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DEPARTMENT OF ANIMAL NUTRITION

**ROLE OF WATER
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Introduction

- Life cannot be sustained without water
- Animals may live for more days without food but die in fewer days if deprived of water

ROLE OF WATER

1. It works as major factor in body temperature regulation.
2. Act as solvent for a wide variety of compounds.
3. It serves as a carrier of digestive juices, enzymes and hormones.
4. It is a medium for hydrolysis of nutrients in the system.
5. It provides cell rigidity, fluidity and elasticity.

WATER REQUIREMENT

- Water requirement for any class or species of animals depends on dietary and environmental factors:

ANIMAL	LITRES/DAY	ANIMAL	LITRES/DAY
Cattle & Buffalo	30-50	Swine	10-20
Sheep & Goat	4-5	Chickens	0.2-0.4
Horses	30-40	Turkey	0.4-06

- Water consumption may increase by 12% or more of body weight per day during heat stress.
- Animals will consume 2-5kg of water for every 1kg of dry feed consumed when they are not heat stressed
- Birds require less than mammalian species.
- Young animals generally require more water than adult per unit of body weight

METABOLIC WATER

Metabolic water refers to water created by oxidation of organic material inside a living organism through their metabolism.

Importance of Metabolic Water

- Metabolic water meets 100% water requirement in hibernating animals.
- Metabolic water meets 15-25% water requirement in desert animals.
- Metabolic water meets 5-10% water requirement in domestic animals.

Thank you

