

## Maize

Maize grain (*Zea mays* L.) (n = 2634).

Synonym (North America): corn.

Expanded maize, extruded maize, flaked maize, high moisture maize, pelleted maize and toasted maize for ruminants: see page 291

All values are expressed on an as fed basis unless otherwise noted.

Main constituents	mean	sd	Fatty acids	%FA	g/kg
Dry matter (%)	86.4	1.1	Myristic acid C14:0	0.1	0.0
Crude protein (%)	8.1	0.7	Palmitic acid C16:0	11.1	3.5
Crude fibre (%)	2.2	0.4	Palmitoleic acid C16:1	0.4	0.1
Ether extract (%)	3.7	0.4	Stearic acid C18:0	1.8	0.6
Ash (%)	1.2	0.1	Oleic acid C18:1	26.9	8.5
Insoluble ash (%)	0.0	0.1	Linoleic acid C18:2	56.5	17.8
Neutral detergent fibre (%)	10.4	1.5	Linolenic acid C18:3	1.0	0.3
Acid detergent fibre (%)	2.6	0.4			
Acid detergent lignin (%)	0.5	0.2	Fatty acids/ether extract (%)	85	
Water insoluble cell walls (%)	9.1	2.7			
Starch (%)	64.1	1.9			
Total sugars (%)	1.6	0.5			
Gross energy (MJ/kg)	16.2	0.3			

Mineral elements	mean	sd	Vitamins	mean
Calcium (g/kg)	0.4	0.3	Vitamin A (1000 UI/kg)	2.32
Phosphorus (g/kg)	2.6	0.3	Vitamin E (mg/kg)	17
Phytate P / total P (%)	75		Vitamin K (mg/kg)	0.31
Magnesium (g/kg)	1.0	0.2	Vitamin B1 - thiamin (mg/kg)	4
Potassium (g/kg)	3.2	0.4	Vitamin B2 - riboflavin (mg/kg)	1.4
Sodium (g/kg)	0.04	0.03	Vitamin B6 - pyridoxine (mg/kg)	5
Chlorine (g/kg)	0.5	0.2	Vitamin B12 (µg/kg)	0
Sulphur (mg/kg)	1.1		Niacin (mg/kg)	21
DCAAD (mEq/kg)	0.38		Pantothenic acid (mg/kg)	6
EB (mEq/kg)	68		Folic acid (mg/kg)	0.25
Manganese (mg/kg)	8	7	Biotin (mg/kg)	0.06
Zinc (mg/kg)	19	6	Choline (%)	533
Copper (mg/kg)	2	1.0		
Iron (mg/kg)	32	11		
Selenium (mg/kg)	0.10			
Cobalt (mg/kg)	0.05			
Molybdenum (mg/kg)	0.41			
Iodine (mg/kg)	0.09			

  

Other	mean
Real applied viscosity (ml/g)	0.6
Xanthophylls (mg/kg)	24
Phytase activity (UI/kg)	20

	Growing	Sow	Poultry	Cockerel	Broiler
Pigs					
DE (MJ/kg)	14.2	14.8	AMEn (MJ/kg)	13.4	13.1
ME (MJ/kg)	13.9	14.4	P availability (%)		24
NE (MJ/kg)	11.1	11.4			
Ed (%)	88	91	<b>Horses</b>		
OMd (%)	91	94	UFC (per kg)	1.12	
Nd (%)	81	91	MADC (g/kg)	65	
NSId (%)		86			
EEd (%)		60	<b>Rabbits</b>		
Pd (%)		28	DE (MJ/kg)	12.8	
			MEEn (MJ/kg)	12.6	
			Ed (%)	80	
			Nd (%)	65	
<b>Ruminants</b>					
UFL (per kg)	1.06				
UFV (per kg)	1.06				
PDIA (g/kg)	46		<b>Fish</b>		
PDIN (g/kg)	64		DE (MJ/kg)	6.3	
PDIE (g/kg)	84		Ed (%)	39	
ME (kcal/kg)	11.7		Nd (%)	95	
Ed (%)	86				
OMd (%)	89				
Nd (%)	66				
Tid (%)	90				
FAd (%)	74				
Absorbed phosphorus (g/kg)	1.9				
Ruminal degradation		Nitrogen	Starch	DM	
Effective degradability	43	60	56		
a (%)	11	23	20		
b (%)	82	77	76		
c (%/h)	4.0	5.5	5.5		

### Amino acid content and digestibility

Amino acids	Total		Pigs				Poultry		Ruminants
	g/kg	% CP	AID	AIDC	SID	SIDC	TD	TDC	AADI
LYS	2.4	3.0	70	1.7	80	1.9	85	2.1	5.7
THR	3.0	3.7	74	2.2	83	2.5	88	2.7	4.8
MET	1.7	2.1	87	1.5	91	1.5	94	1.6	1.9
CYS	2.0	2.5	82	1.7	89	1.8	93	1.9	
MET+CYS	3.7	4.6	85	3.1	90	3.3	93	3.5	
TRP	0.5	0.6	65	0.3	80	0.4			
ILE	3.0	3.7	82	2.5	88	2.7	92	2.8	4.9
VAL	4.1	5.0	81	3.3	87	3.6	92	3.8	5.5
LEU	10.2	12.5	90	9.2	93	9.5	96	9.8	10.2
PHE	4.0	4.9	87	3.5	91	3.7	94	3.8	5.0
TYR	3.4	4.2	85	2.9	90	3.1	94	3.2	
PHE+TYR	7.4	9.1	86	6.4	91	6.8	94	7.0	
HIS	2.4	2.9	84	2.0	89	2.1	90	2.1	2.3
ARG	3.8	4.7	85	3.2	91	3.5	95	3.6	4.6
ALA	6.1	7.5	84	5.2	89	5.5	94	5.8	
ASP	5.3	6.5	79	4.2	87	4.6	90	4.8	
GLU	15.4	18.9	89	13.7	93	14.3	96	14.8	
GLY	3.1	3.8	69	2.1	82	2.5	89	2.7	
SER	4.1	5.0	83	3.4	89	3.6	93	3.8	
PRO	7.5	9.2	82	6.2	89	6.7	96	7.2	

