



Fertilizers – An in-depth introduction

Module 1 (3 hours and 10 minutes)

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| 10 minutes | Welcome and introduction to the course |
| 45 minutes | Understanding agriculture, soil, and crop science <ul style="list-style-type: none">• Basics of agriculture: What the industry needs to know• Insight into different types of soil and crop seasonality across the globe• Types of crops and their applications• Future trends in the agriculture sector |
| 15 minutes | Break |
| 1 hour | Ammonia <ul style="list-style-type: none">• Introduction to the value chain• Production and trade• Factors influencing the international market and prices:<ul style="list-style-type: none">○ Shifts in trade flow post 24 February 2022○ The different colours of the ammonia rainbow○ Ammonia as a marine fuel |
| 1 hour | LNG market overview <ul style="list-style-type: none">• Insight into global LNG production• Understanding trading dynamics within the LNG industry• Factors influencing changes in market and prices: What it means for the fertilizers business• Emerging trends in the LNG market |

Module 2 (2 hours and 30 minutes)

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| 30 minutes | Potash <ul style="list-style-type: none">• Introduction to the value chain• Supply and major producing countries• Factors influencing the international market and prices:<ul style="list-style-type: none">○ Sanctions on Belarus and Russia○ A new supply/demand dynamic○ Canada's commanding position• Future trends: What lies ahead |
| 15 minutes | Break |
| 1 hour & 15 minutes | Urea and other nitrogen products <ul style="list-style-type: none">• Introduction to the value chain• Urea production and trade flows• Factors influencing the international market and prices<ul style="list-style-type: none">○ How will the global urea market be impacted by emission cuts?○ Insight into new capacity in West Africa○ India's buying pattern in 2021 and its impact on the global market• Future trends: What lies ahead? |



30 minutes

Nitrates

15 minutes

Summary and conclusion

Module 3 (2 hours and 45 minutes)

1 hour & 15 minutes Sulphur and sulphuric acid

- Introduction to the value chain
- Production and trade, main players
- Factors influencing the international market and prices:
 - Smelter or burner – the buyer's conundrum
 - The burden of freight costs
 - Fertilizer doldrums
- Future trends: What lies ahead?

15 minutes

Break

45 minutes

Phosphate products

- Introduction to the value chain
- Phosphate products described
- Factors influencing the international market and prices:
 - Global phosphates availability following recent developments in China and Russia and production ramp-ups in other regions
 - Affordability of phosphates after increases in raw materials and production costs
 - Changes in demand patterns because of diversification of fertilizer use, government regulations and logistics issues
- Future trends: What lies ahead?

15 minutes

Summary and conclusion