A CALL TO ACTION

EXECUTIVE SUMMARY

Ohio Smart Agriculture: Solutions from the Land

A Call to Action for Ohio's Food System and Agricultural Economy

Ohio Smart Agriculture
SOLUTIONS FROM THE LAND

Ohio Smart Agriculture: Solutions from the Land Steering Committee

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Our recent initiative, *Ohio Smart Agriculture: Solutions from the Land*, was organized to identify and begin implementing pragmatic, proven, and innovative solutions to challenges confronting Ohio farmers in the face of environmental uncertainty and in support of a food system that benefits producers, the public, and the planet.

Driven by farmers — with participation from experts in agribusiness, health, nutrition policy, ecology, and conservation — the initiative explored ways to place farming at the forefront of resolving the extensive challenges facing Ohio today: hunger, poor health, degraded environments, broken economies, trade, tariffs, and limited inclusion in global economies. In doing so they considered food, agriculture, the environment, and rural and urban communities as a *system* rather than separate challenges. This effort is about creating new options and opportunities for farmers, agriculture, and consumers that together benefit all.

Through months of brainstorming, research, and dialogue with communities of interest across the state, the project leaders forged consensus on strategies to:

- **Reduce hunger** and **improve nutrition** by supporting the production of fruits, vegetables, animal proteins, and food-grade grains for human consumption.
- **Create jobs** and **generate economic growth** by diversifying and sustainably intensifying production and processing of food, feed, fiber, and renewable energy.
- Augment ecosystems services to **improve the environment, enhance the resilience** of agricultural and forested landscapes and **improve the farmer's bottom line.**

This call to action outlines their collective findings and recommendations and offers a series of priority actions needed to help Ohio's farmers and woodland managers further improve the state's quality of life through solutions they can sustainably deliver from the land.

At a time of historically high yields but low commodity prices, climate and environmental threats, and widespread hunger in a skilled and prosperous state, Ohio agriculture can diversify its production with a resilient agricultural model focused on ecosystems services.

We will succeed when the direction we set forth engages the broader community in a joint response to these issues and promotes collaboration among Ohioans. We invite you to join us in bringing this vision to life through *Ohio Smart Agriculture: Solutions from the Land.*

Fred Yoder, *Co-Chair*
4th Generation Farmer
Plain City, Ohio

Lisa Hamler-Fugitt, *Co-Chair*
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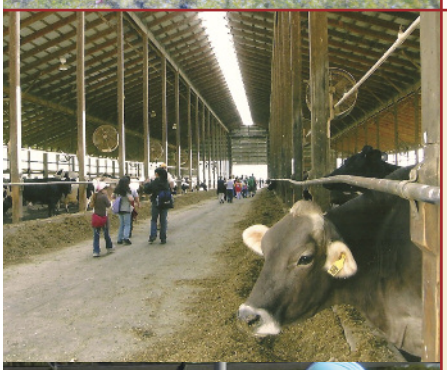
Ohio Smart Agriculture
SOLUTIONS FROM THE LAND

The project is funded by a generous grant from the W.K. Kellogg Foundation. WKKF, founded in 1930 as an independent, private foundation by breakfast cereal pioneer, Will Keith Kellogg, is among the largest philanthropic foundations in the United States. Guided by the belief that all children should have an equal opportunity to thrive, WKKF works with communities to create conditions for vulnerable children so they can realize their full potential in school, work, and life.

W.K. KELLOGG FOUNDATION

PROBLEM: Increasingly complex markets, low commodity prices, and more volatile weather exacerbate crop losses and degrade environmental conditions, such as the creation of the harmful algal blooms, that have combined in ways that threaten Ohio agriculture. At the same time, household food insecurity in Ohio, a state that should be a land of plenty, ranks well above the national average (15.1 percent of the population of Ohio, including one out of five children, suffer from food insecurity). Clearly, the commodities we are so good at producing are not relieving that insecurity, nor are they keeping all farms and farmers on the land. The American Farmland Trust estimates that Ohio has been losing more than 50 acres of farmland per day as the long-term trend toward fewer farmers and fewer farms continues.



VISION: Facing the specter of a rapidly changing and more unpredictable global environment, Ohio agriculture will adjust to these conditions and maintain a style of farming and a food system that benefits producers, consumers, the public, and the planet. Our vision is to boost profitability for farmers at all scales and in all settings, rural and urban, while improving environmental resilience, building strong communities, engaging consumers, and ensuring public health and access to nutritious food.

For more than 200 years, agriculture in Ohio has nourished us at the national and local levels. It has been a powerhouse economically and culturally, and a consistent national leader in providing a wide range of products. Its farmers have changed with the times — steadily boosting their yields, embracing technology, adopting new practices, and deepening a connection with the land and soils.

Yet the changing times have also revealed a disconnect between farms and cities. Many rural farm towns have fallen on hard times. But the highest percentages of food-insecure households fall at both the most urban and rural ends of the spectrum. Changing weather patterns have made prices — and yields— more volatile. And, despite improvements in how farmers apply nutrients, agricultural runoff still is a problem in Ohio's waterways. These are the loose threads in Ohio agriculture today.

Ohio Smart Agriculture: Solutions from the Land has studied this landscape for nearly two years and now unveils a comprehensive strategy to re-weave these threads into a beautiful, strong, and valuable tapestry that reconnects Ohioans, helps reduce hunger, and strengthens communities — all in a way that draws from and gives back to our ecosystems.

The Ohio Smart Agriculture Steering Committee developed this vision for mid-century agriculture after intensive research, presentations, and discussion of the challenges and opportunities that Ohio

agriculture faces. Four workgroups delved into climate, ecosystems, market opportunities, and hunger, and identified three pathways for achieving these solutions from the land:

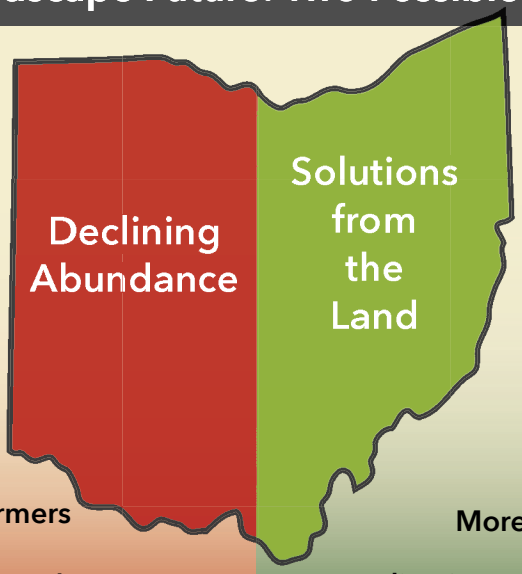
- **Reduce hunger** and **improve nutrition** by supporting the production of fruits, vegetables, animal proteins, and food-grade grains for human consumption.
- **Create jobs** and **generate economic growth** by diversifying and sustainably intensifying production and processing of food, feed, fiber, and renewable energy.
- Augment ecosystems services to **improve the environment, enhance the resilience** of agri cultural and forested landscapes and **improve the farmer's bottom line.**

The result is a set of 50 goals and recommendations apportioned among these pathways to guide the next generation of Ohio agriculture. The steering committee then identified four major initiatives that could be launched in the very near future and, together, set the stage for all the recommendations. Each of the four initiatives encompasses several of the goals and recommendations.

This taxonomy of pathways, goals, and initiatives should not in any way be considered a form of prioritization. This call to action emphasizes that Ohio Smart Agriculture is a **long-term**, comprehensive initiative that requires sowing seeds along all three pathways at once: Agriculture is a *system*, and *all the recommendations together* are priorities that will enable the transformation we envision.

The four sweeping initiatives are the kinds of **short-term** actions that can attract financing for this effort and enlist others to join the quest for a wider range of goods and services from Ohio's farms and woodlands. **The order in which they are presented here does not connote any ranking. These steps are interconnected and interdependent "launching pads."**

Ohio's Landscape Future: Two Possible Pathways



Declining Abundance

- Fewer Farmers
- Tighter Regulation
- Water Quality Loss
- Declining Rural Communities
- Farmland Loss
- Disconnected Consumers
- Less Diversity, in Farms and Farmers
- Changing and More Extreme Weather

RESULT: Low Food Security & Inadequate Nutrition

Solutions from the Land

- Food Chain Diversity
- Soil Health and Quality
- All Farms Prospering
- Communities Prospering
- Reconnected Consumers
- Farm Enterprise Diversity
- Water Quality Gains
- More, and More Diverse, Farmers
- Policy Supports Farmers *AND* Consumers

RESULT: Healthy Lands & Good Food for All

Initiative I: Make Ohio agriculture and the food system a public policy priority.

A) Form and properly resource a Farm, Food, and Health Partners Alliance (a non-governmental group of stakeholders from across the spectrum of food and agriculture).

B) Create an interagency task force to align state agencies toward effective and coordinated food, health, and agricultural programs.

C) Restore state government as a marketer and champion, as well as a regulator, of agricultural goods and services (through such programs as Ohio Proud).

Initiative II: Diversify and sustainably intensify the production of food, feed, fiber, and fuel.

A) Integrate commodity with diversified, identity-preserved, value added agricultural production to enhance ecosystem services and public support for Ohio agriculture.

B) Promote workforce development and resources, such as land access, to ensure a strong agricultural economy.

C) Create a strategy to strengthen value-added woodland supply chains and create new markets for residual forestry products.

Initiative III: Use institutional buying power to ramp up demand for "Ohio Smart Food."

A) Jump-start infrastructure development by quantifying demand for and encouraging commitment to local food purchasing by public institutions.

B) Develop an independent "food system finance authority" to pay for development of processing infrastructure.

C) Develop and pilot a small-scale, mobile meat-processing unit.

D) Regularly evaluate the food needs and preferences of Ohioans through surveys.

Initiative IV: Implement landscape-scale, climate-smart agriculture strategies to ensure sustainability and abate agricultural runoff.

A) **The state of Ohio and all stakeholders should, by 2020, formulate and oversee the implementation of a new state water quality strategy that includes current public and private sector response initiatives.**

B) Develop and implement a climate-smart action plan for Ohio agriculture to help farmers adapt, improve resilience, and deliver products and services that mitigate climate-change impacts.

C) Track and publish statewide progress data to assure and celebrate continuous improvement.

Among the remaining recommendations are recurring themes that illustrate the interconnectedness of these strategies:

- Local and regional supply chains offer great potential for growth once the processing and marketing infrastructure are in place; they can reduce food insecurity while creating jobs and strengthening local economies.
- A greater variety of grains and grasses can improve soil health and reduce runoff from fields; developing markets for winter cover crops can make them and the ecosystem services they provide more attractive to farmers.

The goals and recommendations in this call to action are the result of collaboration among many interests: commodity growers, produce farmers, foresters, public health and nutrition experts, agribusiness leaders, academics, environmentalists, agriculture advocates, and others. A coalition this diverse, coming to consensus on a 30-year vision, shows the seriousness of this call to action and provides a strong foundation for a widespread movement to prepare Ohio agriculture for a challenging future.

The current coalition, however, is only a start. We need agriculture industry leaders, political voices, community and consumer support, and institutional backing if we are going to ensure that political, economic, and social frameworks are ready for these changes. We encourage you to study the vision we've described, share it with those who would appreciate its message, support and join us as we move forward with *Ohio Smart Agriculture: Solutions from the Land.*

Farmers and others are now trying to figure out what Ohio agriculture will look like in 2050.

JOIN US!

Enabled by a grant from the W.K. Kellogg Foundation, Solutions from the Land, a national organization dedicated to advancing land-based solutions to global challenges, and OSU's InFACT teamed up to support and facilitate *Ohio Smart Agriculture: Solutions from the Land.* Through extensive dialogue and collaboration with a wide cross section of stakeholders, we have formulated a mid-century vision for Ohio's food system and agricultural economy. With input and guidance from these partners, we have also created a roadmap to achieve the vision for delivering a wider range of goods and services from the land.

Some of the actions we propose are immediate initiatives that can accelerate and energize a broader and more robust response to the mega challenges facing Ohio today. Others are longer-term strategies that require further vetting and enhancement, along with integrated and landscape-scale planning.

In advancing these findings and recommendations, we know that our work is far from complete. For our vision and mid-century goals to be realized, this call to action must be implemented. This can only happen if those who share a common vision engage all communities of interest in a shared clarion call to action.

Toward this end, we invite all farmers; philanthropic, business, community, and non-governmental organizations; academic and government partners; and advocacy groups that work at the intersection of land, food, health, and the environment. We ask that you join us in the actionable steps we've described that will help reduce hunger and improve nutrition; create jobs and generate economic growth; improve the environment; and enhance the resilience of agricultural and forested landscapes.

Going forward, the implementation phase of this initiative will continue to be guided by a self-directed steering committee composed, we hope, of leaders who step forward from each of the communities of interest that have been engaged so far. Three organizations have partnered in providing backbone support for the effort so far and are willing to continue into implementation: Solutions from the Land (including operating, administrative, and fiduciary support); the OSU Initiative for Food and AgriCultural Transformation (bringing expertise from across the university and its network leadership beyond), and Ohio State University Extension (providing a two-way connection with Ohioans in all 88 counties). We invite willing, able, and respected leaders from across the diverse Ohio agricultural and food system landscape to join us as core partners in advancing this vision and achieving expected outcomes.

In times of changing climate, markets, and preferences, the defining mission of *Ohio Smart Agriculture: Solutions from the Land* is to:

- Help farmers adjust to new weather patterns, nurture the land, clean our air and waters, and provide a healthy ecosystem for future generations.
- Reconnect consumers with agriculture; improve health, food access, and nutrition for Ohioans; and celebrate the importance of strong, vibrant farm communities and farmland.
- Build new opportunities and infrastructure for a more diverse and prosperous farm economy in which Ohioans feed Ohio and the world.

Evidence of transformational change in Ohio's food systems and agricultural economy is emerging across the state. Please join us in nurturing and growing these foundational efforts!

About Solutions from the Land

Solutions from the Land is a nonprofit corporation focused on land-based solutions to global challenges. Its mission is to identify and facilitate the implementation of policies, practices, and projects at a landscape scale that will result in land being sustainably managed to produce food, feed, fiber, and energy while protecting and improving critical environmental resources and delivering high value solutions to combat climate change. The president is Ernie Shea (*eshea@SfLdialogue.net*). **For more information, see *www.sfldialogue.net/SFL/SfL_Vision.pdf***

About InFACT

The **Initiative for Food and Agri-Cultural Transformation** (InFACT) is a transdisciplinary Discovery Theme program at OSU aimed at designing and implementing sustainable food systems, which are defined as achieving a balance of ecology, economy, technology, and culture, and to promote the overall well-being of people, animals, and the natural environment. The InFACT mission is to transform the way we grow, process, and distribute our food, leading to vibrant, sustainable, and resilient agriculture that places nourishing food at the center of just and vital communities in Ohio and beyond.
The program is co-led by faculty director Casey Hoy (*hoy.1@osu.edu*) and executive director Brian Snyder (*snyder.1534@osu.edu*). **For more information, see *discovery.osu.edu/infact.***

About OSU Extension

OSU Extension is commonly referred to as the "outreach arm" of the university, having offices in all 88 Ohio counties. Because its employees live and work in the county they serve, they have a genuine connection both to the people of Ohio and the state's land grant university. Its current priorities are health and wellness, thriving across the lifespan, workforce development, sustainable food systems, community capacity building, and environmental quality. Extension's purpose is to translate and disseminate scientific knowledge in a way that is beneficial to the people of the state. Historically, this has occurred through workshops, seminars, field days, and one-on-one consultation. Today, Extension is also working in partnership with communities to co-create solutions to local problems. The director is Roger Rennekamp (*rennekamp.3@osu.edu*). **For more information, see *extension.osu.edu.***

Acknowledgements

WORK GROUPS

The steering committee would like to thank the scores of agricultural, forestry, conservation, academic, and business leaders who have participated in this dialogue to date. During the period of 2017-2018, four workgroups, comprising a diverse cross section of supporting partners, forged consensus on initial steps necessary to ensure the realization of our vision and produced reports outlining their findings and recommendations. In producing this vision for Ohio agriculture, the steering committee drew heavily from the products of each workgroup. **A list of workgroup participants and their reports can be viewed at *www.ohiosmartag.net.***

SUPPORT

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Glossary

Climate change – Climate change is a consistent and long-term change in the usual weather found in a place. This could be a change in how much rain a place usually gets in a year, or it could be a change the usual temperature for a month or season. Weather can change in just a few hours; the climate takes many years to change.

Commodity – A standardized product sold in a competitive market that encourages the lowest price possible and in which the source of the product is irrelevant.

Ecosystem services – Farms, ranches, and forests provide vital goods and services to society that are called "ecosystem services." These services offer additional benefits to society beyond typical agricultural products, such as clean water and air, wildlife habitat, and carbon storage. Market-based approaches to conservation are a cost-effective method to achieve environmental goals and sustain working and natural landscapes. Farmers also rely on ecosystem services for such basic needs as adequate soil moisture, pest control, and healthy soils that support plant growth. Farmers can manage their land in ways that produce each of these services, avoiding expensive inputs that would otherwise be needed to replace them.

Low food security (14.8 percent of Ohio households, 2014-2016, ERS) – Conditions in which individuals or families may need to make trade-offs between basic needs (such as housing or medical bills) and purchasing nutritionally adequate foods, with diet quality suffering.

Very low food security (6.3 percent of Ohio households, 2014-2016, ERS) – Consistently living with malnutrition and hunger, and missing meals on a regular basis.

Infrastructure (as in local food) – Generally, the aggregation, processing, and distribution services used to get products from farm to market. It can include food hubs, cooperatives, slaughterhouses, produce terminals, and other facilities. The term is sometimes expanded to include marketing, land, equipment, and labor.

Local food – Food produced within a certain geographic area. Definitions in terms of distance varying from an hour's drive to a day's drive to 100 miles to 400 miles, but a key quality that people seek is the chance for the producer and consumer to know each other and perhaps to have met, which is sometimes called civic agriculture.

Ohio Smart Food – Food for human consumption that is grown in an environmentally sensitive manner by Ohio producers and is immediately and conveniently available on an equitable basis to Ohio consumers with minimal handling and processing.

Resilience – The capacity of an agriculture and food system to absorb or withstand small disruptions (e.g., a year with low prices for products or adverse weather) and adapt to large disruptions (e.g., permanent and profound changes in global markets, climate, or technology) without losing its structure and functions (producing food, fiber, and more). Resilience requires self-organization, learning and adaptation; the grist for adaptation is diversity.

Specialty crops – Defined in the 2014 Farm Bill as "fruits and vegetables, tree nuts, dried fruits, horticulture, and nursery crops (including floriculture)."

Sustainable (social, economic, environmental) – Defined in InFACT's strategic plan as "Achieving a balance of ecology, economy, technology, and culture to promote the overall well-being of people, animals, and the natural environment."

50 x'50: Pathways to Ohio's Mid-Century Food System and Agricultural Economy

1. Form and properly resource a Farm, Food, and Health Partners Alliance.
2. Align state agencies toward effective and coordinated food, health, and agriculture programs.
3. Restore the Ohio state government's role as a marketer and champion of agricultural goods and services.
4. Restructure the Ohio Department of Agriculture's Ohio Proud program to make it relevant and engaging to today's consumers, institutional foodser vice markets, and commodity-scale agriculture.
5. Quantify and regularly assess demand for local food.
6. Quantify and regularly assess the food preferences of Ohio consumers.
7. Expand and remove barriers to institutional purchase of Ohio food and agriculture products.
8. Grow more of what Ohioans need.
9. Develop an independent "food-system finance authority."
10. Restore processing capacity and supply chains for Ohio-raised food.
11. Restore processing capacity and supply chains for Ohio-raised meat and poultry.
12. Develop markets and supply chains that serve immigrant populations.
13. Develop and fund a pilot, small-scale, mobile meat-processing program.
14. Improve access to affordable and nutritious food, especially in underserved communities.
15. Promote food as medicine.
16. Expand Ohio farmer outreach and advocacy to address food insecurity challenges.
17. Welcome and support the next generation of farmers.
18. Develop programs to assist young, underserved and "new-American" farmers.
19. Develop programs to assist limited-resource farmers.
20. Promote training in schools, colleges, and prisons in support of the entire food system.
21. Create new agriculture-education programs for adults, communities, and students.
22. Build human capital in the form of workforce development and community resources.
23. Reform immigration policy to help fill agriculture jobs.
24. Ensure living wages for farm and agriculture-related jobs.
25. Support local food aggregation and processing to ensure ease of marketing for farmers.
26. Adjust state regulatory policies to be more collaborative and/or less adversarial.
27. Increase the number of malt houses, grain mills, and other processing facilities to assist the brewing, distilling, baking, snack food, livestock feed, and other industries.
28. Promote controlled-environment production for horticulture and floriculture.
29. Support development and expansion of aquaculture and creation of a processing and distribution supply chain for fish.
30. Promote new processing options and markets for Ohio wood products.
31. Promote new processing and markets for Ohio bio-products and the bio-economy.
32. Invest in rural broadband infrastructure.
33. Diversify commodity production with identity-preserved or value-added products.
34. Develop and implement a climate-smart action plan for Ohio agriculture.
35. Create and implement a new water quality strategy.
36. Identify pathways for accelerating and scaling up the delivery of ecosystem services to Ohio farms and from Ohio's agricultural landscapes.
37. Through knowledge sharing, increase the use of precision farming technologies.
38. Create a strategic forestry roadmap and strengthen programs to promote good management of woodlots on farms.
39. Harmonize tax incentives to protect working lands.
40. Boost awareness of the role that farmers play in Ohio's economy and environment.
41. Create a network of government and private consultants to help develop a landscape scale plan for ecosystem management.
42. Promote research and education about cover crops and other soil-enhancing practices.
43. Track and publish statewide data in order to assure and celebrate continuous improvement.
44. Increase research and data on the handling and application of manure on fields.
45. Increase research and data on the services to agriculture that come from the land.
46. Promote policies and practices that support the ways in which agricultural land can provide public benefits: zoning policies, water resource protection, forestry and woodlot management, and tracing the sources of food.
47. Strengthen land use policies that keep land in agricultural production.
48. Develop a brand and recognition for Ohio farm products of all kinds, including ecosystems services.
49. Create risk management programs.
50. Increase awareness of ecosystem services.

Ohio Smart Agriculture

SOLUTIONS FROM THE LAND

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