

## Grass Seeds and Fertilisers



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## LIME



- Still most important nutrient!
- Lots of types but check Neutralizing Value
- Magnesium / Calcium Limestone about 50-55%



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# NITROGEN



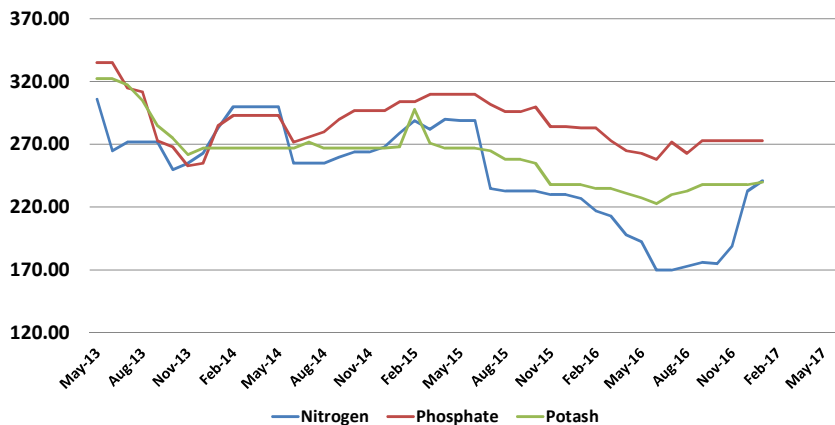
- Ammonium Nitrate made by the **reaction** of an **acid** and an **alkali**
- **Eg:** nitric acid + ammonia = Ammonium Nitrate
- Ammonia comes from combining Hydrogen in Natural Gas with Nitrogen in air = NH<sub>3</sub>
- Very dependant on Oil price



# Fertiliser Prices



Fertiliser prices (£/t) (source: Farm Brief)



## Nitrogen



- Ammonium Nitrate ( $\text{NH}_4\text{NO}_3$ ) – 34.5% N
- Ammonium Sulphate ( $\text{NH}_4$ )<sub>2</sub>SO<sub>4</sub> 21% N (24% S)
- Urea 46% Nitrogen
- Compound fertilisers



## Phosphate



Watersoluble –  
Eg Triple super phosphate 46% P<sub>2</sub>O<sub>5</sub>

Acid soluble Phosphates  
Rock Phosphates



## Phosphate reserves



Country	Production (millions kg)	Est. Reserves (millions kg)
<a href="#">China</a>	100,000	3,700,000
<a href="#">Morocco (including Western Sahara)</a>	30,000	50,000,000
<a href="#">United States</a>	27,600	1,100,000
<a href="#">Russia</a>	12,500	1,300,000
<a href="#">Jordan</a>	7,500	1,300,000
<a href="#">Brazil</a>	6,700	315,000



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## Nutrient Composition of POULTRY MANURE



	Dry matter	N	Total Nutrients	
	%		P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
			kg/tonne	
Broiler litter	70	24	22	14
Deep litter	70	17	18	13
Battery (fresh)	30	17	14	7



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### Typical Nutrient Composition of Slurry

Dry matter	%	N	Total Nutrients	
			P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
kg/tonne				
Cattle	6%	2.6	1.2	3.2

Also Sulphur approx. 0.7%

Nitrogen availability varies depending on time and method of application