

**PhD programme in MOUNTAIN ENVIRONMENT AND AGRICULTURE
(Curriculum 1 – Sustainable agricultural production systems)**

Research projects and supervisors		
Curriculum 1 Sustainable agricultural production systems		
Title	Supervisor(s)	Curriculum
<p>1. Endosymbiotic bacteria of insects and their potential use for sustainable pest control (cf: Smart Specialisation Strategy Innovazione e Ricerca Alto Adige 2030 - Smart Specialisation Strategy (RIS3) della Provincia Autonoma di Bolzano - Alto Adige – only available in Italian and German)</p> <p>Description - Bacteria play a crucial role in the biology and ecology of many insects, forming symbiotic relationships that can range from mutualistic to parasitic. Wolbachia, a widespread endosymbiont, is known for inducing cytoplasmic incompatibility, affecting the reproductive success of infected and uninfected individuals. This phenomenon has implications for the population dynamics and evolution of host species and has the potential to be used as an alternative approach for insect pest control. In this project Wolbachia will be characterized in agricultural insect pests and the role of this symbiont on the host species will be studied.</p> <p>We are looking for an enthusiastic candidate with a background in Agricultural or Biological Sciences, Agricultural Biotechnology, Ecology and Evolution. Competences with molecular genetic methods, next generation sequencing and bioinformatics as well as experience with ecological studies and field work are desired. The candidate should be fluent in English.</p>	<p>Prof. Schuler H.</p>	<p>1</p>