



Prof. Sonja Ivanovska

Faculty of Agricultural Sciences and Food North Macedonia

*EUROPEPLAND– Implementing a trans-EUROpean
PEPper LANDrace collection for resilient agriculture*

30 October 2024, Almeria, Spain



Faculty of Agricultural Sciences and Food



Oldest institution in agriculture

Founder of Ss. Cyril and Methodius University

90 employees, 64 PhD, 2 MSc

11 graduated, 11 MSc, 6 PhD study programs

74 ha trial fields



Faculty of Agricultural Sciences and Food

7 Institutes

Institute of Crop Production Department of Genetics and Plant Breeding

- Traditional breeding, including mutagenesis
- Molecular characterization
- Research on plant genetic resources
cereals, poppy, oilseed rape, beans, peppers, eggplant



Department of Genetics and Plant Breeding

Focus, 2014

Collecting seeds (local landraces)

8098 acc., 72 crops, 550 villages

1216 pepper acc.

Inventory collection, small no of seeds

Multiplication

Characterization (pepper, beans, eggplant)

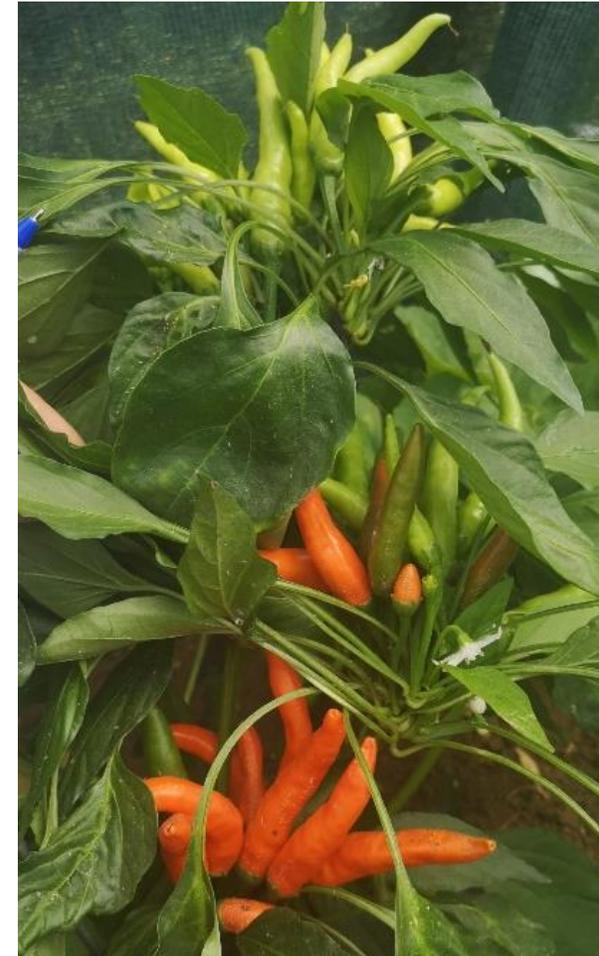


Project activities on pepper

NO PROJECTS, but

Experiments within 2 PhD thesis
2-years, 2 repetitions, RBD, description according to IPGRI

	1, completed	2, ongoing (3 locations)
No. of landraces	101 different types	189 embroidered pepper
Years	2017, 2018	2017, 2019
Analyzed traits:	42	47 Molecular characterization 16 genotypes, 16 SSR markers



Project activities on pepper

2020, Collaboration with CGN, Wageningen University Research

Multiplication of different pepper accessions

Years	2022	2023
No. of landraces	200	200
No of acc. sent to CGN	110	188

Analyzed traits:

Plant habitus, height

No flowers/axil, corolla color

Fruits

shape, length, width, surface, color, weight, hotness

Tested for Tomato Brown Rugose Fruit Virus (ToBRFV)

SMTA signed with benefit sharing



Project activities on pepper

Transplanting peppers



Project activities on pepper

Part of diversity in 2022



Pepper landraces collection diversity

Thin-skinned, for frying, fresh, specific aroma, sweet, mild-to very hot



Pepper landraces collection diversity

Thin-skinned



10 cm



Pepper landraces collection diversity

Thin-skinned



Pepper landraces collection diversity

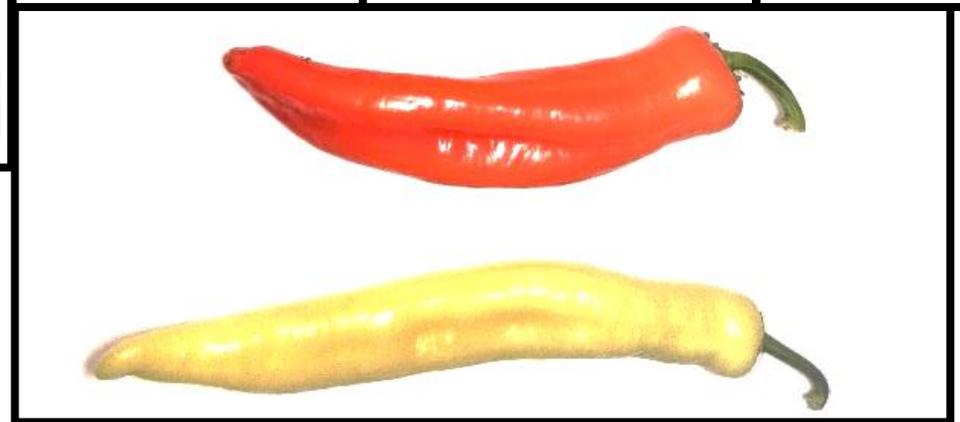
Thin-skinned



Pepper landraces collection diversity

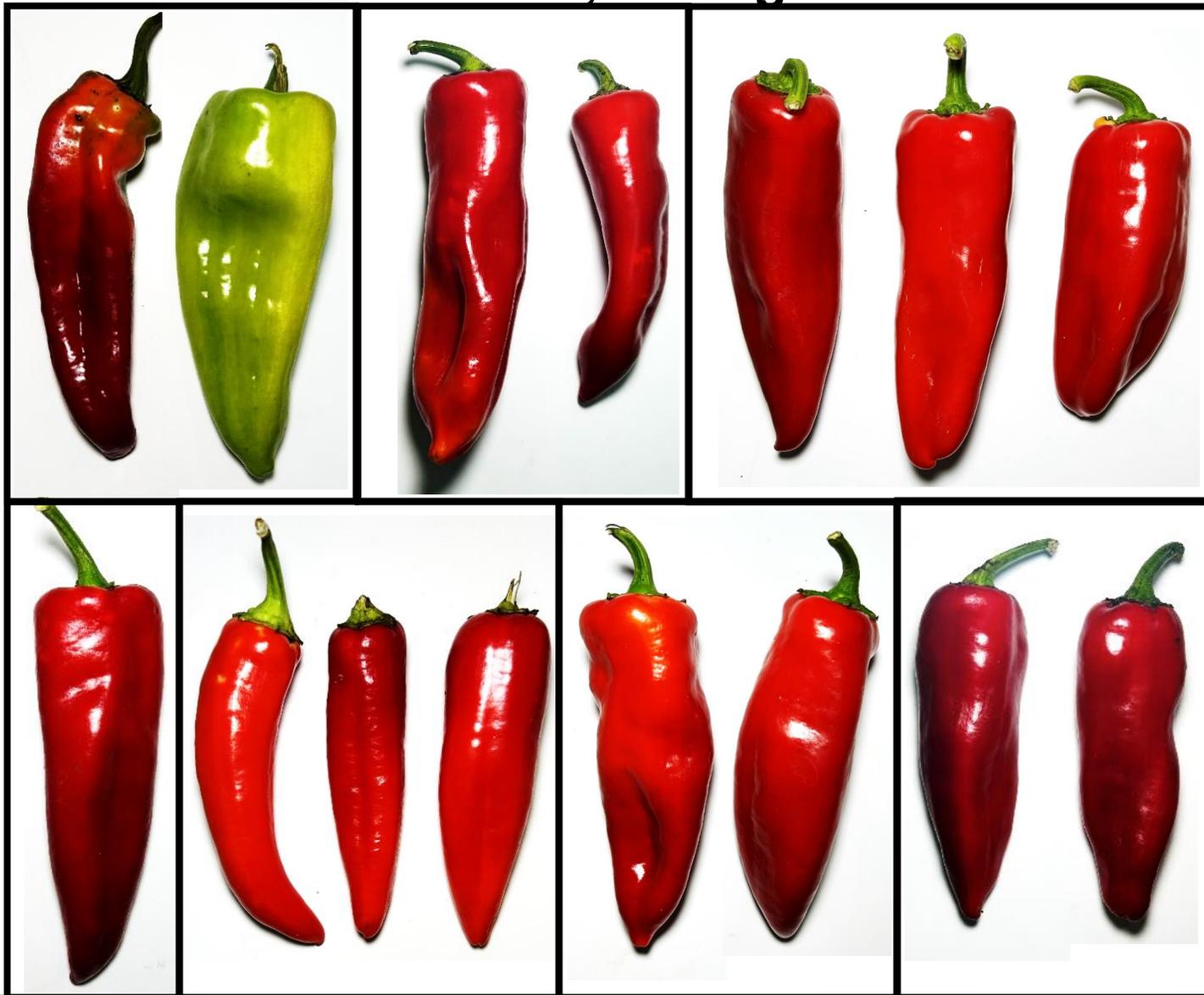


Fresh, frying, baking

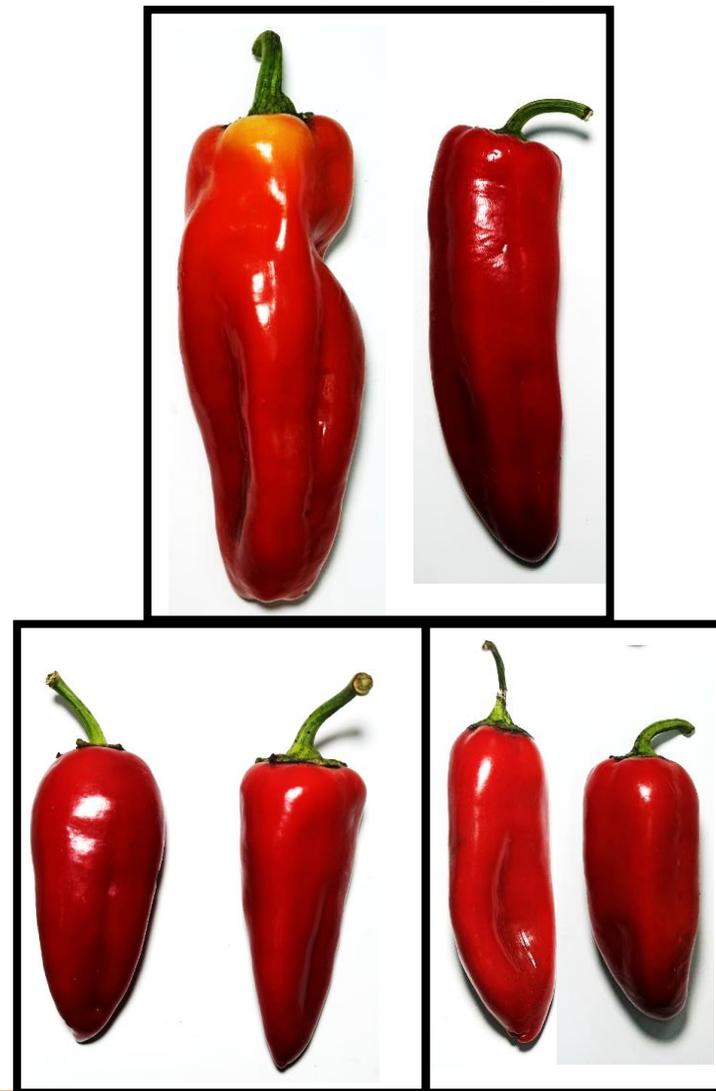


Pepper landraces collection diversity

Fresh, baking



For pickling



Pepper landraces collection diversity

Fresh,
baking

10
cm



For
drying



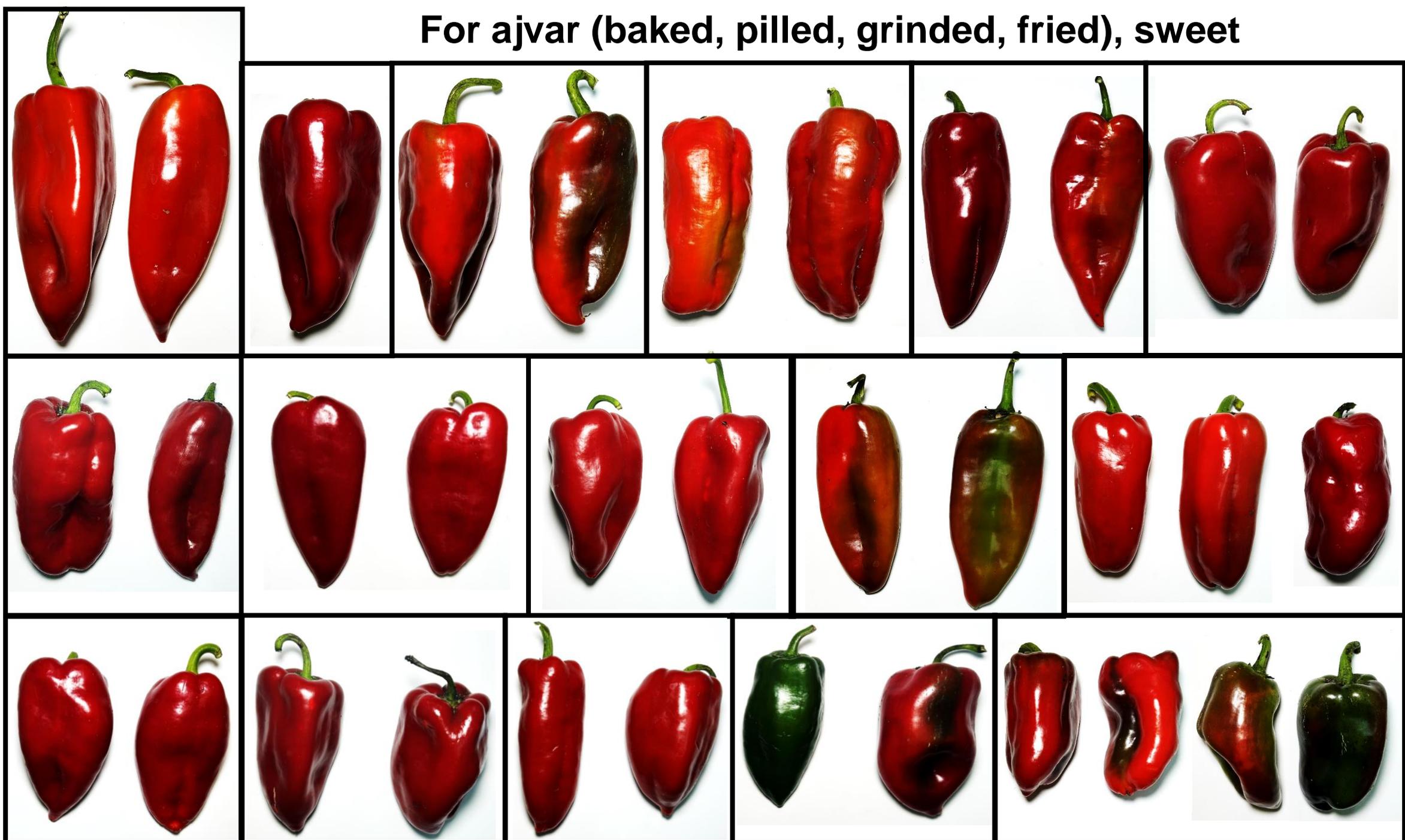
10 cm





For ajvar (baked, pilled, grinded, fried), sweet

10
cm



Pepper landraces collection diversity

For pickling (plane, stuffed with cheese)

10 cm



Pepper landraces collection diversity

For pickling, sweet, hot



10
cm

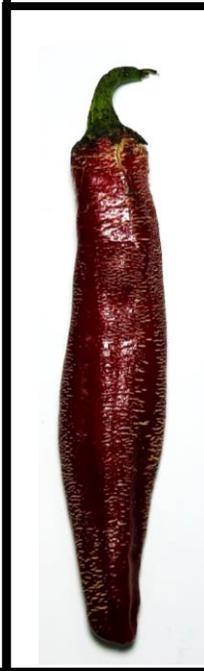


Pepper landraces collection diversity



Embroidered, for drying

10
cm





Intra-landrace diversity



Striation direction

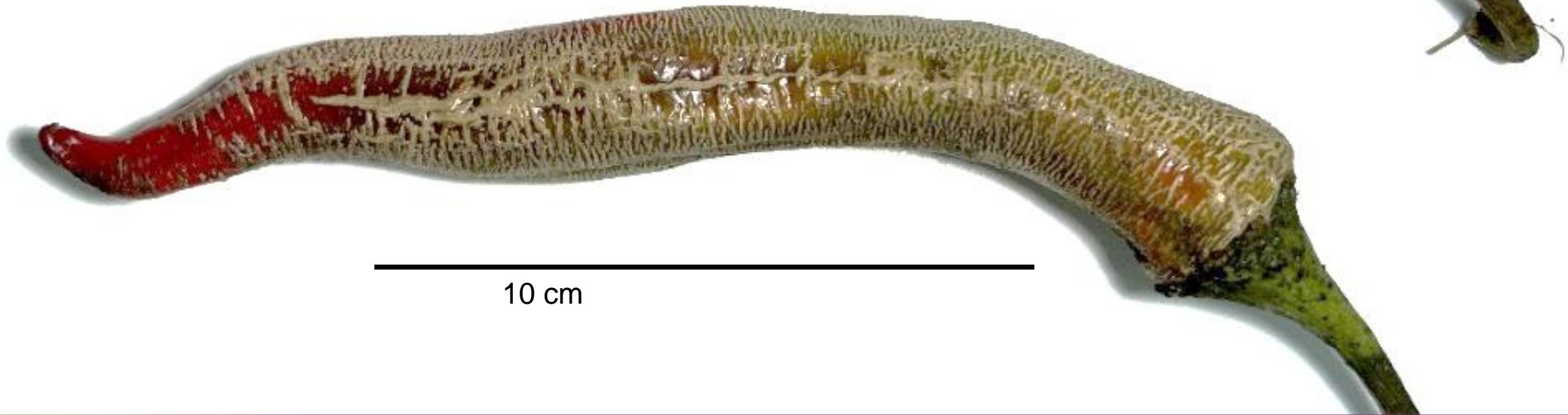




Striation degree



Intermediate color



10 cm

Pepper landraces collection diversity

Embroidered, smaller, extremely hot



Pepper landraces collection diversity



10
cm