

Fertilizer *facts*

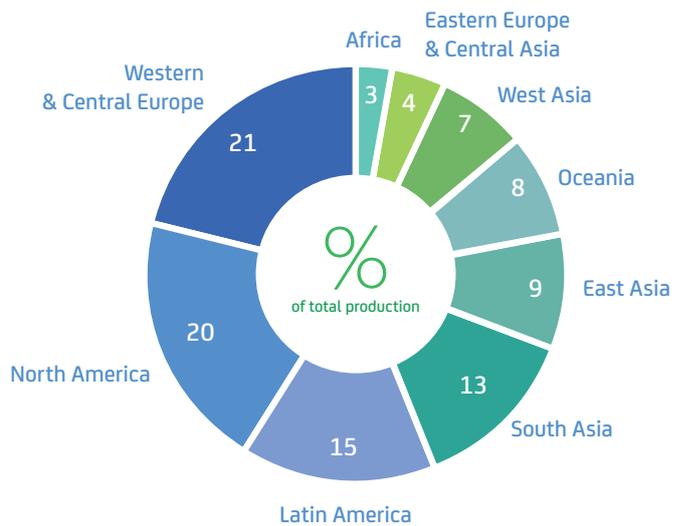
Charting the way to optimal performance

Environmental performance benchmarking for the fertilizer industry

In order to reduce the impact of their industrial processes on the environment, fertilizer producers are increasingly monitoring emissions to water, land and to the air from their production sites globally. Climate change, water, air and soil quality are key environmental indicators against which fertilizer producers worldwide are expected to track improvements as part of their license to operate.

Fertilizer producers around the world have been participating in IFA's biennial Environmental Performance Benchmarking survey, which regularly monitors performance for fifty emission parameters, while tracking performance and progress over time.

The results of the most recent survey, undertaken for some 162 production sites and 647 individual production units in 32 countries, have just been released.



Member company participation in IFA's 2014 environmental survey

The fertilizer industry is showing progress across the board

The survey results show significant improvement in reducing harmful greenhouse gases, including CO₂ and N₂O emissions, as well as NO_x and dust emissions and various effluents to water. Across all product sectors during the 2013 operating year, emissions of greenhouse gases, namely CO₂ and N₂O emissions, were reduced on average by 4 to 16 percent depending on the product. Furthermore, the majority of participating producers are operating at minimal dust to air, and nitrogen and phosphate to water levels. These results indicate a broad adoption of environmental mitigation strategies and best available technologies (BAT's) across the global sector.

Global key performance metrics resulting from these surveys assist fertilizer producers to:

- Establish yearly emissions reduction targets;
- Measure improvements over time;
- Gauge performance relative to generally-accepted best-available techniques (BAT) standards;
- And, communicate current emissions reductions achievements to key stakeholders locally and nationally.

| PRODUCT | TYPE OF EMISSION | CONFORMANCE (%) |
|-------------|-----------------------------------|-----------------|
| Ammonia | nitrogen oxide (NO _x) | 86 |
| Nitric acid | nitrogen oxide (NO _x) | 73 |
| Nitric acid | nitrous oxide (N ₂ O) | 91 |
| AN | ammonia (NH ₃) | 69 |

Source: IFC Environmental, Health, and Safety Guidelines for Nitrogenous and Phosphate Fertilizer Production, 30 April 2007, World Bank Group.

Conformance with World Bank IFC emission guideline values for fertilizer plants (extracted conformance values from survey)