

# Factors modifying Toxicity

- Trivalent compounds are more toxic than pentavalent compounds.
- Pentavalent compounds are said to exhibit their toxic effects only after conversion to trivalent form.
- The other factors, which affect the toxicity of arsenic, are:
  - ❖ The physical state – whether solid, coarse powder or fine powder or solution – finely divided soluble forms are more toxic.
  - ❖ The condition of the digestive tract.
  - ❖ Nature of ingestion.
  - ❖ Method of application.

- ❖ Weak, debilitated and dehydrated animals are more susceptible.
- ❖ Poisoning is more common in bovines and felines. Poisoning is also noticed in horses and sheep. It is occasional in dogs and rare in swine and poultry.
- Herbivores are commonly poisoned as they eat contaminated forage.
- Chronic poisoning can occur due to long continued small doses.

# Factors Influencing Toxicity

- Age – very young animals are more susceptible.
- Species – goats, swine and chicken are more resistant.
- Pregnant ewes are more susceptible.
- Soluble salts of lead like lead acetate are more toxic than insoluble salts like lead oxide.
- Rate of ingestion – large amounts ingested in one or two days is more toxic.
- Presence of other toxicants and debilitating disease enhances toxicity.
- Debilitated, weak, poorly nourished and emaciated animals are more susceptible than healthy animals.
- Presence of food or ingesta in the stomach or intestine delays absorption and thereby reduced toxicity.