

Don't neglect phosphorus (P) and potassium (K)

With a 25% reduction in the use of both P and K fertilisers in 2022, a word of caution is advised around soil fertility levels.

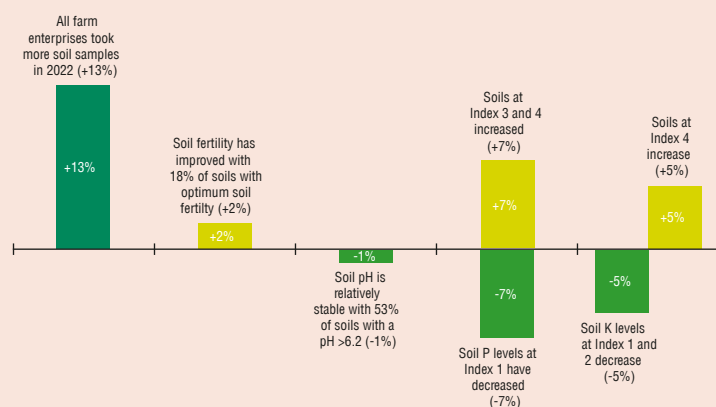
With the continued high fertiliser prices, there is a real concern around national soil fertility levels declining in the years ahead. A lot of progress with soil fertility has been achieved in the last five to 10 years and building on that progress is essential to driving nitrogen (N) use efficiency and reaching national emissions targets.

Fertiliser planning will be critical to managing all applied nutrients if we are to continue to maintain and build soil fertility levels.

In 2022, Teagasc analysed a total 38,134 soil samples comprising of dairy, drystock and tillage enterprises. Soil sample numbers increased by 13% in 2022, which is the same as the increase in 2021. There were 30,082 grassland soil samples (+12%). For dairy farms, 23,322 soil samples (+11%), and on drystock farms, 10,062 soil samples (+19%). On tillage farms, there were 4,325 soil samples, which represents a 14% increase in soil samples in 2022.

Overall, soil sample numbers have increased on all farming enterprises. This increase is primarily driven by the significant increase in the cost of N, P and K fertilisers, in addition to changes to soil sample requirements as per the nitrates directive. The following is a

National highlights (all soil samples).



summary of the main changes for soil pH, phosphorus (P) and potassium (K) in 2022.

National highlights (all soil samples)

- All farm enterprises took more soil samples in 2022 (+13%).
- Soil fertility has improved, with 18% of soils with optimum soil fertility (+2%).
- Soil pH is relatively stable, with 53% of soils with a pH >6.2 (-1%).
- Soil P levels at index 1 have decreased (-7%), soils at index 3 and 4 increased (+7%).
- Soil K levels at index 1 and 2 decreased (-5%), soils at index 4 increased (+5%).

Enterprise highlights

- **Dairy**
 - 20% of soils have optimum pH, P and K (4% increase).
 - 53% of soils have a soil pH >6.2 (no change).
 - 21% of soils are at P index 1 (8% decrease).
 - 28% of soils are at P index 4 (6% increase).

- 39% of soils are at K index 1 and 2 (9% decrease).

• Drystock

- 13% of soils have optimum pH, P and K (no change).
- 43% of soils have a soil pH >6.2 (4% decrease).
- 31% of soils are at P index 1 (5% decrease).
- 43% of soils are at P index 3 and 4 (4% increase).
- 53% of soils are at K index 3 and 4 (no change).

• Tillage

- 19% of soils have optimum pH, P and K (1% increase).
- 61% of soils have a soil pH >6.5 (No change)
- 52% of soils are at P index 1 and 2 (5% decrease).
- 23% of soils are at P index 4 (4% Increase).
- 29% of soils are at K index 2 (7% Increase).
- 30% of soils are at K index 4 (8% decrease).