RapidGen Platform is the byname for the Rapid Generation Advancement, which is a facility that aims to modernise crop breeding by accelerating plant lifecycle in light, temperature, and humidity-controlled conditions.

The RapidGen Platform consists of main 3 elements: tested optimization chambers, lighting controlled greenhouse bays, and a temperature-regulated light deprivation polyhouse. The temperature, light and humidity conditions in these installations can be fine-tuned based on the breeding program’s requirements.

Faster breeding cycles can be achieved through shortening the crop generational window by speeding up the growth and life cycle of crops. When used with the full suite of breeding acceleration techniques, RapidGen has a potential to reduce the breeding cycle by an estimated 40% for most crops.

**FAST & COST-EFFECTIVE BREEDING PROCESS**

Breeding time reduced by an estimated 40% as researchers are able to mimic the right recipes / crop specific-protocols that will induce the plant to hasten the crop cycle by growing at a high density, and by producing healthy, viable seeds within these installations.

This innovation is devised to help crop breeders by significantly lowering the time and cost of crop varietal development by overcoming the limitations of seasons and photoperiod to develop the elite generations in fraction of the time and cost against the traditional methods of developing varieties in fields for over a decade.

**PARTNERSHIPS DELIVER INNOVATIONS**

- International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)
- Indian Council of Agricultural Research (ICAR)
- Accelerated Varietal Improvement and Seed Delivery of Legumes and Cereals in Africa (AVISA)
- Corine Agriservice
- Excellence in Breeding (EiB) Platform
- Crops to End Hunger (C2E2H)
- University of Queensland, Australia
- State Agriculture Universities

**INNOVATION LAUNCH & COMMERCIALIZATION**

On 14th February 2020, this state-of-the-art public research facility was launched at the ICRISAT campus in Hyderabad.

The RapidGen facility is available for both internal and interested external (NARS and other organisations) collaborating agencies, providing opportunities for capacity building to accelerate the development of productive and robust crops for the drylands.

**BROADER RELEVANCE**

This innovation contributes to SDG 2 “End hunger, achieve food security and improved nutrition and promote sustainable agriculture”, and SDG 3 “To ensure healthy lives and promote well-being for all at all ages”. This innovation contributes to nutrition and food security goals, have been taken up by users, and is at Maturity level 1 with discourse or behavior changed - by CGIAR research and related activities that have contributed to changed discourse and/or behavior among next users. The platform has been launched, available for use by researchers and is being used for ICRISAT breeding operations.

http://gldc.cgiar.org