

Bihar Animal Sciences University, Patna

Department of Animal Nutrition

Course No. ANN-607

Topic: Feeding of Guinea Pig

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Advantages of laboratory animal for experiment?

- **Easy to handle**
- **Cost effective**
- **Wide variation of species**
- **Suitable for biomedical research**
- **Fast absorption of nutrients and getting result**
- **Suitable for purified diet experiment**
- **Wide genetic variation among species**
- **Statistically suitable with numbers availability**
- **Repetition of experiment is easy**
- **Slaughter study is easy for organ examination**

NUTRIENT REQUIREMENT OF GUINEA PIG

- Guinea pig is a herbivorous animal.
- Hind gut fermenter and practices coprophagy.
- The following is the nutrient requirement for a guinea pig diet;

Nutrients	Requirements
ME Kcal/kg	2800
Protein (%)	18
Fibre (%)	15
Calcium (%)	0.8-1
Phosphorus (%)	0.4-0.7
Zinc (mg/kg)	20
Iron (mg/kg)	50

Note: 1 gram of vitamin C per kilogram of ration has to be supplemented as Vitamin C is dietary essential in guinea pig

Sample diet for feeding rat & mice

Ingredient	Quantity (g)
Ground wheat	230
Wheat middling	100
Ground corn	245
Corn gluten meal	30
Soyabean oil	25
Dehydrated alfalfa meal	40
Soyabean meal	120
Fish meal	100
Dried molasses	35
DCP	12.5
Ground limestone	5
Iodized salt	7
Salt	5

GUINEA PIG FEEDING

- Guinea pigs are herbivores, require plenty of grass hay & greens and limited concentrate.
- Have continuously growing incisors & molars which wear down with the normal action of eating.
- Guinea pigs produce **nutrient rich caecotropes** which they eat directly from the anal area.

Feed Consumption

- . Growing guinea pigs: 20 -30 g
- . Adult guinea pigs: 30 – 50 g
- . Pregnant and lactating: 40 – 60 g

Guinea pig feed

- **Guinea pigs ration contains 18-20% protein, 15-16% fibre & about 1 gram of vitamin C per kilogram of ration.**
- **However, during storage of feed about half of the vitamin C content is degraded & lost within 6 weeks of manufacture .**
- **Dark leafy greens are important to guinea pigs due to their requirement for an external source of vitamin C.**
- **Minimum daily requirement for vitamin C in the guinea pig is 10-30 mg/day.**
- **Guinea pigs can easily get this amount by feeding of 1/2 to 1 cup of fresh leafy greens daily.**
- **Supplementation of vitamin C in water is not very effective due the rapid breakdown when exposed to light and heat**

Water for Guinea pig

- . To be kept free from contamination by providing in water bottles.**
- . Guinea pigs contaminate and clog their water bottles by chewing on the end of the sipper tube & backwashing of food particles into it.**
- . Guinea pigs do not tolerate changes in the presentation, taste, odor, texture or form of their food & water.**
- . Any changes in the food should be made gradually.**

Recommended nutrient allowances for growing guinea pigs

Nutrient content		Sample Diet	
ME Kcal/kg	2800	Ingredient	g/Kg
Protein (%)	18	Alfalfa meal	350
Fibre (%)	15	Ground wheat	236
Calcium (%)	0.8-1	Ground oats	252.5
Phosphorus (%)	0.4-0.7	Soyabean meal	120
Zinc (mg/kg)	20	Ground limestone	10
Iron (mg/kg)	50	Iodized salt	7.5
		DCP	5
		Soybean oil	15
		Minerals & vitamins	4

Feeding of Mature adult

- Mature adult rabbits should be fed on hay/grass.**
- Concentrate can be reduced in maintenance rabbits.**

Feeding of pregnant & lactating does

- Hay / grass is fed adlibitum & concentrate can be fed upto 200 g /doe /day.**