CRP 2020 Reviews: Grain Legumes and Dryland Cereals

Background
The main objective of the CGIAR Research Program Grain Legumes and Dryland Cereals (GLDC) is to increase the productivity, profitability, resilience, and marketability of nutritious grain legumes (chickpea, cowpea, pigeonpea, groundnut, lentil, soybean) and cereals (sorghum, pearl millet, finger millet) grown in semi-arid and sub-humid dryland agroecologies of Sub-Saharan Africa and South Asia.

Purpose
The primary purpose of the review is to assess the extent to which the GLDC is delivering quality of science and demonstrating effectiveness in relation to its theories of change (ToCs) in the approved proposal.

Review Questions & Methods
- To what extent does the GLDC deliver quality of science, based on its work from 2018 to 2019?
- What outputs and outcomes have been achieved, and what is the importance of those identified results?
- To what extent is GLDC positioned to be effective in the future, seen from the perspectives of both scientists and end users of agricultural research (such as policymakers, practitioners, or market actors)?

The review used a combination of methods with reference to key GLDC and CGIAR documents and publications. Primary qualitative data were collected from 36 respondents. Quantitative data were obtained from bibliometric analyses, the CGIAR Dashboard, and physical outputs.

Performance data were obtained from assessments of contributions to milestones, sub-IDO, and IDOs. The analysis of impacts was implemented through a deep dive on selected seed systems OICRs and an analysis of agri-food systems.

Selected Findings & Conclusions

The quality of science in GLDC is high. Priority setting is integral to all program activities; use of novel tools and technologies is modernizing the breeding programs for enhanced efficiencies; research in seed-system scaling is having impact; modeling and remote sensing are well integrated in crop systems management research; and many publications are in high-impact journals. This effort has generated recognized and measurable international public goods (IPGs).

GLDC has made notable progress in fully completing 30 of 57 milestones and delivering contributions to the sub-IDO and IDOs in two years. The OICRs tell a compelling story, mainly on the adoption of GLDC-improved varieties and establishment of functional seed systems in several countries, in addition to measurable positive impacts on development targets.

However, the lack of funding to FP2 has had a major impact on the nature of GLDC research and the extent of delivery on development impacts. It can be argued that generated GLDC technologies may have been more relevant to, and have had greater impact on, development targets had they taken wider agri-food systems issues into account.

Gender is mainstreamed across GLDC with notable achievements, and each FP has an appreciated bespoke strategy. Progress has been made in developing a youth strategy with partners. GLDC
shows a clear commitment to capacity development, which contributes to its outputs and outcomes. The many PhD projects with national universities are noteworthy. Efforts to modernize capacity development activities through the Task Force need to be further supported. GLDC should take a program-wide view of its research contributions on adaptation to and mitigation of climate change. Internal partnerships could be strengthened by communities of practice. A multitude of strategic partnerships have contributed needed skills for increased effectiveness, but enhanced linkages with A4NH and Livestock CRPs are recommended.

GLDC is well managed with timely reporting. Some action points from the Independent Advisory Committee (IAC) meetings do not appear to have been followed up. The two separate funding streams (W1/W2 and W3/bilateral) and the limited time allocation to the program director (PD) have hampered his ability to direct GLDC, foster rich and productive interactions between FPs, and drive the program as a coherent and integrated portfolio.

The work of GLDC is critical to the hopes and aspirations of millions of poor people in semi-arid and sub-humid lands. The concepts, activities, and aspirations envisaged for the GLDC in the original proposal were well thought through and are just as appropriate for the future. For GLDC to clearly articulate its future contribution, it needs to further modify its theories of change and impact pathways to reflect its current operations without a functional FP2. It can then make realistic projections on the likelihood of ultimate delivery of outcomes.

**Recommendations**

- **Recommendation 1:** In spite of the disappointment of GLDC being terminated one year early, it is recommended that GLDC members continue to generate high-quality outputs with the drive and passion clearly evident from the first two years of operation.

- **Recommendation 2:** It is recommended that future research in seed systems take account of farmer demand for quality seed, farmers’ choices to adopt improved varieties, market preferences, and key factors contributing to the establishment of sustainable seed systems.

- **Recommendation 3:** Although GLDC has made good progress in developing strong linkages with CRPs and Platforms for increased program effectiveness, it is recommended that links with A4NH be strengthened to ensure that the biofortification targets relate to the nutritional objectives in target countries and with Livestock to fully address research and development needs in crop-livestock systems, the most common farming system in the semi-arid tropics.

- **Recommendation 4:** It is recommended that GLDC should as far as possible develop an enhanced systems approach that extends across the whole agri-food system for maximum development impact.

- **Recommendation 5:** It is recommended that the time allocation of the PD be increased to 40–50 percent to allow the PD to drive the program as a more coherent and integrated portfolio and to play a greater role in facilitating and guiding the direction of W3/bilateral funds under an agri-food systems program vision through enhanced dialogue with partner centers and funders. The Roots, Tubers, and Bananas CRP (RTB) offers a proven model.

- **Recommendation 6:** It is recommended that GLDC clearly articulate its true potential future contribution by modifying its ToC and impact pathways to reflect its current operations, allowing it to make realistic projections on the likelihood of ultimate delivery of outcomes.

- **Recommendation 7:** It is recommended that the System Management Board (SMB) and the SMO incorporate the concepts and thinking contained in the CGIAR Strategy and Results Framework (SRF), which are still relevant for transforming food systems for greater impact on the System-Level Outcomes (SLOs), into the forthcoming One CGIAR.

- **Recommendation 8:** It is recommended that the simple model in which each FP is entirely supported by one funder, as exemplified by FP2: HarvestPlus in A4NH and FP6: Common Bean in GLDC, be given serious consideration by the SMB and the SMO in the forthcoming One CGIAR.

**Team**

- **Jill Lenné (Team Leader)**
- **Guy Poulter**