

FerAppease®

Maternal Swine Appeasing Substance

Scientific evidence of the benefits of FerAppease®

The effect of the use MSAS has been evaluated in several independent studies. The body of the literature suggests the following positive effects:

- Weaned pigs:
 - > Stimulation of feeding behaviors
 - > Reduced fighting
 - > Increasing in average daily gain (AVG) and feed efficiency
- > Sows at comingling:
 - > Aggressiveness drastically reduced
 - > Lower number of aggression events
 - > Total and average duration of aggression is reduced

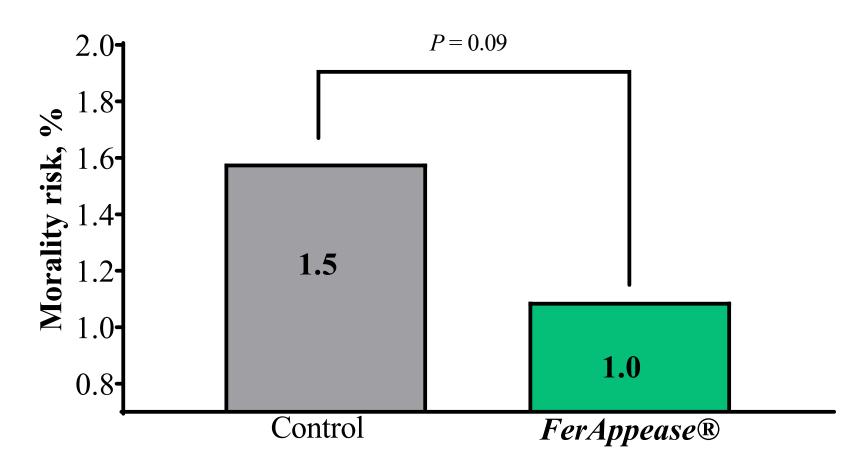


Evaluation of a single administration of $FerAppease^{\mathbb{R}}$ at nursery arrival on weight gain and mortality

	Tre	Treatment			
	Control	FerAppease			
Enrolled piglets	3,000	3,000			
Piglets per pen	60	60			
Number of pens	50	50			

Effect of FerAppease® administration at nursery arrival on weight gain

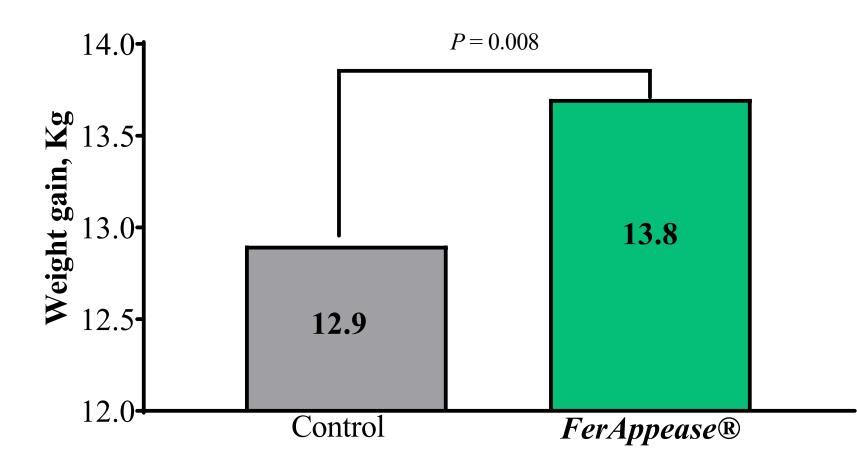
- > 3 weeks old pigs received FerAppease® at nursery arrival
 - Mortality rate tended to be decreased in the FerAppease group





Effect of FerAppease® administration at nursery arrival on weight gain

- Weaned piglets received FerAppease® at nursery arrival
 - Nursery weight gain was significantly improved with FerAppease administration





Effect of FerAppease® administration at nursery arrival on weight gain

- > Conclusions
 - There was a strong statistical tendency for a decreased mortality risk for the FerAppease treated group compared to controls
 - ➤ Piglets in the FerAppease treated group gained significantly more weight during the nursery period compared to controls



Synthetic maternal pheromone stimulates feeding behavior and weight gain in weaned pigs

Synthetic maternal pheromone stimulates feeding behavior and weight gain in weaned pigs¹

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Synthetic maternal pheromone stimulates feeding behavior and weight gain in weaned pigs

Table 1. Effects of application of a putative synthetic maternal pheromone or a control odor on weaned pig behavior^a

	Treatments					
Measure	Control	Pheromone feeder	Pheromone snout	$\mathrm{SE^b}$	<i>P</i> -value ^b	$P ext{-value} \ ext{contrast}^{ ext{b}}$
No. of pigs	42	42	42	_	_	_
No. of replicates	14	14	14		_	_
Scan sample, % of observations						
Feeding (head in feeder)	1.33^{y}	3.06^{z}	$2.54^{\rm z}$	0.29	0.0007	0.0003
Drinking (mouth on waterer)	0.67^{y}	0.30^{z}	0.27^{z}	0.11	0.02	0.007
Lying close to feeder	18.2	9.21	9.25	4.06	0.21	0.08
Lying far from feeder	65.1	69.9	71.8	4.66	0.58	0.32
Lying (total)	83.2^{y}	79.1^{z}	81.0^{yz}	1.32	0.10	0.06
Stand and walk (active)	12.9^{y}	16.1^{z}	13.0^{z}	0.92	0.03	0.14
Agonistic behaviors	1.52^{y}	0.82^{z}	0.96^{yz}	0.24	0.11	0.04

^aTable values are raw data and SE of raw data. Analyses were performed on transformed data and the *P*-values represent those for the transformed data.

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^bP-value refers to the treatment effect while the P-value contrast refers to a linear contrast comparing control with the combined pheromone treatments.

 $^{^{}y,z}$ Means with a different superscript differed P < 0.05.

Synthetic maternal pheromone stimulates feeding behavior and weight gain in weaned pigs

Table 2. Effects of application of a putative synthetic maternal pheromone or a control odor on weaned pig weight performance

		Treatments				
Measure	Control	Pheromone Feeder	Pheromone Snout	SE	<i>P</i> -value	$P ext{-value}$ $ ext{contrast}^{ ext{a}}$
Number pigs	48	48	48		_	
Number replicates	16	16	16	_	_	_
Wean weight, kg	6.07^{y}	5.07^{z}	5.71^{yz}	0.13	0.09	0.03
End of nursery, kg ADG, kg/d	10.6 ^y	11.6 ^z	12.0 ^z	0.35	0.02	0.01
0 to 7 d	0.09	0.12	0.11	0.015	0.36	0.16
7 to 14 d	0.16	0.15	0.18	0.015	0.36	0.95
14 to 21 d	0.29^{y}	$0.32^{ m yz}$	0.36^{z}	0.02	0.098	0.08
21 to 28 d	0.30	0.36	0.40	0.03	0.42	0.24
0 to 28 d	0.198^{y}	0.236^{z}	0.253^{z}	0.01	0.004	0.001
Feed intake, kg/d						
0 to 7 d	0.17	0.19	0.18	0.01	0.61	0.38
7 to 14 d	0.45	0.45	0.46	0.017	0.90	0.78
14 to 21 d	0.63	0.63	0.64	0.028	0.95	0.80
21 to 28 d	0.95	0.98	1.00	0.03	0.12	0.07
0 to 28 d	0.52	0.51	0.54	0.01	0.45	0.25
Feed:gain ratio ^b						
0 to 7 d	0.24	1.98	0.39	1.40	0.61	0.58
7 to 14 d	7.66	1.57	4.91	1.57	0.37	0.83
14 to 21 d	2.51	2.44	2.02	0.25	0.26	0.25
21 to 28 d	3.75^{y}	$3.25^{ m yz}$	2.47^{z}	0.42	0.11	0.09
0 to 28 d	2.65^{y}	2.22^{z}	1.95^{z}	0.13	0.005	0.002



Scientific evidence of the benefits of FerAppease® Study conducted in comingled sows:

Pregnant sows treated in individual Stalls



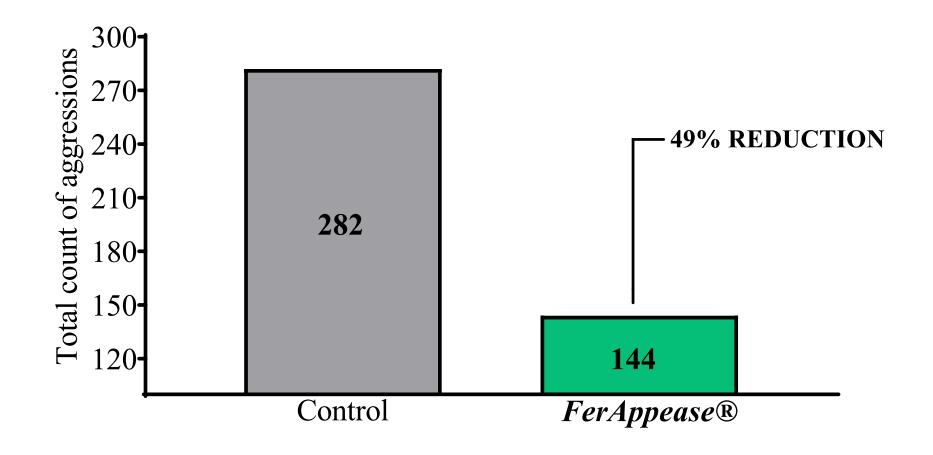
- > Blue = Controls
- Orange = FerAppease®

> Immediately moved to collective pens



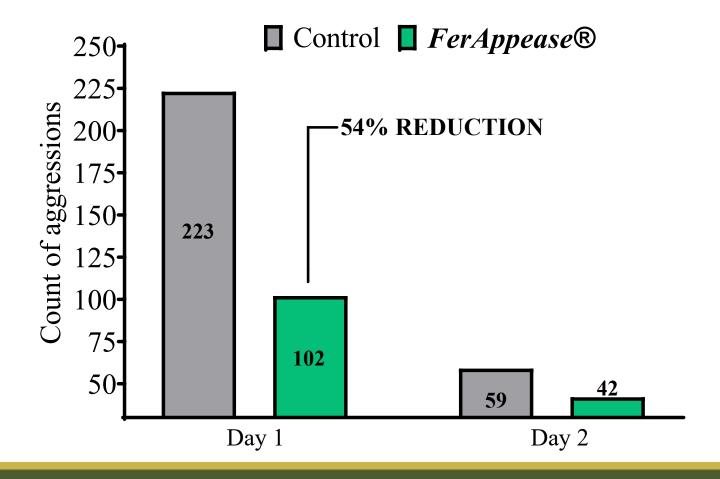
- Treatments separated by pen
- Cameras installed to analyze agonistic behaviors

FerAppease® reduced the total count of aggressions in the first 2 days after commingling

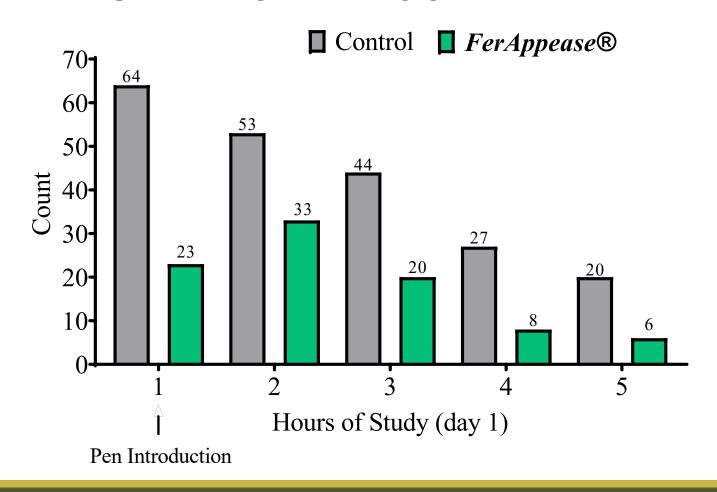




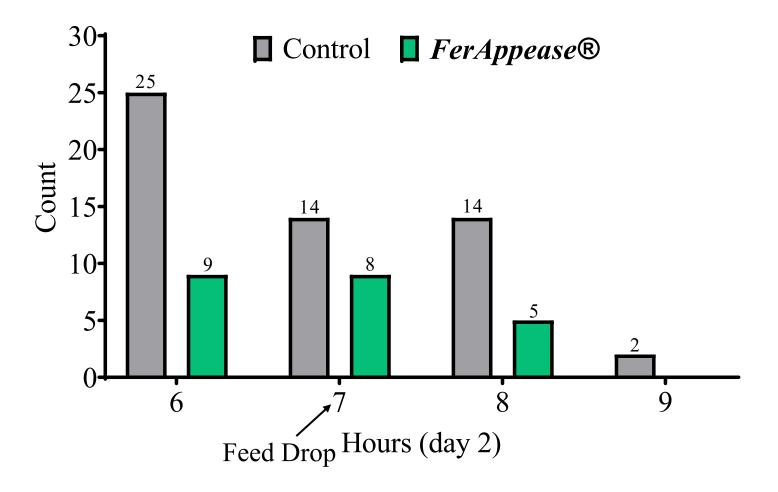
FerAppease® reduced the total count of aggressions in the first 2 days after commingling



Effect of FerAppease® in reducing aggressiveness within hours after topical application

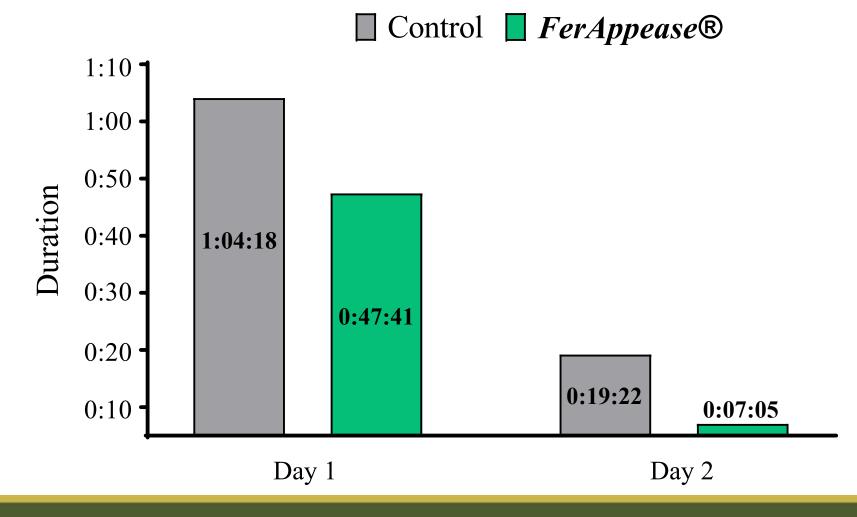


Effect of FerAppease® in reducing aggressiveness in the second day after application

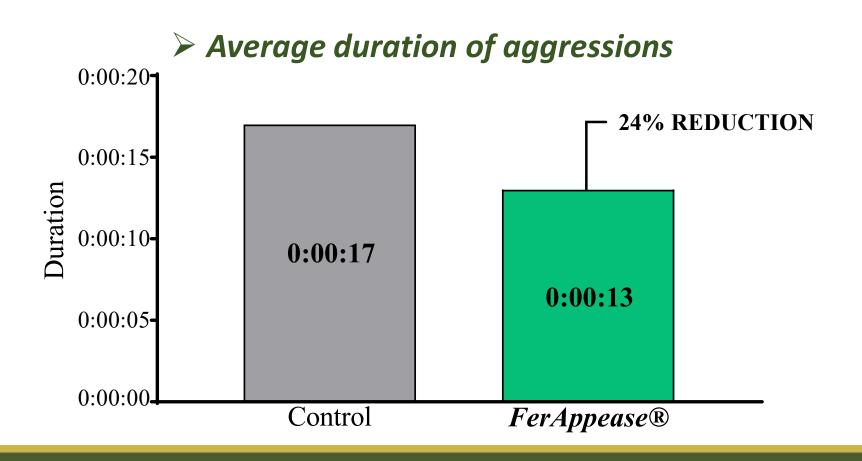


Effect of FerAppease® in reducing aggressiveness in commingled sows

FerAppease® reduced the total duration of aggressions



Effect of FerAppease® in reducing aggressiveness in commingled sows



Final considerations



- Stimulation of feeding behaviors
- > Reduced fighting
- > Increase in performance
 - > Higher body weight gains due to improved feed efficiency
- > Aggressiveness drastically reduced
- Lower number of aggression events
- > Total and average duration of aggression is reduced









For technical assistance please contact Fera Diagnostics and Biologicals Corp. at 979-213-6470, inquiry@feraah.com

• Manufactured in the U.S.A under cGMP and CFR Part 11 requirements



• Manufactured For: Fera Diagnostics and Biologicals Corp. College Station, Texas, United States.