

## Phosphates Methodology

DAP (Diammonium Phosphate), MAP (Monoammonium Phosphate) and TSP (Triple superphosphate) are the most commonly traded phosphate fertilizers.

DAP is produced by combining phosphoric acid with ammonia. It contains 18% nitrogen and 46% phosphorus pentoxide. It is widely produced in granular form for direct application as a fertilizer or for blending with other types of fertilizers, and in the non-granular form for use in liquid fertilizers. It is stored and transported as a solid at ambient temperatures.

MAP is also produced by combining phosphoric acid and ammonia. The most common grade for MAP is 10-11% nitrogen and 52% phosphorus pentoxide. MAP is widely produced in granular form for direct application as a fertilizer or in bulk blending of dry fertilizers. The compound is also a component of some dry powder fire extinguishers. It is stored and transported as a solid at ambient temperatures.

TSP is made by reacting wet-process phosphoric acid with phosphate rock. Typically it contains 46% P<sub>2</sub>O<sub>5</sub>. TSP is produced in granular and non-granular form and is used both in fertilizer blends (with potassium and nitrogen fertilizers) and by itself.

DAP is the most widely-produced phosphate fertilizer. Production amounts to more than 30m tonnes a year, of which about 13m tonnes are traded internationally. It is produced in around 20 countries worldwide and consumed in every developed agricultural market. The largest producers are US, Chinese and Indian companies, who have massive domestic markets to serve. The main exporters are producers in the US, Morocco, Tunisia, Jordan, Russia, Lithuania, Australia and China.

MAP production amounts to about 25m tonnes a year, of which about 7m-8m. tonnes are traded internationally. It is produced in around 10 countries. The largest producers are US, Chinese and Russian companies, who have large domestic markets to serve. The main exporters are producers in the US, Russia, and Morocco and the main import market is Brazil.

TSP production amounts to around 6m tonnes a year, of which around 3m-4m. tonnes are traded internationally. It is produced in about 10 countries. The largest producers and exporters are Chinese, Tunisian, Moroccan, Israeli, Bulgarian and Egyptian companies. The main consuming countries are Brazil, Bangladesh, Iran, the US and northwest Europe.

### **Frequency:**

- Market Updates are published on Mondays, Tuesdays and Wednesdays
- ICIS pricing quotes phosphate fertilizer prices in **Europe** and the **USA** on a Friday
- The Market quotes phosphate fertilizers prices on a weekly basis worldwide on Thursdays.

## DAP bulk

### Weekly price assessments

Diammonium Phosphate (DAP) spot prices:

- FOB US GULF (USD/MT)
- NOLA BARGE FOB (USD/ST)
- FOB NORTH AFRICA (USD/MT)
- FOB SAUDI ARABIA (USD/MT)
- FOB BALTIC (USD/MT)
- FOB CHINA (USD/MT)
- CFR PAKISTAN (USD/MT)
- FCA BENELUX (EUR/MT)

## MAP bulk

### Weekly price assessments

Monoammonium Phosphate (MAP) spot prices:

- FOB BALTIC (USD/MT)
- CFR BRAZIL (USD/MT)

## TSP bulk

### Weekly Price Assessments:

Triple Superphosphate (TSP) Spot Prices

- FOB NORTH AFRICA (USD/MT)

## NPK bulk

### Weekly Price Assessments:

Nitrogen (N), Phosphorus (P), and Potassium (K) – NPK spot prices

- CFR CHINA 16-16-16 (USD/MT)
- FOB RUSSIA 16-16-16 (USD/MT)

## **Phos Acid P205 fert grade**

### **Weekly Price Assessments:**

- FOB NORTH AFRICA (USD/MT)
- CFR NW EUROPE (USD/MT)
- CFR INDIA (USD/MT)

## **Phosphate Rock**

### **Weekly Price Assessments:**

- FOB MOROCCO 70-72% BPL (Bone Phosphate of Lime) (USD/MT)
- CFR INDIA (USD/MT) all grades

*World Monthly Review – monthly assessments*

### **Diammonium Phosphate (DAP) spot prices:**

- FOB US GULF/TAMPA (USD/MT) – as assessed by The Market
- FOB NORTH AFRICA (USD/MT) – as assessed by The Market

## **MAP bulk**

Monoammonium Phosphate (DAP) spot prices:

- FOB BALTIC (USD/MT) – as assessed by The Market

## **Phosphate Rock**

- FOB MOROCCO – as assessed by The Market
- CFR INDIA – as assessed by The Market

## **Phos Acid P205 fert grade**

- CFR NW EUROPE (USD/MT) – as assessed by The Market
- CFR INDIA (USD/MT) – as assessed by The Market

*North American Sulphur Review – monthly assessments*

### **Diammonium Phosphate (DAP) spot prices:**

- FOB US GULF/TAMPA (USD/MT) – as assessed by The Market

## Phosphate Fertilizers (EUROPE)

### Weekly price assessments:

Diammonium Phosphate (DAP) spot prices:

- FOB USG BULK (USD/MT & conversion to US CTS/LB)
- FOB NORTH AFRICA BULK (USD/MT & conversion to US CTS/LB)

Triple Superphosphate (TSP) Spot Prices

- FOB NORTH AFRICA BULK (USD/MT & conversion to US CTS/LB)

Phosphate Rock Spot Prices

- FOB MOROCCO 70-72% BPL (Bone Phosphate of Lime) BULK (USD/MT & conversion to US CTS/LB)

## Diammonium Phosphate (US GULF)

### Weekly Price Assessments:

Diammonium Phosphate (DAP) spot prices:

- FOB BARGE/NOLA (USD/ST & conversion to USD/MT)
- FOB USG/TAMPA (USD/MT)

*General Information:*

### Assessment window:

Price assessments are based on information supplied by market participants from the previous Friday through the week up to close of business on Thursdays at 1700 hours in London.

Price assessments that appear in ICIS' World Monthly Review and North American Sulphur Review are from the most recent published issue of The Market.

### Specification:

DAP price quotes are for standard 18% N: 46% P<sub>2</sub>O<sub>5</sub> DAP. Other grades may be mentioned in the text but not included in the price assessment.

MAP price quotes are for 10-11% N: 50-52% P<sub>2</sub>O<sub>5</sub>. Other grades, including 11% N: 44% P<sub>2</sub>O<sub>5</sub>, may be mentioned in the text but not included in the price assessment.



TSP is 46% P2O5.

NPK prices in China and Russia correspond to standard “triple 16”, which reflects the nutrient content of each element i.e. 16% N: 16% P2O5: 16% K2O

**Timing:**

Cargoes loading prompt to 60 days forward. Typically, spot cargoes are sold with a 2-4 week forward loading window. Nola barge prices refer to prompt to one month forward.

**Terms:**

Most transactions are conducted without credit terms. Where credit conditions apply (up to 180 days) they are taken into account and subtracted such that prices are net of credit or other terms.

**Standard cargo size:**

ICIS pricing considers cargoes from a minimum size of 3,000 tonnes to a maximum size of 65,000 tonnes. Typically, short sea routes in Europe employ vessels of 3,000-10,000 tonnes. Deep sea voyages generally employ vessels ranging in size from handysize vessels of 20,000-30,000 tonnes to panamax vessels of 50,000-65,000 tonnes. FOB NOLA typical cargo size is 1,500 short tons, equivalent to one barge.

**Assessment basis:**

Information about new deals, changes to supply/demand and any other factors that can have an impact on the phosphate market is collected through the week up to press time on Thursday evening, through telephone calls with producers, end-users, traders and shippers, plus email correspondence and web searching. Information received is carefully counterchecked with other sources to make sure the information is true and accurate and not in any way misleading.

Price assessments are based on confirmed deals through the week, adhering to the methodology requirements, but in the absence of new business assessments are made using netbacks and bids and offers and other market intelligence.

The Market and ICIS pricing reports on the major worldwide markets for DAP, MAP and TSP while ICIS pricing offers regional reports covering Europe and the US. Spot and contract transactions are detailed and information is provided on trade and supply-demand developments. The Market analyses the events of the preceding seven days and assesses the impact on pricing. The Market also publishes daily updates to report deals concluded and price changes.

The published spot prices are assessed for business concluded in the past seven days or latest competitive offers and bids. Prices are net of credit or other terms. Shipbrokers and market participants are asked about freight movements, both on a



spot or time charter/COA basis, to be able to estimate the correct FOB price when based on a CFR price.

The main reference price in the DAP market is the FOB US Gulf quote, which is frequently used in contract price formulae. This source accounts for around one half of global DAP trade. Some 4-5m tonnes of US DAP is exported through Tampa each year. At present the FOB US Gulf price does not include netbacks for Indian contract business.

Apart from the FOB US Gulf price, the key other DAP quotes are FOB Nola barge short ton, FOB Baltic and FOB North Africa. Russian and Lithuanian DAP are shipped through Baltic ports for European, Latin American and Asian destinations. The low end is set by the FOB St Petersburg price, because loading rates are lower and freight rates higher there. The high end is set by the FOB Klaipeda price on sales to Europe, since Lithuanian DAP is sold to Europe duty free, whereas Russian sales to Europe attract a 6.5% duty.

The high end of the FOB North Africa price is traditionally set by sales to Europe and the low end by sales to non-European markets.

The main reference price for MAP is the CFR Brazil quote.

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