

**1 Characteristics of 17 studies included in a systematic review and Bayesian network meta-analysis.**

Author	Trial	Study design	Vaccine category	Vaccine dose	Weaning age	Time of vaccination	Vaccination route	Adjuvant	Control	Time of challenge	Sample size	Follow-up	Extracted outcomes
Alexa 1995	Alexa 1995a	Experiment alstudy	Experimental (Vaccine Candidate)	<b>Inact:</b> 1ml/pig (2x10^9CFU/ml) <b>Live:</b> 7ml/pig (2x10^9CFU/ml)	35 days	34 & 35 daysold	<b>Inact:</b> Parenteral (IM); <b>Live:</b> Oral	No adjuvant	No vaccine	<b>7dpsi</b> {ETEC strain No. 8943 (2x10^9 CFU/ml); 7ml/pig}	<b>Vacc:</b> 6 pigs; <b>Ctrl:</b> 4 pigs	7dpc	Diarrhea
	Alexa 1995b	Field study <b>(Farm A)</b>	Experimental (Vaccine Candidate)	<b>Inact:</b> 1ml/pig (2x10^9CFU/ml) <b>Live:</b> 7ml/pig (2x10^9CFU/ml)	35 days	34 & 35 daysold	<b>Inact:</b> Parenteral (IM); <b>Live:</b> Oral	No adjuvant	No vaccine	<b>NA</b>	<b>Vacc:</b> 222 pigs; <b>Ctrl:</b> 232 pigs	14dpw	Mortality
	Alexa 1995c	Field study <b>(Farm B)</b>	Experimental (Vaccine Candidate)	<b>Inact:</b> 1ml/pig (2x10^9CFU/ml) <b>Live:</b> 7ml/pig (2x10^9CFU/ml)	35 days	34 & 35 daysold	<b>Inact:</b> Parenteral (IM); <b>Live:</b> Oral	No adjuvant	No vaccine	<b>NA</b>	<b>Vacc:</b> 255 pigs; <b>Ctrl :</b> 274 pigs	14dpw	Mortality
	Alexa 1995d	Field study <b>(Farm C)</b>	Experimental (Vaccine Candidate)	<b>Inact:</b> 1ml/pig (2x10^9CFU/ml) <b>Live:</b> 7ml/pig (2x10^9CFU/ml)	35 days	34 & 35 daysold	<b>Inact:</b> Parenteral (IM); <b>Live:</b> Oral	No adjuvant	No vaccine	<b>NA</b>	<b>Vacc:</b> 3692 pigs; <b>Ctrl:</b> 6301 pigs	14dpw	Mortality
Bozic et al.,2002	Bozic et al. 2002	Experiment alstudy	Experimental (Vaccine Candidate)	60ml/pig (10^10CFU)	4 weeks	2dpw	Oral	No adjuvant	TSB (Trypti case soy broth)	<b>7dpi</b> {F4ac+ETEC strain (0149:K91:F4 ac: 987P:Hly+++ LT +STb+) }	<b>Vacc:</b> 6 pigs; <b>Ctrl:</b> 6 pigs	7dpc	Diarrhea;  Mortality

<b>Fairbrother et al., 2017</b>	Fairbrother et al. 2017a	Experimental study	Commercial	150ml/pig (5.9x10 <sup>7</sup> CFU)	18-19 days	1dpw	Oral	No adjuvant	150 ml filtered water	<b>3dpi</b> {F4-ET EC EcL8559 O149 challenge strain}	<b>Vacc:</b> 20 pigs; <b>Ctrl:</b> 20 pigs	5dpc	Diarrhea; ADWG
	Fairbrother et al. 2017b	Experimental study	Commercial	150ml/pig (1.3x10 <sup>8</sup> CFU)	18-19 days	1dpw	Oral	No adjuvant	150 ml filtered water	<b>7dpi</b> {F4-ETEC EcL8559 O149 challenge strain}	<b>Vacc:</b> 10 pigs; <b>Ctrl:</b> 10 pigs	3dpc	Diarrhea; ADWG
	Fairbrother et al. 2017c	Experimental study	Commercial	150ml/pig (1.3x10 <sup>8</sup> CFU)	18-19 days	1dpw	Oral	No adjuvant	150 ml filtered water	<b>21dpi</b> {F4-ET EC EcL8559 O149 challenge strain}	<b>Vacc:</b> 10 pigs; <b>Ctrl:</b> 10 pigs	3dpc	Diarrhea; ADWG
<b>Francis et al., 1991</b>	Francis et al. 1991a	Experimental study	Experimental (Vaccine Candidate)	3ml/pig (10 <sup>9</sup> CFU)	10 days	14 & 19 days old	Oral	No adjuvant	ETEC strain G58-1 (0101:K 28:NM)	<b>2wpi</b> {ETEC strain 3030-2 (0157:K88, LT+, STb+)}	<b>Vacc:</b> 33 pigs; <b>Ctrl:</b> 31 pigs	2dpc	Diarrhea; Mortality
	Francis et al. 1991b	Experimental study	Experimental (Vaccine Candidate)	3ml/pig (10 <sup>9</sup> CFU)	10 days	14 & 19 days old	Oral	No adjuvant	ETEC strain G58-1 (0101:K 28:NM)	<b>2wpi</b> {ETEC strain 3030-2 (0157:K88, LT+, STb+)}	<b>Vacc:</b> 18 pigs; <b>Ctrl:</b> 18 pigs	2dpc	Diarrhea; Mortality
	Francis et al. 1991c	Experimental study	Experimental (Vaccine Candidate)	3ml/pig (10 <sup>9</sup> CFU)	10 days	14 & 19 days old	Oral	No adjuvant	ETEC strain G58-1 (0101:K 28:NM)	<b>2wpi</b> {ETEC strain 3030-2 (0157:K88, LT+, STb+)}	<b>Vacc:</b> 14 pigs; <b>Ctrl:</b> 6 pigs	2dpc	Diarrhea; Mortality
<b>J.Lee et al., 2012</b>	J.Lee et al. 2012	Experimental study	Experimental (Vaccine Candidate)	10ml/pig (2x10 <sup>10</sup> CFU) (vaccinated pregnant sows)	28 days	Vaccinated pregnant sows (8 & 11 weeks of pregnancy)	Oral	No adjuvant	10ml PBS	<b>5 weeks of age</b> {Hemolytic wild type E.coli isolates JOL500 and JOL599 containing F18 and F4 genes respectively}	<b>Vacc:</b> 21 pigs; <b>Ctrl:</b> 23 pigs	21dpc	Diarrhea
<b>Jabif et al., 2021</b>	Jabif et al. 2021	Experimental study	Experimental (Vaccine Candidate)	2ml/pig	28 days	33 & 43 days of age	Oral	No adjuvant	2ml/pig saline solution	<b>46 &amp; 47 days of age</b> {Two wild-type Enterotoxigenic E. coli (ETEC) field isolates, VBTEColi-1 and VBTEColi-2. (108 cfu/mL). 2ml/pig}	<b>Vacc:</b> 15 pigs; <b>Ctrl:</b> 15 pigs	10dpc	Diarrhea; ADWG

<b>Kovsca et al., 2009</b>	Kovsca et al. 2009	Experimental study	Experimental (Vaccine Candidate)	60ml/pig (10 <sup>10</sup> CFU F18ac)	4 weeks	2dpw	Oral	Levamisole	Saline solution	<b>7dpi</b> {F4ac+ETEC strain 11-800/1/94 (0149:K91:F4ac:987P: Hly+LT+STb+)}	<b>Vacc:</b> 5 pigs; <b>Ctrl:</b> 5 pigs	7dpc	Diarrhea; ADWG
<b>Kovsca et al., 2010</b>	Kovsca et al. 2010	Experimental study	Experimental (Vaccine Candidate)	60ml/pig (10 <sup>10</sup> CFU F4ac)	4 weeks	2dpw	Oral	Levamisole	5ml saline	<b>7dpi</b> {F4ac+ strain ETEC 11-800/1/94 (0149:K91:Fac:987P: Hly+LT+STb+)}	<b>Vacc:</b> 5 pigs; <b>Ctrl:</b> 5 pigs	7dpc	Diarrhea; ADWG
<b>Kovsca et al., 2011</b>	Kovsca et al. 2011a	Experimental study	Experimental (Vaccine Candidate)	60ml/pig (10 <sup>10</sup> CFU F4ac+)	4 weeks	2dpw	Oral	Levamisole	5ml saline	<b>7dpi</b> {10 <sup>10</sup> CFU/ml: F4ac+ETEC strain 11-800/1/94 (019:K91:F4ac:987P: Hly+LT+STb+)}	<b>Vacc:</b> 5 pigs; <b>Ctrl:</b> 5 pigs	7dpc	Diarrhea; ADWG
	Kovsca et al. 2011b	Experimental study	Experimental (Vaccine Candidate)	60ml/pig (10 <sup>10</sup> CFU F18ac+)	4 weeks	2dpw	Oral	Levamisole	5ml saline	<b>7dpi</b> {10 <sup>10</sup> CFU/ml: F4ac+ETEC strain 11-800/1/94 (019:K91:F4ac:987P: Hly+LT+STb+)}	<b>Vacc:</b> 5 pigs; <b>Ctrl:</b> 5 pigs	7dpc	Diarrhea; ADWG
<b>Lee et al., 2012</b>	Lee et al. 2012a	Experimental study	Experimental (Vaccine Candidate)	10ml/pig (2x10 <sup>10</sup> CFU): vaccinated pregnant sows	21 days	Vaccinated pregnant sows (8 & 11 weeks of pregnancy)	Oral	No adjuvant	10ml PBS	<b>1 week of age</b> { <b>1.</b> JOL489 (Wild type F5+, F41+, LT+, stx2+ ETEC); <b>2.</b> JOL564 (Wild type F6+, stx1+, stx2+ ETEC); <b>3.</b> JOL599 (Wild type F4+, LT+, STa+, STb+, EAST 1+ ETEC). 3ml (1x10 <sup>9</sup> CFU/ml) of each challenge strain}	<b>Vacc:</b> 18 pigs; <b>Ctrl:</b> 18 pigs	21dpc	Diarrhea
	Lee et al. 2012b	Experimental study	Commercial	NR	21 days	Vaccinated pregnant sows (11 & 14 weeks of pregnancy)	Parenteral (IM)	No adjuvant	10ml PBS	<b>1 week of age</b> { <b>1.</b> JOL489 (Wild type F5+, F41+, LT+, stx2+ ETEC); <b>2.</b> JOL564 (Wild type F6+, stx1+, stx2+ ETEC); <b>3.</b> JOL599 (Wild type F4+, LT+, STa+, STb+, EAST 1+ ETEC).	<b>Vacc:</b> 17 pigs; <b>Ctrl:</b> 18 pigs	21dpc	Diarrhea

										3ml (1x10 <sup>9</sup> CFU/ml) of each challenge strain }			
	Lee et al. 2012c	Experimental study	Experimental (Vaccine Candidate)	10ml/pig (2x10 <sup>10</sup> CFU): vaccinated pregnant sows	21 days	Vaccinated pregnant sows (8 & 11 weeks of pregnancy)	Oral	No adjuvant	10ml PBS	<b>3 weeks of age</b> { <b>1.</b> JOL489 (Wild type F5+, F41+, LT+, stx2+ ETEC); <b>2.</b> JOL564 (Wild type F6+, stx1+, stx2+ ETEC); <b>3.</b> JOL599 (Wild type F4+, LT+, STa+, STb+, EAST 1+ ETEC). 3ml (1x10 <sup>9</sup> CFU/ml) of each challenge strain }	<b>Vacc:</b> 19 pigs;  <b>Ctrl:</b> 16 pigs	21dpc	Diarrhea
	Lee et al. 2012d	Experimental study	Commercial	NR	21 days	Vaccinated pregnant sows (11 & 14 weeks of pregnancy)	Parenteral (IM)	No adjuvant	10ml PBS	<b>3 weeks of age</b> { <b>1.</b> JOL489 (Wild type F5+, F41+, LT+, stx2+ ETEC); <b>2.</b> JOL564 (Wild type F6+, stx1+, stx2+ ETEC); <b>3.</b> JOL599 (Wild type F4+, LT+, STa+, STb+, EAST 1+ ETEC). 3ml (1x10 <sup>9</sup> CFU/ml) of each challenge strain }	<b>Vacc:</b> 19 pigs;  <b>Ctrl:</b> 16 pigs	21dpc	Diarrhea
<b>Lin et al., 2013</b>	Lin et al. 2013a	Experimental study	Experimental (Vaccine Candidate)	100µg LT	NA (Gnotobio tic piglets)	10 and 17 days of age	Parenteral (IN)	No adjuvant	1ml PBS	<b>7dpsi</b> {E. coli strain 3030-2 (O157:K88ac+/L T+/STb+). 3ml TSB (2x10 <sup>9</sup> CFU)}	<b>Vacc:</b> 7 pigs;  <b>Ctrl:</b> 19 pigs	4dpc	Mortality;  ADWG
	Lin et al. 2013b	Experimental study	Experimental (Vaccine Candidate)	300µg K88	NA (Gnotobio tic piglets)	10 and 17 days of age	Parenteral (IN)	No adjuvant	1ml PBS	<b>7dpsi</b> {E. coli strain 3030-2 (O157:K88ac+/L T+/STb+). 3ml TSB (2x10 <sup>9</sup> CFU)}	<b>Vacc:</b> 8 pigs;  <b>Ctrl:</b> 19 pigs	4dpc	Mortality;  ADWG

	Lin et al. 2013c	Experimental study	Experimental (Vaccine Candidate)	300µg K88 + 100µg LT	NA (Gnotobiotic piglets)	10 and 17 days of age	Parenteral (IN)	No adjuvant	1ml PBS	<b>7dpi</b> {E. coli strain 3030-2 (O157:K88ac+/LT+/STb+). 3mlTSB (2x10 <sup>9</sup> CFU)}	<b>Vacc:</b> 20 pigs; <b>Ctrl:</b> 19 pigs	4dpc	Mortality; ADWG
<b>Nadeau et al., 2017</b>	Nadeau et al. 2017a	Experimental study	Commercial	120ml/pig (2.8 × 10 <sup>8</sup> CFU F18 and 1.6 × 10 <sup>8</sup> CFU F4)	16-18 days of age	17-19 days	Oral	No adjuvant	No vaccine	<b>7dpi</b> {0138 F18-ETEC 9910297-2STM (Positive for STb, LT, East-1, Stx2e, F18ab)}	<b>Vacc:</b> 12 pigs; <b>Ctrl:</b> 12 pigs	7dpc	Diarrhea; Mortality; ADWG
	Nadeau et al. 2017b	Experimental study	Commercial	120ml/pig (2.8 × 10 <sup>8</sup> CFU F18 and 1.6 × 10 <sup>8</sup> CFU F4)	16-18 days of age	17-19 days	Oral	No adjuvant	No vaccine	<b>21dpi</b> {0138 F18-ETEC 9910297-2STM (Positive for STb, LT, East-1, Stx2e, F18ab)}	<b>Vacc:</b> 12 pigs; <b>Ctrl:</b> 12 pigs	7dpc	Diarrhea; Mortality; ADWG
	Nadeau et al. 2017c	Experimental study	Commercial	150ml/pig (1.1 × 10 <sup>8</sup> CFU F18 and 5.8 × 10 <sup>7</sup> CFU F4)	16-18 days of age	17-19 days	Oral	No adjuvant	No vaccine	<b>7dpi</b> {nalidixic acid resistant 0149F4-ETEC EcL8559 (Positive for STa, STb, LT, East-1, F4ac)}	<b>Vacc:</b> 10 pigs; <b>Ctrl:</b> 10 pigs	7dpc	Diarrhea; Mortality; ADWG
	Nadeau et al. 2017d	Experimental study	Commercial	150ml/pig (1.1 × 10 <sup>8</sup> CFU F18 and 5.8 × 10 <sup>7</sup> CFU F4)	16-18 days of age	17-19 days	Oral	No adjuvant	No vaccine	<b>21dpi</b> {nalidixic acid resistant 0149F4-ETEC EcL8559 (Positive for STa, STb, LT, East-1, F4ac)}	<b>Vacc:</b> 10 pigs; <b>Ctrl:</b> 9 pigs	7dpc	Diarrhea; ADWG
<b>Ruan et al., 2011</b>	Ruan et al. 2011	Experimental study	Experimental (Vaccine Candidate)	100 µl/pig (100 µg FaeG-FedF-LT 192A2:B fusion)	NA (Gnotobiotic piglets)	5 days and 2 weeks of age	Parenteral (IM)	Incomplete Freund adjuvant (Sigma)	No vaccine	<b>2wpsi</b> {3 × 10 <sup>9</sup> CFU of the ETEC strain 3030-2 (K88ac/LT/STb)}	<b>Vacc:</b> 3 pigs; <b>Ctrl:</b> 3 pigs	2dpc	Diarrhea; Mortality
<b>Ruan et al., 2013</b>	Ruan et al. 2013	Experimental study	Experimental (Vaccine Candidate)	7.5x10 <sup>9</sup> CFU (1FaeG-FedF-LT 192A2:5LTB fusion)	NA (Gnotobiotic piglets)	4-5 day of age	Oral	No adjuvant	Host strain 8795	<b>16 days of age</b> {8x10 <sup>10</sup> CFU/ml ETEC strain 3030-2 (K88ac+/LT+/STb+)}	<b>Vacc:</b> 6 pigs; <b>Ctrl:</b> 4 pigs	1dpc	Diarrhea; Mortality
<b>Santiago et al., 2012</b>	Santiago et al. 2012a	Experimental study	Experimental (Vaccine Candidate)	3ml/pig (3x10 <sup>9</sup> CFU F4ac+ ETEC strain 8017). (K88ac+; enterotoxin negative control; Hy-) mixed with milk replacer	NA (Gnotobiotic piglets)	5 days of age	Oral	No adjuvant	3ml Lactose broth mixed with milk replacer	<b>1dpi</b> {ETEC Strain 3030-2 (K88+/LT/STb). 3ml/ piglet (3x10 <sup>10</sup> CFU) mixed with milk replacer}	<b>Vacc:</b> 8 pigs; <b>Ctrl:</b> 9 pigs	1dpc	Diarrhea

	Santiago et al. 2012b	Experimental study	Experimental (Vaccine Candidate)	3ml/pig (3x10 <sup>9</sup> CFU F4ac+ ETEC strain 8221). (K88ac+; LT mutant [LT(R192G)]; Hy-) mixed with milk replacer	NA (Gnotobiotic piglets)	5 days of age	Oral	No adjuvant	3ml Lactose broth mixed with milk replacer	<b>1dpi</b> {ETEC Strain 3030-2 (K88+/LT/STb). 3ml/ piglet (3x10 <sup>10</sup> CFU) mixed with milk replacer}	<b>Vacc:</b> 7 pigs; <b>Ctrl:</b> 9 pigs	1 dpc	Diarrhea
	Santiago et al. 2012c	Experimental study	Experimental (Vaccine Candidate)	3ml/pig (3x10 <sup>9</sup> CFU F4ac+ ETEC strain 8488). (K88ac+; LT mutant fused with STb [LT (R192G)-STb]; Hy-) mixed with milk replacer	NA (Gnotobiotic piglets)	5 days of age	Oral	No adjuvant	3ml Lactose broth mixed with milk replacer	<b>1dpi</b> {ETEC Strain 3030-2 (K88+/LT/STb). 3ml/ piglet (3x10 <sup>10</sup> CFU) mixed with milk replacer}	<b>Vacc:</b> 7 pigs; <b>Ctrl:</b> 9 pigs	1 dpc	Diarrhea
<b>Srivastava et al. 2016</b>	Srivastava et al. 2016a	Experimental study	Experimental (Vaccine Candidate)	2mg F4 fimbriae loaded in porous tablets	4 weeks	1wpw	Oral	No adjuvant	PBS	<b>35 days of age</b> {ETEC strain GIS 26 (0149:K91:F4ac, LT+,STa+,STb+) 2x10 <sup>9</sup> CFU/ml}	<b>Vacc:</b> 4 pigs; <b>Ctrl:</b> 4 pigs	7dpc	Diarrhea;
<b>Van Der Stede et al.,2003</b>	Van der Stede et al. 2003a	Experimental study	Experimental (Vaccine Candidate)	100µg F4 fimbriae	29 days	8 & 25 days of life	Parenteral (IM)	Incomplete Freund adjuvant	PBS + IFA	<b>8dpsi</b> {F4+-ETEC strain GIS26}	<b>Vacc:</b> 5 pigs; <b>Ctrl:</b> 5 pigs	7dpc	ADWG
	Van der Stede et al. 2003b	Experimental study	Experimental (Vaccine Candidate)	100µg F4 fimbriae + 2µg of 1α,25 (OH)2D3	29 days	8 & 25 days of life	Parenteral (IM)	Incomplete Freund adjuvant	PBS + IFA	<b>8dpsi</b> {F4+-ETEC strain GIS26}	<b>Vacc:</b> 5 pigs; <b>Ctrl:</b> 5 pigs	7dpc	ADWG
	Van der Stede et al. 2003c	Experimental study	Experimental (Vaccine Candidate)	100µg of F4 fimbriae + 500µg of CpG-ODN	29 days	8 & 25 days of life	Parenteral (IM)	Incomplete Freund adjuvant	PBS + IFA	<b>8dpsi</b> {F4+-ETEC strain GIS26}	<b>Vacc:</b> 5 pigs; <b>Ctrl:</b> 5 pigs	7dpc	ADWG

Each row in this table corresponds to 1 trial. Different trials from the same publication are indicated by letters a, b, c and d

**Abbreviations:** **Inact:** Inactivated vaccine; **Live:** Live attenuated vaccine; **IM:** Intramuscular; **dpsi:** day post-secondary immunization; **NA:** Not applicable; **Vacc:** Vaccinated; **Ctrl:** Control; **dpc:** day post challenge; **dpw:** day post weaning; **CFU:** Colony Forming Unit; **dbw:** day before weaning; **NR:** Not reported; **dpi:** day post immunization; **dppi:** day post primary immunization; **TSB:** Trypticase soy broth; **ADWG:** average daily weight gain; **wpi:** week post immunization; **PBS:** phosphate buffered saline; **IN:** Intranasal; **dpsi:** day post-secondary immunization; **LT:** Heat labile enterotoxin; **wpw:** week post weaning; **wpti:** week post third immunisation; **CT:** Cholera toxin; **IFA:** Incomplete Freund adjuvant