DATE: 4 June 2019
SUBJECT: Letter to stakeholders and collaborators regarding NAPPN Survey Results on needs for plant phenomics in North America

Greetings, Drs. Bergfeld, Brouder, Bubeck, Burgard, Campbell, Carrington, Davies, Davis, DeMarchi, Drollinger, Fox, Friedberg, Gasic, Guertal, Hill, Hutchison, Kaeppler, Kantar, Last, LaVigne, Lawrence-Dill, Lobos, Lengauer, Moore, Ozias-Akins, Pendall, Pierzynski, Pogson, Schurr, Sirault, Sullivan, Taylor, Torn, VanLoocke, and Westgate.

The North American Plant Phenotyping Network (NAPPN) is an association of nearly 600 scientists and researchers in the rapidly evolving area of plant phenomics, formed as a regional partner of the International Plant Phenotyping Network (IPPN).

As an organization, we focus on:

- Accelerating the visibility and impact of advanced plant phenotyping research
- Maximizing existing synergies, identify and reduce potential bottlenecks, and facilitate collaboration spanning disciplines, locations and facilities across the region and beyond
- Incentivizing mutually beneficial research between public and private sectors
- Promoting a framework for data standards that facilitate data access and sharing
- Increasing the visibility and impact of plant phenotyping as a tool to enable plant sciences research beyond its own current research community
- Facilitating the interdisciplinary training needed for effective basic and translational plant phenotyping research

As part of this mission, we surveyed the NAPPN membership as well as participants in the 2019 PHENOME conference in late 2018 regarding their perspectives on how best to support their plant phenomics-oriented research endeavors. The poll itself and complete results (including respondent numbers and demographics) are available via the NAPPN website via About -> Survey Results.

1. Needs:
    a. Researchers require (in rank order) the following resources for their work: access to environmental sensors, rapid data transfer, and centralized data storage.
    b. Advanced analytics was called out specifically as respondents' "most critical" need (Q8).

2. Environments for Research:
    Respondents most commonly reported conducting experiments at "multiple field locations" with "controlled environments" cited as a close second (Q7).

3. NAPPN demographics:
    a. Respondents cite NAPPN's top roles (in rank order) as being: to bring together potential collaborators from complementary disciplines, to advocate needs to funding agencies, and to share information about science learnings, tools, and methods (Q11).
    b. Computer scientists and engineers are least well-represented among our membership (Q22), and efforts to increase participation by and connections to computer scientists and engineers are highly requested (Q15).

We hope that this information is useful to you and hope you will share these survey results with other interested parties as you see fit. We greatly appreciate your encouragement, support, and suggestions on how best to grow and support plant phenomics research in North America.

Sincerely,

Carolyn J. Lawrence-Dill
2019-2020 Chair, NAPPN

on behalf of the 2019 NAPPN Executive Board: Frank Dohleman, David Ertl, Jian Jin, Andrew Leakey, Charlie Messina, Chris Topp (co-chair)