**Draft program:**  **Farmer participation in plant breeding programs – the state of the art**

**Expert workshop 18-20 September 2017,** [**Staur Gård**](http://www.staur.no/)**, Norway**

|  |  |  |
| --- | --- | --- |
| Time | What/Title of the presentations | Responsible/facilitator(s)/ Logistics |
| Arrival date: 18th September | | |
| 06:00-24:00 | Workshop participants arrive at the venue | All |
| 19:30 | Dinner and orientation on logistics and workshop program | NMBU |
| Day 1: 19th September | | |
| Introduction | | |
| 08:30-08:40 | Welcome | Daniel van Gilst/ Norad |
| 08:40-9:00 | Introduction to the purpose of the workshop and the project context | Organizing team, NMBU/FNI |
| 09:00-09:20 | The CWR project – an overview | Hannes Dempewolf/ Benjamin Kilian, Crop Trust |
| 09:20-09:50 | Adapting crop breeding practice to climate change (Challinor et al. 2016) | Ramirez-Villegas/ CIAT |
| 09:50-10:10 | Coffee break |  |
| Participatory plant breeding around the world[[1]](#footnote-1) | | |
| 10:10-10:40 | From Participatory to Evolutionary Plant Breeding (Ceccarelli 2015, Ceccarelli and Grando 2007) | Salvatore Ceccarelli, Hon. Research Fellow Bioversity /Independent researcher, formerly ICARDA |
| 10:40-11:00 | Barley PPB and adoption in Ethiopia involving University and NARS (Abay, Waters-Bayer, and Bjørnstad 2008) | Fetien Abay /Mekelle University |
| 11:00-11:20 | Rice PPB in India and Nepal: A highly client-oriented plant breeding (Witcombe et al. 2005). | DS Virk, University of Wales/Independent consultant |
| 11:20-11:40 | Potato breeding in the high Andes (Sharma et al. 2014) | Maria Schurrah/ Grupo Yanapai |
| 11:40-12.00 | Discussion | All |
| 12:00-13:00 | Lunch |  |
| 13:00-13:20 | Long-term collaboration between farmer organizations and plant breeding programs: Methodologies for user oriented variety development and dissemination (Vom Brocke et al. 2010) (Jones, Glenna, and Weltzien 2014) | Eva Weltzien/ Honorary Associate, Agronomy Department, University of Wisconsin –Madison |
| 13:20-13:40 | The maize landrace improvement program in Latin America (Navarro et al. 2017) | Martha Willcox / CIMMYT |
| 13:40-14:00 | Collaborative wheat breeding in France (Rivière et al. 2015) | Isabelle Goldringer/INRA |
| 14:00-14:20 | Discussion | All |
| 14:20-14:40 | Coffee |  |
|  |  |  |
| Integrating end-user preferences in crop breeding. Perspectives and approaches | | |
| 14:40-14:50 | Introducing the session | Organizing team |
| 14:50-15:10 | Farmer Breeding: An Essential Element of Innovation for Sustainable Food Production (Tin et al. 2011) | Normita Ignacio /SEARICE |
| 15.10-15-30 | The role of FFS in PPB (Salazar, Louwaars, and Visser 2007) | Rene Salazar /Oxfam Novib |
| 15:30-15:50 | Participation and action research for crop improvement and seed system development | Conny Almekinders / Wageningen UR |
| 15:50-16:10 | Systems that deliver high rates of genetic gain to smallholders: incorporating farmer, consumer, and processor requirements (Atlin, Cairns, and Das 2017) (Skype talk) | Gary Atlin /BMGF |
| 16:10-16:30 | Bioversity International (Skype talk) | Devra Jarvis/Bioversity |
| 16:30-16:50 | Discussion | All |
| 18.00 | Dinner |  |
| Day 2: 20th September | | |
| Legal considerations: PPB/PVS in current national and international law | | |
| 08:15-08:30 | Introducing the session | Organizing team |
| 08:30-08:50 | Participatory approaches and the implementation of the Treaty: experiences so far (Bhatti et al. 2015) | Alvaro Toledo, ITPGRFA |
| 08:50-09:10 | Options for upscaling community support and enhancing impact (Visser 2016) | Bert Visser, Oxfam Novib/Wageningen UR |
| 09.10:-09:30 | Coffee |  |
| 09:30-09:50 | The space for participatory plant breeding and varietal selection in current sui generis plant variety protection (Toledo and Manzella 2012) | Danielle Manzella, ITPGRFA/FAO/Crop Trust |
| 09:50-10:10 | An overview of bottlenecks and opportunities of current seed laws for participatory approaches to plant breeding and selection (De Jonge, Louwaars, and Kinderlerer 2015) | Bram de Jonge Oxfam Novib/Wageningen UR |
| 10:10-10:30 | Toll roads, not road blocks: options for facilitated access beyond IP and Nagoya? (Bjørnstad 2016) | Åsmund Bjørnstad /NMBU |
| 10:30-10:50 | Discussion | All |
| 10:50-11:30 | Summing up and discussion | All |
| 12:00-13:00 | Option to visit experimental fields of Graminor -the leading plant breeding company in Norway (public-private ownership) | Graminor |
| 13:00-14:00 | Lunch |  |
| 14:00- | Departure | All |

**Organizing team:**

Ola Westengen, Trygve Berg, Åsmund Bjørnstad (NMBU) and Tone Winge (FNI)

**Other participants:**

Daniel van Gilst, NORAD

Morten Rasmussen, Norwegian Genetic Resource Centre /scientific advisor to NORAD

Bell Batta Torheim, Norwegian Ministry of Food and Agriculture

Regine Andersen, FNI /Farmers Rights project

Teshome Hunduma, PhD fellow/NMBU

Elin Ranum, Head of International Department, The Development Fund Norway

Nathalie Keen, Master student NMBU (NMBU)

**References**

Abay, Fetien, Ann Waters-Bayer, and Åsmund Bjørnstad. 2008. "Farmers' seed management and innovation in varietal selection: Implications for barley breeding in Tigray, northern Ethiopia." *AMBIO: A Journal of the Human Environment* 37 (4):312-320.

Almekinders, Conny, and Jaap Hardon. 2006. "Bringing Farmers Back into Breeding: Experiences with Participatory Plant Breeding and Challenges for Institutionalisation."

Andersen, Regine, and Tone Winge. 2013. *Realising Farmers' Rights to Crop Genetic Resources: Success Stories and Best Practices*: Routledge.

Atlin, Gary N, Jill E Cairns, and Biswanath Das. 2017. "Rapid breeding and varietal replacement are critical to adaptation of cropping systems in the developing world to climate change." *Global Food Security* 12:31-37.

Berg, Trygve. 1997. "Devolution of plant breeding."

Bhatti, Shakeel, Mario Marino, Daniele Manzella, Jan Petter Borring, and Álvaro Toledo. 2015. "CWR and the Prebreeding in the Context of the International Treaty on Plant Genetic Resources for Food and Agriculture." In *Crop Wild Relatives and Climate Change*, 350-356. John Wiley & Sons, Inc.

Bjørnstad, Åsmund. 2016. "‘Do Not Privatize the Giant's Shoulders’: Rethinking Patents in Plant Breeding." *Trends in biotechnology* 34 (8):609-617.

Ceccarelli, Salvatore. 2015. "Efficiency of plant breeding." *Crop Science* 55 (1):87-97.

Ceccarelli, Salvatore, and Stefania Grando. 2007. "Decentralized-participatory plant breeding: an example of demand driven research." *Euphytica* 155 (3):349-360.

Challinor, Andrew J, A-K Koehler, Julian Ramirez-Villegas, S Whitfield, and B Das. 2016. "Current warming will reduce yields unless maize breeding and seed systems adapt immediately." *Nature Climate Change* 6 (10):954-958.

De Jonge, Bram, Niels P Louwaars, and Julian Kinderlerer. 2015. "A solution to the controversy on plant variety protection in Africa." *Nature biotechnology* 33 (5):487-488.

Halewood, Michael. 2016. *Farmers' crop varieties and farmers' rights: challenges in taxonomy and law*: Routledge.

Jones, Kristal, Leland L Glenna, and Eva Weltzien. 2014. "Assessing participatory processes and outcomes in agricultural research for development from participants' perspectives." *Journal of Rural Studies* 35:91-100.

McGuire, Shawn, and Louise Sperling. 2016. "Seed systems smallholder farmers use." *Food Security* 8 (1):179-195.

Navarro, J Alberto Romero, Martha Willcox, Juan Burgueño, Cinta Romay, Kelly Swarts, Samuel Trachsel, Ernesto Preciado, Arturo Terron, Humberto Vallejo Delgado, and Victor Vidal. 2017. "A study of allelic diversity underlying flowering-time adaptation in maize landraces." *Nature Genetics* 49 (3):476-480.

Rivière, Pierre, Isabelle Goldringer, Jean-François Berthellot, Nathalie Galic, Sophie Pin, Patrick De Kochko, and Julie C Dawson. 2015. "Response to farmer mass selection in early generation progeny of bread wheat landrace crosses." *Renewable Agriculture and Food Systems* 30 (2):190.

Salazar, Rene, Niels P Louwaars, and Bert Visser. 2007. "Protecting farmers’ new varieties: New approaches to rights on collective innovations in plant genetic resources." *World Development* 35 (9):1515-1528.

Sharma, Neeraj, Sanjay Rawal, Mohinder Kadian, Sushma Arya, MW Bonierbale, and BP Singh. 2014. "Evaluation of advanced potatoes clones for drought tolerance in arid zone in Rajasthan, India."

Sperling, Louise, Jacqueline Anne Ashby, Margaret E Smith, E Weltzien, and Shawn McGuire. 2001. "A framework for analyzing participatory plant breeding approaches and results." *Euphytica* 122 (3):439-450.

Tin, Huynh Quang, Nguyen Hong Cuc, Tran Thanh Be, Normita Ignacio, and Trygve Berg. 2011. "Impacts of seed clubs in ensuring local seed systems in the Mekong Delta, Vietnam." *Journal of Sustainable Agriculture* 35 (8):840-854.

Toledo, Álvaro, and Daniele Manzella. 2012. "The role of the International Treaty on Plant Genetic Resources for Food and Agriculture." *Building resilience for adaptation to climate change in the agriculture sector* 23:173.

Visser, Bert. 2016. The impact of national seed laws on the functioning of small-scale seed systems: a country-case study edited by Oxfam-Novib.

Vom Brocke, Kirsten, Gilles Trouche, Eva Weltzien, Clarisse P Barro-Kondombo, Eric Gozé, and Jacques Chantereau. 2010. "Participatory variety development for sorghum in Burkina Faso: Farmers’ selection and farmers’ criteria." *Field Crops Research* 119 (1):183-194.

Witcombe, JR, KD Joshi, S Gyawali, AM Musa, C Johansen, DS Virk, and BR Sthapit. 2005. "Participatory plant breeding is better described as highly client-oriented plant breeding. I. Four indicators of client-orientation in plant breeding." *Experimental Agriculture* 41 (03):299-319.

1. The objective is to bring out similarities and differences between approaches with regard to objective and research design/model. Objectives can be mainly production-oriented or include e.g. enhancing in-situ conservation, expanding genetic diversity, and empowering farmers. Research design has many elements such as level of framer involvement, crop type related features (outcrossing, inbreeding, vegetatively propagated etc.), agroecology related features (differently affected by CC), gender focus, number of varieties, number of repetitions, plot size, capture of Genotype X Environment interactions. [↑](#footnote-ref-1)