

(autumn) season without fear of sulphate losses. This is followed by the subsequent slow-release of plant available sulphur in the spring to match crop needs.

In US field trials, Smart Nutrition™ MAP+MST® has been shown to deliver an adequate supply of sulphur to crops. For comparison purposes, trial results were compared to the equivalent sulphur supply rates from the application of ammonium sulphate (AMS), a readily available sulphate-sulphur source. Results indicate that Smart Nutrition™ MAP+MST® supplies adequate sulphur to maximise yields, matching the sulphur availability from AMS applications, while protecting the environment from potential leaching losses.

In summary, the key benefits of Smart Nutrition™ MAP+MST® (9-43-0-16S) include:

- High performance across diverse crop, soil and environmental conditions
- Increased nutrient availability for quicker crop uptake
- Slow-release behaviour keeps sulphur available throughout the growing season
- Optimised for dry fertilizer storage, handling, and spreading logistics
- Safe for seeds, handling and storage.

Tuning wastewater into fertilizers

Netherlands-based Fertipaq exhibited at this year's IFA annual conference in Prague – attracting a lot of interest in their novel Fertipaq s600 organic sulphur fertilizer and their 'circular economy' business model.

Fertipaq is a wholly-owned subsidiary of Netherlands-headquartered water treatment technology company Paques. The company sources its concentrated liquid sulphur suspension fertilizer from wastewater treatment plants around the globe.

The Thiopaq desulphurisation units installed at these plants biologically treat and recover sulphur from wastewaters rich in hydrogen sulphide. The sulphur produced by these installations comes from a range of different industries including pulp and paper and food and beverage companies.

Fertipaq s600 has distinct advantages over sulphur products derived from oil and gas production, according to the company. Its hydrophilic properties and very fine particle size (<20 microns), for example, ensure the product is 'rain fast' and oxidises easily to supply crops with the sulphur they need under difficult growing conditions.

Fertipaq s600 is a liquid fertilizer and is therefore sprayable and – advantageously – can be added to and applied alongside nitrogen solutions. Applying sulphur and nitrogen together makes sense, suggests Fertipaq, as these two nutrients are closely connected. Sulphur plays a role in nitrogen uptake, for example, and without adequate nitrogen, photosynthesis cannot take place.

In addition to its concentrated liquid sulphur suspension product Fertipaq also manufactures and sells sulphur cake, a raw material with a high dry matter content that is suitable for various agricultural and horticultural applications. ■

References

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3. Kiferle, C., et al., 2022. Improvement in fruit yield and tolerance to salinity of tomato plants fertigated with micronutrient amounts of iodine. *Sci. Rep.* 12:14655.