World Vegetable Center

Development and Delivery of Ecologically-based Integrated Pest Management (IPM) Package for tomato Leaf Miner (*Tuta absoluta*) in Tajikistan

35th International Vegetable Training Course "Vegetables: From Seed to Table and Beyond" Module 3

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My responsibilities

- **In-country Project Coordinator of "Tajikistan Nutrition - Sensitive Vegetable Technologies" and my responsibility is overall project management.**
- **Under the U.S. Government's Feed the Future (FtF) Initiative, this 36-month project with - The World Vegetable Center (AVRDC) aims to improve nutrition outcomes by introducing improved production methods, including greenhouses for extended season vegetable production, containerized seedling production, and introducing improved nutritious vegetable varieties.**

Republic of Tajikistan

- Capital – DUSHANBE
- Territory - 142 thousand sq. km
- Mountains– 93 %
- Valleys - 7 %
- Population – 8,5 million
- TAJIKISTAN have borders with:
- Uzbekistan (1333 km);
- Kyrgyzstan (987 km);
- Islamic Republic of Afghanistan (1344.15 km);
- China (495 km).

Uniqueness of Tajikistan

Mountains , Glaciers

Lakes and rivers

The Fedchenko Glacier, the largest valley glacier of the Eurasian Continent and the world's longest outside of the Polar Regions, is unique and a spectacular example at the global level.

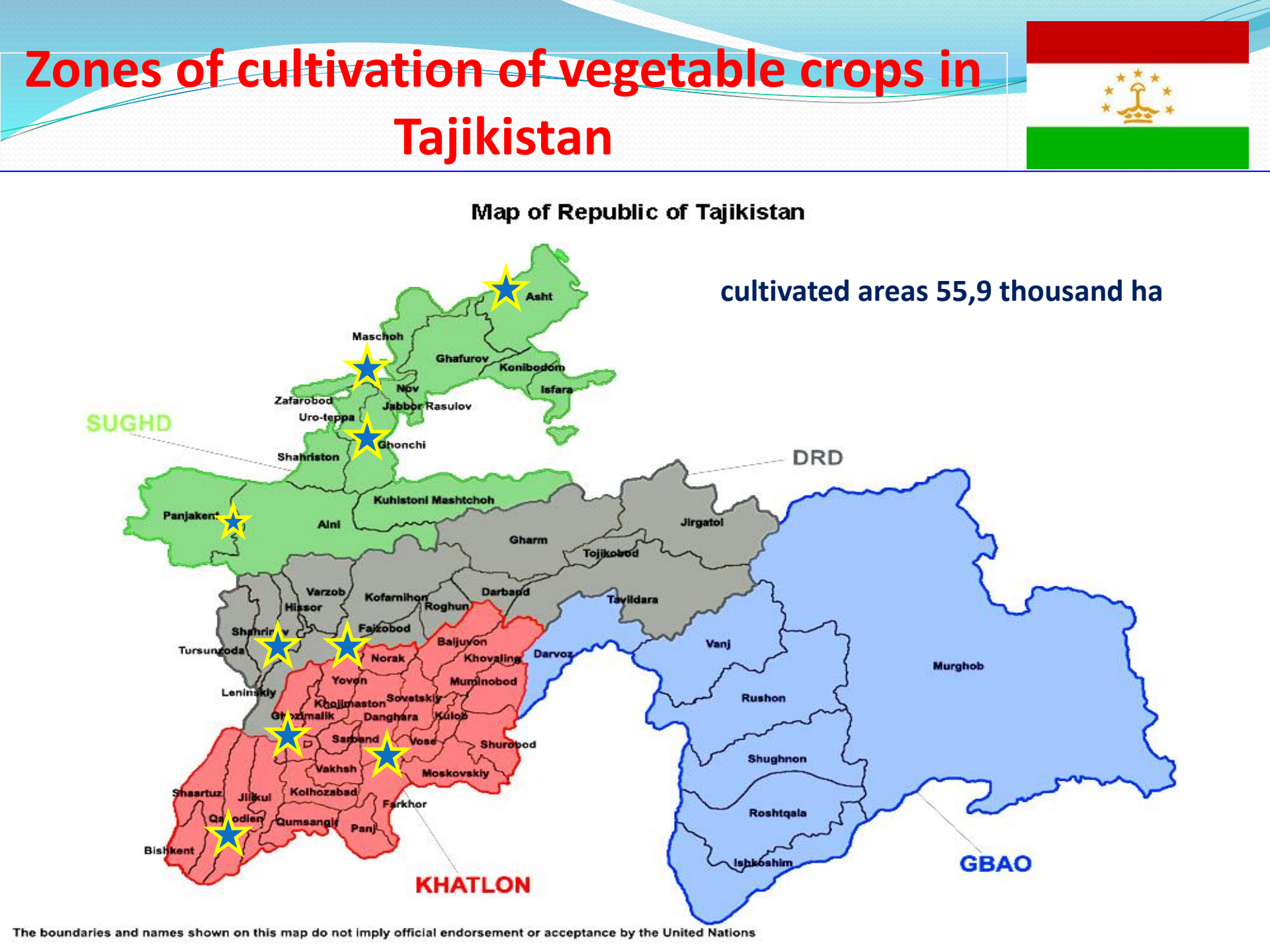
Uniqueness of Tajikistan

High index of plant and animal Biodiversities

Uniqueness of Tajikistan

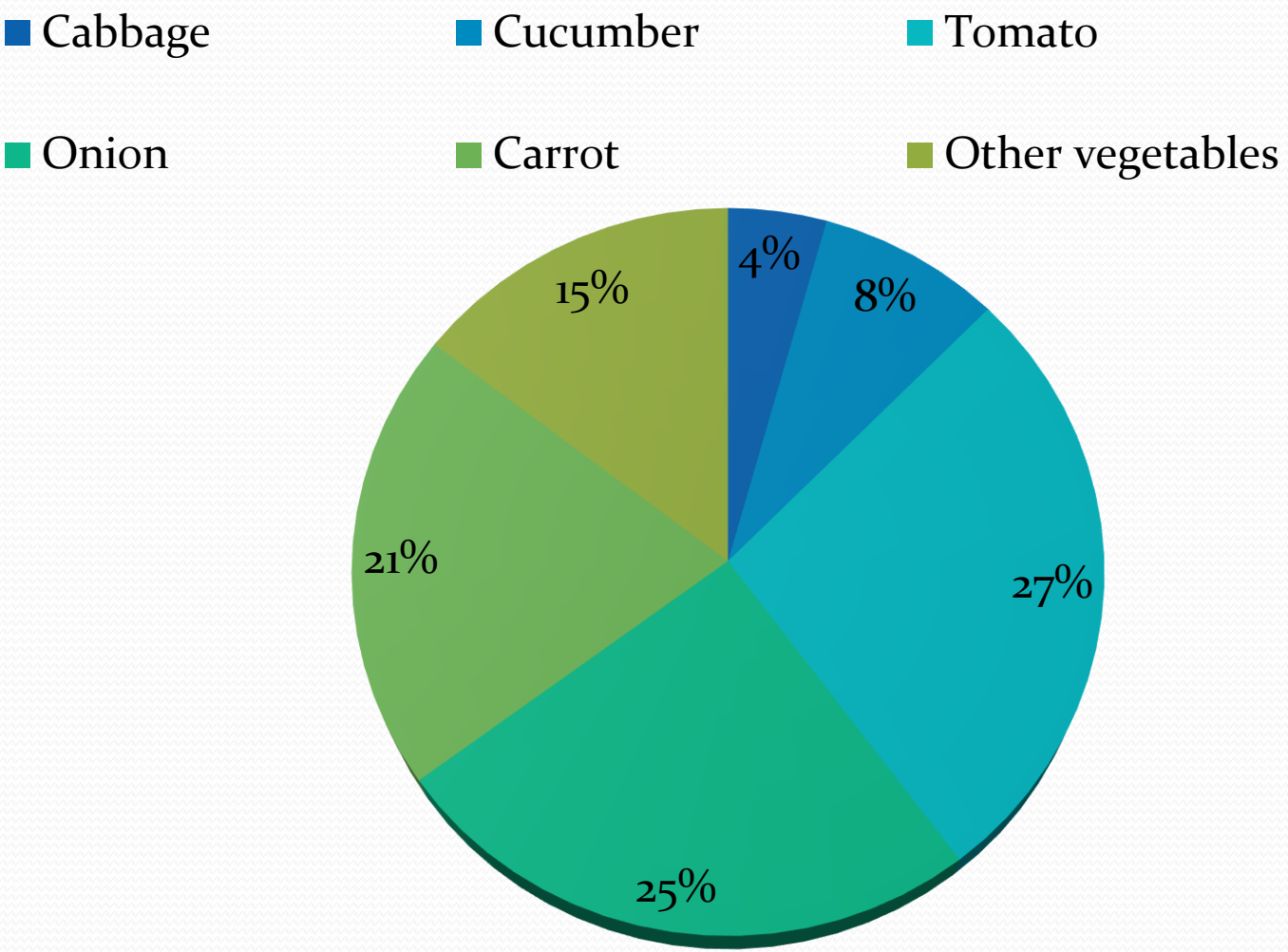
Center of an origin of cultural plants

Zones of cultivation of vegetable crops in Tajikistan



The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations

Structure of production of vegetable crops in Tajikistan



CULTIVATION AREA, YIELD AND PRODUCTION OF TOMATO CROP IN TAJIKISTAN

Year	2013	2014
Cultivation area (thousand/ha)	12,481	12,051
Yield (c/ha)	261,8	257,4
Volume of production (thousand/ton)	368,1	356,1

Three outstanding topics in module 3

- Climate change and Agriculture
- Development communication and Monitoring Evaluation and Extension
- Maejo University's organic agriculture program and Program on "Sustainable development" of the Highland Research and Development Institute

Aim of research and development

Develop ecologically-based IPM package for tomato Leaf Miner *(Tuta absoluta)* through collaborative research and evaluation of new technologies and approaches.

Tuta absoluta

Khatlon Province Profile

It is situated in the southwest of the country. Khatlon consists of two zones, Qurghonteppa zone (Western Khatlon) and Kulob zone (Eastern Khatlon). The capital is the city of Qurghonteppa

Khatlon accounts for half of the country' agricultural land and it is the most important for agriculture with approximately 51% of Gross Agriculture Output (GAO), followed by Sughd province (28%), the Rayons of Republican Subordination – RRS (19%), and Gorno-Badakhshan Autonomous province (3%)

Activities/outputs, outcome indicators

Activities/Outputs	Time line	Involved party	Outcome indicators
Monitoring and Trapping. Pheromone traps will be demonstrated for monitoring of *T. absoluta*	IV-IX – 2017-2018	VWC, Institute of Horticulture and Vegetables of Tajik Academy of Agricultural Sciences (IHV TAAS), local farmers	Number of farmers applied of pheromone and sticky traps for monitoring of *T. absoluta* population.
Resistant tomato varieties: Plots of 20x20m planted to a resistant variety to *T. absoluta* 4 reps with two strips of flowering plants alongside the tomato plots to enhance of natural enemies of tomato pest.	IV-IX – 2017-2018	VWC, IHV TAAS, local farmers	Number of selected tomato cultivars that are resistant to T*. absoluta.* Number of selected flowering plants for enhancement and conservation of biological control agents in tomato field
Cultural and physical practices (Insect/shade netting demonstrations in 10 greenhouses/farmer communities, planting date, fertilizer application, and weed control)	March-August, 2017-2018	VWC, IHV TAAS, local farmers	Number of insect/shade netting types introduced. Number of farmers adopted of Insect/shade netting in own practics
Crop rotation. Avoid rotation with other solanaceous vegetables (e.g. sweet	2017-2018	VWC, local farmers	Number of recommendations

Activities

Activities/Outputs	Time line	Involved party	Outcome indicators
State registration of modest effective Chemicals for control of *T. absoluta*	2017-2018	VWC, Ministry of Agriculture, local farmers	The State list of the resolved pesticides for used in agriculture updated.
Farmer field days (FFD) on IPM of tomato Leaf Miner *(T. absoluta)*	2017-2018	VWC, Ministry of Agriculture, local farmers, NGOs	Number of farmer participated in FFD's
Prepare of extension material on improved practices of IPM of *T. absoluta* (brochure, success stories, video, Power Point).	2017-2018	VWC, IHV TAAS, Extension agencies	Number of brochure, success stories, video, Power Point
National workshop on discussion of Ecologically-based IPM Package for tomato Leaf Miner (*T. absoluta*) in Tajikistan	2018	VWC, Ministry of Agriculture, local farmers, NGOs and other stakeholders	IPM Package for tomato Leaf Miner in Tajikistan undated and delivered to Ministry of Agriculture for approval
Delivery of Ecologically-based IPM Package for tomato Leaf Miner (*T. absoluta*) in Tajikistan	2018	VWC, Ministry of Agriculture, IHV TAAS, Extension agencies	An IPM Package approved by Ministry of Agriculture and adopted by number of farmers

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Thank you for attention!