National Plant Germplasm Coordinating Committee June 14, 2016
Agenda item: "USDA Plant Breeding Working Group report"
Notes from Ann Marie Thro; scheduled for 9-9:30 am, Mountain Time (11-11:30 am Eastern)

I. Office of the Chief Scientist (OCS) - update
II. Update on the Plant Breeding Working Group PBWG

I.USDA Chief Scientist: Created by the 2008 Farm Bill; www.ocs.usda.gov

Designates incumbent REE Undersecretary as USDA's Chief Scientist (currently Dr. C. Woteki)
Creates rotational Sr. Advisor positions in each of the six Farm Bill areas:

i Agricultural Systems and Technology; ii Animal Health and Production, and Animal Products; iii Plant Health and Production, and Plant Products; iv Renewable Energy, Natural Resources, and Environment; v Food Safety, Nutrition, & Health; vi Agricultural Econ. & Rural Communities

Now organized as Office of the Chief Scientist, with a permanent Director who reports to CS

Vision of the framers of the 2008 Farm Bill: CS and advisors would work to focus concern resources and research across USDA for relevance and to avoid duplication (in-house or –funded)
Toward these goals, USDA Chief Scientist developed an REE Action Plan (posted on OCS web page)

Linked to USDA Strategic Plan
Consultative process with USDA agencies and stakeholders
Objective: a *shared* vision for USDA science and education across the Department

II.Plant Breeding Working Group (chartered through OCS)
2016: Invited a team of USDA and SAES researchers to brief CS on "big data" in plant breeding

A decade of increasing Federal attention to data, e.g.

2011/12: Federal Big Data Interagency Working Group (BGIWG) formed by WH OSTP
Networking & Information Technology Research & Development program (NITRD)
Def. "Big Data": "disparate, dynamic, and distributed datasets… so large or complex that traditional data processing applications are inadequate"
May 2016: Federal Big Data Research & Development Strategic Plan
Call for national Big Data innovation ecosystem to enable knowledge discovery

2013: GODAN: (Global **Open Data** for Agriculture and Nutrition) http://www.godan.info/
Initiative of USDA and DfID (UK) for "…proactive sharing of open data to make information about agriculture and nutrition *available, accessible, and usable* to deal with the urgent challenge of ensuring world food security".
Almost 300 partners: governments, international, private sector organizations

Messages presented at the PBWG-organized briefing on big data

- "Massive growth in volume, velocity, and variety of sequencing and phenotyping data"; new and needed capabilities to sample and collect data, both temporally and spatially (from single cell, whole organism, underground, geospatial).
- "Biology has shifted from observational science to an information science; needs to move into a predictive science"
- "Public sector resources needed to support this shift have not kept pace"
- Concern: Can public sector plant breeding continue, if it cannot keep up?

How can PBWG and OCS be responsive?

N.B. to NPBCC:
PBWG focus topic for next year? (FY2017) (Transition year) NPBCC suggestions welcome
OCS Sr. Advisors can serve as contact points; plants: annmarie.thro@osec.usda.gov 202 260 9242