Practice SQ n° 7

SOIL LIMING

Introduction

Category: Good Practice (GP)

Practice identity card

#Soil liming, acidic soils

#SQ, food, feed, fibre, oil, industrial, Good Practice (GP), Poland

Short description

➔ Due to sandy soils (70%) and climate, Poland has problems with soil acidification. Over 4 million hectares have a pH in KCl below 5.0 - such soils can be considered degraded - they have a damaged structure, plants are not able to absorb nutrients, which leads to water pollution. An additional problem is the fact that most of the acidic soils are owned by small farms. The practice consists in a wide action of soil pH analysis, establishment of liming programs and reimbursement of part of the costs from CAP funds - eco-schemes fertilization with liming.

Implementation process

Which practice is considered as the standard in this region? Standard soil liming.

What was the on-farm issue/challenge/opportunity that led to the implementation of the practice? This is the basic solution to improve the efficiency of management and protect the water environment.

How long did it take to implement the practice and which are the measures needed to monitor: a longer period of time, due to the scale of the problem and the target audience - small farmers

Logistics

- **Logistic aspects to consider:** Costs, mechanization, transport over 50 mln ton of lime.
- **Skill/education level required:** rather low

Agronomical traits

- **Can the practice be applied to a multitude of cultivation techniques?** Just few techniques- soil analyse, lime spreading.
- **Targeted crop categories:** food, feed, fibre, oil, industrial
- **Soil types suitable for the practice:** sandy, loamy, silty
- **Expected effect on crop yield**: increase
- **Expected effect on crop yield variation**: increase
- **Expected effect on crop quality:** increase
- **Expected effect on crop quality variation:** increase
- **Which costs may increase due to the practice?** fertilizers, equipment, fuel, transportation
- **Which costs may decrease due to the practice?** skilled labour, herbicides, pesticides, fuel, energy
- **Expected long-term/indirect economic benefits of the practice:** increasing the efficiency of agricultural production, protecting water quality
- **Expected effect on the leaching of nutrients:** Main element to reduce leaching N and P from agricultural lands
- **Specific materials applicated through the practice:** meat/bone meal

Administrative context

- **Does the practice qualify for subsidies?** Yes- to the lime, soil analyse, advisory, popularization
- **Status of the legal framework that regulates the practice:** existing, however with gaps
- **Are there any policy barriers complicating the practice's application?** lack of awareness among politicians and small farmers
- **Does the practice involve the use of hazardous substances?** No, practice even allows to reduce the danger of absorbing heavy metals from the soil
- **Is the practice compliant with EU organic farming practices?** Yes
- **Is the practice supported by Eco-schemes?** Yes - mainly
- **Are there any gaseous emissions to be considered upon application of the practice?** yes: ammonia
- **Greenhouse gas (GHG) reduction potential of the practice:** substantial
- **All features of the practice than may hinder its social acceptance:** dust, change of the landscape, logistics
- **Expected effects from the practice on the time occupation of the farmer?** substantial increase

Contact

Name of the FIN (Fertilization Innovation Network) partner submitting the information: Marek Krysztoforski
Contact information of the FIN partner: m.krysztoforski@cdr.gov.pl
Eu member state: Poland

Find out more

Source of information National State Report agricultural land in Poland: acidification of soils and their regeneration through liming - current state and proposals for systemic solutions

Additional info/links:
http://phavi.wapno-info.pl/at/attachments/2022/0422/133556-spw-raport-zakwaszenie-gleb-wydanie-ii-luty-2022.pdf
https://www.bing.com/videos/riverview/relatedvideo?q=wapnowanie+gleby&mid=BC9481B300A74844D7FDBC9481B300A74844D7FD&FORM=VAMTRV