





Feed Phosphates With Built-in Bioavailability

Inorganic feed phosphates differ in nutritional value based on the bioavailability or digestibility. Bioavailability is expressed as the digestibility of P.

The concept of available or digestible P is used in many countries when formulating monogastric diets. In the presentation "The Effects of digestibility on dietary allowance" (see reverse side), the Dutch digestibility values have been used. These values derive from work done at the ID_DLO, determining the digestibility of P in feedstuffs and inorganic feed sourced in both pigs and poultry. The requirements presented are from the Official Dutch Feeding tables.

-  less inorganic feed P is needed to supply the animal's P requirement
-  Less inorganic P is excreted resulting in lower P emissions
-  lower inclusion rates give more formulation space
-  meets the animal's P requirements without under or overformulating

Official Dutch Feeding Tables
Central Feeding Bureau (CVB) 1998

Growing Pigs

Calculation based on P requirement 2.0g digestible P / energy unit (EW) and a requirement of 2.7 EW / d for a live weight gain of 750 g/d at 67-70 kg live weight. Layers

Layers

Calculation based on a P requirement of 2.8 g digestible P/kg feed at 20-35 weeks and a daily intake of 120 g (see above)

The Ranking Of Phosphates On P Availability / Digestibility

	Product	Digestibility Coefficient Pigs	Digestibility Coefficient Poultry
1.	Monosodium phosphate	0.88	0.92
2.	Monocalcium phosphate	0.83	0.84
		0.83	0.84
3.	Monocalcium phosphate	0.73	0.81
4.	Dicalcium Phosphate, dihydrate	0.70	0.77
		0.70	0.77
5.	Dicalcium phosphate, anhydrate	0.64	0.55
6.	Sodiumcalcium (deflourinated) phosphate (DFP)		
7.	Tricalcium Phosphate (TCP)		