

Yellow Rust and Stem Rust Resistant wheat

Rust-Resistant Wheat for a Flourishing Future

Rust-resistant wheat varieties use All-stage resistance (ASR) and Adult plant resistance (APR) genes to combat rust fungi. ASR provides strong protection but can be overcome by evolving fungi. APR offers partial, longer-lasting, broad-spectrum resistance. Combining ASR and APR enhances resistance.



Symptoms of yellow rust (left) and stem rust (right)

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This technology is **TAAT1 validated**.
 Scaling readiness: idea maturity: 7/9; level of use: 7/9

4.1 Ton/ha average grain yield
 440 USD Total farming operational costs

Technology from
ProPAS

Commodities
Wheat

Sustainable Development Goals



Categories
Production, Improved varieties,
Disease resistance, Yield improvement

Best used with

- [Integrated Management of Insects, Diseases and Weeds in Wheat >](#)

Problem

- Rust Epidemics:** Yellow and stem rust cause significant yield losses and devastate wheat crops in Sub-Saharan Africa.
- Rapid Spread:** These diseases spread rapidly through wind-borne spores, leading to massive losses.
- New Strains & Native Infections:** Continuous emergence of new strains and infections in native grasses make control and eradication challenging.

Solution

- ASR and APR Genes:** Provide strong and broad-spectrum protection against rust fungi at all plant stages.
- High Yield Potential:** Maintain high yield despite rust resistance.
- Robustness:** Exhibit resistance to other diseases and environmental stresses like drought.

Key points to design your business plan

For seed multipliers:

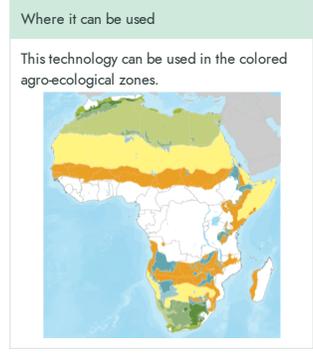
- Partnership & Training:** Collaborate with institutions and train staff on rust-resistant varieties.
- Selection & Multiplication:** Choose suitable varieties and plan multiplication.
- Quality Control & Distribution:** Ensure seed health and develop a distribution network.
- Assessment & Financial Planning:** Regularly assess performance and estimate costs.

For seed resellers:

- Partnership & Planning:** Collaborate with institutions and plan stock based on demand.
- Quality Assurance & Distribution:** Ensure seed health and develop a robust distribution network.
- Marketing & Support:** Develop a marketing strategy and provide agronomic advice.
- Cost Estimation:** Estimate costs and develop a financial plan.

For farmers:

- Education, Selection, & Procurement:** Understand benefits, select suitable varieties, and plan seed procurement.
- Field Management & Sales:** Plan cultivation and develop a sales strategy.
- Financial Planning:** Estimate costs for each step and develop a financial plan.



Gender assessment

Climate impact

