UREA-ES – WHEN UREA IS NO LONGER ENOUGH

Shell Thiogro's Urea-ES technology helps enable urea producers to safely and effectively incorporate elemental sulphur, a highly sought-after nutrient, into their processes. Our flexible technology can be used to produce a range of urea plus sulphur grades and includes our patented micronization process, resulting in a unique finished product that delivers value in production and in the field.

Sample Grade: 40-0-0-13ES
Elemental Sulphur Range from 5-20%

DID YOU KNOW?

UREA IS THE MOST COMMONLY USED FERTILIZER IN THE WORLD. IF JUST 5% OF GLOBAL UREA PRODUCTION WAS CONVERTED TO A 7% UREA-ES PRODUCT, THERE WOULD BE ENOUGH SULPHUR TO SUPPLY 22 MILLION HECTARES OF CORN*.

WHY PRODUCE UREA-ES?

- **Diversify your offer –** add a valuable nutrient to your product portfolio and differentiate your business.
- **Meet rising demand –** respond to the increasing need for sulphur fertilizers and build your market share.

WHO IS IT SUITABLE FOR?

Market-leading urea producers who believe that conventional urea is not sufficient to meet the changing needs and expectations of global growers.

SIMPLE IMPLEMENTATION

With existing equipment and a few plant upgrades, you can convert urea production into Urea-ES production with the flexibility to run in campaigns. The result is a high-performing, differentiated product that addresses many of the challenges growers face today.

Tailor your grades to meet the nutrient needs and practices of your target markets:

Example Grades	Example Crop	Recommended N:S Ratio
43-0-0-7ES	Cereals (corn, rice, wheat)	10:1 (Split Application, ⅔ at planting)
41-0-0-12ES	Oilseeds (canola)	7:1 (Split Application, ½ at planting)
37-0-0-20ES	Sugarcane	4:1 (3 x Split Application)

Urea-ES can also be blended with urea and other components to meet specific nutrient requirements.

*Calculation based on IFA statistics of Global Urea consumption and an average sulphur application rate for corn of 25 kg/ha.

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UREA-ES HAS BEEN PROVEN IN THE FIELD

More than five years of field trials by recognized agronomy institutes around the world have shown Urea-ES to be a viable sulphur source that delivers outstanding performance for a variety of crops and growing conditions.

Using Urea-ES as the sulphur source resulted in an average 12% yield increase*

UP TO
55%
YIELD INCREASE IN **CORN***

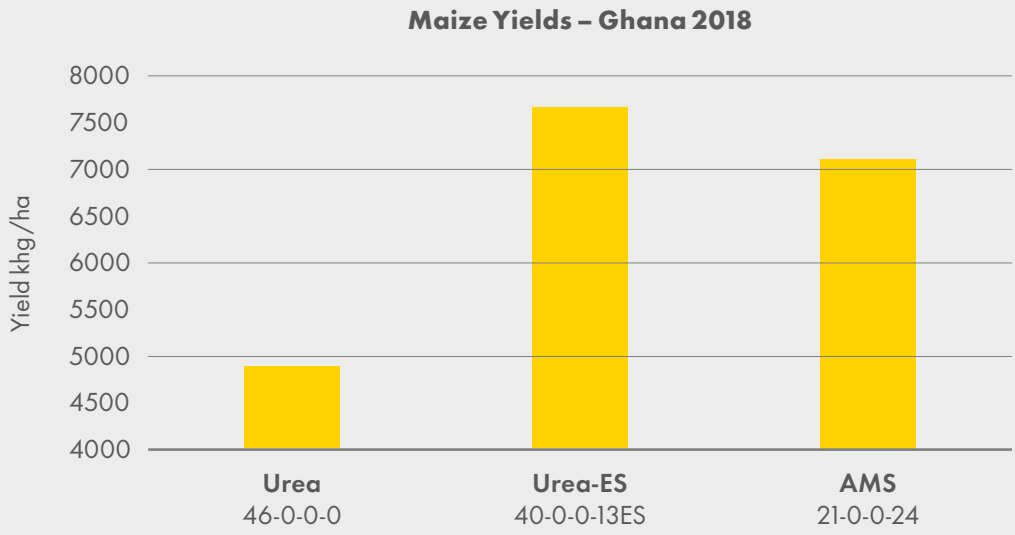
UP TO
35%
YIELD INCREASE IN **COTTON***

UP TO
11%
YIELD INCREASE IN **RICE***

These agronomy results are based on field trials carried out in Canada, the United States, Argentina, Pakistan, Ghana and Kenya with Urea-ES being tested on canola, corn, soybean, cotton and rice. Using scientific protocols, nutrients were balanced across all trials and all products (with the exception of a control which received no sulphur).

*Compared to the control.

CASE STUDY: MAIZE FIELD TRIAL IN GHANA, 2018



Treatment application rates were uniform for all nutrients with urea as control (no S). 50 kg S ha, 250 kg N ha

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