

# Study on Animal Feed and Fodders

Major feeds are roughage, concentrate, mineral supplements & vitamin supplements. Livestock needs all above feeds. Poultry needs all except roughage, although they need some leafy vegetables as roughage. Classification with Examples of Livestock & Poultry Feeds :

## 1. Roughage Feeds:

### A. Succulent or Green

i) *Non-legume Fodders* -Maize, Napier, Para, Bajra, Guinea, German, Jowar, Sorghum, Oats, Barley, Sudan grass etc.

*Tree Leaves* - Jack-fruit, Bamboo, Mander, Banana , Gigha etc.

ii) *Legume Fodders*- Cowpea, Khesari, Motor, Maticali, Dhancha, Berseem, Alfalfa or Lucern etc.

*Tree Leaves*- Ipil-Ipil, Bubla etc.

### B Dry roughage

*Straw (Non-legume)*: Rice, Wheat, Barley, Jowar, Maize

*Straw (Legume)*: Khesari, Maticali, Motor, Cowpea etc.

*Hay (Legume)*: Khesari, Maticali, Motor, Cowpea, Berseem

*Hay (Non - Legume)*: Sorghum, Jowar, and Oats.

## 2. Concentrate Feeds:

### *A. Animal origin* -

Fishmeal, Blood meal, Meat Offal, Meat Meal, Feather meal, Hatchery by product meal, Surplus milk etc.

### *B. Plant origin* -

Products: Maize, Wheat, Barley, Oats, Sorghum, Bajra, Khesari, Maticali, Sweet potato etc. By - products: Rice bran, Wheat Bran, Corn flower, Wheat flower, Bran of Khesari and Maticali, Molasses, oil cake etc.

(# Protein rich concentrate: Fish meal, Blood meal, Meat Offal, Meat Meal, Feather meal, Hatchery by product meal, Surplus milk, Oil cake, Bran of Khesari and Maticali etc)

(# Energy rich concentrate: Rice bran, Wheat Bran, Corn flower, Wheat flower etc.)

**3. Mineral supplements:** Oyster shell, Bone meal, Egg shell, Lime stone, Chalk powder, Common salt, Vitamin-mineral premix etc.

**4. Vitamin supplements:** All leafy vegetables, Yellow corn, Fish liver oil, Vitamin-mineral premix etc.

**5. Feed Additives:** Antibiotics, Hormones, Coloring Materials, Flavoring agents etc.

**Feed value of some common livestock feeds  
(Dry Matter Basis)**

<b>Green Fodder (Roughage)</b>	<b>CP %</b>	<b>EE %</b>	<b>CF %</b>	<b>NEF %</b>	<b>Ash %</b>	<b>DCP %</b>	<b>TDN%</b>
Napier	11.5	2.2	25.9	44.5	15.9	7.6	60
Para	10.8	2.34	29.25	46.94	10.67	6.9	56
Guinea	7.88	1.19	38.38	37.01	15.54	5.83	65
German	11.0	2.5	30.0	45.0	10.0	6.05	63
Bazra	16.0	2.0	28.2	38.4	14.0	9.0	61
Cowpea	28.1	3.0	26.7	33.0	9.2	20.3	62
Lucerne	20.2	2.3	30.1	36.7	10.7	16.2	60
Berseem	17.3	1.9	25.9	40.7	14.2	12.8	62
Khesari	30.64	1.26	8.21	56.3	3.52	22.9	76
Ipeal- Ipeal	24.25	5.07	14.07	46.23	9.88	15.1	56
Maize	12.1	1.1	29.6	44.2	13.3	6.0	65
<b>Concentrates</b>							
Wheat	10.5	1.1	1.9	83.8	1.9	6.3	92
Corn	10.6	3.3	2.2	82.1	1.8	7.0	87
Rice bran	14.0	20.4	14.1	35.7	15.8	9.1	76
Wheat bran	11.5	2.9	12.7	62.5	10.4	8.7	70
Mustard oil cake	35.1	14.1	8.2	30.4	9.2	25	72
Til oil cake	34.47	8.72	8.09	34.92	13.80	31	75
Soybean meal	41.7	21.2	6.3	26.0	4.8	--	--
Fish meal	43.1	4.3	3.6	11.5	37.5	35	77
Blood meal	73.4	-	0.7	-	6.0	66	79
Meat offal	53.0	10.0	2.2	8.7	-	48	70
Molasses	3.5	-	-	86.3	10.9	2.4	96
Gram husk	5.7	0.9	48.4	39.0	6.0	3.2	--
<b>Straw(Roughage)</b>							
Rice straw	3.91	7.37	35.92	43.95	14.85	0.3	43
Wheat straw	3.74	1.0	38.9	42.9	14.1	0.1	48
<b>Mineral feeds</b>							
Bone meal	Ca-30.0%, P-15.0%						
Oyster shell	Ca-38.0%						
Limestone	35.0%						
Sodium chloride	Na-38.35%, Cl-60.65%						
Vit-mineral premix	Source of vitamins and minerals						
<b>Others</b>							
Jack fruits leaf	12.24	3.0	19.46	52.86	12.28	-	-
Jack fruit waste	7.9	-	14.1	65.3	-	1.2	19.9
Sugarcane Top	1.5	0.6	9.0	-	-	-	-
Sugarcane bagasse	2.0	1.0	43.0	52	2.5	-	5
Water hyacinth	9.16	2.04	16.03	58.02	14.75	2.2	--
Urea	Non protein N <sub>2</sub> substance, N <sub>2</sub> %- 46						