

Name:

Phosphorous efficiency.

Definition:

Phosphorous use efficiency is the ratio between the amount of fertilizer phosphorous (P in P₂O₅ form) removed from the field by the crop and the amount of fertilizer P₂O₅ applied.

Calculation method:

This indicator is calculated by estimating the P use efficiency in each of the plots / crops.

$$\text{Indicator} = \frac{\sum_i (PE_i \times A_i)}{A_T}$$

Where:

Indicator: Total phosphorous efficiency (kg P output per kg fertilizer P)

PE_i: The phosphorous efficiency of crop *i*

A_i: Area for the crop *i* (ha)

A_T: Total area considered (ha)

The phosphorous efficiency of each of the crops is estimated as the division between the phosphorous included in the harvested production and phosphorous applied with fertilization.

Interpretation:

Greater phosphorous efficiency means better use of fertilizers by the crop.

Information source:

Crop area, applied inputs and yields of the different crops are taken from the survey.

The values of extractions of phosphorous by the crops are taken from the attached bibliography.

Bibliography and references:

IRENA 18 – Gross nitrogen balance. OECD / Eurostat Nitrogen handbooks (2007)

Ministerio de Medio Ambiente y Medio Rural y Marino (2010). Guía práctica de la fertilización racional de los cultivos en España.

Ministerio de Agricultura, Alimentación y Medio Ambiente (2015). Balance del fósforo en la agricultura española, año 2013. Metodología y resultados.