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## ***ARGUS FERTILIZER EUROPE***

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The most up-to-date Argus Fertilizer Europe methodology is available on [www.argusmedia.com](http://www.argusmedia.com)

## Methodology overview

### Methodology rationale

Argus strives to construct methodologies that reflect the way the market trades. Argus aims to produce price assessments which are reliable and representative indicators of commodity market values and are free from distortion. As a result, the specific currencies, volume units, locations and other particulars of an assessment are determined by industry conventions.

In the European fertilizer markets, Argus publishes physical market prices in the open market as laid out in the specifications and methodology guide. Argus uses the trading period deemed by Argus to be most appropriate, in consultation with industry, to capture market liquidity.

In order to be included in the assessment process, deals must meet the minimum volume, delivery, timing and specification requirements in our methodology. In illiquid markets, and in other cases where deemed appropriate, Argus assesses the range within which product could have traded by applying a strict process outlined later in this methodology.

### Survey process

Argus price assessments are informed by information received from a wide cross section of market participants, including producers, consumers and intermediaries. Argus reporters engage with the industry by proactively polling participants for market data. Argus will contact and accept market data from all credible market sources including front and back office of market participants and brokers. Argus will also receive market data from electronic trading platforms and directly from the back offices of market participants. Argus will accept market data by telephone, instant messenger, email or other means.

Argus encourages all sources of market data to submit all market data to which they are a party that falls within the Argus stated methodological criteria for the relevant assessment. Argus encourages all sources of market data to submit transaction data from back office functions.

Throughout all markets, Argus is constantly seeking to increase the number of companies willing to provide market data. Reporters are mentored and held accountable for expanding their pool of contacts. The number of entities providing market data can vary significantly from day to day based on market conditions.

For certain price assessments identified by local management, if more than 50pc of the market data involved in arriving at a price assessment is sourced from a single party the supervising editor will engage in an analysis of the market data with the primary reporter to ensure that the quality and integrity of the assessment has not been affected.

### Market data usage

In each market, Argus uses the methodological approach deemed to be the most reliable and representative for that market. Argus will utilise various types of market data in its methodologies, to include:

- Transactions
- Bids and offers
- Other market information, to include spread values between grades, locations, timings, and many other data.

In many markets, the relevant methodology will assign a relatively higher importance to transactions over bids and offers, and a relatively higher importance to bids and offers over other market information. Certain markets however will exist for which such a hierarchy would produce unreliable and non-representative price assessments, and so the methodology must assign a different relative importance in order to ensure the quality and integrity of the price assessment. And even in markets for which the hierarchy normally applies, certain market situations will at times emerge for which the strict hierarchy would produce non-representative prices, requiring Argus to adapt in order to publish representative prices.

### Verification of transaction data

Reporters carefully analyse all data submitted to the price assessment process. These data include transactions, bids, offers, volumes, counterparties, specifications and any other information that contributes materially to the determination of price. This high level of care described applies regardless of the methodology employed. Specific to transactions, bids, and offers, reporters seek to verify the price, the volume, the specifications, location basis, and counterparty. In some transactional average methodologies, reporters also examine the full array of transactions to match counterparties and arrive at a list of unique transactions. In some transactional average methodologies, full details of the transactions verified are published electronically and are accessible by subscribers. The deals are also published in the report.

Several tests are applied by reporters in all markets to transactional data to determine if it should be subjected to further scrutiny. If a transaction has been identified as failing such a test, it will receive further scrutiny. For assessments used to settle derivatives and for many other assessments, Argus has established internal procedures that involve escalation of inquiry within the source's company and escalating review within Argus management. Should this process determine that a transaction should be excluded from the price assessment process, the supervising editor will initiate approval and, if necessary, documentation procedures.

### Primary tests applied by reporters

- Transactions not transacted at arm's length, including deals between related parties or affiliates.
- Transaction prices that deviate significantly from the mean of all transactions submitted for that day.
- Transaction prices that fall outside of the generally observed lows and highs that operated throughout the trading day.
- Transactions that are suspected to be a leg of another transaction or in some way contingent on an unknown transaction.
- Single deal volumes that significantly exceed the typical transaction volume for that market.
- Transaction details that are identified by other market participants as being for any reason potentially anomalous and perceived by Argus to be as such.

- Transaction details that are reported by one counterparty differently than the other counterparty.
- Any transaction details that appear to the reporter to be illogical or to stray from the norms of trading behaviour. This could include but is not limited to divergent specifications, unusual delivery location and counterparties not typically seen.
- Transactions that involve the same counterparties, the same price and delivery dates are checked to see that they are separate deals and not one deal duplicated in Argus records.

### Secondary tests applied by editors for transactions identified for further scrutiny

#### Transaction tests

- The impact of linkage of the deal to possible other transactions such as contingent legs, exchanges, options, swaps, or other derivative instruments. This will include a review of transactions in markets that the reporter may not be covering.
- The nature of disagreement between counterparties on transactional details.
- The possibility that a deal is directly linked to an offsetting transaction that is not publicly known, for example a “wash trade” which has the purpose of influencing the published price.
- The impact of non-market factors on price or volume, including distressed delivery, credit issues, scheduling issues, demurrage, or containment.

#### Source tests

- The credibility of the explanation provided for the outlying nature of the transaction.
- The track record of the source. Sources will be deemed more credible if they
  - Regularly provide transaction data with few errors.
  - Provide data by Argus’ established deadline.
  - Quickly respond to queries from Argus reporters.
  - Have staff designated to respond to such queries.
- How close the information receipt is to the deadline for information, and the impact of that proximity on the validation process.

### Assessment guidelines

When insufficient, inadequate, or no transaction information exists, or when Argus concludes that a transaction based methodology will not produce representative prices, Argus reporters will make an assessment of market value by applying intelligent judgement based on a broad array of factual market information. Reporters must use a high degree of care in gathering and validating all market data used in determining price assessments, a degree of care equal to that applying to gathering and validating transactions. The information used to form an assessment could include deals done, bids, offers, tenders, spread trades, exchange trades, fundamental supply and demand information and other inputs.

The assessment process employing judgement is rigorous, replicable, and uses widely accepted valuation metrics. These valuation

metrics mirror the process used by physical commodity traders to internally assess value prior to entering the market with a bid or offer. Applying these valuation metrics along with sound judgement significantly narrows the band within which a commodity can be assessed, and greatly increases the accuracy and consistency of the price series. The application of judgement is conducted jointly with the supervising editor, in order to be sure that guidelines below are being followed. Valuation metrics include the following:

#### Relative value transactions

Frequently transactions occur which instead of being an outright purchase or sale of a single commodity, are instead exchanges of commodities. Such transactions allow reporters to value less liquid markets against more liquid ones and establish a strong basis for the exercise of judgment.

- Exchange one commodity for a different commodity in the same market at a negotiated value.
- Exchange delivery dates for the same commodity at a negotiated value.
- Exchange a commodity in one location for the same commodity at another location at a negotiated value.

#### Bids and offers

If a sufficient number of bids and offers populate the market, then in most cases the highest bid and the lowest offer can be assumed to define the boundaries between which a deal could be transacted.

#### Comparative metrics

- The relative values between compared commodities are readily discussed in the market and can be discovered through dialogue with market participants. These discussions are the precursor to negotiation and conclusion of transactions.
- Comparison to the same commodity in another market centre.
- Comparison to a more actively traded but slightly different specification commodity in the same market centre.
- Comparison to the same commodity traded for a different delivery timing.
- Comparison to the commodity’s primary feedstock or primary derived product(s).
- Comparison to trade in the same commodity but in a different modality (as in barge versus oceangoing vessel) or in a different total volume (as in full cargo load versus partial cargo load).

#### Volume minimums and transaction data thresholds

Argus typically does not establish thresholds strictly on the basis of a count of transactions, as this could lead to unreliable and non-representative assessments and because of the varying transportation infrastructure found in all commodity markets. Instead, minimum volumes are typically established which may apply to each transaction accepted, to the aggregate of transactions, to transactions which set a low or high assessment or to other volumetrically relevant parameters.

For price assessments used to settle derivatives, Argus will seek to establish minimum transaction data thresholds and when no such threshold can be established Argus will explain the reasons. These

thresholds will often reflect the minimum volumes necessary to produce a transaction-based methodology, but may also establish minimum deal parameters for use by a methodology that is based primarily on judgement.

Should no transaction threshold exist, or should submitted data fall below this methodology's stated transaction data threshold for any reason, Argus will follow the procedures outlined elsewhere in this document regarding the exercise of judgement in the price assessment process.

### Transparency

Argus values transparency in energy markets. As a result, where available, we publish lists of deals in our reports that include price, basis, counterparty and volume information. The deal tables allow subscribers to cross check and verify the deals against the prices. Argus feels transparency and openness is vital to developing confidence in the price assessment process.

### Swaps and forwards markets

Argus publishes forward assessments for numerous markets. These include forward market contracts that can allow physical delivery and swaps contracts that swap a fixed price for the average of a floating published price. Argus looks at forward swaps to inform physical assessments but places primary emphasis on the physical markets.

### Publications and price data

Argus European fertilizer prices are published in the Argus Fertilizer Europe report. Subsets of these prices appear in other Argus market reports and newsletters in various forms. The price data are available independent of the text-based report in electronic files that can feed into various databases. These price data are also supplied through various third-party data integrators. The Argus website also provides access to prices, reports and news with various web-based tools. All Argus prices are kept in a historical database and available for purchase. Contact your local Argus office for information.

A publication schedule is available at [www.argusmedia.com](http://www.argusmedia.com)

### Corrections to assessments

Argus will on occasion publish corrections to price assessments after the publication date. We will correct errors that arise from clerical mistakes, calculation errors, or a misapplication of our stated methodology. Argus will not retroactively assess markets based on new information learned after the assessments are published. We make our best effort to assess markets based on the information we gather during the trading day assessed.

### Ethics and compliance

Argus operates according to the best practices in the publishing field, and maintains thorough compliance procedures throughout the firm. We want to be seen as a preferred provider by our subscribers, who are held to equally high standards, while at the same time maintaining our editorial integrity and independence. Argus has a strict ethics policy that applies to all staff. The policy can be

found on our website at [www.argusmedia.com](http://www.argusmedia.com). Included in this policy are restrictions against staff trading in any energy commodity or energy related stocks, and guidelines for accepting gifts. Argus also has strict policies regarding central archiving of email and instant messenger communication, maintenance and archiving of notes, and archiving of spreadsheets and deal lists used in the price assessment process. Argus publishes prices that report and reflect prevailing levels for open-market arms length transactions (please see the [Argus Global Compliance Policy](#) for a detailed definition of arms length).

### Consistency in the assessment process

Argus recognises the need to have judgement consistently applied by reporters covering separate markets, and by reporters replacing existing reporters in the assessment process. In order to ensure this consistency, Argus has developed a programme of training and oversight of reporters. This programme includes:

- A global price reporting manual describing among other things the guidelines for the exercise of judgement
- Cross-training of staff between markets to ensure proper holiday and sick leave backup. Editors that float between markets to monitor staff application of best practices
- Experienced editors overseeing reporting teams are involved in daily mentoring and assisting in the application of judgement for illiquid markets
- Editors are required to sign-off on all price assessments each day, thus ensuring the consistent application of judgement.

### Review of methodology

The overriding objective of any methodology is to produce price assessments which are reliable and representative indicators of commodity market values and are free from distortion. As a result, Argus editors and reporters are regularly examining our methodologies and are in regular dialogue with the industry in order to ensure that the methodologies are representative of the market being assessed. This process is integral with reporting on a given market. In addition to this ongoing review of methodology, Argus conducts reviews of all of its methodologies and methodology documents on at least an annual basis.

Argus market report editors and management will periodically and as merited initiate reviews of market coverage based on a qualitative analysis that includes measurements of liquidity, visibility of market data, consistency of market data, quality of market data and industry usage of the assessments. Report editors will review:

- Appropriateness of the methodology of existing assessments
- Termination of existing assessments
- Initiation of new assessments.

The report editor will initiate an informal process to examine viability. This process includes:

- Informal discussions with market participants
- Informal discussions with other stakeholders
- Internal review of market data

Should changes, terminations, or initiations be merited, the report editor will submit an internal proposal to management for review and approval. Should changes or terminations of existing assessments be approved, then formal procedures for external consultation are begun.

### Changes to methodology

Formal proposals to change methodologies typically emerge out of the ongoing process of internal and external review of the methodologies. Formal procedures for external consultation regarding material changes to existing methodologies will be initiated with an announcement of the proposed change published in the relevant Argus report. This announcement will include:

- Details on the proposed change and the rationale
- Method for submitting comments with a deadline for submissions
- For prices used in derivatives, notice that all formal comments will be published after the given consultation period unless submitter requests confidentiality.

Argus will provide sufficient opportunity for stakeholders to analyse and comment on changes, but will not allow the time needed to follow these procedures to create a situation wherein unrepresentative or false prices are published, markets are disrupted, or market participants are put at unnecessary risk. Argus will engage with industry throughout this process in order to gain acceptance of proposed changes to methodology. Argus cannot however guarantee universal acceptance and will act for the good order of the market and ensure the continued integrity of its price assessments as an overriding objective.

Following the consultation period, Argus management will commence an internal review and decide on the methodology change. This will be followed by an announcement of the decision, which will be published in the relevant Argus report and include a date for implementation. For prices used in derivatives, publication of stakeholders' formal comments that are not subject to confidentiality and Argus' response to those comments will also take place.

### Introduction

The biweekly Argus Fertilizer Europe report covers all the key fertilizer products traded within the region, including straight and compound fertilizers. The report is published every other Friday and covers the major benchmark prices, while also containing analysis of key market developments during the past two weeks. Fertilizer Europe is not published during the week between 25 December and 1 January each year. Please see the publishing schedule for further details.

### General methodology

The report covers spot pricing only. It seeks to determine price ranges in which actual spot transactions are taking place or in which transactions could have taken place between a willing buyer and seller. Deals done, bids and offers and other relevant information are considered when assessing prices.

The deadline for information gathering is 5:00pm UK time on the Friday of publication.

When there is adequate liquidity and deals data are deemed reliable and representative, Argus will establish its price ranges using the low and the high of confirmed deals done. In order to qualify to set the low or high of the week, deals must meet the minimum volume established in this methodology, and must meet the delivery, timing, and product specification requirements.

Argus works to validate all deal prices, counterparties and volumes. Transaction prices that fall outside of the generally observed lows and highs that operated throughout the two-week period will be subject to further scrutiny, which will involve consultation with industry sources and review by senior Argus management. This process is critical to ensuring that the Argus range of trade remains representative. Argus reserves the right to exclude deals from the range of trade if these are deemed unrepresentative or unrepeatable.

Market information is gathered mainly through telephone conversations, but email and instant messaging systems are also frequently used. Argus will contact and accept market data from all credible market sources including front and back office of market participants and brokers.

### Assessment basis

Prices are assessed in euros (€), US dollars (\$) or pound sterling (£), depending on product and country. All assessed fertilizer prices are on a per tonne (t) basis. Upstream and downstream prices have individual specifications (*please see below*).

Most transactions are conducted on a sight/cash basis, but where credit terms apply, e.g. up to 180 days, these are taken into account and subtracted from the price so that the published price is net of this credit or other terms.

For all the price assessments (excluding the upstream and downstream), the time period assessed is for cargoes loading prompt to one month forward.

All of these assessments are based on cargo sizes of a minimum 100t. Most commonly, barge lots are 1,500-2,000t with quantities below this usually transported by trucks. Products can be transported and sold on a bulk basis or in bags. This is specified in each assessment.

While all information and trades within the past 14 days are taken into account during price assessment, in periods of high volatility, assessments are weighed towards trading activity later in the second week, towards the Friday of publication.

Prices are only ever reassessed or corrected if new data come to light on a previously reported deal or sale. If subsequently, a transaction comes to light within the 14-day period but its existence was not known by the editor and not reported by 5:00pm on the Friday

of publication, the particular price range will not be retrospectively changed.

The report seeks to determine price ranges in which actual transactions are taking place or in which transactions could have taken place between a willing buyer and seller. In the absence of verified high or low deals, Argus makes an intelligent assessment of the spread between the low and high price. In markets that occasionally lack liquidity, Argus may assess the price ranges based on judgment, in view of market discussions with buyers and sellers, and what we consider to be achievable given prices paid in end user markets. Where there has been no discoverable business for a specific pricing point, prices are usually held at the previous range. However, in the absence of verified high or low deals, Argus also reserves the right to make an assessment of the range based on what deals could have been achieved within that timeframe based on market fundamentals.

During periods of low trade, price ranges may be highlighted as indicative to show there has been no discoverable business done on that specific pricing point.

Formula pricing is an arrangement where a buyer and seller agree in advance on the price to be paid for a product delivered in the future, based upon a pre-determined calculation, sometimes utilising published prices from Argus and/or other publications. Given that the exact nature of the calculation or the agreement between the parties is often private and confidential, and if the deal is considered a one-off (i.e. not repeatable) then calculated netbacks are not used in formulation of a spot price range. However, if a buyer and seller use this method of pricing for multiple transactions on a specific trade route, then the editor may use the deal in formulating a spot price range using current known cfr levels, domestic prices in destination country and indicative freight rates.

The varying price of nitrogen products (urea, AN, UAN etc.) can have an influence on fertilizer buying patterns as the cost per unit nitrogen is considered. For example, urea priced at €250/t represents a cost per unit nitrogen of €5.43, whereas CAN 27 priced at €250/t represents a cost per unit nitrogen of €9.26. In this example, urea is priced more competitively on a unit nitrogen basis. This may affect buying patterns. Where necessary, this is explained in the report text.

## Product specifications

**Urea** – A solid fertilizer with a 46pc nitrogen content by weight. Urea is produced in liquid form and is then solidified either through prilling or granulation.

**Diammonium phosphate (DAP)** – A solid fertilizer with an 18pc nitrogen and a 46pc phosphate (P205) content by weight. It is produced by combining ammonia with phosphoric acid.

**Urea ammonium nitrate (UAN)** – A liquid fertilizer with a nitrogen content of 28pc, 30pc or 32pc, by weight, depending on assessment.

**Ammonium Nitrate (AN)** – A solid fertilizer with a nitrogen content of 33.5-34.5pc by weight, depending on the assessment.

**Triple super phosphate (TSP)** – A solid fertilizer with a 46pc phosphate content by weight.

**Calcium ammonium nitrate (CAN)** – A solid fertilizer with a nitrogen content of 27pc by weight.

**15-15-15** – A solid compound or blended fertilizer with 15pc nitrogen, 15pc phosphate, and 15pc potassium content by weight.

**0-25-25** – A solid compound or blended fertilizer with a 25pc phosphate and 25pc potassium content by weight.

**20-10-10** – A solid compound or blended fertilizer with a 20pc nitrogen, 10pc phosphate and 10pc potassium content by weight.

**27-6-6** – A solid compound or blended fertilizer with a 27pc nitrogen, 6pc phosphate and 6pc potassium content by weight.

**18-6-12** – a solid compound or blended fertilizer with 18pc nitrogen, 6pc phosphate and 12pc potassium content by weight.

**Nitrogen + Sulphur 24N 15SO3** – A solid compound fertilizer with a 24pc nitrogen and 15pc sulphur trioxide (SO3) content by weight.

**Nitrogen + Sulphur 27N 30SO3** – A solid compound fertilizer with a 27pc nitrogen and 30pc SO3 content by weight.

**Ammonium sulphate nitrate (ASN) 26N 13S** – A solid compound fertilizer with a 26pc nitrogen and a 13pc sulphur content by weight.

**Muriate of Potash (MOP)** – A solid fertilizer also known as potassium chloride (KCl). Granular MOP has a water soluble potash content (as K2O nutrient) minimum of 60pc and a maximum moisture content of 0.50pc by weight.

## Inco terms used in assessments

**Cif** – Cost, insurance and freight. Carriage paid.

**Cif inland** – As above, but delivered by barge on internal waterway system.

**Cpt** – Carriage paid to. Delivered to buyer.

**Fca** – Free carrier. Carriage unpaid.

**Fob** – Free on board. Carriage unpaid.

**Cfr** – Cost and freight. Carriage paid.

**Ex-store** – Price at the storage facility. Carriage unpaid, loading not included.

**Delivered** – Delivered to buyer. Carriage paid.

**Bagging** – Additional and varying costs are applicable for bagging fertilizers. Fertilizers can be transported in bags of varying sizes, from 25kg up to 1,000kg. Most commonly in Europe, bags are 500-600kg. In the UK, 600kg is the most common bag used, while in Ireland, 500kg bags are the most widely utilised. In Italy, a wider variety of bags are used depending on product and location. The prices assessed by Argus are for a standard 50kg bag. Commonly, this would attract a €5/t premium to a 500-600kg bag (big bag).

## Price assessments

All €/t bulk unless otherwise stated:

### Germany

#### CAN 27pc cif inland

Yara, OCI and EuroChem Agro are among the CAN producers active in Germany. Commonly, producers will announce official list prices for the month ahead or until further notice. The CAN price published is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers, and reflects the level at which actual trade is taking place.

#### UAN 28pc fca Hamburg

Yara and SKW Piesteritz are among the UAN 28 producers active in Germany. The UAN price published is referenced to the major trading hub of Hamburg, and assessed through conversations with various market participants. These include producers, importers, distributors, traders and buyers.

#### Urea prilled fca

Yara is among the prilled urea producers active in Germany. Prilled urea is also imported from countries including Russia and Poland. Producers take the potential cif value of imported urea into account when setting their own prices. The published price is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

#### Urea granular fca

Yara and SKW Piesteritz are among the granular urea producers active in Germany. Granular urea is also imported from countries including Egypt, the Netherlands and Russia. Therefore, fob export prices can have an influence on domestic prices. The published price is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

#### DAP fca (\$/t)

There is no domestic DAP production so the market is fed by imports from countries including Russia and Lithuania. Prevailing fob export levels are a major influence on price levels. The published price is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

#### 15-15-15 cif inland

Yara and EuroChem Agro are among the 15-15-15 producers active in Germany. The published price is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

#### Ammonium sulphate nitrate (ASN) 26N 13S cif inland

EuroChem Agro is the principal supplier of ASN in the German market. Some product is also imported from southern and central Europe. The published price is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

### France

#### AN 33.5pc cpt merchant

Yara, Borealis and EuroChem Agro are the main AN producers active in the market. Normally, producers will announce official list prices for the month ahead or until further notice. The AN price published is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers and reflects the level at which actual trade is taking place.

#### AN 34pc fca imported (bagged)

AN is imported from several countries including Lithuania, Poland, Bulgaria and Georgia. AN cannot be imported in bulk by vessel into most French seaports, but bulk AN can be railed or trucked to inland destinations. The AN price published is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

AN is normally imported in vessels of less than 5,000t, with sales made fca ex-seaport generally delivered by truck to inland destinations.

#### CAN 27pc cpt merchant

Yara, OCI and EuroChem Agro are among the leading CAN producers active in France. Commonly, these producers will announce official list prices for the month ahead or until further notice. Imports from Lithuania and Spain also feature but to a lesser extent. The CAN price published is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers, and reflects the level at which actual trade is taking place.

#### Urea granular fca Atlantic

Please see the [Argus Nitrogen methodology](#) for further details.

#### UAN 30pc fca Rouen.

Please see the [Argus Nitrogen methodology](#) for further details.

#### DAP fca

There is no domestic DAP production in France so the market is fed by imports from countries including Morocco for French Mediterranean Sea and Atlantic ports, Tunisia mainly for French Mediterranean Sea ports, and Russia and Lithuania mainly for northern ports. The domestic DAP price is influenced greatly by changes in fob export levels at these origins. The DAP price published is assessed

basis conversations with various market participants including producers, importers, distributors, traders and buyers.

#### TSP fca

There is limited domestic TSP production in France so the market is fed mainly by imports from countries including Israel, Morocco and Tunisia. Therefore, fob export prices have an influence on domestic values. The published TSP price is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

#### 0-25-25 cpt merchant

Yara and Seco are among the producers active in the market, as well as bulk blenders. The published price is assessed basis conversations with various market participants including producers, distributors, traders and buyers.

#### 15-15-15 cpt merchant

Yara and Seco are among the producers active in the market. The published price is assessed basis conversations with various market participants including producers, distributors, traders and buyers.

#### Nitrogen + Sulphur 24N 15SO<sub>3</sub> cpt merchant

Yara and Borealis are among the producers active in the market. The published price is assessed basis conversations with various market participants including producers, distributors, traders and buyers.

#### Granular MOP fca

The market is fed by imports from countries including Germany, Israel, Spain and Russia. The price published is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

### UK

#### AN 34.5pc domestic delivered to merchant (bagged) (£/t)

GrowHow is the sole domestic producer of AN 34.5pc in the UK. It normally issues a list price to distributors for each month or until further notice. The published price is assessed basis conversations with various market participants including this producer, traders, distributors and buyers.

#### AN 34pc import cif (bagged) (£/t)

AN 34pc is imported from various countries, primarily Lithuania and Poland, and offered on a cif or fca bagged basis. Imported AN is priced in relation to UK-produced AN, to which it sells at a discount as domestic AN is favoured. The published price is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

AN is normally imported in vessels of less than 5,000t and delivered by truck to inland destinations.

#### Nitrogen + Sulphur 27N 30SO<sub>3</sub> domestic delivered to merchant (bagged) (£/t)

GrowHow is the domestic producer of this N+S fertilizer in the UK. The published price is assessed basis conversations with various market participants including this producer, distributors, traders and buyers.

#### Urea granular fca (bagged) (£/t)

There is no domestic urea production in the UK. Granular urea is commonly imported from countries including Egypt and the Netherlands. Therefore, fob export prices can have a major influence on domestic values. The published urea price is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

#### TSP fca (bagged) (£/t)

There is no domestic TSP production in the UK, so the market is fed by imports from countries including Morocco and Tunisia. Therefore, fob export prices have an influence on domestic values. The published TSP price is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

#### 20-10-10 delivered to merchant (bagged) (£/t)

GrowHow and bulk blenders produce this compound fertilizer in the UK. The published price is assessed basis conversations with various market participants including this producer, distributors, traders and buyers.

### Italy

#### Urea granular fca Ravenna (bagged)

The primary granular urea price indication for the Italian market is provided by domestic producer Yara's sales from its Ferrara plant. However, Italy is also a large importer of prilled urea from countries including Ukraine and Romania, as well as granular urea from Egypt, and bids/offers for these products are also taken into account when assessing the price. The price published in this report is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers and reflects the level at which trade is taking place rather than posted prices. Ravenna is Italy's leading port for fertilizer imports.

#### DAP fca (bagged)

There is no domestic DAP production in Italy, but it is a major importer of DAP from countries including Tunisia, Morocco, Russia and Lithuania. The domestic DAP price is influenced greatly by changes in fob export levels from these origins. Imported DAP is commonly bagged and then sold into the domestic market through major ports, including Ravenna, for use in direct application or blended fertilizer manufacture. The DAP price published is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

#### CAN 27pc fca (bagged)

CAN 27 is commonly imported into Italy from countries including Austria. The price published in this report is CAN 27, which is the most



commonly traded product internationally and an important product domestically. Domestic producer Yara mostly supplies the market with CAN 26, which is its benchmark CAN price, but also sells smaller quantities of CAN 27 and CAN 28. While this trade is not included in the price assessment, it can provide an indication as to what level importers can expect to achieve on CAN 27 sales into Italy, as the products have a similar nutrient value. The CAN 27 price published is assessed basis conversations with various market participants including producers, importers, traders and buyers and reflects the level at which actual trade is taking place rather than posted prices.

## Spain

### CAN 27pc fca

The sales of domestic producer Fertiberia provide the key price indication for this market. Imported CAN from countries including Germany and Belgium plays a smaller role in internal pricing. The CAN price published is assessed basis conversations with various market participants including producers, importers, traders, distributors and buyers and reflects the level at which actual trade is taking place rather than posted prices.

### Urea prilled fca

Sales by domestic producer Fertiberia provide the primary price indication for the prilled urea market. Imported prilled urea from countries including Ukraine and Libya plays a smaller role in internal pricing. Spanish farmers favour granular urea, which has seen the importance of imported urea from countries such as Egypt rise. Traditionally, granular urea attracts a premium of €8-15/t to prilled urea in the Spanish market. The prilled urea price published is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers and reflects the level at which actual trade is taking place rather than posted prices.

### DAP fca (\$/t)

DAP is imported from countries including Morocco and Tunisia, and then sold on an fca or ex-warehouse basis. The DAP price is published in US dollars and assessed basis conversations with various market participants including producers, importers, traders and buyers and reflects the level at which actual trade is taking place rather than posted prices.

### 15-15-15 fca

Fertiberia is among the producers of 15-15-15 in Spain. The 15-15-15 published price is assessed basis conversations with various market participants including producers, distributors, traders and buyers and reflects the level at which actual trade is taking place rather than posted prices.

### Urea granular fca

Granular urea is the key price benchmark for agricultural buyers in Spain and it traditionally enjoys a premium to prilled product. There is no domestic granular urea production, hence the vast majority of the urea imported into Spain is granular, from destinations including Egypt and Algeria. Nitrogen Iberian (NIC) — a joint venture between OCI Nitrogen and Delso Fertilizers Group (DF Grupo) — is the leading Spanish importer of granular urea and commonly offers this

urea on an fca or ex-warehouse basis into the domestic market. The granular urea price published is assessed basis conversations with various market participants including producers, importers, traders, distributors and buyers and reflects the price at which actual trade is taking place rather than posted prices.

### UAN 32pc fca

Spanish consumption of UAN 32 is rising year on year as demand for its use in irrigation systems, mostly for the substantial maize crop of early summer, grows steadily. In some cases, it is replacing urea usage. UAN 32 is also used as a raw material for soluble blended fertilizers and again this growth is supporting higher demand. While Fertiberia does produce UAN 32 at its Puertollano plant, this is insufficient to cover domestic demand, especially during the peak period of May to July, and UAN 32 imports from Egypt and Romania are rising. UAN 32 is commonly offered into the domestic market on an fca or ex-warehouse basis. The UAN 32 price published is assessed basis conversations with various market participants including producers, importers, traders, distributors and buyers and reflects the price at which actual trade is taking place rather than posted prices.

## Belgium

### CAN 27pc cif inland

Active CAN producers in Belgium include Yara, OCI and EuroChem Agro. Commonly, producers announce official list prices for the month ahead or until further notice. The CAN price published is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers and reflects the level at which actual trade is taking place.

### DAP fca (\$/t)

There is limited DAP production in Belgium, so the market is fed by imports from countries including Lithuania, Russia and Morocco. Russian DAP incurs a duty into the EU, whereas Lithuanian and Moroccan product does not. Fob export prices have an influence on domestic prices. The price published is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

### Granular MOP fca

The market is fed by imports from countries including Germany, Russia and Israel. Belgium is also an entry point for potash from Belarus, Chile and Canada. The price published is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

### 15-15-15 ex-store

The main producers active in the NPK market in Belgium are Yara, EuroChem Agro and Rosier (Borealis). The price published in this report is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

## Netherlands

### CAN 27pc cif inland

CAN producers include Yara, OCI and EuroChem Agro. Commonly, producers will announce official list prices for the month ahead or until further notice. The CAN price published is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers and reflects the level at which actual trade is taking place.

### TSP fca

There is no domestic TSP production in the Netherlands, so the market is fed by imports from countries including Israel and Morocco. Therefore, fob export prices have an influence on domestic values. The published TSP price is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

### Granular MOP fca

The market is fed by imports from countries including Germany and Israel. The price published in this report is assessed basis conversations with various market participants including producers, importers, distributors, traders and buyers.

## Ireland

### CAN 27pc delivered to merchant (bagged)

There is no domestic CAN production in Ireland, so the market is fed by imports from countries including Belgium and the Netherlands. The published price is quoted on a delivered to merchant basis. It is assessed basis conversations with various market participants including importers, distributors, traders and buyers.

### 27-6-6 delivered to merchant (bagged)

The 27pc nitrogen compounds are imported into Ireland by companies including Yara. The published price is quoted on a delivered to merchant basis. It is assessed basis conversations with various market participants including importers, distributors, traders and buyers.

### 18-6-12 delivered to merchant (bagged)

The 18pc nitrogen compounds are manufactured in Ireland from imported raw materials. The published price is quoted on a delivered to merchant basis. It is assessed basis conversations with various market participants, including importers, distributors, traders and buyers.

## Upstream/downstream

### TTF gas prices

To provide an upstream indication, Argus publishes a five working day average (Friday to the Thursday before publication) of the Title Transfer Facility (TTF), day ahead spot price assessment from the daily Argus European Natural Gas report. For further details on TTF gas pricing and assessments please see the [Argus European Natural Gas methodology](#).

### Ammonia cfr NW Europe (duty free/paid)

To provide an upstream indication, Argus publishes the latest north-west European duty-free anhydrous ammonia spot price. For further details on ammonia pricing and assessments please see the [Argus Ammonia methodology](#).

### Rapeseed oil methyl ester (OME) RED.

To provide a downstream indication, Argus publishes a five working day average (Friday to Thursday before publication) of the daily Argus European rapeseed OME RED spot price. For further details on rapeseed pricing and assessments please see the [Argus Biofuels methodology](#).

### European milling wheat futures

The NYSE Liffe milling wheat futures are provided by NYSE Euronext. To provide a downstream indication, Argus publishes a five working day average (Friday to the Thursday before publication) of the daily settlement prices, for the front delivery month. Prices are in €/t at an approved silo in Rouen, France. As of September 2015 delivery month, an approved silo in Dunkirk, France will also be included.

Full specification details are available at:

<https://derivatives.euronext.com/en/products/commodities-futures/EBM-DPAR/contract-specification>

## Freight rates

The below seaborne freight rate indications are provided in the report, for indicative purposes only.

- Nitrogen: Egypt to French Bay – 6,000t
- Nitrogen: Egypt to European Mediterranean Sea – 6,000t
- Nitrogen: Upper Baltic Sea to German Baltic Sea – 3,000-5,000t
- Phosphates: Baltic Sea to Amsterdam-Rotterdam-Antwerp (ARA) – 25,000t
- Phosphates: Morocco to European Mediterranean Sea – 6,000t
- MOP: Baltic Sea to Belgium – 5,000-7,000t

The freight ranges are established by surveying freight providers and buyers of spot freight, maintaining a balance between both parties. The assessment is for cargoes that will load and move within the next 30 days. Argus makes an assessment of the range between the low and high prices provided. Market information will be collected up until 5:00pm UK time on the day of publication.