INTRODUCTION

- Spray dried plasma
  - Modulation gut microbiota and host immune responses
  - High bioavailable source: essential amino acids, minerals
  - Various physiological components
    : immunoglobulins, glycoproteins, peptides, unknown growth factors
  - Immature immune system of young pigs
  - Change in adaptive immunity: immunity gap
  - Commonly used in early nursery diets
  - Improvement of reproductive performance
  - BW change, litters size & growth
- However, limited information for dietary SDP on immune responses of sows and their litters.

OBJECTIVE

- To investigate the effects of spray dried plasma (SDP) in last gestating and lactating diets on systemic immune responses of lactating sows and their litters.

MATERIALS AND METHODS

- Experimental design: completely randomized design
- Animals: 12 sows (227 ± 1.64 kg; BW; 2.0 parity) and their litters
- Dietary treatments: sows
  - Corn and soybean meal basal diet (CON)
  - CON + 1% spray dried plasma (SDP)
- Measurements
  - Serum tumor necrosis factor-α (TNF-α), transforming growth factor-β (TGF-β), C-reactive protein (CRP), cortisol, and immunoglobulin (Ig)G, M, and A from sows and their litters
- Statistical analysis: PROC GLM procedure of SAS

RESULTS

- **Sows**
  - Serum TNF-α, pg/ml
  - d 3, d 7, d 28
  - CON: 200, 250, 300
  - SDP: 220, 250, 340
  - **P < 0.10**

- **Litters**
  - Serum TNF-α, pg/ml
  - d 3, d 7, d 28, d 31, d 35
  - CON: 200, 300, 500
  - SDP: 300, 500, 600
  - **P < 0.10**

REFERENCES


CONCLUSION

- Supplementation of dietary spray dried plasma in last gestating and lactating diets may modulate systemic immune responses of sows and their litters.