

OUR FOOD SYSTEM IS UNDER SEVERE THREATS

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Over the past century or so, there has been a seventy-five percent decline in agricultural biodiversity, meaning many varieties of edible plants are no longer available today. This is mainly due to the rise of industrialized agriculture. Once lost biodiversity for food and agriculture cannot be recovered. Essentially a very small club of corporations now dominates the commercial seed trade, especially for the crops that feed industrial food systems.



Of some 6,000 plant species cultivated for food . . . only nine account for 66 percent of total crop production

Current analyses tend to focus on the “Big Four” agrochemical–seed firms, Bayer, Corteva, ChemChina (Syngenta Group), and BASF who together controlled about 60% of global proprietary seed sales. Recent reports by ETC Group & GRAIN and allied organizations estimate that these four companies together control about 50–60% of the global commercial seed market and about 60–70% of the pesticide market.

It is important to note that despite this corporate concentration in the seed sector, farmer-managed seed systems still produce an estimated 80–90% of all seed and planting material globally, especially in the Global South. The Big Four dominate the commercial seed sector, not all the seed that farmers actually plant.

“Of some 6,000 plant species cultivated for food, fewer than 200 contribute substantially to global food output, and only nine account for 66 percent of total crop production. . . . Less biodiversity means that plants and animals are more vulnerable to pests and diseases. Compounded by our reliance on fewer and fewer species to feed ourselves, the increasing loss of biodiversity for food and agriculture puts food security and nutrition at risk.”



“Biodiversity is critical for safeguarding global food security, underpinning healthy and nutritious diets. We need to use biodiversity in a sustainable way, so that we can better respond to rising climate change challenges and produce food in a way that doesn’t harm our environment.”

José Graziano da Silva, former Director-General of the Food and Agriculture Organization of the United Nations (FAO) from 2012 to 2019

UJAMAA - EXPANDING SEED PRESERVATION & CONSERVATION

The seed picture is concentrated but not hopeless. Farmer-managed seed systems and community networks still supply most of the world's seed by volume, and public and participatory plant breeding efforts are expanding. Numerous independent and cooperative seed companies continue to preserve heirlooms, culturally meaningful crops, and regionally adapted varieties. Yet we must intensify efforts to stop corporate and agrochemical mergers and protect farmers' rights to save, use, and exchange seeds.

The programs of the Ujamaa Cooperative Farming Alliance (UCFA) serve as vital instruments for conserving and preserving culturally meaningful heirloom seed varieties. Because many heirlooms carry unique adaptations to pests, diseases, and climate stressors, UCFA draws on the traditional ecological knowledge and farming practices of many BIPOC growers, contributing to the expansion of food-crop genetic diversity.

Conservation Through Community-Based Networks

UCFA-supported Seed Hubs form a network of growers spanning rural, urban, and peri-urban communities, creating a living seed-bank system that maintains diverse heirloom varieties across multiple regions. These hubs embody a stewardship model that keeps culturally meaningful, rare, and endangered cultivars genetically viable and regionally adapted. Each participating grower helps maintain varieties with African, Asian, European, Indigenous American, and diasporic origins by cultivating, saving, and re-circulating culturally meaningful heirloom seeds. This distributed model actively counters genetic erosion, which occurs when seeds are confined to isolated repositories.

Preservation of Cultural Heritage Through Seed Stories

Through Ujamaa Seeds—UCFA's online and direct-to-customer platform—each variety is paired with cultural, historical, and



culinary context, informing growers about botanical origins, domestication, migration, diversification, and food traditions. Through the Heirloom Gardens Oral History Project (HGP), we collect oral histories from those preserving Black and Indigenous seeds and foodways across the Southeast and Appalachia. By publishing cultural seed journeys in the quarterly journal *Seed Culture*, and through workshops and storytelling programs, UCFA preserves the intangible heritage linked to African, Asian, European, Indigenous American, and immigrant food traditions. These narratives transform seeds into living vessels of culture, connecting growers and consumers to ancestral foodways and community identity.

Education and Training for New Seed Stewards

Through the Ira Wallace Seed School (IWSS) and related education programs, UCFA trains new and experienced farmers, gardeners, and youth in seed saving, seed-farming isolation techniques, plant breeding, and regional adaptation. These initiatives build long-term conservation capacity by preparing individuals to become skilled stewards of culturally meaningful heirloom seeds.

Collaborative Research and Regional Adaptation

UCFA partners with academic institutions, community colleges, and farms to conduct variety trials and participatory research that document how heirloom seeds adapt to changing climates. These collaborations enhance conservation by developing regionally resilient landraces and ensuring that historic varieties continue to thrive under new environmental pressures.

In sum, the programs of the Ujamaa Cooperative Farming Alliance embody a holistic model of cultural agro-biodiversity conservation—preserving seeds not only for their genetic traits but also for their roles as symbols of identity, resilience, and community memory.

