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Research and Innovation in implementation of Feed the Future Initiative in Tajikistan

Local farmer, Mr. Yoftakov, is very happy to see how his sweet pepper seedlings planted in pots with fertile medium are growing very well

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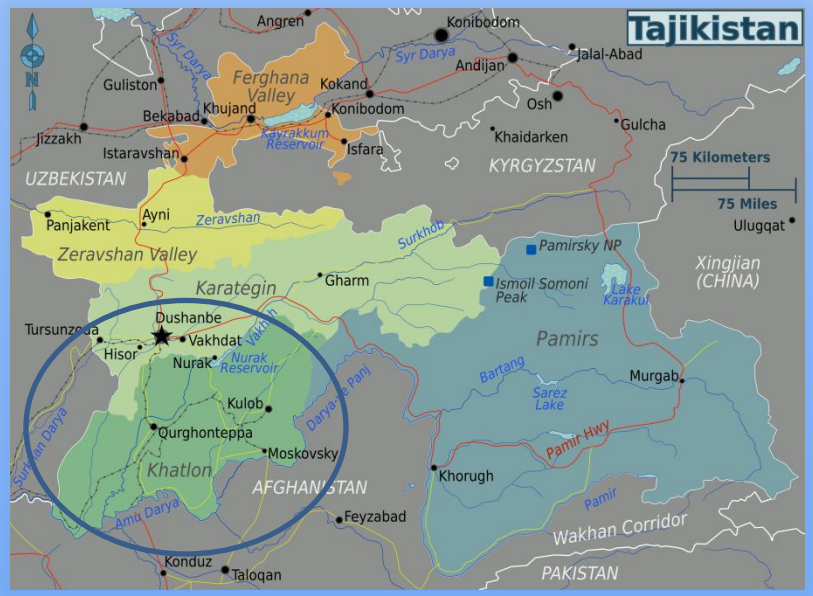
1. Population – 8,2 M
2. Area - 143,100 km^2
3. Arable land- 0,9 M ha
4. Main crops: Cereals, Cotton, Vegetables, and Fruits



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Feed the Future Tajikistan: Research and Innovation in Horticulture

Research

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CENTRO INTERNACIONAL DE LA PAPA CIP

International and local research institutions work in close cooperation

Local Institutions
1. Tajikistan Academy of Science
2. Tajikistan Agrarian University
3. Tajikistan Horticulture Research Institute

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1. Improved Greenhouse Design

Old and new greenhouses

Tomatoes growing in new greenhouse

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2. Containerized Seedlings

Local seedling producer , Hikoyat, are taking care of her tomato seedlings

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3. Introducing new vegetables varieties

Local farmers demonstrate AVRDC varieties and lines, Tajikistan, 2016

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4. Integrated Pest and Weed Management

Soil Solar Sterilization Field day, Jayhun District, August 15, 2015.

Field day on IPM, Jayhun District, June 16, 2015.

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CENTRO INTERNACIONAL DE LA PAPA
CIP

1. Introducing New Crops and Crop Varieties

New CIP genotypes are tested in a demonstration in Tajikistan , 2015.

New sweet potatoes varieties will be introduced

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2. Early Potato Production Techniques.

Potato planted beds are covered with low tunnel to warm up soil for faster germinations, 2016.

Tajik woman farmer is harvesting potatoes planted in autumn, Tajikistan, 2016

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3. Using Freshly Harvested Potatoes as Seeds for Second Growing Season

Tubers were treated with mix solution of Gibberellin acid (1.2 mg/L) and Thiourea (15g/L) within 30 min

Treated tubers were covered with polyethylene film and stored at room temperature on 12 July 2015

First sprouts of treated tubers were observed on 21 July, and mass sprouts were observed on 27–27 July

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USAID projects:
Tajikistan Agriculture and Water, and Farmer to Farmer

Pruning and grafting technologies

Introducing new fruits varieties and establishing nurseries

Strong collaboration with volunteers

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USAID projects:
Women's Entrepreneurship for Empowerment Project

New strawberry varieties: "Festival" and "Ruby Jam"

Raised beds, drip irrigation , and mulching

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Cost Benefit Analyses

The team of economist from Almaty and Washington conducted CBA on:

1. New greenhouse model
2. Containerized seedling production
3. Sweet pepper, tomato , and cucumber production; greenhouse /open field production

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Scaling up studies

The team consisted of agriculture specialists, economists, nutrition specialists , and value chain specialist conducted a scaling up study of following technologies;

1. New greenhouse model
2. Containerized seedlings
3. Sweet-potatoes
4. Bok choy and mung bean

More 1000 households started using containerized seedlings in 2016

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Public Private Partnership

1. Partnering with agricultural input suppliers
2. Partnering with commercial seedling producers
3. Partnering with International and local agriculture extension service providers
4. Partnering with international and local research institutions

This farmers produced more than 120000 tomatoes and sweet pepper seedlings

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Public Private Partnership

Cooperation with Israeli's Agency for International Development Cooperation Ministry of Foreign Affairs

Mashaw's consultant are talking to local farmer, Tajikistan , 2016

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Public Private Partnership

Cooperation with local agriculture input suppling and extension services providing company.

Agriculture machinery supplying company “Madadi Tursunzoda”

Agriculture input suppling company “Neksigol”

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Results

Open field tomatoes

Bare root seedlings
1. Productivity – 0,820kg per plant
2. Survivability rate after transplanting - 70-80%

Containerized seedlings
1. Productivity – 1,270 kg per plant
2. Survivability rate after transplanting - almost 100 %

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Results

Greenhouse production tomatoes

Traditional greenhouses
Productivity
5.00 – 9.10 kg per 1 meter square

Improved greenhouses
Productivity
12.5-17,5 kg per 1 meter square

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Results

Greenhouse production sweet peppers

Traditional greenhouses
Productivity
3.1- 3.5 kg per 1 meter square

Improved greenhouses
Productivity
5.0 – 6.7 kg per 1 meter square

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THANK YOU

Tajikistan Mountains