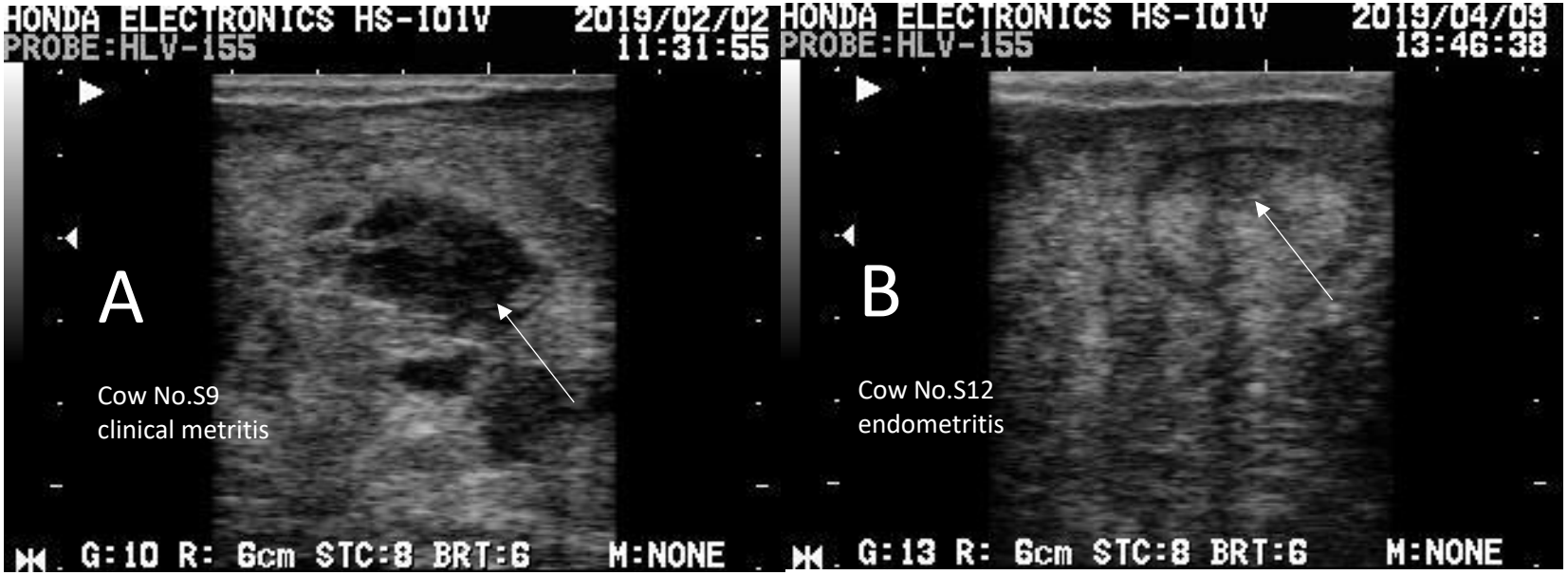
Supplementary Table 1. Primers used in polymerase chain reaction protocols.

Target genes	Primer name	Primer sequnece (5' to 3')	Annealing temprature	Amplicon size (bp)	Reference
cdgR	EC_F	CCAGGCAAAGAGTTTATGTTGA	57	212	28
	EC_R	GCTATTTCCTGCCGATAAGAGA			
fimH	fimH-F	TGCAGAACGGATAAGCCGTGG	63	508	17
	fimH-R	GCAGTCACCTGCCCTCCGGTA			
fyuA	fyuA-F	TGATTAACCCCGCGACGGGAA	63	880	17
	fyuA-R	CGCAGTAGGCACGATGTTGTA			
kpsMTII	kpsMTII-F	GCGCATTTGCTGATACTGTTG	63	272	17
	kpsMTII-R	CATCCAGACGATAAGCATGAGCA			
csgA	csgA-F	ACTCTGACTTGACTATTACC	55	200	17
	csgA-R	AGATGCAGTCTGGTCAAC			
hra1	hra1-F	TCACTTGCAGACCAGCGTTTC	58	537	24
	hra1-R	GTAACTCACACTGCTGTCACCT			
astA	astA-F	TGCCATCAACACAGTATATCCG	58	102	2
	astA-R	ACGGCTTTGTAGTCCTTCCAT			

Supplementary Table 2. Clinical symptoms associated with *Escherichia coli* isolated from the postpartum uterus.

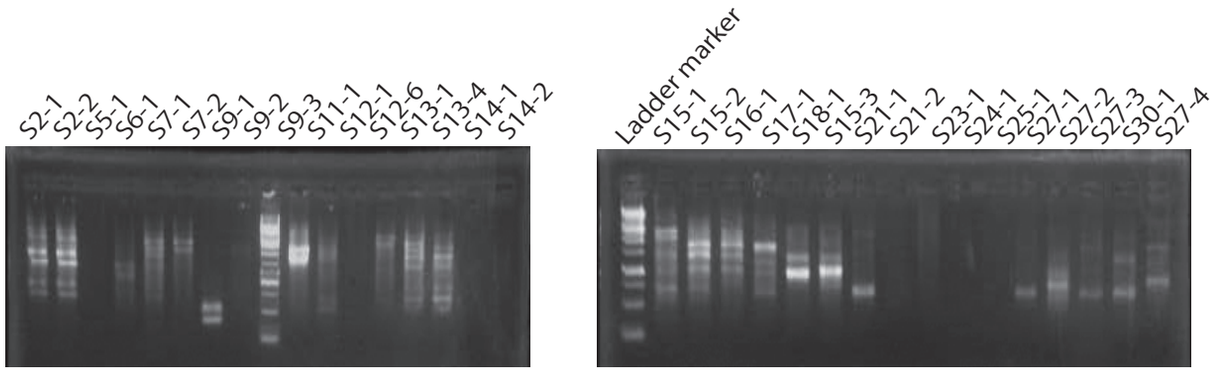
Cow No.	Bacterial No.	days after parturition	Vaginal discharge score	PMN（%）	total score	Bacterial colony counts
s2	s2-1	14	0	6.5	4	20<
	s2-2	14	0	6.5	4	2
s5	s5-1	38	0	1.4	2	1
s6	s6-1	32	0	6.8	3	2
s7	s7-1	6	3	74.3	7	∞
	s7-2	13	3	83.9	7	30<
	s7-3	13	3	83.9	7	∞
	s7-4	21	0	53.8	2	∞
	s7-6	28	0	79.4	1	∞
	s7-7	45	3	41.5	5	∞
	s7-8	48	3	49.2	5	∞
s9	s9-1	9	6	83.7	10	30<
	s9-2	9	6	83.7	10	<10
	s9-3	9	6	83.7	10	1
	s9-4	9	6	83.7	10	∞
	s9-5	15	3	56.9	5	∞
s11	s11-1	33	1	6.0	2	5
s12	s12-1	8	3	39.6	7	7
	s12-2	8	3	39.6	7	∞
	s12-4	15	3	13.1	7	∞
	s12-5	22	1	16.8	3	∞
	s12-6	29	2	41.8	3	∞
	s12-7	29	2	41.8	3	∞
s13	s13-1	16	3	(-)	2	1
	s13-2	16	3	(-)	2	∞
	s13-3	22	2	26.2	5	20
	s13-4	43	0	4.9	0	∞
s14	s14-1	34	1	7.4	1	20
	s14-2	48	0	0.5	0	5
s15	s15-1	31	2	0.0	2	3
	s15-2	45	0	9.1	0	3
	s15-3	66	0	0.4	0	∞
s16	s16-1	20	2	71.3	5	20
s17	s17-1	29	1	10.3	5	∞
s18	s18-1	50	0	0.01	1	∞
s21	s21-1	30	0	1.8	2	1
	s21-2	30	0	1.8	2	1
s23	s23-1	33	0	0.74	1	3
s24	s24-1	43	0	4.8	2	6
s25	s25-1	38	0	35.2	4	1
s27	s27-1	34	0	10.8	1	2
	s27-2	34	0	10.8	1	1
	s27-3	34	0	10.8	1	1
	s27-4	48	3	2.8	3	5
s30	s30-1	29	0	1.6	2	3

PMN%; the percentage of polymorphonuclear neutrophils



Supplementary Figure 1. The typical ultrasonographic images of the bovine uterus with clinical metritis (A) and endometritis (B).

The uterine involution of each cow was evaluated not only by transrectal palpation and vaginoscopy but also by ultrasonography. Clinical metritis (A) and endometritis (B) ultrasonograms at 9 (cow No. 9) and 29 (cow No. 12) days respectively after parturition were shown. Ultrasonographic image of the clinical metritis (A) shows graysh liquid containing hyperechogenic particles and pus (pointed by arrow symbol) in the lumen of abnormally enlarged uterine horn, but the cow was not ill. A slight hyperechogenic line (pointed by arrow symbol) showing accumulated fluid as fibrins, pus, and mucus was observed in the lumen of the cross section of the uterine horn with endometritis (B). The cow also had vaginal mucopurulent material, but was not ill.



Supplementary Fig. 2