

FORM PER PROGETTI BANDO DOTTORATO

1. Project title

Maze landraces: tackling future challenges from tradition

2. Proposer

Surname	Landoni
Name	Michela

3. Research Unit

Surname	Name	Institution
Landoni	Michela	DSTA Università degli Studi di Pavia
Hay	Fiona	Aarhus University (Denmark), Department of Agroecology - Crop Genetics and Biotechnology. Unipv contract professor (LM Agri- food Sustainability)

4. Key words

(Max. 5 – at least 2)

Maize; Landraces; genetic diversity; stress resistance, yield

5. Abstract

(Max.1.500 characters with spaces)

Agrobiodiversity plays a crucial role in conferring resilience to agroecosystems, enabling them to buffer negative effects induced by climate change. Since the 1900s, approximately 75 percent of plant genetic diversity has diminished, driven by the abandonment of local varieties and landraces in favour of genetically uniform, high-yielding varieties.

It has been reported that maize landraces are characterized by the presence of important phytonutrients, as well as resistance to biotic and abiotic stresses, absent in the modern hybrids, because genetic improvement programs, aimed at increasing production, tend to ignore these traits.

In this project, maize landraces for human consumption will be characterized with the aim of valorising and promoting their cultivation. Starting from maize varieties studied in two ongoing projects (PSR Maisalpi and PNRR Spoke7), the most promising varieties will be selected by in vitro and field screening, genetic and morphological analyses to address current agriculture challenges, including increased production, nutritional value, water resistance and salt stress.