Appendix 1: Abbreviations

The following abbreviations may be used without definition in *JDS Communications*.

AA = amino acid
ACTH = adrenocorticotropin
ADF = acid detergent fiber
ADG = average daily gain
ADL = acid detergent lignin
ADIN = acid detergent insoluble nitrogen
AMP, ADP, ATP = adenosine mono-, di-, or triphosphate
ANOVA = analysis of variance
ATPase = adenosine triphosphatase
BCS = body condition score
BHB = β-hydroxybutyrate
BLUP = best linear unbiased predictor
BSA = bovine serum albumin
bST = bovine somatotropin
BTA = *Bos taurus* autosome
BUN = blood urea nitrogen
BW = body weight
cDNA = complementary deoxyribonucleic acid
CI = confidence interval
CLA = conjugated linoleic acid
CN = casein
CNS = coagulase-negative staphylococci (see NAS)
CoA = coenzyme A
CP = crude protein
CV = coefficient(s) of variation
DCAD = dietary cation-anion difference
df = degrees of freedom
DHI(A) = Dairy Herd Improvement/Information (Association)
DIM = days in milk
DM = dry matter
DMI = dry matter intake
DNA = deoxyribonucleic acid
DNase = deoxyribonuclease
dNTP = deoxynucleotide triphosphates
EAA = essential amino acid
EBV = estimated breeding value
ECM = energy-corrected milk
EDTA = ethylenediaminotetraacetate
EGTA = ethylene glycol tetraacetate
ELISA = enzyme-linked immunosorbent assay
FCM = fat-corrected milk
FSH = follicle-stimulating hormone
GAPDH = glyceraldehyde 3-phosphate dehydrogenase
GBLUP = genomic best linear unbiased prediction
GC = gas chromatography
GEBV = genomic estimated breeding value
GHG = greenhouse gases
GLC = gas-liquid chromatography
GnRH = gonadotropin-releasing hormone
GWAS = genome-wide association study
h^2 = heritability
HEPES = *N*-2-hydroxyethyl piperazine-N′-ethanesulfonic acid
HPLC = high-performance (pressure) liquid chromatography
HTST = high temperature, short time
IFN = interferon
Ig = immunoglobulin
IGF = insulin-like growth factor
IL = interleukin
IMI = intramammary infection
α-LA = α-lactalbumin
β-LG = β-lactoglobulin
LH = luteinizing hormone
LPS = lipopolysaccharide
LSD = least significant difference
LSM = least squares means
mAb = monoclonal antibody
MALDI-TOF = matrix-assisted laser desorption/ionization time-of-flight
ME = metabolizable energy
MIC = minimum inhibitory concentration
MP = metabolizable protein
mRNA = messenger ribonucleic acid
MS = mass spectrometry
MUFA = monounsaturated fatty acids
MUN = milk urea nitrogen
n = number of samples
NAD^+/NADH = nicotinamide adenine dinucleotide (oxidized/reduced)
NADP = nicotinamide adenine dinucleotide phosphate
$NADPH_2$ = reduced nicotinamide adenine dinucleotide phosphate
NAN = nonammonia nitrogen
NAS = non-*aureus* staphylococci
NDF = neutral detergent fiber
NDIN = neutral detergent insoluble N
NDM = nonfat dry milk
NEAA = nonessential amino acid
NEG = net energy for gain
NEL = net energy for lactation
NEM = net energy for maintenance
NFC = nonfiber carbohydrates
NPN = nonprotein nitrogen
NRC = National Research Council
NSC = nonstructural carbohydrates
OM = organic matter
PAGE = polyacrylamide gel electrophoresis
PBS = phosphate-buffered saline
PCR = polymerase chain reaction
$PGF_{2\alpha}$ = prostaglandin $F_{2\alpha}$
PMN = polymorphonuclear leukocyte
PTA = predicted transmitting ability
PUFA = polyunsaturated fatty acids
QTL = quantitative trait loci
r = correlation coefficient
R^2 = coefficient of determination
RDP = rumen-degraded protein
REML = restricted maximum likelihood
RFLP = restriction fragment length polymorphism
RIA = radioimmunoassay
RNA = ribonucleic acid
RNase = ribonuclease
rRNA = ribosomal ribonucleic acid
RUP = rumen-undegraded protein
SARA = subacute ruminal acidosis
SCC = somatic cell count
SCS = somatic cell score
SD = standard deviation
SDS = sodium dodecyl sulfate
SE = standard error
SEM = standard error of the mean
SFA = saturated fatty acids
SNF = solids-not-fat
SNP = single nucleotide polymorphism
SPC = standard plate count
TDN = total digestible nutrients
Tris = tris(hydroxymethyl)aminomethane
TMR = total mixed ration
TS = total solids
UF = ultrafiltration, ultrafiltered
UFA = unsaturated fatty acids
UHT = ultra-high temperature
USDA = United States Department of Agriculture
UV = ultraviolet
VFA = volatile fatty acids

Appendix 2*:* Selected Units and Terms

The following units and terms can be used without definition in *JDS Communications.*

atomic mass unit	amu
atmosphere	atm
base pair	bp
calorie (gram)	cal
celsius (with number)	°C
centimeter	cm
centimeter, square	cm^2
circa	ca.
centimorgan	cM
centipoise	cP
central processing unit	CPU
colony-forming unit	cfu
counts per minute	cpm
counts per second	cps
crossed with, times	×
cubic	cu
cubic centimeter	cc, cm^3
cubic millimeter	mm^3
curie	Ci
cycles per second (hertz)	Hz
day(s)	d
dalton	Da
deci	d (prefix)
deciliter	dL
electron volt	eV
equivalents	Eq
foot-candle	use lx
gram	g
gravity	*g*
hectare	ha
hour(s)	h
inside diameter	i.d.
international unit	IU
intramuscularly	i.m.
intraperitoneally	i.p.
intravenously	i.v.
joule	J
kilo	k (prefix)
kilobase	kb
kilobyte	KB
kilocalorie	kcal
kilogram	kg
kilopascal	kPa
liter	L
logarithm (natural)	ln
logarithm (base 10)	$\log_{10}$
lux	lx
mega	M (prefix)
meter	m
metric tonne	tonne or t
micro	µ (prefix)
microcurie	µCi
microfarad	µF
microgram	µg
microliter	µL
milli	m (prefix)
milliliter	mL
millimeters of mercury	mm Hg
millimolar (concentration)	m*M* (= mmol/L)
millimole (mass)	mmol
minute(s)	min
molar (concentration)	*M*
molar (mass)	mol
mole (number, mass)	mol
month(s)	mo
morning/afternoon	a.m./p.m.
nano	n (prefix)
newton	N
normal (concentration)	*N*
nanogram	ng
osmolality	use mmol/kg
outside diameter	o.d.
parts per billion	ppb (use µg/kg or equivalent)
parts per million	ppm (use mg/kg or equivalent)
pascal	Pa
pico	p (prefix)
picogram	pg
plaque-forming unit	pfu
probability	*P*
revolutions per minute	rpm
second(s)	s
siemens	S
species	spp.
subcutaneous	s.c.
subspecies	ssp.
thousands (approximation)	K (e.g., 50K SNPs)
unit	U
volt	V
volume	vol
volume/volume	vol/vol (use parenthetically)
watt	W
week(s)	wk
weight/volume	wt/vol (use parenthetically)
year(s)	yr

Amino Acids

alanine	Ala
arginine	Arg
asparagine	Asn
aspartic acid	Asp
citrulline	Cit
cysteine	Cys
glutamic acid	Glu
glutamine	Gln
glycine	Gly
histidine	His
isoleucine	Ile
leucine	Leu
lysine	Lys
methionine	Met
ornithine	Orn
phenylalanine	Phe
proline	Pro
serine	Ser
threonine	Thr
tryptophan	Trp
tyrosine	Tyr
valine	Val