Seeds & Breeds Summit Proceedings

Distilled Summary Prepared by the National Sustainable Agriculture Coalition, October 2014

KEY FINDINGS – The Summit identified seven major challenges that have contributed to the decline in publically available and regionally adapted seed varieties and animal breeds:

❖ SHRINKING PUBLIC FUNDING FOR DEVELOPING BETTER SEEDS

- Federal funding has been the lifeblood of public breeding programs that develop new, improved seed varieties and animal breeds, but funding has declined steeply. This has decimated breeding infrastructure and capacity at our academic research institutions, meaning we have fewer people actually doing the research to develop new publicly available varieties that farmers can use. Over the past 20 years, we have lost over a third of our country's public plant breeding programs.

❖ FEWER SEEDS MEANS LESS BIODIVERSITY AND RESILIENCY

Fewer seed varieties in the public marketplace translates into less biodiversity on our nation's farms. This makes our entire food production system more vulnerable to disease, pests and climate change – and means farmers struggle to access the best-adapted seeds for different regions.

❖ CONCENTRATED SEED OWNERSHIP LIMITS FARMER AND CONSUMER CHOICE

A handful of giant chemical companies control more and more of our nation's seed stocks ("germplasm collections") and breeding infrastructure – and, in turn, controls our current and future seed supply. They focus on seeds they can sell the most of, like commodities such as soy, and neglect crops with a smaller market like fruits and vegetables, organic crops, and regionally adapted grain and oilseed varieties. Three firms now control over more than half of the global seed market, up from 22 percent in 1996.

❖ RESTRICTIVE PATENTS PREVENT SEED SHARING AND STRIP FARMERS OF CONTROL

Big seed companies use restrictive patents and licensing agreements to restrict the use of the seeds they develop. This means farmers often can't save or share their own seeds with other farmers, and even other plant breeders have trouble improving seeds bred by others. This means farmers and researchers have fewer choices for the seeds they can use, share, and improve.

❖ ALMOST NO PUBLIC SEED DEVELOPERS ARE LEFT

The number of professionals who develop seeds and breeds - public breeders - continues to decline, and universities and public institutions are losing ground on training future professionals who will be needed to address the needs of the next generation of American farmers and ranchers.

❖ AGING SEED STORAGE SYSTEMS MEAN THE LOSS OF PUBLIC SEED 'BRAIN TRUST' FOREVER

Our country's public seed stocks are stored in "germplasm collections" that have been critically under-funded and under-staffed, forcing triage decision-making regarding which seeds will be kept up to date and viable for planting. Every seed we fail to preserve represents a loss of that genetic diversity forever, and this diversity may hold the answer to future challenges the next generation of farmers will face.

RECOMMENDATIONS – The Proceedings include the following major recommended actions aimed at building enduring and meaningful solutions to the challenges identified during the Summit, with the ultimate long-term goal of revitalizing public support for plant and animal breeding:

❖ NATIONAL PLAN TO RESTORE FUNDING AND CAPACITY

Develop a comprehensive national plan to restore funding and institutional capacity and support for public breeding programs at our nation's land grant institutions and federal research facilities.

❖ ENCOURAGE BIODIVERSITY FOR RESILIENCY

Address the vulnerability of our agricultural systems by encouraging and rewarding agro-biodiversity on farms and in our commercial seed choices, in order to increase resilience against shifting and unpredictable climatic conditions and ensure farmers can choose well-adapted seeds.

❖ INCREASE SEED AVAILABILITY FOR FARMER CHOICE

Empower farmers to save, share and own their seeds, encourage the development of more independent regional seed companies who can help farmers respond to local and regional market demand and climate conditions, and address the negative impacts of consolidation and concentration in the ownership of seeds, including the enforcement of antitrust laws.

❖ REFORM PATENT AND LICENSING LAWS

Increase farmer and researcher access to and innovation in the development of improved varieties, and take steps to reverse the negative impacts of utility patents and restrictive licenses.

❖ EXPAND THE NUMBERS OF CURRENT AND FUTURE BREEDERS

Increase the number of public breeders in each U.S. climatic region with a focus on renewed institutional capacity to support the next generation of public plant breeders. Develop a national policy agenda to increase long-term plant breeding funding in the 2017 Farm Bill.

❖ CREATE INNOVATIVE PARTNERSHIPS TO FOSTER INNOVATION

Develop new partnerships and models to address more regionalized and participatory approaches that more deeply involve farmers in the breeding process.

❖ DEMOCRATIZE ACCESS TO SEEDS FOR PUBLIC BENEFIT

Strengthen our country's seed storage systems (public germplasm collection and storage) by revitalizing long-term funding to protect this critical 'brain trust' of seeds and increasing germplasm access and sharing at both the national and international level.

❖ INCREASE PUBLIC AWARENESS OF THE IMPORTANCE OF SEEDS

Develop a national campaign to educate the public and policymakers on the values and benefits of public plant breeding and linkages to climate change, dangers of genetic uniformity, role of public investments, demands for nutritious and local foods, and the need for regionally adapted seeds.