



2<sup>nd</sup> International Symposium on Work in Agriculture

*Thinking the future of work in agriculture*

March 29<sup>th</sup> – April 1<sup>st</sup>, 2021

Clermont-Ferrand (France)

WS 2

**Health and work  
in agricultural activity**

---

## **Multidisciplinary approach ergonomics and law: a resource to improve the design of agricultural equipment and to reduce the risks of pesticide exposure**

Marion Albert<sup>a</sup>, Alexandre Charbonneau<sup>b</sup>, Alain Garrigou<sup>a</sup>

<sup>a</sup> University of Bordeaux, Bordeaux Population Health Center, Inserm U1219, EPICENE, France

<sup>b</sup> University of Bordeaux, Faculty of law, UMR CNRS n°5114 COMPTRASEC, France

---

**Abstract:** One of the factors of pesticide exposure is the equipment used for spraying pesticides. This can be explained by different utilisation issues and variabilities encountered during the use of the sprayer. This stems from the fact that the real needs of the farmers have so far been poorly taken into account. Therefore, the role of agricultural equipment designers can be questioned regarding the users' work activity and regulation integration during the design process. The originality of this research lies in its multidisciplinary approach: ergonomics and law. Considering the different issues presented above, this research aims at improving the design of the sprayer with an ergotoxicological approach integrated during the design process. It will also contribute to questioning the process through which regulatory documents are drafted regarding the design of the sprayer and to reducing the farmers' exposure to pesticide.

**Keywords:** sprayer design, use of agricultural equipment, pesticide exposure, ergonomics, prevention

---