

## Road map towards improved Afghan public sector wheat basic research capacity and performance

**Project Title:** P1821 - Grain Research And Innovation (GRAIN) Project in Afghanistan

**Description:** the document lists existing structure and resources of the Agricultural Research Institute of Afghanistan and identifies gaps and requirements for an efficient delivering breeding programme in Afghanistan.

**Is new?:** Yes

**Stage of Maturity of the Process:** Stage 1

**Policy/Investment Type:** Policy or Strategy

**Amount:** <Not Applicable>

**Geographic Scope:** National

**Country(ies):**

- Afghanistan

**Outcome Impact Case Report:**

**Innovations:**

- I2531 - Off season nursery for shuttle breeding in Afghanistan (<https://tinyurl.com/2k8x5zwr>)

**Narrative of Evidence:** Afghani wheat farmers grow the crop on 2.7M ha, yet the country imports roughly 90% to meet demand. Enabled by the USAID-funded GRAIN project (2017-2022), ARIA and CIMMYT developed a roadmap towards improved wheat research capacity. Key elements are breeding cycle time and quality (e.g. improved pest/disease resistance, in particular yellow rust) & seed sector innovation (improved farmer access to high quality seed; improved variety adoption benefits tracking). With regard to cycle time, ARIA intended to use the off season facility at Bamyan, to reduce overall variety development time by 50%. The main season crop is grown at Nangarhar research station, which would then be taken to Bamyan to grow an off-season nursery. Wheat research policy implementation has been delayed for well-known reasons.

<https://www.usaid.gov/news-information/fact-sheets/grain-research-and-innovation-grain>  
[https://pdf.usaid.gov/pdf\\_docs/PA00X4FD.pdf](https://pdf.usaid.gov/pdf_docs/PA00X4FD.pdf); <https://doi.org/10.1186/s12864-019-6015-4>  
<https://bgri.cornell.edu/portfolio/fluctuating-yellow-rust-profile-of-afghan-wheat-seed-chain-varieties> / <https://doi.org/10.1002/csc2.20653> - published online Nov 2021; Jan/Feb 2022.

**Milestones:** <Not Provided>

**Sub-IDs:**

- 2 - Reduced smallholders production risk
- 11 - Adoption of CGIAR materials with enhanced genetic gains

**Contributing Centers/PPA partners:**

- CIMMYT - Centro Internacional de Mejoramiento de Maíz y Trigo / International Maize and Wheat Improvement Center

**Contributing CRPs/PTF:**

- Wheat - Wheat