Subsequently deliverable elements / reserve fraction

Elements in the reserve fraction / subsequently deliverable elements are those elements which become available to plants through weathering processes within 10 to 15 years.

The reserve fraction e.g. of phosphorus, has been considerably replenished in the last 40 years through the supply of N-P-K fertilizers. In some cases, negative interdependencies have been observed. For example, if the phosphorus content is too high, zinc deficiencies can occur.

Ecological importance:

For ecological and economic reasons, it makes sense to mobilize existing soil reserve pools instead of adding nutrients by means of fertilization.

Depending on the nutrient and the form of binding, the following strategies are suitable for mobilization:

- Application of acidifying fertilizers
- Application of alkaline fertilizers
- Utilization of ion competition (synergism, antagonism)
- Promotion of biological activity
- Intercropping (catch crop) / subseeding (nurse crop) of plants with special mobilization capacity for certain nutrients
- Crop rotation
- Soil tillage

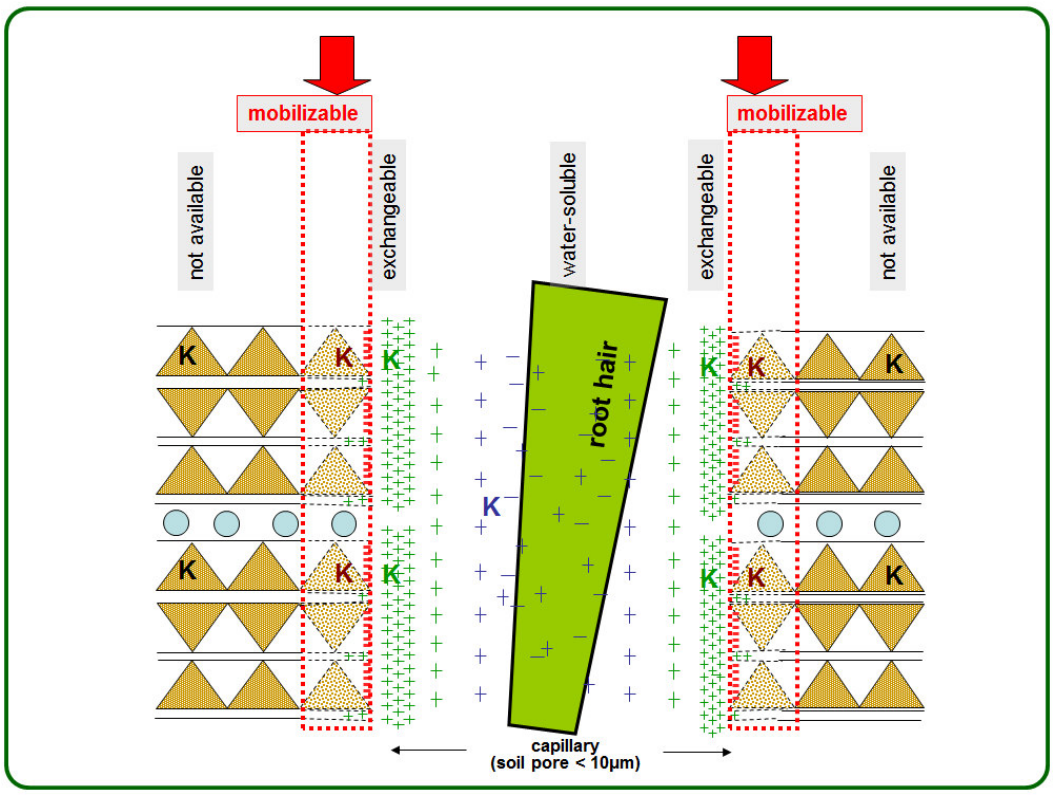

Figure: Soil pore, elements (e.g. K) in different solubilities, highlighted: subsequently deliverable elements / reserve fraction.