

Animal Nutrition

UNIT-IV (NON-RUMINANT NUTRITION)

UG Lecture: 1

Feeding of Ducks

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Objective.....

- **Learn about the nutrition and feeding management of ducks.**

Duck rearing in India

- . Feeding practices of ducks will depend on the population of ducks raised.**
- . If few ducks are reared & access for foraging, ducks survive, grow & lay eggs by consuming available food (plants, insects, snails, frogs & table scraps).**
- . In above conditions, duck grow slowly and produce small number of eggs.**
- . In India ducks are mostly managed in the free range system.**
- . Ducks mostly forage and feed on small insects, snails & certain plants.**

Differences between duck & chicken

- The digestive system of duck is slightly different from chicken;
 - They do **not have crop**
 - Their **proventriculus is cylindrical** which make the feed passage rate quicker than that of chicken.
 - Also possess a **bill in place of a beak**
 - Bills are capable of **separating feed mixed** in water.
 - Ducks bill is not well adapted for dry mash feeding as dry mash sticks on to the bill & duck tries to remove it by shaking or washing out in water.
- Ducks food must contain all the nutrients needed for maintenance, growth & reproduction.

NUTRIENT REQUIREMENT OF DUCK

Nutrients	Starter (0-8 weeks)	Grower (9-20 weeks)	Breeder Laying period
Protein (%)	20	17	16
Energy (kcal/kg)	2850	2850	2650
Calcium (%)	1	1	3
Fat (%)	5	5	5
Methionine (%)	0.35	0.3	0.3
Phosphorus (%)	0.45	0.4	0.4
Manganese (mg/kg)	60	50	40
Niacin (mg/kg)	55	40	55
Pantothenic acid (mg/kg)	15	10	20
Pyridoxine (mg/kg)	3	3	3
Riboflavin (mg/kg)	10	6	10
Vitamin A (mg/kg)	3100	1720	4130
Vitamin D3 (mg/kg)	300	22.5	62.5
Vitamin K (mg/kg)	2.5	2	2.5

Feedstuffs for duck ration

- Feed ingredients commonly used for chicken ration can be used for preparing duck feed ration.
- Some feed ingredients contain toxic substances should not be used for duck rations.
- Groundnut meal (peanut meal) is more susceptible with aflatoxin & ducks are highly sensitive to this, so, GN meal should be avoided unless proven it is to be free of aflatoxin.
- Ducks can tolerate only 0.03 ppm of aflatoxin compared to chicken, tolerate upto 0.2 ppm.
- Rapeseed meal is also potentially toxic to ducks due to erucic acid & goitrogens.
- Ducks are much more sensitive to erucic acid than chickens & turkeys.

Feeding of meat type breeder ducks

- . Meat-type ducks, such as Pekins, when kept as breeders will become fatty if access *adlibitum* feed during their development prior to lay.**
- . Therefore, necessary to limit their daily intake of feed to an amount that will supply all the necessary nutrients .**
- . Spreading of the feed will prevent overconsumption and all ducks will get their share of feed.**
- . Feed can be spread out in long food troughs, or on the ground if the area is dry and clean.**

Feeding of laying breeder ducks

- . Layer rations contain a higher level of calcium than other duck rations.**
- . @ 3.0% of the diet is adequate for most breeds of ducks including high egg producing breeds.**
- . When enough calcium is included in the ration, it is not necessary to feed oyster shells in addition.**

Watering to ducks

- Clean drinking water should be available to ducks at least 8-12 hrs per day.**
- Avoid watering at night, helps to maintain litter in a dry condition & applies to breeder ducks or market ducks over 3 weeks of age.**
- Such practice is not harmful & has no effect on performance during periods of moderate temperatures.**
- When temperatures are above 90°F, drinking water should be available in the evening until the temperature has dropped below 80°F, or else made available all night.**
- Providing some water for wading or swimming can be beneficial, especially in hot climates.**

Average feed consumption of ducks

Age (weeks)	Cumulative feed (kg)
0-1	0.15
1	0.55
2	1.30
3	2.25
4	3.25
5	4.55

PREPERATION OF DUCK FEED

Mash or Pellet Feed

- Ducks grow faster and utilize their feed more efficiently, when fed pelleted rations than in mash form.
- Pelleting of duck feed is common practice in commercial duck production.
- Feeding ducks with **dry mash is not recommended** as it forms a sticky paste when mixed with saliva & form cakes which accumulates on the outer ridges of the mouth.
- So, to free their bills of caked feed, ducks make frequent trips to water to wash their bills, causing feed wastage.
- Feeding mash also **reduces feed intake** & growth rate.
- For small flock owners, **wet mash feed** can be fed & water is mixed with the mash just before feeding.
- **Enough water is added to form a thick mush without making it watery.**

Pellet size

- . It is important to avoid feeding pellets that are too large in diameter or too long for ducklings to swallow.**
- . For newly hatched ducklings, pellets should not have more than 4.0 mm diameter & 7.9 mm length.**
- . After two weeks of age, ducklings can consume pellets of 4.8 mm in diameter and 12.7 mm in length.**

Discussions.....

Questions, if any.....??

THANKS