

Sanitary Situation of Grapevine Collections in Georgia

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AGRO: National Center

Year of establishment: 2007

Type: Charity organization

Purposes:

1. Conservation and study of Georgian native grape varieties in a field collection
2. Organization of basic planting materials (rootstocks and scions)
3. Supporting of new nurseries' establishment in Georgia

Available Germplasm:

500 accessions of Geo Native varieties

200 foreign varieties (wine, table)

7 rootstock varieties / clones



AGRO: ELISA-Test method

Method of Research:

Serologic diagnostic – Immunofluorescence analyses
– 'Sandwich' method "DAS-ELISA-Test"

Equipments Produced by:

BioTek, BioReba, AVARENES Technology,
Socorex

Diagnosticums for virus testing:

SEDIAG (France)

BioReba-s (Switzerland)



AGRO: Laboratory equipments

- ELISA-rider (BioTek-ELx800)
- ELISA-washer (BioTek-ELx50)
- Homogenizator (BIOREBA-Homex)
- Termostate (Boekel Scientific 130000)
- Mini centrifuge (Labnet C1301)
- Wortex mixer (Science Basic Solutions-MVOR-03)
- Deionizator (Barnstead Mega-Pure D2)
- Mini Readbeater (Biospec Products)
- Binder FD 53
- Termostate (Thermoscientific 3523)
- Balance (OHAUS)
- Extraction pakige (BioReba)
- Other lab equipmnet



AGRO: Viruses under examination

1. Grapevine Leaf Roll Virus-1 (**GLRV-1**)
2. Grapevine Leaf Roll Virus-2 (**GLRV-2**)
3. Grapevine Leaf Roll Virus-3 (**GLRV-3**)
4. Grapevine Fleck Virus (**GFkV**)
5. Grapevine Fanleaf Virus (**GFLV**)
6. Grapevine Virus **A** (**GVA**)
7. Arabis Mosaic Virus (**ArMV**)



AGRO: Made Research

In: 2010 – 2011 in the Mtskheta – Jighaura collection of the National Center “AGRO”

In: 2009 – 2011 in the Provinces Kakheti (Telavi), Kartli (Gori and Skra) and Imereti (Zestaphoni)

23 Geo cultivars were studied:

Rkatsiteli	Shavkapito
Rkatsiteli pink	Tsolikouri
Mtsvane Kakhuri	Tsitska
Kisi	Krakhuna
Khikhvi	Otskhanuri Sapere
Saperavi	Dzelshavi
Saperavi Budeshuri	Aleabdrouli
Goruli Mtsvane	Mujuretuli
Chinuri	Usakhelouri
Gorula	Ojaleshi
Tita Kartlis	Tsulukidzis Tetra
Tavkveri	Mgaloblishvili



Otskhanuri Sapere



Rkatsiteli

+ 10 introduced cultivars were studied

AGRO: Viruses detected

1. Grapevine Leaf Roll Virus-1 (**GLRV-1**)
2. Grapevine Leaf Roll Virus-3 (**GLRV-3**)
3. Grapevine Fleck Virus (**GFkV**)
4. Grapevine Fanleaf Virus (**GFLV**)

Relatively resistant varieties:

Rkatsiteli, Saperavi, Goruli Mtsvane, Tsitska, Gorula

Relatively susceptible varieties:

Kisi, Tavkveri, Mgaloblishvili, Krakhuna, Usakhelouri

AGRO: Future prospective

**Starting of Testing for 7 viruses in the
Mtskheta and Kindzmarauli collections**

IHVO: Research Institution

Year of establishment: 1890

Purposes:

1. Conservation and study of Georgian native grape varieties

Available collections: 3

Skra 1 and Skra, Vachebi

Available Germplasm:

About 700 accessions of native varieties



IHVO: Testing of Collections



Virus testing: Not was done yet

IHVO: Laboratory equipments

Available:

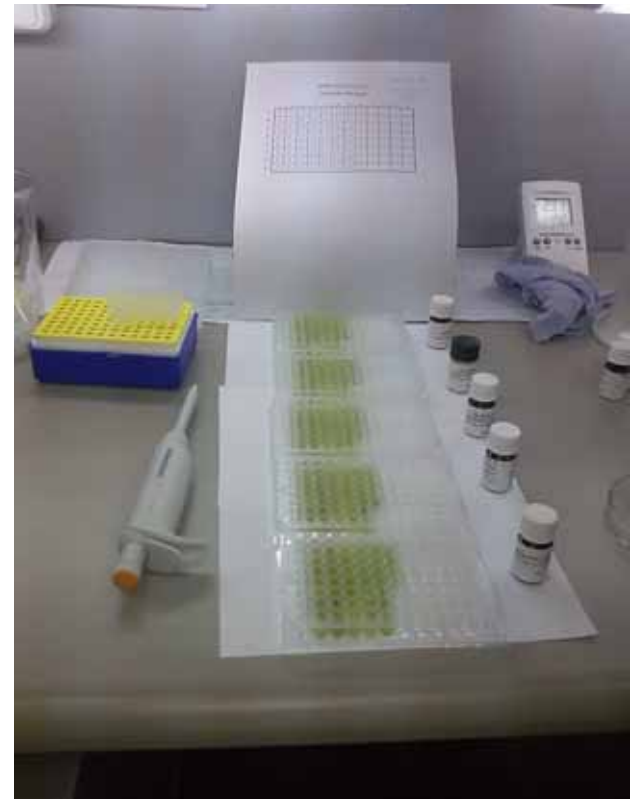
- Basic instruments and tools for ELISA-testing
- Real Time PCR

Missing:

- ELISA-washer
- Diagnosticums
- Reagents

Needs

- Training of the staff



Georgian Quarantine Inspection Request

!! Introduced to Georgia planting materials (cuttings, rootstocks and saplings) **MUST BE FREE** from:

- *Xylophilus ampelinus* (Panogopoulos) Willems.
- Grapevine flavescence doree phytoplasma
- *Phomopsis viticola* Sacc.