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A platform on the move

At half-a-year old, GCP's Molecular Breeding (MBP) is off to a good start, as project teams meet to track progress and jointly map next steps

HYDERABAD, INDIA – “We have learnt a lot and grown as a community. The next steps to develop and deploy the Molecular Breeding Platform are clear and the project team is primed to take them.” This was the sum-up and affirmation from Graham McLaren, MBP Coordinator, at the end of a four-day workshop to officially launch the MBP. The workshop was held 17–20 February 2010 in Hyderabad, India, hosted by the International Crops Research Institute in the Semi-arid Tropics (ICRISAT).

The MBP was initiated in September 2009. It is an initiative of the Generation Challenge Programme (GCP) of the Consultative Group on International Agricultural Research (CGIAR) and is funded by the Bill & Melinda Gates Foundation, with additional financial support from the UK Department for International Development (DFID) and the European Commission. The MBP is a broad initiative that is not exclusively limited to molecular breeding: the platform will blend molecular breeding and phenotypic selection as appropriate to serve breeding goals (for more on the MBP's background, see links at the end of this article).

The road travelled, and the road ahead

Planning for the Molecular Breeding Platform first started in 2007. Throughout the MBP's two-year incubation and into its early months, this steadfast and constructive dialogue has continued through face-to-face meetings and virtual interactions. MBP project teams first met in Montpellier, France, in March 2009, to design the initiative. This Hyderabad workshop in February 2010 was the team's second face-to-face meeting. They re-examined the steps to realise the MBP's vision, assessed progress in the first six months, and adjusted course as necessary following the consultations. And they drew inspiration from one another. Specific objectives were to clarify expectations of all stakeholders in the MBP, review the current status of services and applications, and to verify workplans for platform developers.

“We've had a steady build-up, and we're now approaching consensus after broad discussions with stakeholders,” noted McLaren.

The MBP project unites three main groups: plant breeders, the developers of tools that breeders need and service providers for breeding programmes. “The MBP is a right step in enhancing collective action between and amongst CGIAR Centres and their partners, and with stakeholders,” said William Dar, ICRISAT's Director General. ICRISAT is a central MBP partner.

David Bergvinson, senior program officer at the Bill & Melinda Gates Foundation observed that molecular breeding can succeed in the public sector, especially by partnering with the private sector, as well as with small and medium-scale enterprises. “The idea is to level the playing field so developing countries can benefit from molecular breeding without having to

make large capital investments,” he said. “Service providers will be critical in providing information and tools that will allow breeders to develop better varieties in a shorter period of time, which will eventually increase productivity for small farmers.” Some of these service providers are in the developing world and the public sector, such as Biosciences Eastern and Central Africa (BecA), based in Nairobi, Kenya.

Data, diversity and technology

Data management and access is one of the platform’s cornerstones. Although a challenge, good data management creates the opportunity to leverage and mine the wealth of knowledge data hold.

The project brings together broad diversity in many areas – not only in crops, but also within and across project teams, with different people having different expectations. As such, it is critical that the project remain focused and deliver practical tools, and also that users and developers maintain continuous dialogue

There is a tremendous upsurge in agricultural development and the technology is now available to design tools to spur revolutions in agriculture to which the MBP can contribute, to address current and future food security needs. Nevertheless, the MBP is not driven by technology but rather by providing practical solutions for breeders. The idea is not to design – or wait for – the perfect product or tool: the MBP is reality-based, services ongoing projects, and proceeds by using the best of the technology and tools available now.

David Hoisington, Deputy Director General (Research) at ICRISAT, committed to continue to encourage breeders to take advantage of the platform and the tools it offers. However, he also observed that for breeders to use these tools, they need the support of science managers.

What next?

To ensure focus, the MBP will primarily first prioritise the pre-selected breeding projects, termed ‘use cases’. There are now 14 pioneer [use cases](#), up from 10 at the project’s initiation in September 2009. The seven GCP research [Challenge Initiatives](#) (CIs) will also be served by the platform. Wheat in Asia is one of the CIs, and the MBP launch meeting was immediately followed by the launch of the wheat CI, first in India (22–23 February), and then in China (25–26 February).

All in all, the MBP meeting closed on an optimistic and inspiring note. It was clear that there would be challenges ahead, but the limitations had been recognised and were not insurmountable, especially given the commitment, dedication and energy of the MBP project teams. The MBP conversations will therefore continue, well after Hyderabad.

Read more on the Molecular Breeding Platform at the project [website](#).

Quick links

- [Press release](#) at MBP’s initiation, September 2009 (background on the project)
- [MBP launch workshop](#), February 2010 (including presentations and reports)