

# **Against the grain – Minimising terrestrial export of P with a low grain P trait**

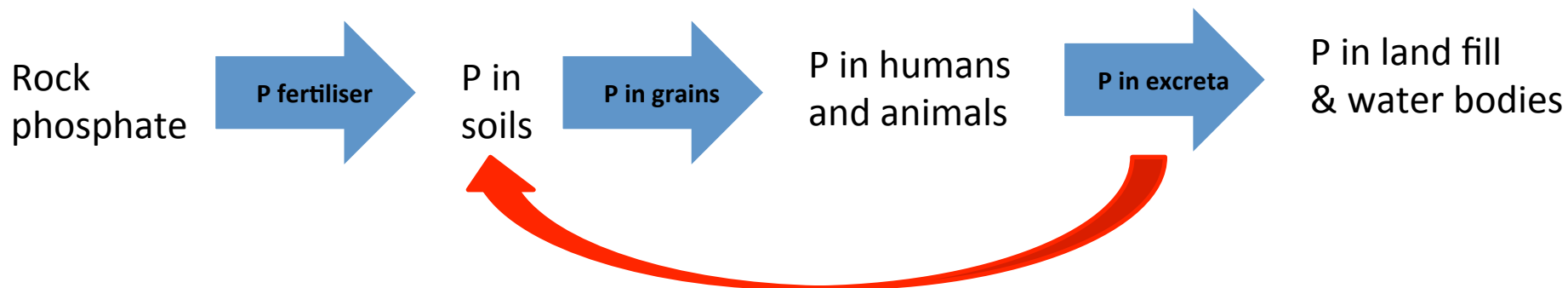
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Sustainable Food Systems



## Against the grain: minimising terrestrial export of P with a low grain P trait

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Key step: P in grains/fruit equates to > 80 % of P applied as fertiliser each year

## Problems with a low grain P trait

1. Human nutrition? Unlikely, more likely to improve Ca, Mg, Zn, Fe bioavailability
2. Seedling vigour? Needs addressing through breeding and agronomy

## Breeding a low grain P trait

1. Exploiting genotypic variation? Very tricky
2. Engineering? Need to understand P transports and gene networks involved
3. Mutants? Possible, as per low-phytic-acid (lpa) mutants, but a lot of screening to be done

