



Profercy Nitrogen

METHODOLOGY STATEMENT

Published by Profercy Ltd

Editor Clive Yearsley

E fertilizers@profercy.com

T +44 1372 386205

www.profercy.com

Profercy Methodology Statement

Profercy's Methodology Statement aims to provide a summary of the methodology informing Profercy's price assessment and benchmark services, as published through our weekly reports. Profercy publishes over 45 nitrogen market prices covering spot and contract values. Each week, additional supporting analysis and information is provided related to bid and offer levels, as well as cost and freight values.

The methodology supporting our price benchmark assessments is designed to ensure our benchmarks provide a reliable and accurate representation of the market for key fertilizer products, as determined by the forces of supply and demand. Our methodological approach is also designed to eliminate factors that could distort the price quoted and ultimately lead to the price quotation not reflecting the actual market.

Use of Profercy's Price Assessments

The market information publishing industry has changed significantly over the last three decades with publications and the information published by price assessment firms playing an increasing role in trading. Profercy's services and price assessments are primarily intended to provide a guide to the current state of global fertilizer markets. However, we recognise that some industry stakeholders use these prices in regular trading and we are proud to have established a strong reputation for independence, reliability and accuracy to meet these requirements.

All stakeholders should be aware that Profercy is completely independent and will not take responsibility for trades that are directly influenced by our price assessments (i.e. formula contracts). Stakeholders are welcome to use Profercy's price assessments to determine trade prices, but this is solely their responsibility.

Profercy also provides key benchmarks price assessments to administrators of financial instruments, such as those used for swaps. These organisations maintain a regular dialogue with Profercy and are fully apprised of our methodological approach, governance structures and any changes to these.

Specific definitions and key benchmarks

The key benchmark prices published by Profercy include:

Benchmark	Specifications	Remarks
Egypt granular urea	\$pt fob	
Arab Gulf granular urea spot price	\$pt fob	This does not include Iranian granular urea which has been subject to sanctions and currently achieves lower prices in the market.
Brazil granular urea	\$pt cfr	
US Gulf granular urea*	\$pst to	Granular urea in the US Gulf is traded in small barge lots of 1,500st
Yuzhnyy prilled urea	\$pt fob	
China prilled urea	\$pt fob	
UAN US Nola	\$ps ton fob	Nola UAN is traded in small barge lots of 1,500st.



All of our price quotes are for cargoes of 5,000t or more, with the exception of the price quote for US Gulf granular urea and US Gulf UAN, for which physical trades are focused on barges of 1,500st.

The price quotes above are provided to Direct Hedge and the Chicago Mercantile Exchange. All are basis fob values (free on board), as opposed to cfr values (cost and freight). Profercy publishes a further 40 or more nitrogen values, of which, some of these are cfr values.

Timing

The benchmark captures the value of product based on a shipment window of 30 days. For the avoidance of doubt, this shipment window relates to product shipped within 30 days of the weekly report and price benchmarks being published. Trades, bids and offers that fall outside this shipment window do not directly inform the price quote in any given week.

Volumes

Trades bids and offers directly influencing Profercy's price quotes must be for cargoes of 5,000t or more, with the exception of the price quote for US Gulf granular urea, as explained above. The majority of product is sold on this basis. Lower volume cargoes compete in different markets that will often pay a premium (owing to low cargo size, higher marginal costs etc.). In addition, the minimum threshold is intended to minimise the threat of low volume sales being utilised to manipulate price quotes and benchmarks.

Normalization

Trades, bids and offers that do not meet the above criteria can have an influence on Profercy's price benchmarks. In these instances, expert judgement is utilised to indicate values for cargoes meeting Profercy's benchmark criteria. When this occurs, this process is not the sole basis through which a benchmark is determined. An explanation is also provided in the supporting analysis published in the Weekly Report.

Accuracy

For information regarding trades, bids and offers to influence Profercy's benchmark price assessments, the information must be considered reliable and accurate by Profercy. In this respect, it must meet our standards for data collection and will be checked with multiple participants in the market. Profercy has published a Submitters Code of Conduct and a Control Framework detailing our approach to data collection. This is also discussed below.

Assessment Window

The price benchmarks published reflect market values for the period following the publication of Profercy's previous report until 18.00 GMT on the date of publication. Information regarding trades, bids and offers outside this window will be disregarded.

Types of information influencing our price assessment

Profercy's price quotes are based on information obtained regarding market transactions, bids and offer prices for spot tonnage. All information is obtained from participants directly involved in the relevant market. This includes producers, traders, importers and end-users, as well as those providing ancillary services for this market.

While greater value is given to actual trade, bids and offers, information is also obtained regarding the value of comparable product in other key markets.

It is worth noting, and all stakeholders should be aware, that Profercy, nor any other market publication, has sight of actual transaction data. Information is obtained from market participants, as set out below. All information obtained by Profercy and utilised to inform our price assessments is obtained daily, with information regarding data, offers, bids and netbacks in other markets verified ahead of the publication of our weekly report.

Quality and accuracy of information

Profercy obtains market information from a vast number of market participants involved in global fertilizer markets. As noted above, this includes those operating at all levels of the supply chain.

Some firms chose to submit price information to Profercy formally via email. Where this is the case, Profercy retains the right to check such information with other sources for validity and contextual accuracy. This information will also be utilised in determining price assessments, assuming Profercy considers it accurate and verifiable.



Submissions are also provided informally by agents of individual companies. Where this is the case, Profercy encourages all submitters to fully disclose all information regarding specific trades, bids and offers. Profercy has published a guidance document for submitters (Submitters Code of Conduct), setting out our reasonable expectations of those choosing to deal with Profercy. This also sets out our commitment to submitters, including their right to anonymity.

For the avoidance of doubt, where Profercy believes that a market participant is providing information that they cannot reasonably be expected to have obtained first hand, or where an attempt to manipulate our price benchmarks is evident, Profercy will disregard information from that source indefinitely. Where doubts exist regarding the accuracy or reliability of information received, this information will not shape Profercy's price assessment.

Profercy retains records of all submissions received via email, telephone or instant messenger service.

Basis for determining specific price assessments

Information regarding confirmed arms-length transactions has the greatest influence on Profercy's price assessments. Notwithstanding the accuracy of the information obtained (commented on below), trades considered must meet the criteria identified above. All transactions that meet the criteria above in a given week are of equal value and have equal influence on Profercy's benchmark price assessments.

While trades that do meet Profercy's criteria will not be considered first and foremost in our weekly price assessment, they can shape the weekly price assessment if, in Profercy's expert opinion, they reflect the current market. The use of expert judgement is detailed below.

For most markets covered by Profercy's price benchmarks, there are occasions in a year that no trades take place in a given week, although this is rare. As such, our price assessments are also shaped by bids and offers by market participants for product that meets the criteria above in terms of volume and shipment.

In any given week, Profercy receives numerous data regarding bids and offers, all of which are considered. Where bids and offers are utilised in our price assessments, often shaping the low and high end of benchmarks, Profercy uses expert judgement to distinguish between firm and soft bids.

Profercy always takes into consideration the value of relevant import markets and export origins when reviewing price benchmarks. It should be noted though that trades take precedence, followed by firm bids and firm offers. In reviewing key prices for export origins, netbacks (cfr less freight) can inform the price quotation if in Profercy's expert opinion this is deemed necessary to ensure our price quote accurately reflects the market. Likewise, for benchmarks covering key import markets, values can be referenced from major export origins, adjusting for reasonable costs.

The use of expert judgement

All data received regarding trades, bids and offers is assessed and scrutinised by Profercy. Data is assessed for reliability, quality and significance. To do so, Profercy's editors draw on many years' experience reporting on global fertilizer markets.

Information received is compared to other data and information regarding prices in key markets relevant to the specific benchmark. The authenticity of such information is also compared against information received in any given week from other market participants. Profercy proactively cross checks all information related to trades, bids and offers.

Expert judgement can also be utilised to determine whether trades, bids or offers that occur in a week should be disregarded on the basis of unique circumstances, for example, when a cargo is in distress.

As touched on above, in the event that no trades take place in a week, price benchmarks and information relating to other markets can be utilised by Profercy's editors. However, firm bids and offers take priority in determining the price assessment.

The use of expert judgement by Profercy is applied as set out above and is applied consistently in our price assessments.



Misquotes and errors

Profercy reserves the right to revise price quotes retrospectively where this is deemed necessary by Profercy. This is incredibly rare. This may take place, but is not limited to, instances in which Profercy believes that:

- Incorrect information has been deliberately submitted to influence our weekly price assessment
- Information has been incorrectly reported or been proven, beyond doubt, to be incorrect
- A submitter has submitted information relevant to a particular price assessment but withheld information that would also have a material impact on a price assessment
- Our price benchmark methodology has been applied incorrectly or the price specified is incorrectly presented due to a typo or other human error

Profercy will not revise price quotes to reflect new information obtained after the publication of our Weekly Report and price assessments. A price quote can only be revised within 5 working days of a report being published.

In the event of a price quote being revised, all stakeholders and subscribers will be informed by email.

Review of and changes to the benchmark

All of Profercy's benchmark assessments and methodologies are subject to review whenever deemed appropriate by Profercy. The primary justification for reviewing a methodology is to ensure that it accurately informs the relevant price benchmark and that this subsequently reflects the actual market the benchmark is intended to assess.

A benchmark may be reviewed if the market it measures changes. Similarly, the benchmark may cease if a market no longer exists. Material changes to markets can include:

- Long periods of low liquidity – NB: a market may be considered generally active even if it experiences periods of low liquidity.
- Structural changes to price reference points
- The increased role of contract pricing over spot pricing, or vice versa, for a benchmark
- Material changes to the product covered by the benchmark – for example, should quality of product vary
- A dramatic change in average volumes of product sold

The benchmark may be discontinued if Profercy believes that no significant market exists for the benchmark to measure, or if material factors prevent the market from being observed.

Should Profercy seek to amend the methodology for the benchmark, or the benchmark requirements (timing, volume, price basis), Profercy will invite comments from stakeholders and subscribers through a soft consultation. A series of key questions will be provided to obtain feedback. Profercy will ensure that a representative sample of participants is given the opportunity to submit feedback. Profercy will subsequently make available a brief response via our web page.

Transition and cessation of benchmarks

Given the nature of global fertilizer trade, it is possible that the significance of an individual price benchmark will diminish. This could be due to the natural evolution of the market, for example, a reduction of demand in a previously active import market, or a notable drop in export supply from a major export origin.

In the event that Profercy observes a diminishing significance for a particular price benchmark, it will notify all stakeholders regarding the possible cessation of the benchmark. This includes the administrators of financial derivatives reliant on Profercy's price benchmarks.

Reasons for possible cessation or review of, or amendment to, a benchmark include, but are not limited to:

- No physical trade of relevance to the benchmark has taken place for a prolonged period of time (over one month).
- If, in the case of supply side benchmarks, no product will likely be available for a prolonged period of time, for example, in the case of major production problems or civil unrest.
- If, in the case of demand side benchmarks, trade is expected to be limited, for example, by government policy.
- The product or average contract specifications for physical product have changed significantly. For example, if industry investment leads to production switching from prilled to granular urea.



Where Profercy issues a notification to stakeholders regarding the relevance of a benchmark, Profercy's forward approach to publishing the benchmark will be provided. In the absence of trade, this will set out how Profercy will use expert judgement to define prices for a period of up to 3 months. Profercy is not responsible for financial contracts derived from our prices and cannot maintain a price benchmark if it is no longer of relevance in the long term. Profercy will liaise with all key stakeholders, such as CME and Direct Hedge, regarding reasonable provision of a benchmark to meet their requirements.

For major stakeholders, such as the administrators of financial derivatives or swaps, notification will be provided directly. Other stakeholders that wish to be appraised of any changes to or notifications regarding Profercy's price benchmarks can sign up to receive alerts by emailing accounts@profercy.com. Subscribers will also be kept informed of any changes or transition notifications either through our weekly reports or through separate emails to subscribers.

Complaints process

Profercy prides itself on independent, reliable and accurate price reporting and it is very rare that stakeholders query individual price benchmarks. However, given the use of expert judgement, Profercy acknowledges the need for a formal complaints process. This complaints process is detailed in the Control Framework.

In the event that a stakeholder wishes to log a formal complaint regarding Profercy's price quotations for a particular product, Profercy will provide the complainant with an overview of how the specific benchmark was decided. This will identify the use of expert judgement where needed.

Should the complainant feel that the price benchmark fails to accurately reflect the market, Profercy will require the complainant to provide an alternative price quote with a supporting justification that meets our criteria. Should the price quote meet Profercy's criteria and should it not be reliant on information obtained after our publication, or information not provided to Profercy, we will raise the issue with a number of other key stakeholders. The matter will also be raised with the relevant oversight function who will ultimately decide whether a revision to the price quote is required.