K+S sees bigger role for potash as UK gets drier

The ‘Cinderella nutrient’ can give better water retention in soil and better water uptake by plants. Chris Lyddon hears at a K+S press briefing

Potash is often overlooked. It’s easy to skimp on it when there might be no immediate yield penalty. But potash supplier K+S believes the nutrient can have a vital effect on soil’s ability to retain water and plants’ ability to take it up.

Richard Pinner, managing director UK and Eire for K+S, explained that the company is one of the leading suppliers of standard and specialty fertiliser.

“We’re Europe’s largest potash producer,” he said. Potash has not gone up in price in the same way as other nutrients, it had been the most stable input cost for farmers to skim on it when there might be only the start.”

He said there was no need to discuss whether there was climate change or not. “Conditions for farmers in Europe for water resources, especially in spring and summer, are more and more unfavourable. The target is intelligent water management and the changing conditions.

“Maybe in Europe the annual rainfall is not decreasing, but the problem is the distribution,” he said. “In the hot periods there is less water available.”

Prof Gransee explained the role of potash as a lubricant, in effect the oil that makes the plant system run. “It’s well-known that potash is linked to the efficiency of water use,” he said. “You can’t replace water by nutrients, but what you can do is teach the plant to cope with dry conditions better.”

If you have drought conditions the influence of nutrients becomes more important.

“The first reaction of crops to potash and magnesium deficiency is limitation of sugar transport from the leaves. Magnesium and potash control the transfer of sugar from the leaves to the other organisms including impacting the root growth. It’s obvious that these plants aren’t able to take up enough nitrogen and water, especially under dry conditions.”

The effect of nutrient deficiency on roots could be dramatic. “That has a tremendous impact on yield,” he said.

SOIL WATER STORAGE

K+S has also looked at the water storage of the soil under field conditions. Potash could help the soil producer bridges that help hold water.

“These are clay minerals,” Prof Gransee explained. “It’s not clear at the moment if different clay minerals have a different effect.”

There was also an effect on the shear strength of the soil. “Shear strength, especially in sandy soils, is very important for soil structure,” he said.

Adequate potash increases water availability

Jerry McHoul, K+S agronomist, explained how water is moving up the political agenda in the UK.

“Last year was the driciest year on record in the Midlands and the second driest in the South-East,” he said. “There's an increasing trend, becoming drier and warmer. The issue of compaction or not. "Conditions for farmers in Europe for water resources, especially in spring and summer, are more and more unfavourable. The target is intelligent water management and the changing conditions. "Maybe in Europe the annual rainfall is not decreasing, but the problem is the distribution," he said. “In the hot periods there is less water available."

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