Annual Soil Summary

NRM is the UK's leading provider of agronomic analysis.

Every year we publish summarised data from thousands of samples from farms across the country. Our soil, plant tissue, harvested crops, and inputs analysis helps farmers and their advisors understand their nutrient status and benchmark against other farms. This data helps them plan and implement insightful management decisions to prepare them for the coming season.

The 2024 - 2025 summary includes data from over 350,000 soil samples collected between June 2024 and May 2025. The nutrient levels outlined in the 9th edition of the RB209 are used to summarise our data for phosphorus, potassium, and magnesium in the soils of four different crop categories.

This year's results show that average soil pH values remain close to agronomic targets for both land uses.

- Arable soils: Average pH 6.99 (target 6.7)
- Grassland soils: Average pH 6.23 (target 6.2)

Maintaining soil pH near these targets is vital for nutrient availability, soil biological activity, and overall crop performance. While most soils are well-balanced, continued attention to liming programmes will help sustain optimal nutrient-use efficiency and prevent gradual soil acidification.

While potassium (K) levels were broadly consistent between systems (averaging Index 2-), magnesium (Mg) levels were higher, averaging Index 3, indicating that most soils hold adequate reserves to support crop requirements and maintain structural stability. Generally good phosphorus (P) availability was found across UK soils.

Soil organic matter (SOM) levels were generally consistent with expectations for both systems, with arable soils averaging 5.87% and grassland soils averaging 9.95%. These results emphasise the importance of maintaining SOM to support soil structure, biological activity, and long-term nutrient cycling.

To book analysis for your farm or for help interpreting your results, talk to your agronomist or contact us.

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2024-2025 Soil Summary

Phosphorus is a cornerstone of plant growth and productivity. Regular soil testing (every 3-5 years or annually on a rotational basis) helps identify nutritional imbalances early, allowing prompt corrective action. This not only supports optimal crop production, but also safeguards the environment.

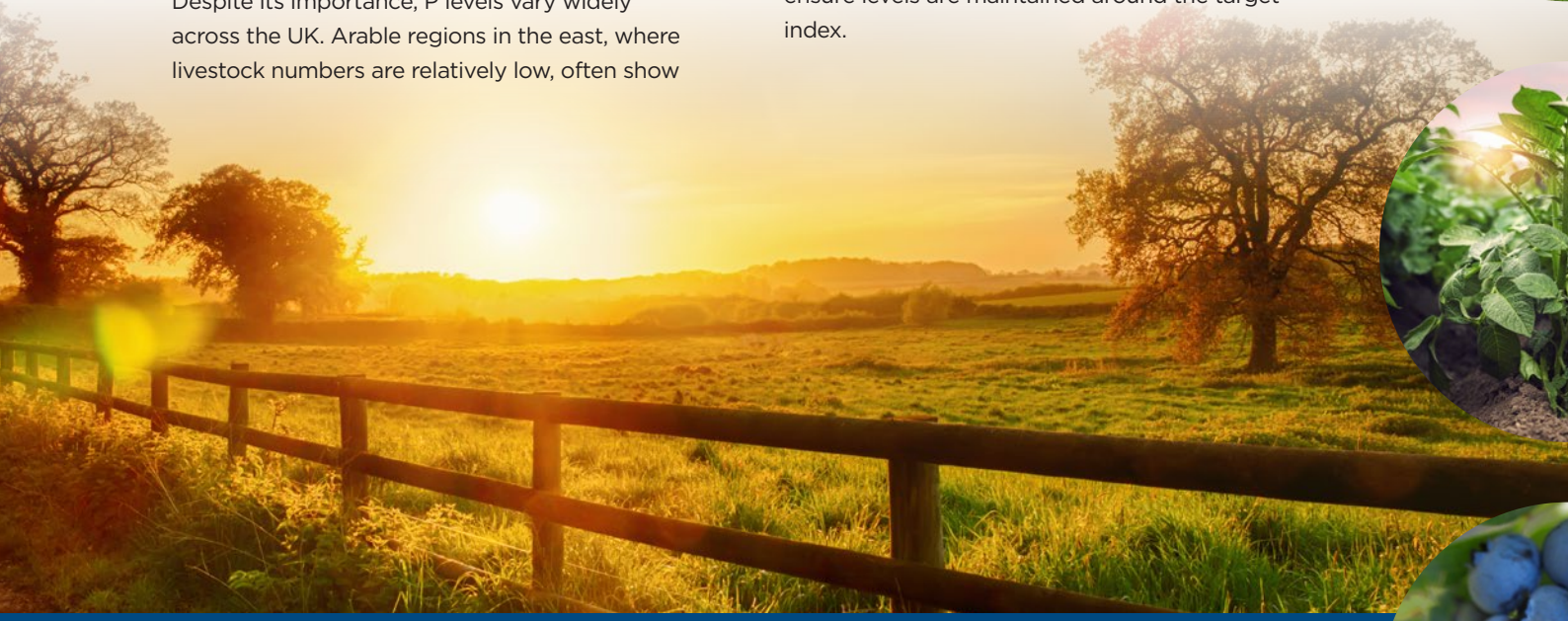
Phosphorus (P) drives many of the most fundamental processes in plants. It powers cell division, DNA and RNA formation, and energy transfer through ATP. Without adequate P, root systems fail to develop properly, leaves remain stunted, and overall yields decline. In short, no P means no growth.

Conversely, excessive P can reduce the uptake of essential nutrients such as zinc (Zn) and iron (Fe) and increase the risk of runoff losses that contribute to water pollution.

Despite its importance, P levels vary widely across the UK. Arable regions in the east, where livestock numbers are relatively low, often show deficiencies. In contrast, livestock-rich areas of the northwest tend to record levels well above target, reflecting years of repeated manure applications. Understanding these regional differences is essential for balanced nutrient management.

Soil pH is a crucial factor. For best results, arable soils should be maintained at a pH of around 6.7, while grassland soils should remain close to 6.2. When pH levels drift outside these ranges, P binds with iron, aluminium, or calcium, making it unavailable to plants. Tillage methods and sampling depth can also influence measured phosphorus levels, so consistent testing practices are important.

To support both crop productivity and environmental protection, P inputs should be carefully matched to crop offtake. Regular soil testing remains the best way to track trends and ensure levels are maintained around the target index.



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NRM Focus: Soil Phosphorus

Key Findings

- Arable soils continue to maintain good levels of fertility. 33% of samples were at target Index 2, while 41% were above and 25% were below.
- Grassland soils, in contrast, show a slight shift compared with last season. This year, 30% of soil samples were at the target (P Index 2), 33% were below (P Index 0 and 1), and 37% were above. The small increase in high index soils, alongside a fall in those at the target level, highlights the importance of maintaining balanced fertiliser inputs and avoiding over-application.

This suggests that phosphorus management across arable land remains broadly stable, with a continued need to monitor high indices to prevent potential nutrient surpluses and/or losses.

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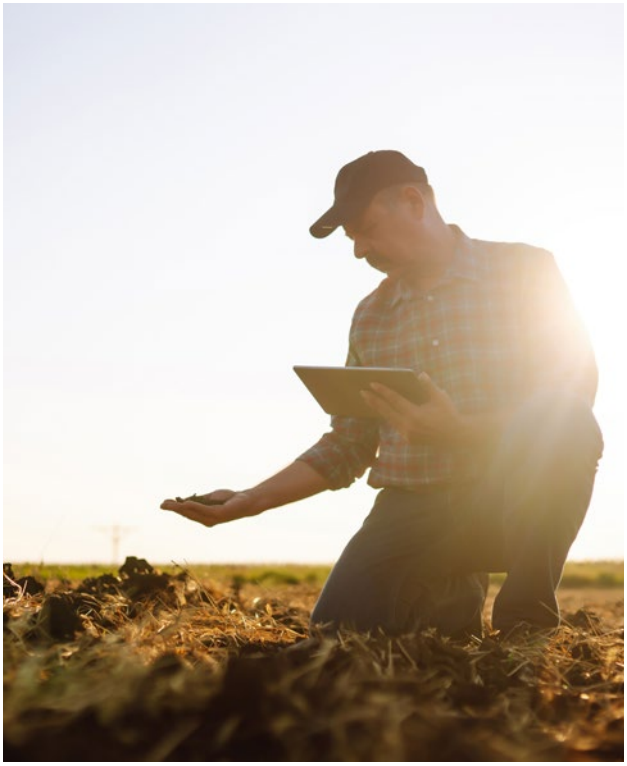
Phosphorus management in the wider landscape

Phosphorus losses to water pose a major environmental concern. When excess phosphate enters rivers and lakes, it stimulates algal blooms that deplete oxygen, harming fish, wildlife, and aquatic ecosystems. In England and Wales alone, around two million tonnes of soil and organic matter are lost to water each year, with much of it carrying phosphorus. Losses are particularly severe on sloping clay soils, where runoff and erosion are prevalent.



Practical recommendations for managing phosphorus nutrition for sustainable agriculture

The stark differences seen across the UK emphasise the need for tailored management practices. While farmers with low P soils must rebuild reserves carefully, those with excess must hold back and allow levels to decline. Index 2 requires a maintenance approach to hold a steady balance.

What can we do to optimise crop production whilst limiting losses to the environment?

- Field management: buffer strips, beetle banks, grassed tramlines, cover crops, and sediment ponds will help limit phosphorus losses.
- Soil care: maintaining structure and organic matter to improve infiltration and reduce compaction.
- Careful nutrient planning and timing: avoiding applications on high-index soils, timing manure and fertiliser use carefully, and analysing organic manures for accurate nutrient values before applying.
- Analyse all year round with soil, plant tissue (CropCheck), and grain (GrainCheck) analysis to help provide a complete picture of phosphorus status.

For further information on soil organic matter analysis, talk to your agronomist or contact our customer services team on 01344 886 338.

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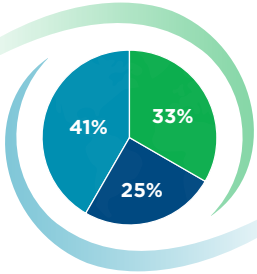
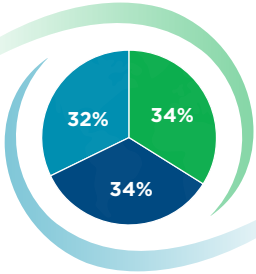
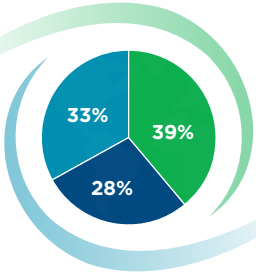
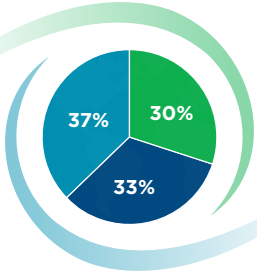
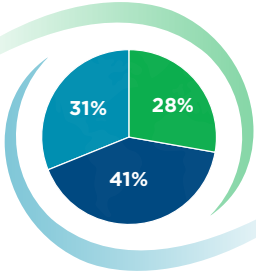
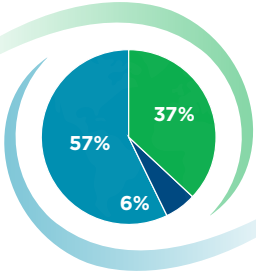
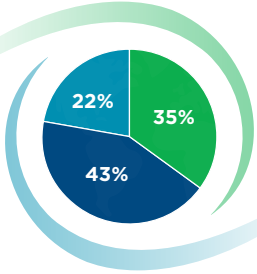
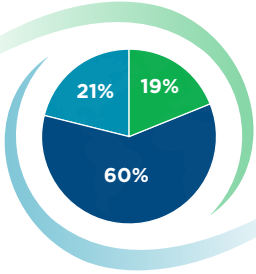
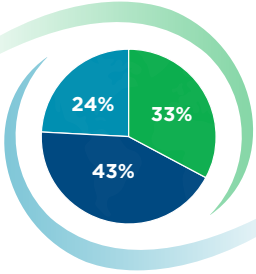
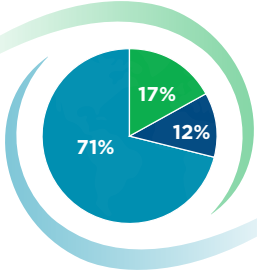
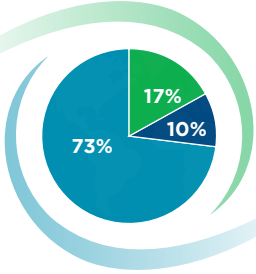
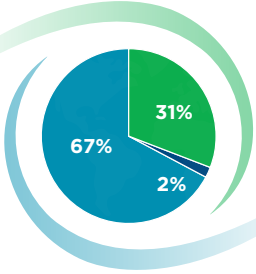
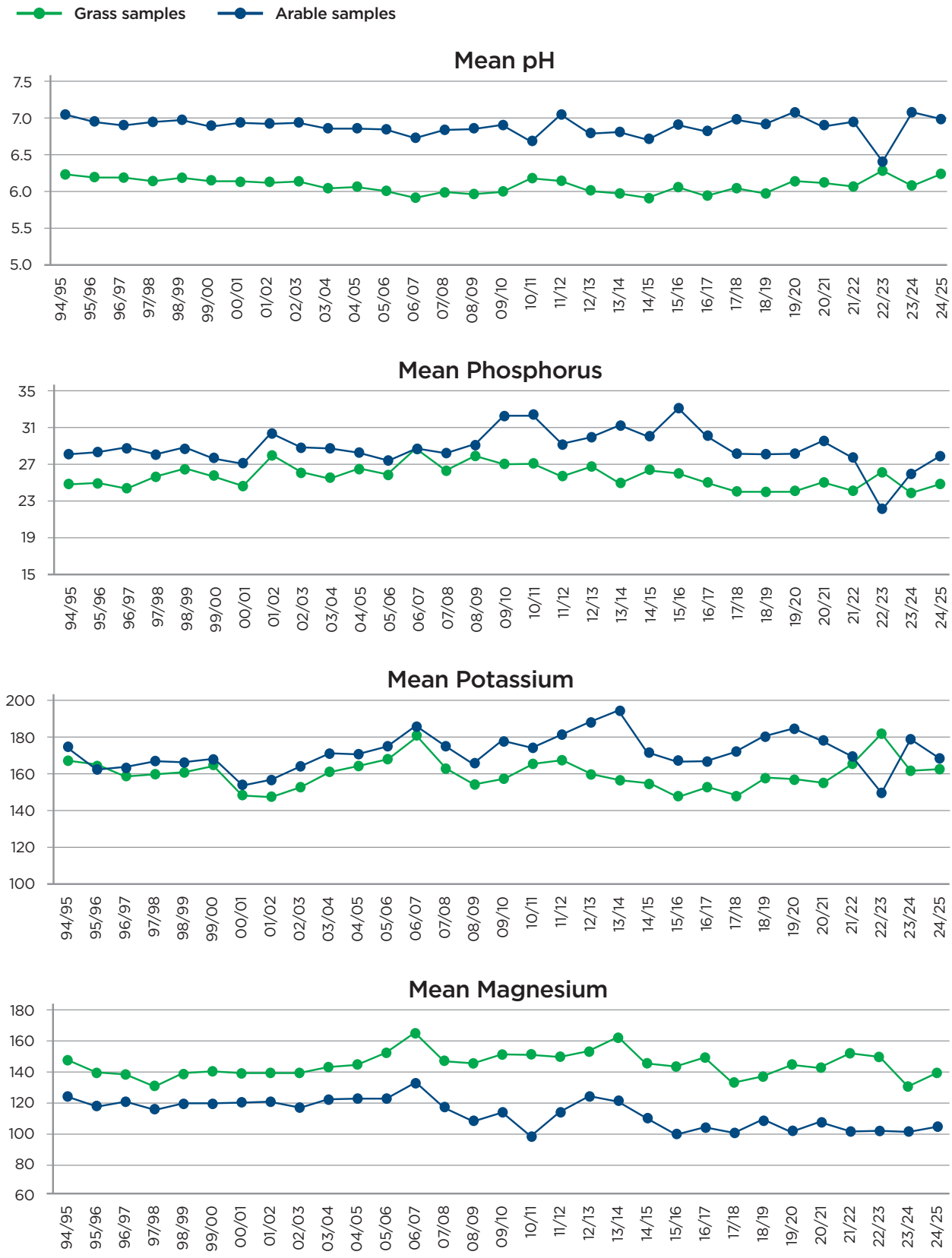
Summarised Results

	Phosphorus	Potassium	Magnesium
 **Arable Soils**	 33% of soils at target value	 34% of soils at target value	 39% of soils at target value
	> Index 2 < Index 2 Index 2	> Index 2 < Index 2 Index 2	> Index 2 < Index 2 Index 2
 **Grassland**	 30% of soils at target value	 28% of soils at target value	 37% of soils at target value
	> Index 2 < Index 2 Index 2	> Index 2 < Index 2 Index 2-	> Index 2 < Index 2 Index 2
 **Vegetable & Bulb Soils**	 35% of soils at target value	 19% of soils at target value	 33% of soils at target value
	> Index 3 < Index 3 Index 3	> Index 2 < Index 2 Index 2+	> Index 2 < Index 2 Index 2
 **Fruit, Vines & Hops Soils**	 17% of soils at target value	 17% of soils at target value	 31% of soils at target value
	> Index 2 < Index 2 Index 2	> Index 2 < Index 2 Index 2	> Index 2 < Index 2 Index 2

1994-2025 Trends



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