



# DIVERSITY FOR SUSTAINABLE AND RESILIENT AGRICULTURE

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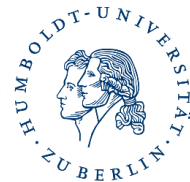
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## **Mapping available agricultural equipment to enable farmers' and manufacturers' interactions for an agroecological transition. The case of legume crops in Hauts-de-France region**

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In the broad spectrum of the shift towards sustainable agriculture, agroecological transition is widely targeted by policy guidelines and addressed by farmers in western Europe. Among the most known transformative factors, there are plant breeding, the achievement of nitrogen autonomy, crop diversification, and agricultural equipment. Insofar, the latter appears to be widely neglected in the literature. The availability of suited machinery and implements might be the simplest prerequisite for developing and deploying agroecological farming practices and cropping systems. This to decrease the existing gap between the design of equipment and of farming systems. In this vein, protein production raises specific challenges for the cropping systems.

The main goal of this study is the achievement of a shared perspective between farmers and machinery manufacturers. This study is contributing to the design of an analytical framework for the adaptation of equipment to the agroecological transition for legume crops. Our case study is in northern France (Hauts-de-France region), characterized by large crop farms (27400 farms with an average area of 78.5 ha which is 1.4 higher than the national average) and engaged in the quest for protein autonomy. As so, we will focus on the availability of agricultural equipment for forage legumes in the region. It will require involving multiple agricultural actors concerned by the agroecological transition, especially from the agricultural equipment sector.

We carried out two parallel actions. On one hand, we retrieved all the institutional and commercial structures in the region based upon documents available online to map the actors in the region and the possible interactions between them. On the other hand, we carried out an exhaustive inventory of all the 166 dealers in the region as experts to describe the available agricultural equipment for local farmers. The output of these two actions of information will be an integrative knowledge base. To study the interactions between these actors, as well as to check the equipment availability and their adaptation to agroecological transition, we conducted about 20 semi-directive surveys.

The main result will be a mapping of stakeholders and a catalogue of available equipment as an intermediate object to represent the sector considering all its complexity, thus mixing agronomic and social sciences towards a shared perspective.

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