

Subsequent deliverable Elements / Reserve Fraction

Elements in the reserve fraction / subsequent deliverable elements are those elements which become accessible to plants by natural weathering processes within 10 to 15 years.

The reserve fraction e.g. of Phosphorus was accumulated during the last 40 years with the common N-P-K fertilizing strategy. In some places negative interdependencies are already observed. Is the phosphorus content for example too high zinc can be fixed.

Ecological Importance:

For ecological and economic reasons it is useful to mobilize existing reserve pools of the fields and sites instead of adding fertilizers..

Depending on the kind of nutrient and the bond type of the nutrient the following strategy examples are suitable for mobilization:

- Application of acidly-acting fertilizers
- Application of alkaline-acting fertilizers
- Utilization of the ion competition (synergism, antagonism)
- Encouraging biological activity
- Catch crop / nurse crop of plants with the special ability to digest certain nutrients
- Crop rotation
- Tillage

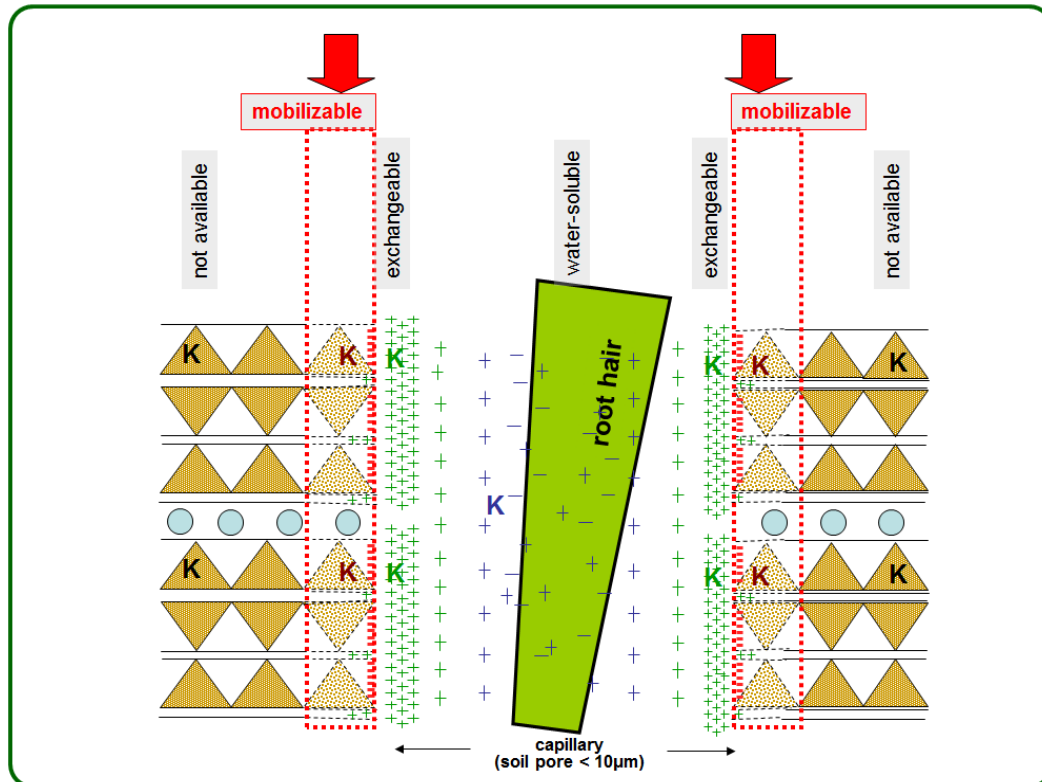


Figure: Soil pore, elements (e.g. K) in different solubilities, highlighted: subsequent deliverable elements / reserve fraction.