Tomato value chain in Iraq

Climate change risks and proposed adaptation practices

Inputs

- WATER
  - Water scarcity, pollution and salinization exacerbated by inefficient irrigation practices (e.g. surface irrigation) and lack of international agreements on river water use.
- SEEDS
  - Use of counterfeit and unfit chemical products. Increased emissions, risk of pollution and eutrophication of water.
- FERTILIZERS
  - Preparation and use of organic fertilizers, e.g. composting.
- MARKETS
  - Use of outdated varieties, insufficient national agronomic research, and no evidence of climate-adapted breeds.
- STORAGE AND TRANSPORT
  - Increase availability and use of drought-resistant varieties and shift to modern nursing methods.
  - Use of counterfeit and unfit chemical products. Increased emissions, risk of pollution and eutrophication of water.

Farming

- PRODUCTION INFRASTRUCTURE
  - Open-field farmers face declining yields and direct crop damage from weather extremes such as drought and heatwaves.
  - Promote investment in greenhouses, adapted shading equipment, and retrofit existing farming infrastructure by adding protective features.
- AGRICULTURAL PRACTICES
  - Low adoption of crop rotation and intercropping making production more prone to losses from weather extremes.
  - Adoption of GAPs to enhance crop diversification, soil fertility and climate resilience.
- PESTS AND DISEASES
  - Outbreaks of insects, pests and fungal infestations, such as root-knot nematode pest, tomato fruit worm and leaf miner, threaten tomato production.
  - Use of pest-resistant breeds and increase knowledge of pesticides use and application (e.g. biological-control techniques and GAPs).

Post-harvest

- HIGH post-harvest losses (15% to 30%) due to the absence of cold storage, handling, and prolonged exposure to high temperatures.
- RESTORE or establish shared processing facilities at the community level.
- ADOPTION of energy-efficient cooling infrastructure and refrigerated transport equipment.

End market

- HIGH demand from Iraqi consumers for local sustainable tomatoes to substitute imports but low availability and need to meet market requirements (packaging, aspect, colour).
  - 77% of Iraqi consumers would choose local tomatoes against imported ones, even if their cost is higher 43% of Iraqis who have tried organic products would buy those, even at a higher price.
- MARKETS
  - Improve understanding of domestic market requirements and invest in productivity-enhancing equipment and infrastructure.
  - Foster agri-business innovation to support organic farming, value-added activities and ecosystem, and climate services.

Risk level

- High
- Moderate
- Low

Opportunity level

- High

Read the report: Climate change risks and opportunities in Iraqi agrifood value chains
Hyperlink: https://www.intracen.org/uploadedFiles/Common/SAAVIreport.pdf