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## ABBREVIATIONS AND SYMBOLS

<u>Abbreviation or symbol</u>	<u>Term</u>
%	percent
=	is equal to
<	is less than
>	is greater than
μ	micron
°C	degree centigrade or Celsius
μg	microgram
μl	micro liter
/	per
+	plus
AA	amino acid
ADFI	average daily feed intake
ADG	average daily gain
AME	apparent metabolizable energy
ANFs	anti-nutritional factors
ANOVA	analysis of variance
AOAC	Association of Official and Analytical Chemists
APD	apparent protein digestibility
BIOTEC	National center for Genetic Engineering and Biotechnology
BW	body weight
C	carbon
CAFOs	concentrated animal feeding operations
CF	crude fiber
CFU	colony-forming units
cm	centimeters
Co., Ltd.	Company Limited

CO <sub>2</sub>	carbon dioxide gas
Con	control
CP	crude protein
CRD	completely randomized design
df	degree of freedom
DM	dry matter
DMRT	Duncan's new multiple range tests
DNS	dinitrosalicylic acid
e.g.	exempli gratia (for example)
ed., eds.	Editor (s)
EDTA	ethylene diamine tetra acetic acid
EE	ether extract
<i>et al.</i>	Et alii (Latin), and other (s)
F	F-values
FAO	Food and Agricultural Organization
FCR	feed conversion ratio
FDA	Food and Drug Administration
FTU	phytase unit
g	gram
h	hour
IU	international unit
kg	kilogram
KPFC 277	Crude β-glucanase from <i>Aspergillus</i> sp. KPFC 277
l	liter
m	meter
M	molar
mg	milligram
min.	minute
MJ	mega joule
ml	milliliter

mm	millimeter
MS	mean square
MTT	3-(4, 5-dimethylthiazoyl-2-yl) 2, 5 diphenyltetra-zolium bromide
η	nano
N	nitrogen
NA	nutrient agar
NB	nutrient broth
ND	not determined
NDF	neutral detergent fiber
NFE	nitrogen free extract
NRC	National Research Council
NSP	non starch polysaccharide
NSTDA	National Science and Technology development Agency
O <sub>2</sub>	oxygen gas
OD	optical density
P	Probability
pH	negative logarithm of hydrogen ion activity
ppm	parts per million
rpm	rounds per minute
S.D.	standard deviation
SBM	soybean meal
sp., spp.	Species
SPSS	the Statistical Package for Social Science
SS	sum of square
SSF	solid-state fermentation
TCA	trichloroacetic acid
v/v	volume by volume
v/w	volume by weight
w/v	weight by volume
w/w	weight by weight