Working Landscapes: Achieving Productivity, Profitability, and Environmental Outcomes

AGree
Transforming Food & Ag Policy

2014

Challenges

- Meet future demand for food
- Conserve and enhance water, soil, and habitat
- Improve nutrition and public health
- Strengthen farms and communities to improve livelihoods

Initiatives

- Food & Nutrition
- Immigration Reform
- International Development
- Local Food
- Next Generation
- Research & Innovation
- Risk Management
- Working Landscapes

AGree brings together a diverse group of producers, environmentalists, processors, supply chain companies, and academics who have widely divergent views of the issues and opportunities facing U.S. agriculture. Despite our differing perspectives, however, we share a common vision: a 21st century food system in which farms and ranches are productive and able to meet growing demand for affordable and nutritious food; farming and ranching are profitable enterprises; soil, water, and biodiversity are conserved and enhanced; and environmental quality is maintained or improved. We believe that American farmers and ranchers have had remarkable success to date in achieving many aspects of this vision. Challenges remain in maintaining and improving soil health, water quality, and habitat in many agricultural regions, and as agriculture moves forward, new challenges associated with a changing climate, shrinking water supplies, shifting dietary preferences, and growing populations must also be addressed.

We have developed a set of strategies and initiatives that will be essential to trigger and sustain transformative change on an effective and meaningful scale. While public policy, regulation and publicly-funded research will play a role in enabling needed innovations, we strongly believe the solutions necessary to attain our common vision will largely emerge from the efforts of those directly engaged in food and agriculture enterprises working in their businesses and communities. Models of innovation that create new sorts of linkages and are laser-focused on problem-solving are needed to set the stage for aligning efforts to achieve positive economic, social, and environmental outcomes across U.S. and international supply chains. Innovative problem-solving must engage producers, commodity groups and associations, researchers, educators, NGOs, and businesses, as well as public policy and institutions. Building trust and promoting cooperation among these stakeholders is essential. We know this is possible because we have seen it work in diverse circumstances across the United States.

We acknowledge that there is anxiety in the agricultural community with government-driven regulatory approaches to farm and land management. We believe that government's role is to set goals and support producers, landowners and businesses in their achievement, ensuring accountability for meeting goals and avoiding prescribing specific practices as much as possible. And, when regulation is essential to ensure public health and safety and conservation of natural resources, it must be fair, sensible, effective, and flexible.

To set U.S. agriculture more firmly on a path toward achieving our common vision, even as new challenges and opportunities emerge, we recommend the following strategies:

- Embrace diverse agricultural systems to ensure achievement of sustainability, productivity, and profitability goals. Stakeholders must move beyond debates about big vs. small, organic vs. conventional or low vs. high tech to focus on what works best to achieve these concrete outcomes: reliable and consistent production of affordable, safe, and nutritious food; healthy working lands and ecosystems, and prosperous farms and communities. All producers must

have the tools and resources they need to successfully and sustainably deliver agricultural products while serving diverse consumer values and markets. Food value chains everywhere must be sufficiently resilient to adapt to changing market and environmental conditions and to recover from short-term weather, market, or resource-based crises.

- Expand producer-led cooperative conservation across U.S. working lands. U.S. agriculture should capitalize on and extend proven successes of producer- and landowner-led efforts to advance conservation and improve environmental outcomes. Farmers, ranchers, and landowners should be empowered by federal policy to take the lead in initiating efforts to:
    - determine a basic standard of care — performance and practice standards that should reasonably be expected of landowners and producers in their watersheds or regions and should be in place whether or not public cost-share dollars are available;
    - encourage all producers to participate in meeting those standards, and test innovative approaches to meeting these standards while also achieving production goals;
    - assess the productivity and profitability of these practices over the long term;
    - work with relevant agencies, technical experts, and organizations to identify additional on-farm practices and infrastructure that support achievement of natural resource conservation goals;
    - determine implementation and financing strategies and identify sources of funding to support implementation; and
    - provide safe harbor to those who are willing to take voluntary action to achieve desired outcomes or early adopters who achieve such outcomes in an unconventional or extraordinary manner.

"Taking the lead" does not mean "doing it alone." The value of public research and extension systems in providing science-based advice is well-recognized and will be an essential complement to producer-led efforts. Indeed, strengthening public agricultural education and extension would facilitate additional acceptance and implementation among producers, landowners, community groups, and state and federal agencies to advance effective conservation at both the farm and landscape scale.

- Improve soil health and water quality and quantity through targeted investments. Farmers and other stakeholders should take an integrated, systems-oriented approach to soil, water, and nutrient management tailored appropriately to local conditions and farming practices. While soils vary dramatically across topography, they are the most basic, precious and critical resource for agricultural production. Degraded soil quality reduces the effectiveness for roots to access both water and nutrients, which leads to the need for higher levels of applied fertilizer and irrigation water when crops are actively growing. Farmers must have the correct levels of nutrients for their crops to perform and need access to the knowledge and tools necessary to maintain and improve long-term fertility by promoting soil quality. In summary, improvements in soil quality benefit society with lower food costs, cleaner water and reduced atmospheric carbon while landowners experience higher land values due to greater productivity from the resilience naturally inherent in improved soil.
    - Federal and state agencies as well as commodity groups and business leaders should invest in the research, education, and tools needed by farmers to more efficiently manage soil, water, and nutrients so that long-term productivity, profitability, and ecosystem health are improved and sustained.
- Increase understanding of the overall benefits, costs, and health and safety of agricultural inputs, practices, and systems. Well integrated and publicly available data and further analyses are needed to accelerate progress, as are better aligned goals and standards:
    - Invest in baseline data collection, long-term monitoring, research, and the merging, mining, and analysis of existing public and private databases (while effectively protecting proprietary information) to understand the relationships between production systems, conservation practices, yields, resilience, and environmental outcomes and to support both on-farm management and watershed/landscape scale natural resource conservation.
    - Craft widely accepted goals, standards, and associated metrics relevant to producers and landowners, commodity groups and associations, policymakers, supply chain leaders and the public to focus activities of multiple sectors and actors, and leverage public and private investments around commonly shared objectives.

  - Develop knowledge that can be used to design programs and incentivize conservation practices and systems that result in long-term productivity, resilience, and environmental quality. Increase capacity of the federal government to conduct independent and transparent, government-funded assessments of the agronomic effectiveness and human and ecological health impacts of new agronomic tools, technologies, and systems while modifying and streamlining the regulatory permitting processes to accelerate timely use of new tools and technologies that meet environmental, health, and safety standards.

- Foster collaboration across the supply chain to drive innovation and improved environmental outcomes: Move from checklists where large companies make demands of farmers and ranchers to mix and match "sustainable" practices to collaborative partnerships among food companies and producers focused on improving the "triple bottom line" (economic, social and environmental outcomes) at both farm and watershed/community scales, and indeed all along food value chains. Adopt new policies to promote and reward the widespread adoption of successful models. The goal is to create an equitable distribution of costs and benefits associated with transformative system changes, and create and share added value along the entire supply chain through high-quality engagement, commitment to ethical principles, and continuous learning.

Much work is already underway to advance these strategies, with leadership from producers and landowners, the supply chain, and the conservation community. But the challenges are also growing more complex and U.S. agriculture faces new competition and threats, both from inside the United States and globally. To amplify current efforts and accelerate progress, we propose the following specific goals, which we believe are indicative of the scope, scale, and pace of change necessary to realize our vision. The achievement of these goals will require the integrated pursuit of the strategies identified above.

1. **Shift up to 50 percent of USDA conservation program spending to support producer-led models for watershed-based cooperative conservation** by engaging 20 percent of working lands in producer-led, cooperative conservation projects in areas with significant resource concerns by 2025, 50 percent by 2035, and 75 percent by 2045.

2. **Increase continuous no-till where compatible with regional farm and crop practices by 50 percent and plant cover crops on 65 percent of annual row crop acreage to decrease soil degradation ratings** by 2025.

3. **Increase water supplies suitable for irrigation by 33 percent and mitigate overdraft of aquifers by 2025** by increasing irrigation water efficiency, increasing environmentally sound water storage and recharge, reducing losses in water conveyance, and bringing into greater alignment the water needs of crops/livestock grown in regions and long-term projections (including potential for enhancement) of water supply.

4. **By 2025, reduce by 30 percent the number of rivers, lakes and streams currently designated as impaired primarily because of legacy and current nutrient, pesticide, and sediment runoff from cultivated cropland.**

5. **Universalize methods of nutrient application that result in efficient uptake by plants, retention of nutrients in the soil, and reduced release into water and air.** Acceptable levels of nitrogen and phosphorus use efficiency will vary by region, soil, type of irrigation (if any), and source of nutrient. In impaired watersheds, require producers who chose not to participate in voluntary efforts to conduct nutrient management planning and other practices necessary to reduce offsite environmental effects of nitrogen and phosphorus and protect the watershed.

6. **Integrate and/or manage USDA (e.g., NASS, ERS, NRCS, etc.) on-farm data collection programs** so that detailed, comprehensive farm-specific information is available to quantify the impacts of farm enterprise design, farming system choices, conservation practices and systems, technology, and policy on all critical aspects of farm-level and watershed/landscape-scale performance, impacts, resilience, and sustainability.

Progress toward these goals will demonstrate that U.S. agriculture is on a trajectory to meet the challenges of aligning productivity, profitability, and environmental outcomes. These goals and programmatic recommendations are not intended to be comprehensive, nor the final word, but are offered as an essential starting point. For a more detailed and comprehensive set of strategies, please see *Annex to AGree Consensus Recommendations: Achieving Productivity, Profitability and Environmental Outcomes in U.S. Agriculture*.

Although all the individuals formally affiliated with AGree may not agree completely with every statement noted, they are committed to working together to find solutions to the challenges facing food and agriculture. AGree Advisors participated as individuals, not as official representatives of their organization.

About AGree

AGree seeks to drive positive change in the food and agriculture system by connecting and challenging leaders from diverse communities to catalyze action and elevate food and agriculture policy as a national priority. AGree recognizes the interconnected nature of food and agriculture systems globally and seeks to break down barriers and work across issue areas.

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