



Research of landraces of peppers in Armenia

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

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Short presentation of the institute

The Scientific Center of Vegetable and Industrial Crops (SCVIC) is located in the Darakert village of the Masis community of the Ararat region of Armenia, which is about 5 km away from the city of Yerevan.

This center was established in 1949 and is still engaged in selection, breeding and seed production of major vegetable crops. It is widely known especially for the genetic resources of tomatoes, eggplants, peppers, Armenian varieties and various scientific researches conducted with these crops.

The main goals of the research are:

- evaluation of local and foreign collections, selection of the best of them for use in breeding,
- breeding of new varieties and hybrids using both classical and modern methods, their versatile characterization,
- study of new growing technologies,
- preparation of new vegetable preserves, etc.

Project activities on pepper

We have done a number of projects on sweet and hot peppers:

- the main thing is the breeding of new varieties of these crops for the open field and greenhouse, and the project is an ongoing topic(current). During the implementation of this project, pepper genetic resources are studied, biological, morphological, agronomic, biochemical properties and characteristics of their samples are studied, and new recipes are prepared for processing. Crossings and pollinations are made between the selected donor varieties and hybrids.
- The study of some samples of the sweet pepper gene pool of the Vavilov Research Institute in the mountain forest zone (completed). The characterization of the biological, morphological, agronomic, biochemical properties and characteristics of the collected samples under new cultivation conditions was given. During this project, donors were selected to breed new varieties and hybrids for pepper cultivation in shorter growing seasons.

Project activities on pepper

- Import and study of some samples of sweet, hot and chili peppers of the AVRDC gene pool in Armenia (completed). The characterization of the biological, morphological, agronomic, biochemical properties and characteristics of the collected samples under new cultivation conditions was given. During the implementation of this project, donors were selected to breed new varieties and hybrids for pepper cultivation. A number of issues of Taiwanese cultivation technology were studied. Several new varieties of pepper were bred together with AVRDC breeders, which are widely cultivated in the farms of the republic.
- Evaluation of EVA network peppers. A number of pepper varieties and hybrids preserved in European genebanks were imported to Armenia. The characterization of the biological, morphological, agronomic, biochemical properties and characteristics of the collected samples under new cultivation conditions was given. During the implementation of this project, donors were selected to breed new varieties and hybrids for pepper cultivation.

Study of landrace and cultivated varieties of pepper, preparation of seeds for sending to Svalbard World Seed Bank (completed)

Seeds of the following landraces have been sent to storage

Sweet pepper

- Vardanashen local – **Vardanasheni teghakan**
- Bulgarian - **Bulgharakan**
- Salad - **Salatayin**
- Canned - **Pahatsoyi**
- Urtsadzor local – **Urcadzori teghakan**
- Aren local – **Arenii teghakan**
- Local sweet - **Teghakan qaghcr**

Seeds of the following landraces have been sent to storage

Hot pepper

- Teghakan ktsu
- Kntsitanman
- Kanachavun
- Shukayakan
- Mkhchyani teghakan
- Echmiadzni teghakan
- Tavusi teghakan
- Masisi teghakan
- Malishkayi teghakan
- Masisi tsitsak
- Tsitsak teghakan
- Metsamori tsitak

Your institute's pepper landraces collection

Sweet pepper landraces collection

- Vardanashen local – **Vardanasheni teghakan**
- Bulgarian - **Bulgharakan**
- Salad - **Salatayin**
- Canned - **Pahatsoyi**
- Urtsadzor local – **Urcadzori teghakan**
- Aren local – **Arenii teghakan**
- Local sweet - **Teghakan qaghcr**

Hot pepper landraces collection



- Teghakan ktsu
- Kntsitanman
- Kanachavun
- Shukayakan
- Mkhchyani teghakan
- Echmiadzni teghakan
- Tavusi teghakan
- Masisi teghakan
- Malishkayi teghakan
- Masisi tsitsak
- Tsitsak teghakan
- Metsamori tsitak



Your institute's pepper landraces collection

Pepper collection samples were characterized according to international distributors, their biological, morphological, agronomic, biochemical properties and characteristics were given in new cultivation conditions.

In our country, we currently cannot perform genotyping, for this we need the participation of foreign scientists in our new projects. In this regard, Dr. Pasquale Tripodi agreed to act as a foreign partner in our new project, for which we are very grateful. We hope that the project will win the 2025 competition and be financed.

Our country's pepper as well as tomato and eggplant collections are diverse. There are landraces, wild forms and species, original material, cultivated varieties, hybrids, commercial varieties and hybrids. We have the necessary seeds for propagation. Based on their initial demand for seed distribution based on SMTA, seeds from these samples will be propagated in 2025.

Currently, together with our partners in Georgia, we have presented a new project "Research and restoration of forgotten varieties of Solanaceae crops, tested for the conditions of Georgia and Armenia".











