

Determinants and barriers for farmers' adoption of pesticide free wheat production in Switzerland (PestiFreeWheat)

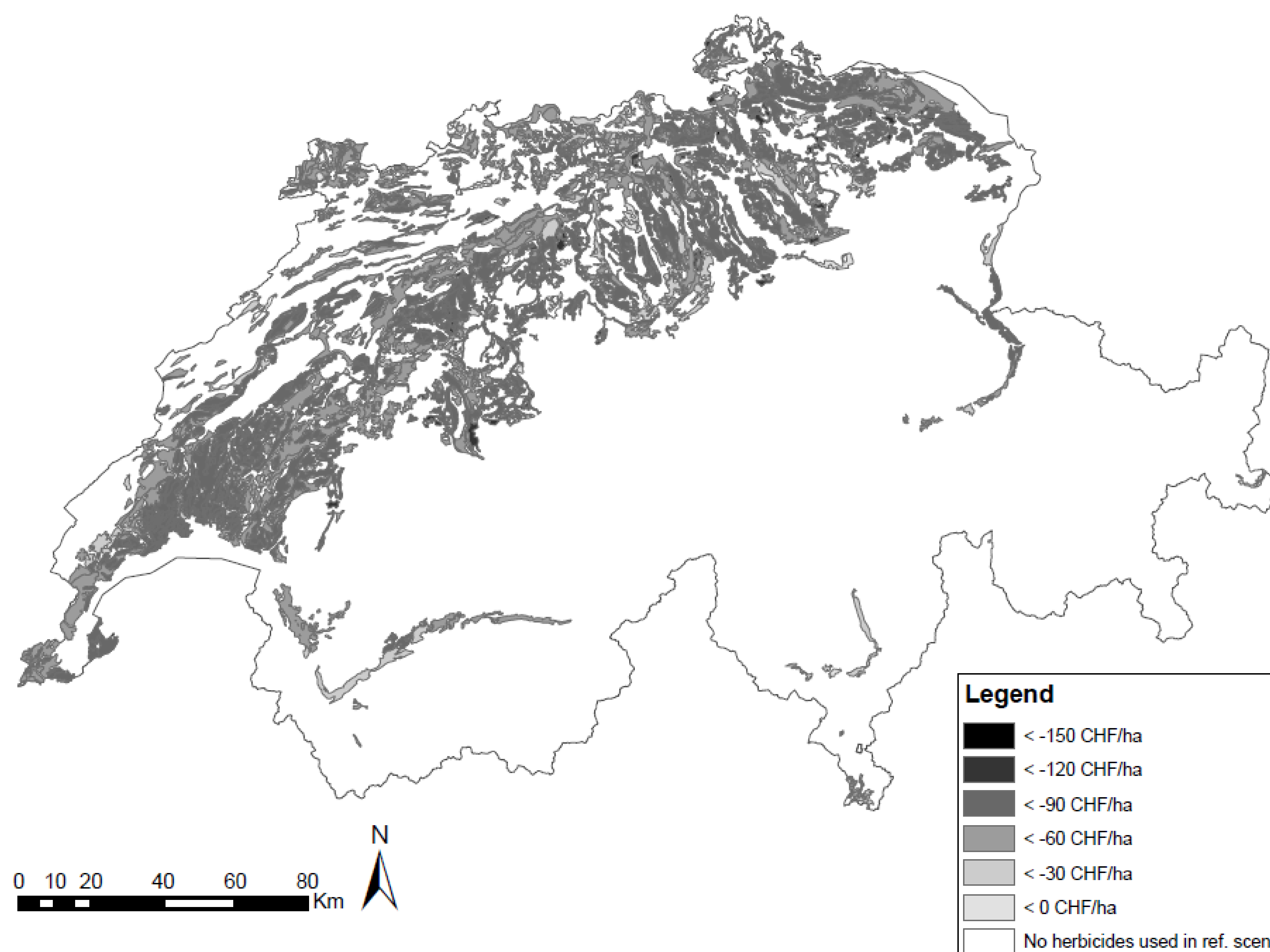
Niklas Möhring, Robert Finger

Goals

Pesticides are an important input for agricultural production, but adverse effects of pesticides on human health and the environment have repeatedly been found. The reduction of adverse effects is therefore on top of the agenda of consumers, food industry and agricultural policy. Moreover, private initiatives exist to reduce and replace pesticide use. In Switzerland, for example, the majority of cereals is produced under the Extensio program (only herbicides and seed treatments allowed). Farmers receive both direct payments and higher product prices via the producer organization IP-Suisse. In a next step, IP-Suisse is planning to introduce a completely pesticide-free (but not organic) production program. The goal of this project is to analyze determinants, challenges and potentials of a pesticide-free Extensio-wheat production program in Switzerland.

Research

Reduction of gross margin when giving up herbicide application
 (P = 52 CHF/ha, high weed pressure, average abundance, conventional tillage previously)



Building on results of an ex-ante bio-economic modeling approach (Böcker et al., 2019) we will conduct an ex-post evaluation based on a survey with Extensio wheat producers in Switzerland.

- assess the heterogeneous determinants of farmers' participation or intention to participate in the program

assess the feasibility of introducing large-scale, voluntary production standards for a reduced agricultural pesticide use

Publications

Böcker, T., Möhring, N., & Finger, R. (2019). Herbicide free agriculture? A bio-economic modelling application to Swiss wheat production. *Agricultural Systems*, 173, 378-392.

Böcker, T., Britz, W., Möhring, N., & Finger, R. (2019). An economic and environmental assessment of a glyphosate ban for the example of maize production. *European Review of Agricultural Economics*.