

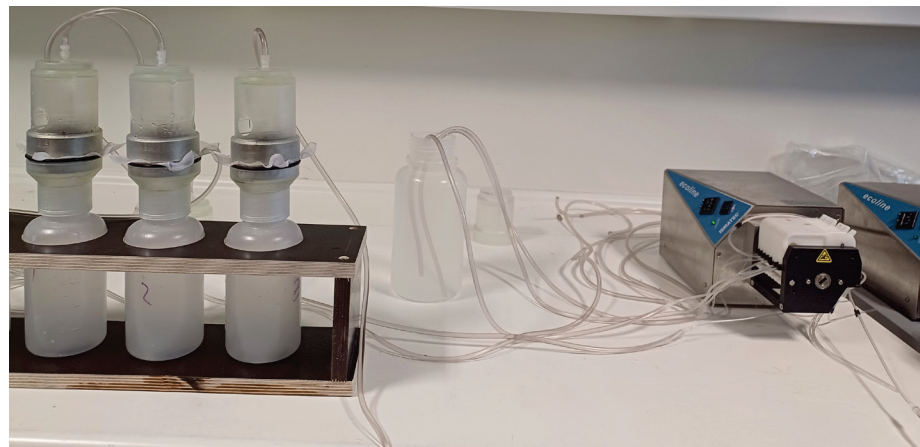
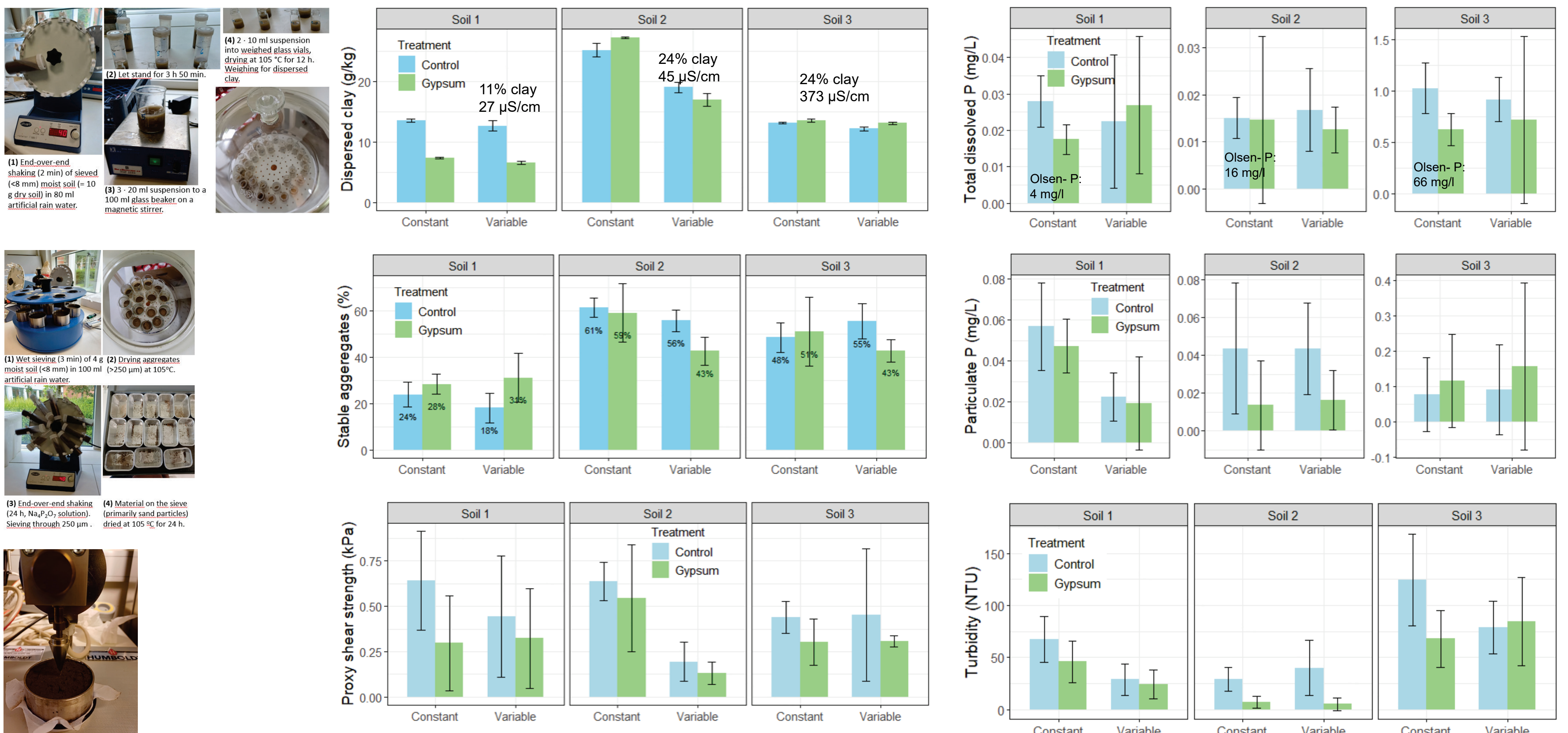


The GYPREG and NordGypsum projects examine the performance of gypsum amendment at scales ranging from the laboratory to the field in Denmark, Latvia, Lithuania, Norway, Poland, Sweden and Åland. The aim is to develop nationally adapted operating models for applying the gypsum method. - Provided the method works, of course.

Drainage water before (left) and after (right) gypsum amendment. Photo: Mats Willner (ELY Centre for Varsinais-Suomi).

Testing gypsum amendment for reducing the agricultural phosphorus load to the Baltic Sea

Gypsum amendment has a potential to markedly reduce P losses from Finnish fine-textured soils (Ekholm et al. 2012, 2024, Ollikainen et al. 2020). As the mechanism by which gypsum works is not fully understood, it is difficult to estimate its effectiveness in soils in other countries and how its performance should be tested. Here, the effect of gypsum is assessed with simple soil structure tests and by leaching experiments, and the results will be related to those from simple soil tests.



Moisture regime (constant pF 2 or with drying cycles pF2, pF6, pF2) had a variable effect on the results. Gypsum decreased clay dispersion and increased water-stable aggregates in one out of three soils (Soil 1). Leachate concentration of particulate P and leachate turbidity was reduced in two soils (Soil 1, 2) and dissolved P in one soil (Soil 3). Hence, no clear trends in gypsum effect could be observed. Testing a larger number of samples will reveal which soils react to gypsum and whether the effect can be approximated based on simple soil tests.