

Supplementary Table 1 Composition and Nutritional Levels of experimental diets (as-fed basis)

Items	Corn	Experimental diet group									
		Rice				Wheat		Sorghum		Wheat bran	
		VR1	VR2	VR3	VR4	VR5	VR6	VR7	VR8	VR9	VR10
Ingredients											
Vinegar residue		15	15	15	15	15	15	15	15	15	15
Corn	96	81	81	81	81	81	81	81	81	81	81
Premix ¹⁾	4	4	4	4	4	4	4	4	4	4	4
Total	100	100	100	100	100	100	100	100	100	100	100
Nutrient levels											
GE/ (MJ/kg)	15.77	16.19	16.09	16.25	16.07	16.20	16.21	16.04	16.01	16.51	15.66
DM	87.68	88.39	88.06	88.33	88.04	88.37	88.44	88.15	88.16	88.03	88.07
CP	8.15	8.97	8.49	8.68	8.48	8.98	9.11	9.27	8.49	8.69	7.54
Ash	3.85	4.04	4.21	4.03	4.35	4.47	4.69	5.04	4.14	5.21	3.75
EE	4.52	4.65	4.18	5.13	4.08	4.13	4.94	4.21	4.48	5.22	5.34
CF	2.75	7.68	5.90	6.09	6.28	4.35	7.63	3.99	6.17	5.17	5.53

1) The vitamin-mineral premix provided the following quantities of vitamins and micro minerals per kilogram of complete diet: VA 5,812 IU, VD3 2,000 IU, VE 30 IU, VK3 2.3 mg, VB12 27.6 µg, VB2 4.0 mg, pantothenic acid 15.0 mg, nicotinic acid 32.0 mg, choline 430.0 mg, folic acid 0.7 mg, thiamine 1.5 mg, VB6 3.0 mg, biotin 45.0 µg, Mn 40.0 mg, Fe 75.0 mg, Zn 75.0 mg, Cu 20.0 mg, I 0.3 mg, Se 0.5 mg.