



## Master/Bachelor Thesis: SPRINT – Sustainable Plant Protection Transition: A Global Health Approach (interdisciplinary) GIUB, 13.12.2021

**Background:** Farming systems in Europe rely strongly on the use of Plant Protection Products (PPPs) such as pesticides to secure yields and food safety in plant production and animal husbandry: an average 340,000 to 370,000 tons of active substances are spread on Europe's fields every year. Multiple residues of these substances are commonly found in soil, water, crops, food and feed, as well as animals and humans. Data on the risks and impacts associated with PPPs' is, at present, scarce and fragmented. There is a need to deliver an integrated approach to fill this research gap. SPRINT (<https://sprint-h2020.eu/>) aims to develop a Global Health Risk Assessment Toolbox to assess impacts of PPPs on ecosystem, crop, livestock and human (EPAH) health.



**Project:** SPRINT is based on a multi-actor approach to engage stakeholders and identify needs, improving farmer and citizen awareness, joint development of novel strategies for reduced reliance on PPP use. SPRINT consists of 9 interlinked work packages. The distribution and the impacts of PPP on EPAH health will be evaluated at 10 EU case study sites (CSS) and one CSS in Argentina. The students will directly contribute to some of the work packages, namely a) identifying the link between PPPs exposure and the ecosystem health or b) identifying innovative and sustainable land management practices to reduce reliance on PPPs.

**Aims:** A comprehensive understanding of a) how the use or non-use of pesticides impacts the health of the environment, as well as animals, including livestock, and people, in agricultural areas or b) how sustainable agricultural management practices could reduce the reliance on pesticides.

**Learning goals:** The candidate will learn to analyse data which was collected at the canton of Bern. She/he will learn how to manage her/his Thesis project (data analysis, statistical analysis, interpretation, writing and presenting).

**Prerequisite:** The candidate should have attended the Bachelor course "Introduction to Physical Geography Labwork". The following courses are also recommended: "Advanced Lab Methods in Physical Geography Labwork I and II" as well as the lecture and the block course "Soil Biogeochemistry".

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