



Ohio  
Smart  
Agriculture  
SOLUTIONS FROM THE LAND

## **An Introduction to Ohio Smart Agriculture: Solutions from the Land**

### **An Upper Midwest Multi-Functional/Climate-Smart Agriculture Initiative**

Ohio is facing a growing demand for affordable and nutritious food, feed, fiber and energy, clean water in healthy watersheds, thriving wildlife habitats and other ecosystem services. Fortunately, Ohio is positioned to meet these needs and demonstrate agriculture's value to society. These responses to tough demands is the focus of the Ohio Smart Agriculture: Solutions from the Land initiative.

Enabled by a grant from the W.K. Kellogg Foundation, Solutions from the Land, a national NGO dedicated to advancing land-based solution to global challenges and The Ohio State University's Initiative for Food and AgriCultural Transformation (InFACT), joined together to help a diverse coalition of agricultural, environmental and food security [leaders](#) build a 21st century sustainability plan.

Using a holistic, integrated approach to land management, the project leaders are identifying and incubating platforms that support the sustainable production of food, feed, fiber, energy and ecosystem services. These goods and services will then be delivered up the food chain all the way to the urban core. While previous initiatives have been valuable planning exercises designed to "increase production of farms", this initiative builds on that work and includes "getting food on tables". In embracing the vision of Ohio agriculture helping to "feed the world", we recognize that this starts with feeding our neighbors in Ohio.

Over the past 12 months, the project leaders have been taking stock of the "current state" of Ohio food systems and crafting a vision for Ohio's agriculture future. They now seek your input. Diverse views from agricultural, environmental, business, community, academic and government leaders will add to their initial draft vision, findings and ideas to transform Ohio agriculture to meet 21st century needs.

Please join the growing conversation about solutions Ohio agriculture can deliver from the land.

### **Problems to Solve**

Increasingly complex markets, low commodity prices and more variable and unpredictable weather are contributing to crop losses and degraded environmental conditions, including harmful algal blooms, that have combined to create problems and elevate risks for 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 (14.8% of the population of Ohio including 1 in 5 children suffer from food insecurity). The commodities we produce well, are not relieving insecurity, nor are they keeping farms and farmers on the land.

### **Vision Statement**

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 (from rural to urban) while restoring environmental resilience, building strong communities, engaging consumers and ensuring public health and access to nutritious food.

## **We Succeed When**

- Ohio agriculture is resilient and sustainable;
- All Ohioans have access to nutritious food;
- There is greater diversity in producers, products grown and production systems;
- Opportunities for food and agriculture market development grow;
- Through multi-stakeholder collaboration, Ohio agriculture is a national model for environmentally sound and sustainable production systems;
- The lives of those who live below the poverty level, especially vulnerable children, are improved; and
- Ohio agriculture is valued, respected and compensated for the full range of goods and services it delivers from the land.

## **State of Today**

### **Ohio: An agriculture powerhouse**

- Food and agriculture are Ohio's largest industry; contributes more than \$105 billion to the annual economy and employs 1 in 7 people;
- Ohio has some of the most fertile land in the country, allowing diverse production of grains, oilseeds, fruits, vegetables, dairy, meats and eggs;
- 14 million acres in production and 74,000 farm operations providing local to national levels;
- Ranks #2 in egg production nationally; #5 in hogs; #5 in floriculture; #6 in soybeans; and #8 in corn.

### **Big challenges cloud the future**

- Ohio ranks 38<sup>th</sup> nationally in food security; 1 in 7 individuals suffer from food insecurity and 1 in 5 children are unsure where their next meal will come from;
- Ohio ranks 46<sup>th</sup> out of 50 states in health value;
- Nutrient pollution from agriculture is a leading cause of water quality impairment across the state;
- Ohio is losing more than 50 acres of farmland per day; since 1950, more than 7 million acres of farmland, representing nearly 1/3 of the state's land, has been lost;
- Ohio ranks 2<sup>nd</sup> in the United States in wetland losses;
- Changing climatic conditions are a growing threat multiplier;
- Ohio's farmers are aging.

All of these facts are leading us to see a future that presents both opportunities and threats for the state's number one industry. To remain relevant and economically viable, Ohio agriculture must transform for the quality of life for all Ohioans.

## **AGRICULTURE**

Thanks to its competitive advantage in value added processes, opportunities exist for further sector development. Bioprocessing industries and locally produced meat, fruit and vegetables can stimulate rural and urban economic growth and creates jobs. With growing markets for locally produced edible foods, agriculture can become a fresh "economic engine" for regions struggling with declining economies and rising rates of poverty. New precision tools and marketing opportunities are emerging. But challenges also increase with regulations and new requirements to improve on lagging indicators. How can marketing, infrastructure and innovative improvements shift producers and farms forward?

## **LAND**

Sustainability is more than a trend. Today it is a guiding principle for many businesses, communities and non-governmental organizations across the state.

The amount of land needed to raise livestock and grow crops will not increase. But, if we think broadly about ways to improve the productivity and health of soil, long-term dividends for future Ohioans can be derived. New statewide adaptive management strategies like reduced tillage practices, cover crops, precision application of nutrients are steps in the right direction. What else can we do to preserve and heal our land?

## **WATER**

Everyone wants clean water and healthy aquatic ecosystems. Unfortunately the list of impaired water bodies in our state is growing and agriculture is a contributor to these problems. While we may argue over the precise amount of pollution that comes from Ohio's farms, we remain part of the problem that the public wants corrected. We can and need to do more, especially around efforts to reduce nutrient loadings from farming operations. These challenges provide an opportunity for farmers to lead the movement to improve water quality and ecosystem health. How can we further build on the improved conditions the adoption of best management practices have created? What steps can be taken to simultaneously improve sustainability and water quality?

## **HEALTH and WELLBEING**

There is an urgent need to improve health and wellbeing in Ohio. According to the Health Policy Institute of Ohio, Ohio's performance on population health outcomes has steadily declined relative to other states over the past few decades. In 2017 Ohio ranked 46 out of 50 states and the District of Columbia on health value. Sadly, Ohio ranked in the bottom quartile in food security. How is this possible in the "land of plenty"? What can Ohio farmers do to make children nutritionally secure and food a pathway to improved health and prosperity?

## **RURAL COMMUNITIES**

Many rural communities across Ohio are in a state of decline. Local economies are struggling as manufacturing jobs dry up and youth migrate out of small towns to find jobs and escape poverty. There are also higher rates of teen pregnancy and less investment per student in many rural towns in Ohio. Drug use is increasing and leading to more crime. How can agriculture help combat these systemic problems? Can agriculture help rebuild rural areas to someplace worth returning to?

## **CLIMATE**

The changing climate affects more than we think or know. Weather patterns have become more volatile and severe. Scientists are telling us to expect increasingly erratic weather; more frequent and prolonged droughts; more intense precipitation events; declines in productivity from weeds, diseases, insect pests and invasive species; less winter chilling hours; higher nighttime summer temperatures; false springs and less predictability. What changes are you experiencing on your farm? What steps have you taken to improve the resiliency of your operation?

## **CONSUMER PREFERENCES**

Across Ohio and the country, there is a growing conversation about food. GMOs, organic, pesticides, animal care and hormones and locally produced are all conversation topics. The preferences are not necessarily for or against any production method, but one statistic was clear--consumers trust farmers.

Millennials want to know how their food is produced and where it comes from. What can Ohio farmers do to build bridges between those who grow food and those who consume it?