This Community is aligned with the Wheat Initiative’s Expert Working Group (EWG) for Agronomy (www.wheatinitiative.org), with a collective goal to “co-ordinate global wheat research efforts so that, through international efforts, the progress needed to increase wheat production, quality and sustainability can be achieved, thus contributing to the global efforts towards food security and safety under changing climate conditions.” It is also responsive to the Wheat Initiative’s stated research need: “A knowledge transfer strategy to ensure uptake of new knowledge and innovations at the farm gate and to update scientists on changing field realities.”

Our Focus

The main aim of this Community would be to consolidate the global expertise for agronomy with a focus on wheat production systems. The overarching approach would be to develop and adopt a “systems agronomy framework” relevant to any wheat production system. Such an approach first establishes the scale of current yield gaps identifying physiologically defensible benchmarks and then takes a holistic approach to understand and overcome exploitable yield gaps. Finally, new opportunities to drive increased productivity would be sought by capturing future G×E×M synergies identified in different systems. The EWG would then be able to influence priorities for wheat agronomy research in member countries that would facilitate collaborations, minimize duplication, and maximize the likely global impact on wheat production systems.

Several agronomy-related issues are common worldwide including weed resistance; the interface between the plant and the living soil, commonly referred to as the soil microbiome; and the interface between new genetics and management, taking into account the physiology of the plant in agronomic systems and the linkages with other EWGs that are overcoming one component solutions. The Agronomy EWG will bring a holistic approach utilizing all the expertise that affects a living system in the relevant socioeconomic context.

Supporting aims include:

- Establish a protocol for sharing member approaches and priorities to integrated research, outreach, and policy to improve climate systems in wheat-producing regions.
- Support interdisciplinary collaboration in production systems through symposia, special publications, and coordinated efforts to link funding.
- Expand the scope of the Initiative to ensure wheat is effectively implemented to efforts and changes in wheat sustainability and livelihoods of those dependent on wheat production systems worldwide.

We envision the EWG to be a discovery group that will link research priorities and inventories from each country that could then establish synergies among agronomy networks around the world. This should include the deliverables—inventory, priorities, conferences, white papers, and changes made by member country networks because of the EWG. After five years, it could blossom into an Associated Program like IWYP (International Wheat Yield Partnership) or others.

Our Participants, Activities

The aim of this Community and the Agronomy EWG is to bring together experts from a broad range of disciplines who would all contribute to the enhancement phase as part of a systems agronomy approach to meet the global challenges facing wheat growers and end-users today and well into the future. Thus, members from all supporting disciplines of the Community and the Wheat Initiative’s Agronomy EWG.

Key activities in 2017 include, by 15 April 2017, a research inventory by specified region to be compiled. A symposium will be held at the ASA Annual Meeting in Tampa, FL entitled “Understanding the Yield Gap in Worldwide Wheat Initiative Agronomists” by Brian Beres.


Published March 10, 2017