

REDUCE P-APPLICATION BASED ON SOIL P STATUS

first DRAFT

Author: G. Hofman

Description

In some countries or regions, especially with high inputs of animal manures, the total and available P in soils is high to very high which can be lost by run-off, erosion and/or leaching to the environment. A reduction of P-application can reduce these losses.

Rationale, mechanism of action

Too high phosphorus concentrations in surface waters lead to eutrophication. These high P-concentrations are at least partly due to losses from agricultural practices. P-inputs lower than the offtake by the crop will gradually decrease the P-concentration in the soil and as a consequence the P-concentration in surface waters in the long run.

Applicability

Knowledge of the mean P status of the soil in a certain region is necessary. If this is the case and the P status is high to very high, a reduction of P-applications can be advised. Farmers who think that certain fields have a lower P status can prove this with a soil analysis. It is a very simple measure and there is no need for technical equipment.

Effectiveness, including certainty

The measure will be effective at least in the long run. By diminishing the P-status it is not excluded that so called "retrograded P" will become more available and will further delay the effectiveness of the action.

Time frame

Depending on the height of the P status and the still allowed P-application, it can take several decades before real changes in losses will occur.

Environmental side-effect/ pollution swapping

No problems are expected.

Relevance, potential for targeting, administrative handling, control

Relevant for all fields above the optimum. Target values must be available which will be different depending on the extraction procedure. Farmers have to fill out a document indicating the total P-application. Control on the field will be only possible after several years.

Costs: investment, labor and acceptance by farmers

Except some administrative load no further investment and labor costs. The acceptance by life stock farmers can be hard because this will limit to a great extent the application of animal manure on their fields. As a consequence more animal manure has to be treated with supplementary costs.