Georgia potato seed system baseline study

Tbilisi, 27-28 Sept, 2018

Outline

- 1)Expert elicitation workshop
- 2)Local stakeholder identification
- 3)International and national stakeholder identification
- 4)Seed sources and harvest uses
- 5)Varieties
- 6)Pest and diseases
- 7) Discussion points

Expert elicitation workshop

13-14 October, 2017 43 Experts

Potato ecologies in Georgia



Potato production by region in Georgia

Region	Production (1000 t)	Yield (t/ha)	Area (1000 ha)
Georgia	249	12.3	20
Adjara AR	14.2	12.3	1
Kakheti	4.5	5.7	0.8
Mtskheta-Mtianeti	3.2	5.7	0.5
Samtskhe-Javakheti	160.5	14.9	10.8
Kvemo Kartli	44.1	10.5	4.2
Shida Kartli	16.0	7.9	1.9
The remaining regions	6.5	8.0	0.8

Primary international stakeholders in Georgia potato seed system

Research organizations (CIP, University of Florida, BOKU University)	Public
Donors (ADA, USAID, EU)	Public
International NGOs (MercyCorps, CARE, People In Need)	Public
Food and Agriculture Organization (FAO)	Public
European input suppliers and seed companies	Private

Primary national stakeholders in Georgia potato seed system

Ministry of Environmental Protection and Agriculture (MEPA)

Laboratory the Ministry of Environmental Protection and Agriculture MEPA

Scientific-Research Center of Agriculture MEPA

Logistic Company MEPA

Information Consultancy Agency MEPA

Biotechnology Center of Georgian Technical University

Agriculture University of Georgia

Primary national stakeholders in Georgia potato seed system

Input suppliers (eg, Kartlisi, Gema, Agrosphero) Unified National Body of Accreditation – Accreditation Center National Intellectual Property Center of Georgia Farmer Service Centers

Potato seed sources in Georgia



Potato crop uses in Georgia



Primary potato varieties in Georgia



Primary pests and diseases affecting potato in Georgia

Disease & pest name	Loss, national ²	Loss, field level	Quality loss ³	Seed transmitted ?	Frequency (years)
Potato late blight	30-35%	70%	20-25%	NO	Annual
Rhizoctonia	15-20%	50%	20-30%	YES	Annual
Early blight	30-35	50-80%	20%	NO	Annual
scab	20%	10%	20		
Black leg	3-5%	5%	5-7%	YES	3 - 4
Potato cyst nematode					
PYX and PVY	20-25%	25%		YES	3 - 4

Primary pests and diseases affecting potato in Georgia, continued

Disease & pest name	Loss, national ²	Loss, field level	Quality loss ³	Seed transmitted ?	Frequency (years)
PVM and PVS	5-7%	20%		YES	3 - 4
Colorado potato beetle	20%	30%			Annual
Wire worm	25-30%	45%			
Mole cricket	20%	30%			Annual
Aphids	10%	15%			
Potato tuber moth	25-35%	50%			Annual
Bollworm	20%	20%			3 - 4

Major pests and diseases of potato in Georgia by location







Potato wart (cancer) Synchytrium endobioticum



Potato bacterial wilt *Ralstonia solanacearum*



Potato bacterial ring rot *Clavibacter michiganensis spp. sepedonicus.*



Potato cyst nematode *Globodera spp*.

Managing problems like wart:



Fields 'scheduled' and 'immune' varieties in area

Seed: zero tolerance

Resistance: all varieties tested

Observations

1. What amount of seed is imported each year from abroad.

2. Is this seed multiplied by importers before it is sold, if so how many times?

3. What is really meant by 'local' sources of seed for small and large-holder farmers? We assume this can be traders, markets, other farmers....

4. Yield loss estimates often seem exaggerated. This is a common problem in this type of exercise and requires some sort of standardization.

5. Farmer cooperatives exist in the Southern Highlands; what is their role.

6. Many disease/pest problems require special seed regulation – for seed plan