Table 1. Effects of injectable Fe dosage on preweaning pig performance and hematological criteria

	Fe, mg[1]						
Item	0	50	100	150	200	200 + 100[2]	SEM
BW, kg[3]							
d 21	4.7	5.7	5.9	5.8	5.8	5.7	0.15
ADG, g[3]							
d 3 to 21	171	226	237	228	230	227	7.3
Hgb, g/dL[4,5]							
d 3	8.4	8.3	8.3	8.3	8.2	8.5	0.24
d 11	5.7	8.3	9.9	10.1	10.7	10.5	0.22
d 21	4.6	6.8	9.3	11.3	12.0	12.8	0.22
Hct, %[4,5]							
d 3	28.0	27.1	27.6	27.4	27.4	28.0	0.72
d 11	20.0	29.2	34.4	35.8	36.5	36.2	0.71
d 21	16.0	23.4	30.9	37.3	38.8	40.9	0.71

[1]Fe (Gleptoforte, Ceva Animal health, LLC., Lenexa, KS) dosage administered 3 d after farrowing.
[2]Pigs were administered 200 mg at 3 d after farrowing and 100 mg 11 d after farrowing.
[3]Level main effect (quadratic; $P < 0.05$).
[4]Treatment×day interactions ($P<0.001$).
[5]200-mg vs. 200+100-mg ($P < 0.05$).

Key words: gleptoferron, performance, preweaning

PSV-13 Effects of increasing iron dosage in newborn pigs on subsequent nursery performance and hematological criteria. Hayden E. Williams[1], Joel M. DeRouchey[1], Jason C. Woodworth[1], Steve S. Dritz[1], Mike D. Tokach[1], Robert D. Goodband[1], Andrew Holtcamp[2], *[1]Kansas State University, [2]Ceva Animal Health, LLC.*

Weaned pigs (n = 308; 5.7 kg BW) were used in a 42-d study evaluating the effects of increasing injectable Fe dose at processing (d 3 after farrowing) on subsequent nursery pig performance and hematological criteria. Pigs were weaned on d 21 and allotted to pens based on previous Fe treatment with BW balanced across pens within a treatment with 5 or 6 pigs/pen and 10 pens/treatment. Treatments applied at processing were a negative control receiving no Fe injection or increasing injectable Fe (Gleptoforte, Ceva Animal Health, Lenexa, KS) to provide 50, 100, 150, 200-mg, or 200-mg plus 100-mg on d 11 post-farrowing. All pigs were fed the same diets after weaning containing 110 mg/kg of Fe from $FeSO_4$ provided from the trace mineral premix. Growth data were analyzed as a CRD with pen as the experimental unit. Hematological criteria were analyzed as a repeated measure with pig as the experimental unit. Overall, increasing injectable Fe improved (linear; $P < 0.05$) ADG and ADFI (Table 1). Increasing injectable Fe up to 150 mg improved (quadratic; $P = 0.011$) G:F with a worsening G:F thereafter. There was no evidence of difference in growth performance ($P > 0.10$) between the 200-mg and the 200 + 100 mg injectable Fe treatments. Significant treatment×day interactions ($P < 0.001$) were observed for Hgb and Hct because pigs receiving an Fe injection less than 150-mg had increasing values through nursery while all other pigs had values remaining constant until d 63 after birth with no evidence of difference ($P > 0.10$) amongst all treatments at d 63 after birth. These results suggest that providing a 200-mg Fe injection at processing provides the greatest growth performance in the nursery and Fe in the diet is sufficient to meet the pigs' Fe requirement to restore blood Fe status at the end of the nursery.

Table 1. Effects of Fe dosage administered 3 d after birth on nursery pig performance and hematological criteria

	Fe, mg[1]						
Item[2]	0	50	100	150	200	200 + 100[3]	SEM
d 0 to 42							
ADG, g[4]	326	364	374	392	397	392	13.8
ADFI, g[4]	566	583	588	604	630	617	23.3
G:F[5]	0.577	0.624	0.637	0.651	0.632	0.640	0.0132
Hgb, g/dL[6]							
d 21	4.6	6.8	9.3	11.3	12.0	12.8	0.22
d 35	7.4	8.4	10.0	10.8	11.6	12.7	0.23
d 63	12.0	11.8	12.0	12.1	12.0	12.4	0.24
Hct, %[6]							
d 21	16.0	23.4	30.9	37.3	38.8	40.9	0.71
d 35	26.4	30.0	33.6	35.5	37.2	40.6	0.72
d 63	40.9	39.4	40.1	40.4	39.7	41.1	0.76

[1]Fe (Gleptoforte, Ceva Animal Health, LLC., Lenexa, KS) dosage administered 3 d after farrowing.
[2]ADG = average daily gain, ADFI = average daily feed intake, G:F = feed efficiency, Hgb = hemoglobin, and Hct = hematocrit.
[3]Pigs were administered 200 mg at 3 d after farrowing and 100 mg 11 d after farrowing.
[4]Level main effect (linear; $P < 0.05$).
[5]Level main effect (quadratic; $P = 0.011$).
[6]Treatment×day interactions ($P < 0.001$).

Key words: gleptoferron, growth performance, nursery