

2. Technical Specifications

1. Calf Starter Feed

	Parameter	
Nutrients		
	Crude protein % (min)	18.0
	Crude Fat % (max)	6.0
	Moisture % (max)	12.0
	Acid Insoluble Ash (sand) % (max)	2.0
Mineral		
	Calcium % (min)	0.90
	Phosphorous % (min)	0.45
Energy		
	Metabolisable energy (Kcal/kg) (min)	2.6

- Calf starter meal should have at least 3% of either whole or skimmed milk powder
- Should not contain any non-proteinous nitrogen compounds
- Should have a shelf life of at least 4 weeks
- Should not contain any moulds/ deleterious compounds
- Should be palatable to calves
- Should be provided in pelleted form
- Total aflatoxin content should be less than 20 ppb

2. Dairy Cattle Feed

	Parameter	
Nutrients		
	Crude protein % (min)	16.0
	Crude Fat % (max)	5.0
	Moisture % (max)	12.0
	Acid Insoluble Ash (sand) % (max)	2.0
Mineral		
	Calcium % (min)	0.9
	Phosphorous % (min)	0.45
Energy		
	Metabolisable energy (Mcal/kg) (min)	2.4

- No more than 1% of total crude protein should from added non-protein nitrogen compounds
- Should have a shelf life of at least 4 weeks
- Should not contain any molds/ deleterious compounds
- Should be palatable to cows
- Should be provided in pelleted form
- Total aflatoxin content should be less than 20 ppb

3. Stud Bull Feed

	Parameter	
Nutrients		
	Crude protein % (min)	15.0
	Crude Fat % (max)	5.0
	Moisture % (max)	12.0
	Acid Insoluble Ash (sand) % (max)	2.0
Mineral		
	Calcium % (min)	1.00
	Phosphorous % (min)	0.50
Energy		
	Metabolisable energy (Mcal/kg) (min)	2.4

- No more than 1 % of total crude protein should from added non-protein nitrogen compounds
- Should have a shelf life of at least 4 weeks
- Should not contain any molds/ deleterious compounds
- Should be palatable to bulls
- Should be provided in pelleted form
- Total aflatoxin content should be less than 20 ppb

4. Goat Feed

	Parameter	
Nutrients		
	Crude protein % (min)	16.0
	Crude Fat % (max)	5.0
	Moisture % (max)	12.0
	Acid Insoluble Ash (sand) % (max)	2.0
Mineral		
	Calcium % (min)	0.60
	Phosphorous % (min)	0.55
Energy		
	Metabolisable energy (Kcal/kg) (min)	2.4

- Should have a shelf life of at least 4 weeks
- Should not contain any molds/ deleterious compounds
- Should be palatable to goats
- Total aflatoxin content should be less than 20 ppb

5. Sow feed

	Nutrient	Pig Grower	Bidders Responds (yes/no)	If "NO" comments
Nutrients	Moisture % (max)	12.00		
	Crude Protein % (min)	16.00		
	Crude Fiber % (max)	8.00		
	Acid Insoluble Ash % (max)	2.0		
Amino Acids				
	Lysine % (min)	0.80		
	Methionine + Cysteine % (min)	0.50		
Minerals				
	Calcium % (min)	0.90		
	Total Phosphorus % (min)	0.60		
Energy				
	Gross Energy (Mcal/kg) (min)	3.5		
	Digestible energy (Mcal/kg) (min)	3.0		

- Should have a shelf life of at least 4 weeks
- Should not contain any molds/ deleterious compounds
- Should be palatable to breeding female pigs
- Total aflatoxin content should be less than 20 ppb

6. Creep Feed

	Nutrient	Creep Feed	Bidders Responds (yes/no)	If "NO" comments
Nutrients	Moisture % (max)	12.00		
	Crude Protein % (min)	21.00		
	Crude Fiber % (max)	6.00		
	Acid Insoluble Ash % (max)	2.0		
Amino Acids				
	Lysine % (min)	1.40		
	Methionine + Cysteine % (min)	0.75		
Minerals				
	Calcium % (min)	1.20		
	Total Phosphorus % (min)	0.85		
Energy				
	Gross Energy (Mcal/kg) min	3.65		
	Digestible energy (Mcal/kg) (min)	3.1		

- Should have a shelf life of at least 4 weeks
- Should not contain any molds/ deleterious compounds
- Should be palatable to young suckling piglets
- Total aflatoxin content should be less than 20 ppb

7. Commercial Layer Feed

	Parameter	Layer Feed	Bidders Responds (yes/no)	If "NO" comments
Nutrients				
	Crude protein %	16.5 – 17.5		
	Crude Fat % (max)	7.0		
	Crude Fiber % (max)	7.0		
	Moisture % (max)	12.0		
	Acid Insoluble Ash (sand) % (max)	2.0		
Amino Acids				
	Lysine %	0.70 – 0.74		
	Methionine	0.34 – 0.35		
	Methionine & Cysteine %	0.60 – 0.62		
	Tryptophan%	0.16 – 0.18		
Mineral				
	Calcium % (min)	3.00		
	Total Phosphorous % (min)	0.65		
	Available Phosphorus % (min)	0.40		
Energy				
	Metabolisable Energy (Kcal/kg)	2650 - 2800		

- Should have a shelf life of at least 4 weeks
- Should be palatable to laying poultry.
- Should not contain any molds/ deleterious compounds
- Total aflatoxin content should be less than 20 ppb

8. Commercial layer Grower Feed / Chick Grower Feed

	Parameter	Grower Feed	Bidders Responds (yes/no)	If "NO" comments
Nutrients				
	Crude protein %	15.5-16		
	Crude Fat % (max)	7.0		
	Crude Fiber % (max)	7.0		
	Moisture % (max)	12.0		
	Acid Insoluble Ash (sand) % (max)	2.0		
Amino Acids				
	Lysine %	0.78 – 0.80		
	Methionine	0.32 – 0.34		
	Methionine & Cysteine %	0.55 – 0.58		
	Tryptophan%	0.16 – 0.18		
Mineral				
	Calcium % (min)	0.90		
	Total Phosphorous % (min)	0.60		
	Available Phosphorus % (min)	0.40		
Energy				
	Metabolisable energy (kcal/kg)	2650 - 2750		

- Should have a shelf life of at least 4 weeks
- Should be palatable to growing layer poultry
- Should not contain any molds/ deleterious compounds
- Total aflatoxin content should be less than 20 ppb

9. Layer Chick Starter Feed

	Parameter	Chick Starter	Bidders Responds (yes/no)	If "NO" comments
Nutrients				
	Crude protein %	18.5 – 19.0		
	Crude Fat % (max)	6.0		
	Crude Fiber % (max)	6.0		
	Moisture % (max)	12.0		
	Acid Insoluble Ash (sand) % (max)	2.0		
Amino Acids				
	Lysine %	0.9 – 0.95		
	Methionine	0.36 – 0.38		
	Methionine & Cysteine %	0.65 – 0.67		
	Tryptophan%	0.18 – 0.20		
Mineral				
	Calcium % (min)	0.95		
	Total Phosphorous % (min)	0.7		
	Available Phosphorus % (min)	0.4		
Energy				
	Metabolisable energy (kcal/kg)	2750 - 2800		

- Should have a shelf life of at least 4 weeks
- Should be palatable to laying poultry chicks
- Should not contain any molds/ deleterious compounds
- Total aflatoxin content should be less than 20 ppb

10. Layer Breeder Starter Feed / Layer Breeder Starter Feed (Crumbles)

	Parameter	Layer Breeder Starter	Bidders Responds (yes/no)	If "NO" comments
Nutrients				
	Crude protein %	19.0-19.5		
	Crude Fat % (max)	6.0		
	Crude Fiber % (max)	6.0		
	Moisture % (max)	12.0		
	Acid Insoluble Ash (sand) % (max)	2.0		
Amino Acids				
	Lysine %	0.95-1.00		
	Methionine	0.40-0.42		
	Methionine & Cysteine %	0.70-0.72		
	Tryptophan%	0.2-0.25		
Mineral				
	Calcium % (min)	0.85-0.95		
	Total Phosphorous % (min)	0.70		
	Available Phosphorus % (min)	0.45		
Energy				
	Metabolisable energy (kcal/kg)	2850-2950		

- Should have a shelf life of at least 4 weeks
- Should be palatable to layer breeder chicken
- Should not contain any molds/ deleterious compounds
- Total aflatoxin content should be less than 20 ppb
- Should be supplied in small crumble form

11. Layer Breeder Developer Feed (Crumbles)

	Parameter	Layer Breeder Developer	Bidders Responds (yes/no)	If "NO" comments
Nutrients				
	Crude protein %	15.5-16.5		
	Crude Fat % (max)	7.0		
	Crude Fiber % (max)	7.0		
	Moisture % (max)	12.0		
	Acid Insoluble Ash (sand) % (max)	2.0		
Amino Acids				
	Lysine %	0.72-0.75		
	Methionine	0.34-0.36		
	Methionine & Cysteine %	0.60-0.62		
	Tryptophan%	0.17-0.2		
Mineral				
	Calcium % (min)	0.85-0.95		
	Total Phosphorous % (min)	0.75		
	Available Phosphorus % (min)	0.45		
Energy				
	Metabolisable energy (kcal/kg)	2700-2750		

- Should have a shelf life of at least 4 weeks
- Should not contain any molds/ deleterious compounds
- Should be palatable to Layer breeder developer poultry
- Should be provided in crumble form
- Total aflatoxin content should be less than 20 ppb

12. Layer Breeder Feed (Pellet)

	Parameter	Layer Breeder Layer	Bidders Responds (yes/no)	If "NO" comments
Nutrients				
	Crude protein %	17.5-18.5		
	Crude Fat % (max)	7.0		
	Crude Fiber % (max)	7.0		
	Moisture % (max)	12.0		
	Acid Insoluble Ash (sand) % (max)	2.0		
Amino Acids				
	Lysine %	0.80-0.82		
	Methionine	0.38-0.40		
	Methionine & Cysteine %	0.65-0.70		
	Tryptophan%	0.20-0.22		
Mineral				
	Calcium % (min)	3.25		
	Total Phosphorous % (min)	0.8		
	Available Phosphorus % (min)	0.45		
Energy				
	Metabolisable energy (kcal/kg)	2750-2850		

- Should have a shelf life of at least 4 weeks
- Should not contain any molds/ deleterious compounds
- Should be palatable to Layer breeder poultry
- Should be provided in pelleted form
- Total aflatoxin content should be less than 20 ppb

13. Broiler Starter Feed

	Parameter	Layer Breeder Layer	Bidders Responds (yes/no)	If "NO" comments
Nutrients				
	Crude protein %	18.5-21.0		
	Crude Fat % (max)	7.0		
	Crude Fiber % (max)	7.0		
	Moisture % (max)	12.0		
	Acid Insoluble Ash (sand) % (max)	4.0		
Amino Acids				
	Lysine %	0.80-0.82		
	Methionine	0.38-0.40		
	Methionine & Cysteine %	0.65-0.70		
	Tryptophan%	0.20-0.22		
Mineral				
	Calcium % (min)	3.25		
	Total Phosphorous % (min)	0.8		
	Available Phosphorus % (min)	0.45		
Energy				
	Metabolisable energy (kcal/kg)	2850-3000		

- Should have a shelf life of at least 4 weeks
- Should not contain any molds/ deleterious compounds
- Should be palatable to Broiler Starter Chicken
- Should be provided in pelleted form
- Total aflatoxin content should be less than 20 ppb

14. Broiler Finisher Feed

	Parameter	Broiler finisher	Bidders Responds (yes/no)	If "NO" comments
Nutrients				
	Crude protein % (min)	18 - 19		
	Crude Fat % (max)	7.0		
	Crude Fiber % (max)	7.0		
	Moisture % (max)	13		
	Ash % (max)	7.0		
	Acid Insoluble Ash (sand) % (max)	3.0		
Amino Acids				
	Lysine %	1.0		
	Methionine	0.40 - 0.45		
	Methionine & Cysteine %	0.8		
	Tryptophan%	0.17		
Mineral				
	Calcium % (min)	0.95		
	Total Phosphorous % (min)	0.6		
	Available Phosphorus % (min)	0.4		
Energy				
	Metabolisable energy (kcal/kg)	2950 - 3100		

- Should have a shelf life of at least 4 weeks
- Should not contain any molds/ deleterious compounds
- Should be palatable to Broiler Finisher chicken
- Should be provided in pelleted form
- Total aflatoxin content should be less than 20 ppb

15. Mineral Mixture for Dairy cattle

Composition per kg

	Nutrient	level	Bidders Responds (yes/no)	If "NO" comments
General composition	Moisture (g) (max)	100		
	Ash (g) (min)	850		
	Acid Insoluble Ash (sand) (g) (max)	50		
Mineral Composition	Calcium (g)	180 – 250		
	Phosphorus (g) (min)	70		
	Magnesium (g)	10 – 15		
	Sodium (g)	120 – 160		
	Sulphur (g)	15 – 20		
	Copper (g)	1.0 – 1.5		
	Zinc (g)	6.0		
	Cobalt (mg)	25		
	Selenium (mg)	100		

Mineral mixtures should be

- Prepared with high quality mineral salts with biologically available forms
- Free from toxic elements
- Palatable
- Free-flowing without caking
- Should have a shelf life of at least 8 weeks

Starter Goat Feed (Kid Feed)

	Parameter		Bidders Responds (Yes/No)	If "no" Comments
Nutrients				
	Crude protein %	17.0 – 18.0		
	Crude Fat % (max)	7.0		
	Moisture % (max)	12.0		
	Acid Insoluble Ash (sand) % (max)	2.0		
Mineral				
	Calcium % (min)	0.80		
	Phosphorous % (min)	0.55		
Energy				
	Gross energy (Mcal/kg) (min)	3.5		
	Metabolisable energy (Mcal/kg) (min)	2.8		

- Starter meal should have at least 3% of either whole or skimmed milk powder
- Should not contain any non-proteinous nitrogen compounds
- Should have a shelf life at least 4 weeks
- Should not contain any moulds/ deleterious compounds
- Should be palatable to kids
- Total aflatoxin content should be less than 20 ppb

18. Mineral Mixture for Goats

Composition per kg

	Nutrient	level	Bidders Responds (Yes/No)	If "no" Comments
General composition	Moisture (g) (max)	100		
	Ash (g) (min)	850		
	Acid Insoluble Ash (sand) (g) (max)	50		
Mineral Composition	Calcium (g)	160 - 200		
	Phosphorus (g) (min)	70		
	Magnesium (g)	10 – 15		
	Sodium (g)	120 – 160		
	Sulphur (g)	15 – 20		
	Copper (g)	1.0 – 1.5		
	Zinc (g)	6.0		
	Cobalt (mg)	25		
	Selenium (mg)	150		

Mineral mixtures should be

- Prepared with high quality mineral salts with biologically available forms
- Free from toxic elements
- Palatable
- Free-flowing without caking
- Should have a shelf life of at least 8 weeks

Broiler Booster feed

Nutrient	Pig Grower	Bidders Responds (Yes/No)	If "no" Comments
Crude Protein % (min)	23%		
Metabolizable Energy (kcal/kg)	3050 - 3100		
Crude Fat%(max)	7%		
Crude Fiber % (max)	4%		
Calcium % (min)	2%		
Available P%	0.45%		
Lysine % (min)	0.9%		
Methionine + Cystine%	0.8%		

Pre-Layer Feed (15-18 Weeks)

Nutrient	Creep Feed	Bidders Responds (Yes/No)	If "no" Comments
Crude Protein % (min)	16.5		
Metabolizable Energy (kcal/kg)	2900-3080		
Crude Fat%(max)	7%		
Crude Fiber % (max)	7%		
Calcium % (min)	2.5		
Available P%	0.43		
Lysine % (min)	0.85		
Methionine + Cystine%	0.74		

Mineral mixture for stud bulls

Item	Amount (in 1 kg)
Moisture (Max)	100 g
Ash (Min)	850 g
Ca	220 g
P (Min)	80.0 g
Na (Min)	5.0 g
K	8.0 g
Mg	14.2 g
S	15.0 g
Fe	0.5 g
Cu	0.5 g
Mn	0.4 g
I	2.5 mg
Co	20 mg
Zn*	5.0 g
Se**	15 mg

*A minimum of 1.5 g must be from an organic source

**Must be from an organic source