



Definitions

Differences in the terminology have sometimes led to confusion in defining the nutritional value of feed phosphates. Below are the definitions for the terminology used in this publication.

Available phosphorus

Phosphorus that can be absorbed and made available to meet an animal's net nutritional requirements. Usually expressed as relative availability, the proportion of phosphorus retained in the animal's body compared to a highly available reference source, assumed to have a biological value of 100. Normally bone parameters are used as response criteria.

When defined in this way, various parameters not directly linked to absorption are used.

Because it has often been assumed that phytate phosphorus is unavailable to monogastrics and non-phytate phosphorus is fully available, it has been common practice to define available phosphorus as total phosphorus minus phytate phosphorus.

Digestible phosphorus

The actual proportion of the ingested phosphorus that has been absorbed. This is expressed as a True Absorption Coefficient when corrections are made for endogenous losses.

Most often used is apparent digestibility, the proportion of phosphorus retained in the animals body, not taking into account endogenous losses:

$$\text{ADC} = \frac{\text{P intake} - \text{P faecal}}{\text{P intake}} \times 100\%$$

for poultry, apparent absorbable (or apparent available) phosphorus is used: AAP

$$\text{AAP} = \frac{\text{P intake} - (\text{P faecal} + \text{P urine})}{\text{P intake}} \times 100\%$$

