AAG ACC GAG GCG GAT AAA CG-3'	Nested-PCR
16	Corn F	Corn	<i>Zea mays</i>	5'-GGA ACC TGC TAA GTG GTA ACT TC-3'	First-PCR
17	Corn R			5'-GAC ACC CAC AGG TAG AAT GG-3'	First-PCR
18	Corn F02			5'-GTG GTT CTC AAA CTA GAA CCC AA-3'	Nested-PCR
19	Corn R2			5'-ATC CTC GTC CGA TTA ATC CAC TT-3'	Nested-PCR
21	Daizu F1	Soybean	<i>Glycine max</i>	5'-ACT CCC AAG TTT TCA GTC GGA AA-3'	First-PCR
22	Daizu R1			5'-TTA AAG ATA GAG AGG GAG GGT ATG-3'	First-PCR
23	Daizu F2			5'-GAA GTA GGG GCA TAG AAT CGA AA-3'	Nested-PCR qPCR
24	Daizu R2			5'-TCC TGG AAT TTT GAC GGA AGG ATT-3'	Nested-PCR qPCR
25	Hakusai F01	Chinese cabbage	<i>Brassica rapa L. var. pekinensis</i>	5'-ACG AAT CGA CCG TTC GAC TAT TTC T-3'	First-PCR
26	Hakusai R01			5'-ACT GAG CTA TCC CGG CCA TTA CCG A-3'	First-PCR
27	Hakusai F02			5'-AGC AAA AAG GGG GAT ATG GCG GAA T-3'	Nested-PCR
28	Hakusai R02			5'-TTT AGG GAG TAG GGT TGG GGA TAG A-3'	Nested-PCR
29	Ingenname F001	Common bean	<i>Phaseolus vulgaris L.</i>	5'-GTG GTA CTC CAG ATG CAC GCC TTG A-3'	First/Nested-PCR
30	Ingenname R001			5'-TAT TGA GGG GGT GCC AGG GTG TGT T-3'	First-PCR

	Primer	Crop	Scientific name	Sequence	Purpose
31	Ingenname R002	Potato	<i>Solanum tuberosum</i> L.	5'-TGG CCA AAG TCT CTG TGT GGA ACC A-3'	Nested-PCR
32	Jyagaimo F1			5'-TCT AAG CGT AAC TGG CTT TCT CTT-3'	First-PCR
33	Jyagaimo R1			5'-AAG TTG GGA AGT GAT CAT AGG CC-3'	First-PCR
34	Jyagaimo F2			5'-TCC CTA GTT GAA TGA TTC CCG ATC A-3'	Nested-PCR
35	Jyagaimo R2			5'-TTT CAT TCG CAT ACC GGT GGC A-3'	Nested-PCR
36	Kome F1	Japanese rice	<i>Oryza sativa</i> subsp. <i>japonica</i>	5'-CAT AAT AAA GAG AAC ATG CGA ATT TCT-3'	First-PCR
37	Kome R1			5'-TTA GAA GGG AGT TCC GCT AGC AA-3'	First-PCR
38	Kome F2			5'-CCG CTA GAC TAC ATA GAG TAA TGA A-3'	Nested-PCR
39	Kome R2			5'-TTT GGG TTC TAG TTC GAG AAC CG-3'	Nested-PCR
40	Komugi F1			5'-TTG AGC CTT GGT ATG GAA ACC T-3'	First-PCR
41	Komugi R1	Wheat	<i>Triticum</i> L.	5'-AGG GAC TTG AAC CCT CAC AAC T-3'	First-PCR
42	Komugi F2			5'-ACA AGG GGT TCT CGA ACT AGA A-3'	Nested-PCR
43	Komugi R2			5'-ACT CTC TCT TTG TCC TCG TCC-3'	Nested-PCR
44	Lettuce F01	Lettuce	<i>Lactuca sativa</i>	5'-GAA AAT GAG TAT GAG ACA TGA GGA-3'	First-PCR
45	Lettuce R1			5'-TTA GGA ATT AAT CGG GAT TCT CAA A-3'	First-PCR
46	Lettuce F1			5'-TCT TTA GAA CCC CAT CTA TTT GAT T-3'	Nested-PCR
47	Lettuce R2			5'-AAC CAA ACG AAT TAT GCA GCA TCA ACT-3'	Nested-PCR
48	Oomugi F1	Barley	<i>Hordeum vulgare</i> L.	5'-TAA CTT CCA AAT TCA GAG AAA CCC-3'	First-PCR
49	Oomugi R1			5'-CTC ACA ACT TAA AAA GTC GTC G-3'	First-PCR
50	Oomugi F2			5'-GAA GGG ATT CTC GAA CTA GAA T-3'	Nested-PCR
51	Oomugi R2			5'-CAT GTA GAA TGG GAC TCT CTC-3'	Nested-PCR
52	Radish F1	Japanese radish	<i>Raphanus sativus</i> var. <i>hortensis</i>	5'-TTT GAA TTA GAC CGG AAA GCT TTT-3'	First-PCR
53	Radish R1			5'-TAA CTC AGG ATT TGG CTC AGG AT-3'	First-PCR
54	Radish F2			5'-TTT TGT TCT AAC CTC ATG CGA TTA T-3'	Nested-PCR
55	Radish R2			5'-ATG TTC TTC CTT TTC TCA TCG TTG TT-3'	Nested-PCR
56	Soba F1	Buckwheat	<i>Fagopyrum esculentum</i>	5'-AAA GGG CTA CCC TAA GAA AAG ACA AAA-3'	First-PCR
57	Soba R1			5'-AAT CTC AGT GTG ATA TAC TTT CTC CTT-3'	First-PCR
58	Soba F2			5'-ATG GAA TAG GCC TGT CGT ATA ATA TA-3'	Nested-PCR
59	Soba R2			5'-TTT CAT ACC GCA TAC CGT CGA ATT C-3'	Nested-PCR
60	Tomato F1	Tomato	<i>Solanum lycopersicum</i>	5'-ATG GGT CTC TCT TCC CTA GAA TGA A-3'	First-PCR

Primer	Crop	Scientific name	Sequence	Purpose
61 Tomato R1	Alfalfa	<i>Medicago sativa</i>	5'-ATT GGA ATT CTC ACA TTT AGT TGG AAG ATA-3'	First-PCR
62 Tomato F2			5'-ATA GCT TTA TCC AGT TTA GCG AGA T-3'	Nested-PCR
63 Tomato R2			5'-ATA GGA AGG AAT GGA GAA ATC GAG AAT A-3'	Nested-PCR
64 Alfalfa F1			5'-GAG AAA CCC TGG AAT TAA AAA TGG GCA AT-3'	First-PCR
65 Alfalfa R1			5'-TCT TGA CAC ACC ACC CTA ATT TTA GGA A-3'	First/Nested-PCR
66 Alfalfa F2			5'-ATC CTG AGC CAA ATC CTT CTT TCC GAA AA-3'	Nested-PCR

Table S4. Primers for high-throughput amplicon sequencing

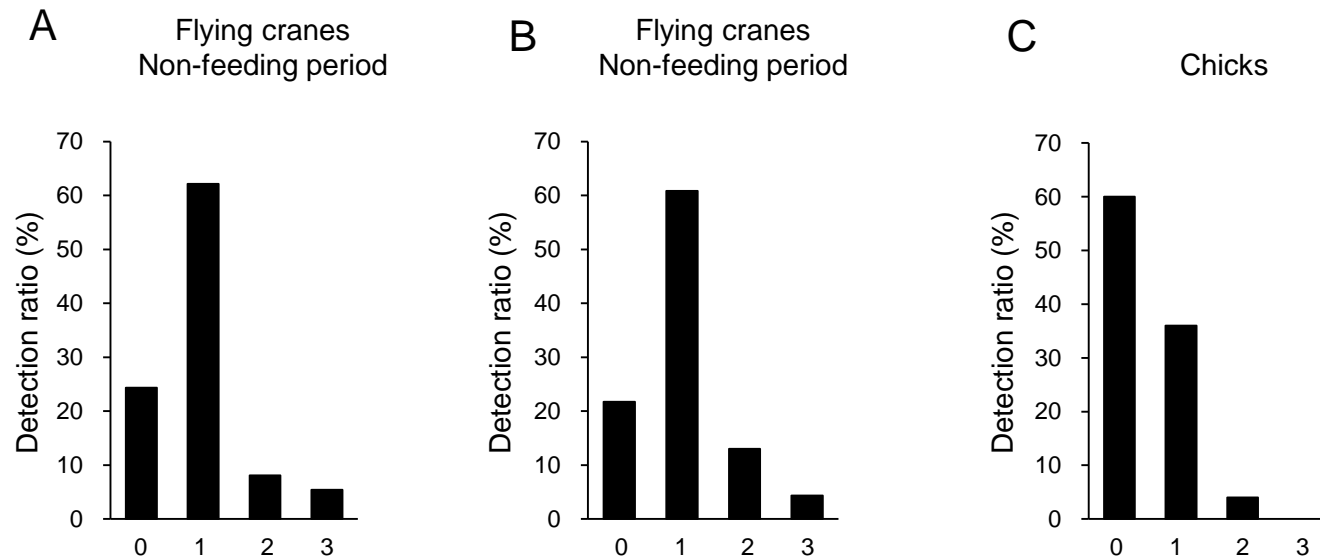
	Primer	Crop	Sequence
1	Beet Amplicon F	Sugar beet	5'-TCG TCG GCA GCG TCA GAT GTG TAT AAG AGA CAG TTA GAA TCG ATG AAC TCC GGA T-3'
2	Beet Amplicon R		5'-GTC TCG TGG GCT CGG AGA TGT GTA TAA GAG ACA GTC TCT ATC GGA AGT CTA TAT CTT CAT-3'
3	Cabbage Amplicon F	Cabbage	5'-TCG TCG GCA GCG TCA GAT GTG TAT AAG AGA CAG GAC TTA TAA TCT TTT TAC ATT GCA CAT-3'
4	Cabbage Amplicon R		5'-GTC TCG TGG GCT CGG AGA TGT GTA TAA GAG ACA GAC TCT GTT TTG TTC GCG TAA CCC A-3'
5	Corn Amplicon F	Corn	5'-TCG TCG GCA GCG TCA GAT GTG TAT AAG AGA CAG GTG GTT CTC AAA CTA GAA CCC AA-3'
6	Corn Amplicon R		5'-GTC TCG TGG GCT CGG AGA TGT GTA TAA GAG ACA GAT CCT CGT CCG ATT AAT CCA CTT-3'
7	Daizu Amplicon F	Soybean	5'-TCG TCG GCA GCG TCA GAT GTG TAT AAG AGA CAG GAA GTA GGG GCA TAG AAT CGA AA-3'
8	Daizu Amplicon R		5'-GTC TCG TGG GCT CGG AGA TGT GTA TAA GAG ACA GTC CTG GAA TTT TGA CGG AAG GAT T-3'
9	Hakusai Amplicon F	Chinese cabbage	5'-TCG TCG GCA GCG TCA GAT GTG TAT AAG AGA CAG AGC AAA AAG GGG GAT ATG GCG GAA T-3'
10	Hakusai Amplicon R		5'-GTC TCG TGG GCT CGG AGA TGT GTA TAA GAG ACA GTT TAG GGA GTA GGG TTG GGG ATA GA-3'
11	Ingenmame Amplicon F	Common bean	5'-TCG TCG GCA GCG TCA GAT GTG TAT AAG AGA CAG GTG GTA CTC CAG ATG CAC GCC TTG A-3'
12	Ingenmame Amplicon R		5'-GTC TCG TGG GCT CGG AGA TGT GTA TAA GAG ACA GTG GCC AAA GTC TCT GTG TGG AAC CA-3'
13	Komugi Amplicon F	Wheat	5'-TCG TCG GCA GCG TCA GAT GTG TAT AAG AGA CAG ACA AGG GGT TCT CGA ACT AGA A-3'
14	Komugi Amplicon R		5'-GTC TCG TGG GCT CGG AGA TGT GTA TAA GAG ACA GAC TCT CTC TTT GTC CTC GTC C-3'
15	Lettuce Amplicon F	Lettuce	5'-TCG TCG GCA GCG TCA GAT GTG TAT AAG AGA CAG TCT TTA GAA CCC CAT CTA TTT GAT T-3'
16	Lettuce Amplicon R		5'-GTC TCG TGG GCT CGG AGA TGT GTA TAA GAG ACA GAA CCA AAC GAA TTA TGC AGC ATC AAC T-3'
17	Oomugi Amplicon F	Barley	5'-TCG TCG GCA GCG TCA GAT GTG TAT AAG AGA CAG GAA GGG ATT CTC GAA CTA GAA T-3'
18	Oomugi Amplicon R		5'-GTC TCG TGG GCT CGG AGA TGT GTA TAA GAG ACA GCA TGT AGA ATG GGA CTC TCT C-3'
19	Radish Amplicon F	Japanese radish	5'-TCG TCG GCA GCG TCA GAT GTG TAT AAG AGA CAG TTT TGT TCT AAC CTC ATG CGA TTA T-3'
20	Radish Amplicon R		5'-GTC TCG TGG GCT CGG AGA TGT GTA TAA GAG ACA GAT GTT CTT CCT TTT CTC ATC GTT GTT-3'
21	Tomato Amplicon F	Tomato	5'-TCG TCG GCA GCG TCA GAT GTG TAT AAG AGA CAG ATA GCT TTA TCC AGT TTA GCG AGA T-3'
22	Tomato Amplicon R		5'-GTC TCG TGG GCT CGG AGA TGT GTA TAA GAG ACA GAT AGG AAG GAA TGG AGA AAT CGA GAA TA-3'

Table S5. Individual status of crop detection in intestinal contents of flying red-crowned cranes

Figure 1A No.	Reference No.	Collection date	Collection site	Corn	Barely	Wheat	Soy bean	Radish	Cabbage /broccoli	Chinese cabbage	Lettuce /Prickly lettuce	Tomato
3	R143	28-Jun-06	Shibecha	○								
4	R146	19-Oct-06	Bekkai	○	○							
5	R147	22-Oct-06	Tsurui	○								
6	R148	23-Oct-06	Nemuro	○								
7	R157	19-Mar-07	Shibecha	○								
8	R158	30-Mar-07	Akkeshi	○								
9	R160	4-Apr-07	Hamanaka	○							○	
10	R161	9-May-07	Nakashibetsu	○								
11	R165	10-Jul-07	Shibecha	○		○						
12	R175	16-Nov-07	Urahoro	○								
13	R176	20-Nov-07	Tsurui				○					
14	R178	27-Nov-07	Kushiro								○	
15	R183	11-Jan-08	Shibecha	○								
16	R184	14-Feb-08	Hamanaka							○		
17	R187	11-Mar-08	Hamanaka	○			○					○
18	R196	21-Jul-08	Bekkai	○								
20	R223	20-Mar-09	Akkeshi	○								
21	R225	21-May-09	Honbetsu	○								
22	R226	2-Jun-09	Bekkai	○								
23	R241	22-Nov-09	Teshikaga	○								
24	R243	27-Jan-10	Nemuro	○								
25	R245	27-Feb-10	Shibetsu	○	○							
26	R246	18-Mar-10	Shibecha				○					
27	R251	24-May-10	Shiranuka	○			○					
28	R262	29-Nov-10	Akkeshi									○
29	R264	16-Dec-10	Teshikaga	○								
30	R265	20-Dec-10	Kushiro	○								
31	R269	28-Mar-11	Teshikaga								○	
32	R272	7-May-11	Abashiri	○	○				○			
33	R275	25-Jun-11	Toyokoro	○								
34	R281	2-Nov-11	Taiki								○	○
37	R474	3-Sep-18	Urahoro	○								
39	R476	3-Sep-18	Urahoro			○		○		○	○	
40	R542	30-Apr-20	Shiranuka	○								
41	R547	29-Jul-20	Akkeshi								○	
45	R551	4-Oct-20	Shibecha	○		○						
47	R553	9-Oct-20	Tsurui	○							○	
48	R555	18-Oct-20	Tsurui	○								○
49	R556	26-Oct-20	Tsurui	○							○	
51	R560	4-Dec-20	Tsurui	○								
52	R561	5-Dec-20	Ikeda	○		○						
53	R562	8-Dec-20	Nemuro	○								
54	R563	17-Dec-20	Tsurui			○				○		
55	R564	30-Dec-20	Shiranuka	○								
56	R566	10-Feb-21	Onbetsu	○								
58	R569	18-Mar-21	Kushiro				○					
59	R580	5-Jun-21	Ikeda	○								
60	-	1-Aug-21	Erimo	○								

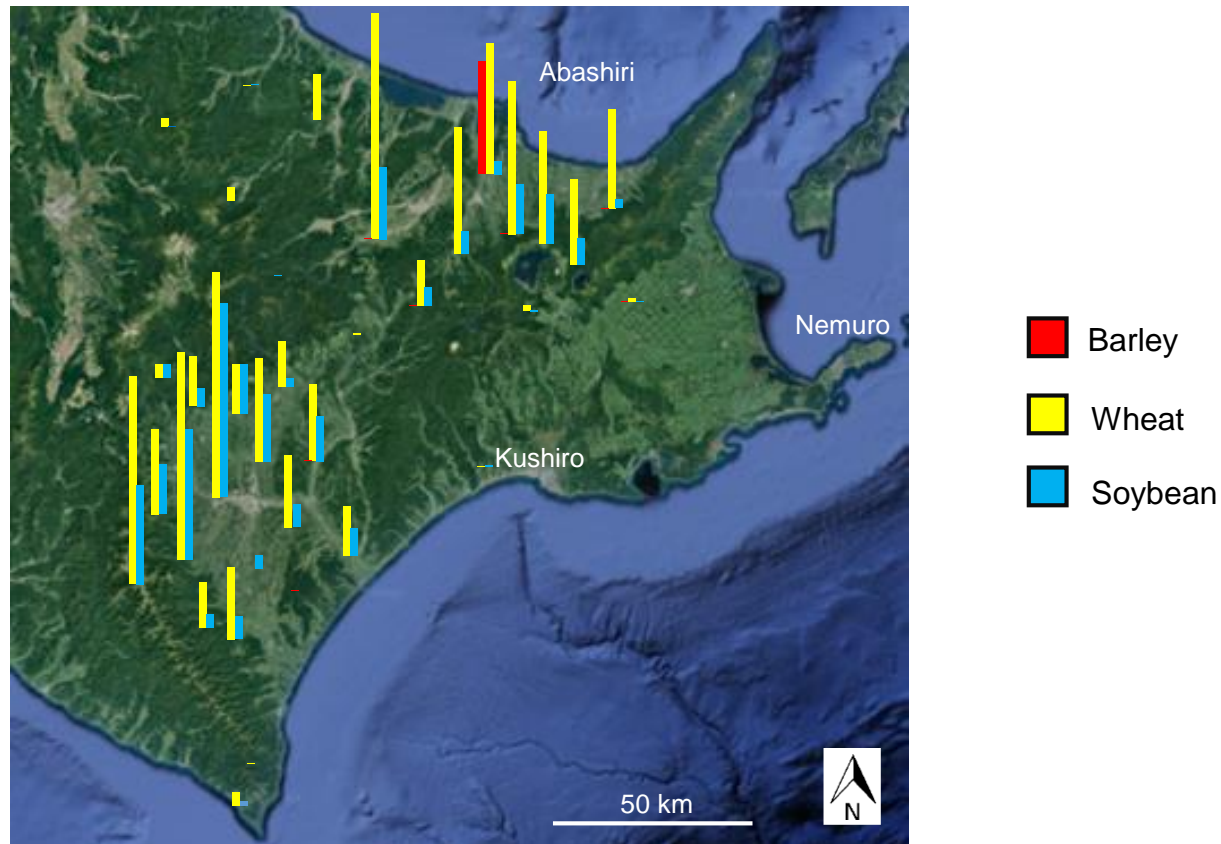


Figure S1. Numbers of crops detected in flying cranes (A) and chicks (B)



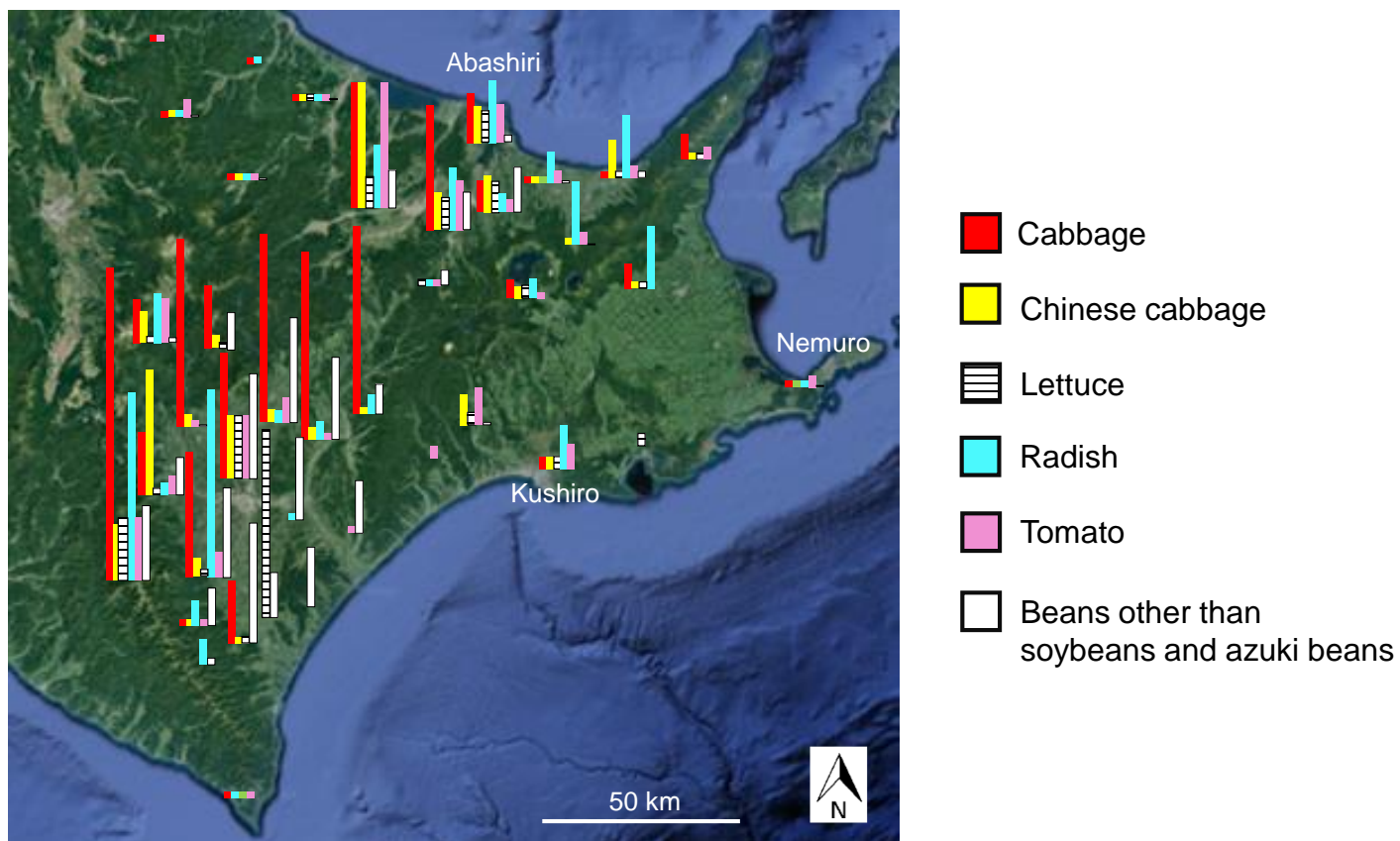
Numbers of crops detected in flying cranes and chicks. Percentages of the numbers of crops that were detected in each scatological sample of flying cranes (juveniles, subadults and adults) in non-feeding period (April – November, n = 37) (A) and feeding period (December – March, n = 23) (B) and chicks (n = 25) (C) are indicated. An adult crane found dead in Erimo (Number 60 in No. in Figure 1A) is included. Lettuce is not included because the read sequences of lettuce and prickly lettuce (*Lactuca scariola* L.) are the same.

Figure S2. Numbers of farms for three grains by city in eastern Hokkaido



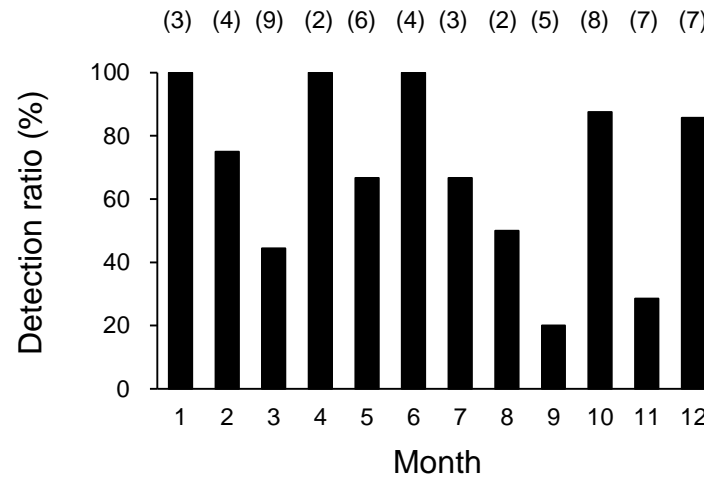
Numbers of farms for barley (red bar), wheat (yellow) and soybean (blue) are indicated by bar graphs. Data are based on 2020 Census of Agriculture and Forestry in Japan in 2020 (<https://www.maff.go.jp/e/data/stat>).

Figure S3. Numbers of farms for six vegetables by city in eastern Hokkaido



Numbers of farms for cabbage (red bar), Chinese cabbage (yellow), lettuce (lateral stripes), radish (light), tomato (purple) and beans other than soybeans and azuki beans (white) are indicated by bar graphs. Data are based on 2020 Census of Agriculture and Forestry in Japan in 2020 (<https://www.maff.go.jp/e/data/stat/>).

Figure S4. Monthly ingestion status of corn in flying red-crowned cranes



Monthly ingestion status of corn in flying cranes (juveniles, subadults and adults). Black bar indicates detection of corn for the month. Numbers in parentheses above bars indicate numbers of samples studied. Total of 60 cranes.

Figure S5. Corn kernels in compost pile of dairy cattle feces



Three arrows indicate corn kernels.

Table S6. Detection of alfalfa by nested PCR and comparison with other crops

Samples	City	Number in Fig. 1	Stage	Date	Corn	Soybean	Lettuce	Alfalfa
R183	Shibecha	15 in A	Adults	2008.1.18	○			○
R564	Shiranuka	55 in A	Juveniles	2020.12.30	○			○
R566	Onbetsu	56 in A	Adults	2021.2.10	○			○
305	Kushiro	13 in B	Chick	2007.7.4	○	○		○
324	Kushiro	21 in B	Chick	2018.7.13			○	○
336	Teshikaga	22 in B	Chick	2018.7.14	○			○

The collection sites of samples can be confirmed in Figure 1A and Table S1 (flying cranes) and Figure 1B and Table S2 (chicks).