

TABLE SI Ingredient and nutrient composition of experimental gestation diets and common lactation diet (as-fed basis)

| Item | Gestation diet | | Lactation diet |
|----------------------------------|----------------------|-----------------|----------------|
| | Control ¹ | KF ¹ | |
| Ingredient,% | | | |
| Corn | 56.3 | 54.5 | 54.4 |
| Soybean meal, 43% CP | 10 | 10.3 | 26 |
| Wheat bran | 30.4 | 29.7 | 11 |
| <i>Konjac</i> flour ² | 0 | 2.2 | |
| Calcium carbonate | 1.2 | 1.2 | 1.51 |
| Dicalcium phosphate | 1.04 | 1.04 | 1.23 |
| Salt | 0.4 | 0.4 | 0.26 |
| Mildewcide ³ | 0.12 | 0.12 | 0.1 |
| Choline chloride | 0.14 | 0.14 | 1 |
| Premix ⁴ | 0.4 | 0.4 | 1.5 |
| Nutrient composition | | | |
| Net energy,MJ/kg ⁵ | 9.32 | 9.38 | 10.36 |
| Crude protein,% | 14.06 | 14.25 | 18.92 |
| ISF, % ⁶ | 20.12 | 20.36 | 14.45 |
| SF, % ⁷ | 2.38 | 3.57 | 1.76 |
| NDF, % ⁸ | 19.7 | 20.32 | 11.18 |
| ADF,% ⁹ | 5.42 | 5.58 | 4.26 |
| Lys,% ⁵ | 0.61 | 0.61 | 1.03 |
| Ca, % ⁵ | 0.77 | 0.77 | 1.06 |
| Available P, % ⁵ | 0.33 | 0.32 | 0.45 |

¹C =control diet group; KF=2.2% *konjac* flour diet group.

²*Konjac* flour contains 8% crude protein, 10.81% insoluble fiber, 61.03% soluble fiber, 48.66% NDF and 3.76% ADF.

³Mildewcide: ammonium propionate.

⁴ Provided per kg of diet: Cu 30 mg; Fe 160 mg; Zn 160 mg; Mn 55 mg; I 0.5mg; Se 0.5; Co 0.8mg; Cr 0.2mg; Vitamin A 14000 IU; Vitamin D₃ 2900 IU; Vitamin E 120 mg; Vitamin K₃ 6mg; Vitamin B₁ 2.4 mg; Vitamin B₂ 8.5mg; Vitamin B₆ 4.5 mg; Vitamin B₁₂ 0.03 mg; Vitamin H 0.55mg; Pantothenic acid 30mg; Folic acid 5mg; Nicotinamide 50mg.

⁵Calculated chemical concentrations using values for feed ingredients from the NRC (1998).

⁶insoluble fiber.

⁷solubel fiber.

⁸neutral detergent fiber.

⁹acid detergent fiber.

TABLE S2 Raw reads, valid sequences reads and valid ratio (%) from four groups

| Group | Raw reads | High quality sequences | Valid ratio (%) |
|---------------------|-----------|------------------------|-----------------|
| Control | 25,036 | 19,862 | 80.80 |
| <i>Konjac</i> flour | 19,483 | 16,092 | 86.11 |
| Gestation | 22,155 | 17,977 | 83.45 |
| Lactation | 25,172 | 19,310 | 77.17 |