



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.

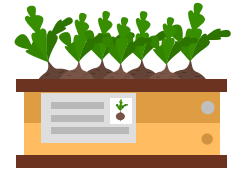
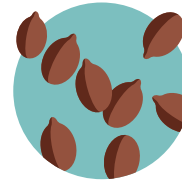
Uptake of **water-efficient technologies** (e.g. drip irrigation) and budget-friendly **tools** to monitor soil moisture and salinity.



FERTILIZERS ●●

Use of **counterfeit** and unfit chemical products. Increased **emissions**, risk of **pollution** and eutrophication of water.

Preparation and use of **organic fertilizers**, e.g. composting.



SEEDS ●

Use of **outdated varieties**, insufficient national agronomic research, and no evidence of climate-adapted breeds.

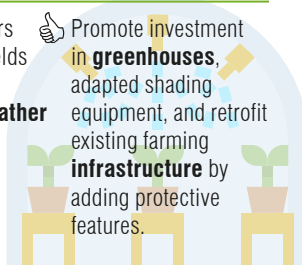
Increase availability and use of **drought-resistant varieties** and shift to modern nursing methods.

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

STORAGE AND TRANSPORT ●

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

MARKETS ●

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.

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 ●

Read the report: *Climate change risks and opportunities in Iraqi agrifood value chains*



Hyperlink: <https://www.intracen.org/uploadedFiles/Common/SAAVIreport.pdf>