



PULSE NUTRIENT COMPOSITION

Northern Pulse Growers Association



Nutrient composition of dry peas and other pulses (as fed basis)

Nutrient, as is basis	Dry Peas	Sweet Lupins	Lentils	Sweet Lupins
Dry matter, %	90	91	90	90
Crude protein, %	23	32	24	24.1
Oil, %	1.4	5.9	0.9	1.2
Crude fibre, %	5.5	15.4	4.4	8.4
Ash, %	3.3	2.7	2.2	2.7
Starch, %	46	10	38	38
Oligosaccharides, %	5	4.1	2.4	2.7
Tannins, %	0.4	0.3	0.9	1
ADF, %	8.2	19.7	6	9.9
NDF, %	16.7	23.5	18	12.8
Lysine, g/16gN	7.26	4.75	6.3	6.29
Met + cys, g/16gN	2.17	2.01	2.2	2.14

Carbohydrate components of dry peas (10% moisture basis)

Component	Average
Sugars, %	4.6
Starch, %	46
Insoluble cell walls, %	12.5
Oligosaccharides, %	5
Crude fibre, %	5.5
Acid detergent fibre, %	8.2
Neutral detergent fibre, %	16.7
Non-starch polysaccharides, %	12.5
Lignin, %	0.5

Dry pea nutrient composition

Component	Average	Component	Average
Moisture, %	10	Calcium, %	0.11
Crude protein (Nx6.25), %	23	Phosphorus, %	0.39
Oil, %	1.4	Available P, %	0.15
Starch, %	46	Sodium, %	0.04
Ash, %	3.3	Chlorine, %	0.05
Crude fibre, %	5.5	Potassium, %	1.02
Non-starch polysaccharides, %	12.5	Sulfur, %	0.2
Oligosaccharides, %	5	Magnesium, %	0.12
Insoluble cell walls, %	12.5	Cobalt, mg/kg	133
Acid detergent fibre, %	8.2	Copper, mg/kg	9
Neutral detergent fibre, %	16.7	Iron, mg/kg	65
Lignin, %	0.5	Manganese, mg/kg	23
Trypsin Inhibitor Activity, TIA/mg	3.5	Molybdenum, mg/kg	0.8
Phytic acid, %	1.2	Zinc, mg/kg	23
		Selenium, mg/kg	0.38

Vitamin	Amount
Biotin, mg/kg	0.15
Choline, mg/kg	547
Folic Acid, mg/kg	0.2
Niacin, mg/kg	31
Pantothenic acid, mg/kg	18.7
Pyridoxine, mg/kg	1
Riboflavin, mg/kg	1.8
Thiamin, mg/kg	4.6
Vitamin E, mg/kg	0.2



Amino acid composition of dry peas (23% crude protein basis)

Amino acid	Average	Amino acid	Equation	R Value
Alanine, %	0.92	Arginine, %	% CP x .1555 – 1.497	0.94
Arginine, %	2.31	Lysine, %	% CP x .0598 + .358	0.99
Aspartate, %	2.38	Methionine, %	% CP x .0075 + .065	0.94
Cystine, %	0.22	Cystine, %	% CP x .0059 + .220	0.75
Glutamate, %	3.68	Threonine, %	% CP x .0264 + .297	0.98
Glycine, %	0.95	Tryptophan, %	% CP x .0077 – .010	0.91
Histidine, %	0.72			
Isoleucine, %	1.1			
Leucine, %	1.8			
Lysine, %	1.67			
Methionine, %	0.28			
Methionine + Cystine, %	0.50			
Phenylalanine, %	0.98			
Proline, %	0.97			
Serine, %	0.99			
Threonine, %	0.84			
Tryptophan, %	0.19			
Tyrosine, %	0.73			
Valine, %	1.05			

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