

# DEPARTMENT OF ANIMAL NUTRITION

## FEEDING OF POULTRY CONVENTIONAL AND UNCONVENTIONAL FEED INGREDIENTS



# UNCONVENTIONAL FEEDING

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- It refers to all those feeds that have not been traditionally used for animal feeding either by farmers and by feeding manufacturers in commercial feeds.
- These includes the industrial and agricultural by products used in animal feeds at certain percentages depending on their palatability, nutritional value and toxic factors/anti –nutritional factors.
- Feed constitutes 60-70% of total cost of production.
- Poultry being the mono-gastric animal lack the fibre degrading enzyme.

## CHEMICAL COMPOSITION :

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- Dried grain
- Cashew apple waste
- Cow pea leaves
- Palm oil
- Sunflower oil cake
- Unconventional cereals
- Broken rice

## BREWER'S DRIED GRAINS :

- It is a valuable by product of brewery which has a potential to be used as supplementary feed.
- They have been used in both ruminants monogastric animals.
- Materials used in beer making process contains 75% moisture.
- High level of BDG reduces performance of poultry birds.
- Enzyme is added to improve performance of birds.



## CASHEW APPLE WASTE:

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- Used in layer chick ration.
- It replace 10% of commercial layer diet.
- CAW can also be incorporated in the diet of Japanese quail chicks.



## RICE KANI/ BROKEN RICE:

- It's chemical composition varies from where it collected, processed and stored.
- Rice kani is comparable to maize in cp and energy contents.
- Apparent metabolizable energy is compared to that of maize.



## COWPEA LEAVES :

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- It is important legume grain and fodder.
- It has significant impact in reduction of egg production.



## SUNFLOWER OIL CAKE:

- It is concentrated feed rich in proteins and fats.
- They contain-lysin, methionine, tryptophan.
- They are poor in carotene



## UNCONVENTIONAL CEREALS :

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- Unconventional cereals like bajra and ragi available in most parts of india
- Millets grossly resemble maize.



## CONVENTIONAL FEED :

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- These are essentially composed of complex carbohydrates which are extremely tough to be digested by poultry due to lack of specific enzymes in their systems.

## CONVENTIONAL FEED INGREDIENTS:

- Maize
- Barley
- Oats
- Wheat
- Wheat bran
- Pearl millet
- Rice
- Rice polish
- Deoiled rice polish
- Sorghum
- Ground nut cake
- Fish meal
- Oyster shell

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**1. Maize:-** It is highly digestible and contains very little fibre. It is used as a source of energy and is low in protein, especially lysine & sulphur containing amino acids.



Maize

**2 .Barley:-** It is not very palatable because of its high fibre content & should not constitute more than 15% of the ration.



Barley

**3.Oat:-** It contains manganese, which may help in preventing hook disorders, feather cannibalism pulling & cannibalism.



Oats



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**Rice :** Broken grains of rice can be used for replacing maize.



Rice

**Limestone :** limestone is a source of calcium. It should not contain more than 5% magnesium.



Limestone

**Oyster-shell:** Oyster-shell contains more than 38% calcium, and is a good substitute for limestone. It is quite palatable.



Ref:

Swain, B. K. , Naik, P. K. & Singh, N. P. (2014). Unconventional  
Feed Resources. ICAR- Research Complex For Goa.

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