Heat and Drought Tolerant Wheat Varieties

Wheat cultivation in high temperature regions

Heat and Drought Tolerant Wheat Varieties offer business opportunities through wheat production, seed multiplication and supply. With potential yields of 5–8.2 tons/ha, maturity within 85–110 days and protein content of 14–15%, they offer attractive options for farmers, seed companies and wheat processors.

ICARDA
Science for resilient livelihoods in dry areas

International Center for Agricultural Research in the Dry Areas (ICARDA)
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This technology is TAAT1 validated.

7·8 Scaling readiness: idea maturity 7/9; level of use8/9

Project adoption 10

Technology integrated in the CREW, EFPP(AEFPF), ERAVCDP, PUPSAN, PURPA, Regenerative agri, SEPAREF, SEWPP, TAISP, and ZEFPF projects.

4 - 6 tons/ha	**100** kg/ha	IP
increase in yield	Planting rate	Unknown

Problem

- **Heat Stress:** Reduced yields at temperatures 4°C above normal.
- **Drought Conditions:** Significant yield losses with less than 200 mm of moisture.
- **Low Productivity:** Traditional varieties yield much less than **5–8.2 tons/ha**.
- **Limited Cultivation Zones:** Poor performance in hot and dry areas limits market expansion.

Solution

- **Heat Tolerance:** Tolerate temperatures 4°C above normal.
- **Drought Performance:** Maintain 75% of yield potential with less than 200 mm of moisture.
- **Increased Yields:** Potential yields of 5–8.2 tons/ha within 85–110 days, with 14–15% protein content.
- **Expanded Cultivation Areas:** Suitable for wheat production in hot and dry regions, creating new market opportunities.

Key points to design your business plan

This technology is beneficial for three main groups: multipliers, resellers and farmers:

For Multiplier, to succeed, source seeds from specified countries, navigate transportation efficiently, and adhere to licensing regulations.

For Resellers, efficiently source seeds, transport, and store them to succeed. Target small retailers, development projects, producers, and cooperatives.

For Users, partner with sellers and estimate potential profits.

Inclusion assessment 4

Climate impact 7

Technology from

ProPAS

Commodities

Wheat

Sustainable Development Goals

Categories

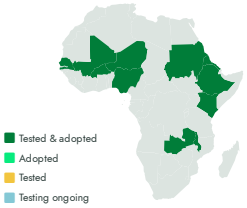
Production, Improved varieties, Drought tolerance, Heat tolerance

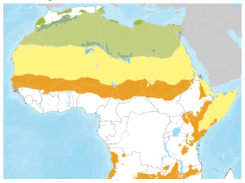
Best used with

Wheat Cultivation in Dryland through Winter Irrigation, Furrow Irrigated Raised Bed Wheat Production, Yellow Rust and Stem Rust Resistant wheat

See all 3 technologies online

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.