NATIONAL PRESS RELEASE

Growers warned of false security with P and K

Growers who paused potassium (K) and phosphorus (P) applications in recent seasons to prioritise other nutrients are warned against continued application breaks to avoid depleting soil nutrient reserves further and risk crop deficiencies.

Soils with good reserves of P and K will have sustained crop growth and quality during recent application gaps, with growers unlikely to have noticed much difference in the past two seasons. However, Toby Ward, nutrition agronomist at Origin Soil Nutrition, says time is running out and maintenance applications will be needed to avoid a nutrient deficiency.

“P/K soil reserves will have been used by the crop in the previous seasons, and it is likely that a third-year P/K application break will reveal crop deficiencies. Indications such as slow rooting and establishment due to a lack of phosphorous, or scorched leaves and reduced disease resistance for low potash levels, are clear signs of nutrient shortages.”

Toby went on to say the harsh reality of returning soil nutrients back to previous levels will require significant investment and time to do so. Replacing lost nutrients takes much longer than the two-year application gap.

He continues: “Dropping from an index 2 to an index 1 may incur a greater cost to move back up than applying maintenance applications, and, in some cases, can take 10-15 years. Maintenance applications are essential this year to avoid this becoming a reality for some growers. The slower establishment and reduced disease resistance in subsequent years, caused by low soil P/K, will also have cost implications to the farm.”

Preserving plant available levels of these nutrients will have wider benefits to the soil profile. Crops with good access to phosphate will develop stronger and healthier root structures, which leads to improved uptake of other nutrients. Good levels of potassium supports cell wall growth and improves disease resistance, which is vital for plants throughout the growing season.

As a guide, a maintenance application of K on soil index 2, growing an 8t/ha crop of winter wheat, requires on average 120kg/ha per year. However, to increase plant available soil K by 50mg/l, an application of 300-500kg/ha of K would be required over a 10-year period, in addition to the maintenance pass.

“This example highlights how costly it could be to let levels drop too low. Growers looking to apply these nutrients in different ways, or benefit from sustained nutrient release patterns to increase nutrient efficiency, should use a detailed soil analysis to match the deficiencies to crop and soil requirements for the season ahead,” concludes Toby.

–ENDS–

Image: P and K loading

Caption: P and K additions will be vital to maintain crop performance this season

Notes to editors:

- Origin Soil Nutrition is a national manufacturer and distributor of fertiliser with 11 production facilities across Great Britain and headquarters in Royston, Hertfordshire.
- Origin Soil Nutrition has over 18,500 products to help arable and grassland farmers make better use of fertiliser – both financially and environmentally – by using targeted prescription fertilisers to improve soil fertility and crop productivity. Targeted nutrition (with a known carbon footprint) can have a significant impact on helping farming reach sustainability goals.
- A team of regional in-house nutrition agronomists offer practical advice to merchants and growers on ways to improve their crop nutrition and fertiliser usage.
- Origin Fertilisers is changing its trading name to Origin Soil Nutrition in Q4 2024.

10 March 2025

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