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Tools for Community Self-determination

Hoosier Farmer? Emergent Food Systems in Indiana

CONDENSED VERSION

*This is a partial version showing only the opening summaries and final conclusions;
page numbers are out of normal order.*

for full report see

<http://www.crcworks.org/infood.pdf>

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Executive Summary

Indiana's food industry is experiencing tremendous changes that roll across the state as steadily as a summer storm.

A vital consumer movement seeking healthier food choices, born forty years ago in Bloomington, has expanded and matured. Now, people all over Indiana seek to know the farmer that feeds them, and to see with their own eyes the farms where their food was raised.

Hoosiers are responding to this hunger in a variety of ways. Direct sales from farmers to consumers rose 38% from 1992-2007. Over 100 communities host farmers' markets. These markets foster social connections and spin off commercial development, even as they bring consumers into direct contact with neighboring farmers. Many emerging farms sell memberships so consumers can share the risks of farming. Backyard and community gardens have sprung up across the state as Hoosiers decide to produce food for themselves.

Grocers, restaurants, and distributors now feature foods produced by Hoosier farmers. In many cases, this is centered on high-end outlets that sell to more prosperous customers. Many farmers with the means to do so have opened, or purchased, processing or retail businesses so they can vertically integrate. Intentional clusters of food-related businesses have spawned collaboration across separate firms. Delivery services bring local foods right to residential doors. Produce auctions have formed in many regions. In these respects, the marketplace appears to be working.

However, the market has failed many Hoosiers, and seems unable to respond to the burgeoning demand for local food. More than one of every four Hoosiers earns so little that they are in jeopardy of not eating well — a remarkable statistic in the nation's tenth-largest farm state. So, food leaders in lower-income communities have devised innovative ways to engage low-income consumers in growing or purchasing food. Wishard Hospital in Indianapolis, the "safety-net" hospital for the city, has launched a food initiative that places fresh food in the hands of low-income patients with food-related health conditions. These food boxes are accompanied by personal attention from medical staff.

Many young farmers find themselves in a vulnerable place. Many have turned away from a dependence on commodity agriculture since they view it as unrewarding, or beyond their financial means. Other farmers have concluded that to respond to the growing interest from consumers, they need to fashion farms that are vastly different from those their parents ran. Moreover, the prevailing farm economy is deeply dependent on fossil fuels; as the supply peaks, rising fuel prices threaten the viability of the entire food industry. People across the state warn that Indiana must grow thousands of new farmers if it is to meet consumer demand. The Indiana Farm Bureau responds sensitively to these cross-currents. Purdue Extension educators offer assistance to many emerging farmers. The county-based extension service places Indiana at a profound advantage over other states that have consolidated into less responsive regional units.

Market failure plagues commodity farmers. Net cash income from farming was \$1.1 billion less in 2009 than in 1969 (when the dollar is adjusted for inflation) — despite the fact that farm productivity doubled over that period. While at this writing, 2011 appears to be a banner year for many Hoosier commodity growers, the U.S. Department of Agriculture (USDA) projects that national net farm income will be lower than in 1929 (once again, after adjusting for inflation).

Despite these trends, some Hoosier farmers speak of doubling corn production over the next twenty years, from 200 bushels per acre to 400. New genetically modified varieties, and far more intensive production techniques, will be required to attain this goal, they say, if the world is to feed the 9 billion consumers expected to populate the globe by 2050.

Yet Indiana does not even feed itself, let alone feed the world. The state imports an estimated 90% of its food. More than \$14.5 billion is spent by Hoosier consumers each year buying food sourced outside of the state. Personal income for workers in food manufacturing, distribution, and retail industries has fallen in recent years.

What is emerging in Indiana

The key question asked in study was, “What is emergent in the Indiana food industry that most defines a new future for food?” This question is partially answered here, based on research and interviews performed for the study.

One key finding is that Indiana has a history of turning its attention to distant commodity markets, rather than feeding itself. This is a legacy of the pioneer days, when farmers came to the Midwest in debt to outside lenders, and had to plant cash crops in order to pay off loans. Shipping food commodities to distant urban markets offered the best choice for many farmers. Moreover, there was little commercial opportunity to raise food for fellow Hoosiers, because most of them were farmers with the capacity to produce food for themselves.

That situation is now drastically different. Few Hoosiers — even few farm families — produce their own food. Personal income is at record levels. Yet farms are still focused on outside markets. The marketing and distribution infrastructure creates great efficiencies for shipping food long distances, and few efficiencies for local food trade.

This appears to be an historic opportunity for Indiana. This may be the first time in the state’s history that public policy will be devoted to creating lasting infrastructure that promotes local food trade. The word “infrastructure” refers to facilities such as warehouses and freight systems, information and knowledge systems, highways, railroads, and other transportation systems.

Public Policy

In a situation of market failure, it would be wrong for the state of Indiana to trust the market to resolve the issues Hoosiers face as they farm and eat. Commercial enterprise cannot resolve these issues by itself. Educational initiatives, engaged citizens, and public policy will also play a significant role.

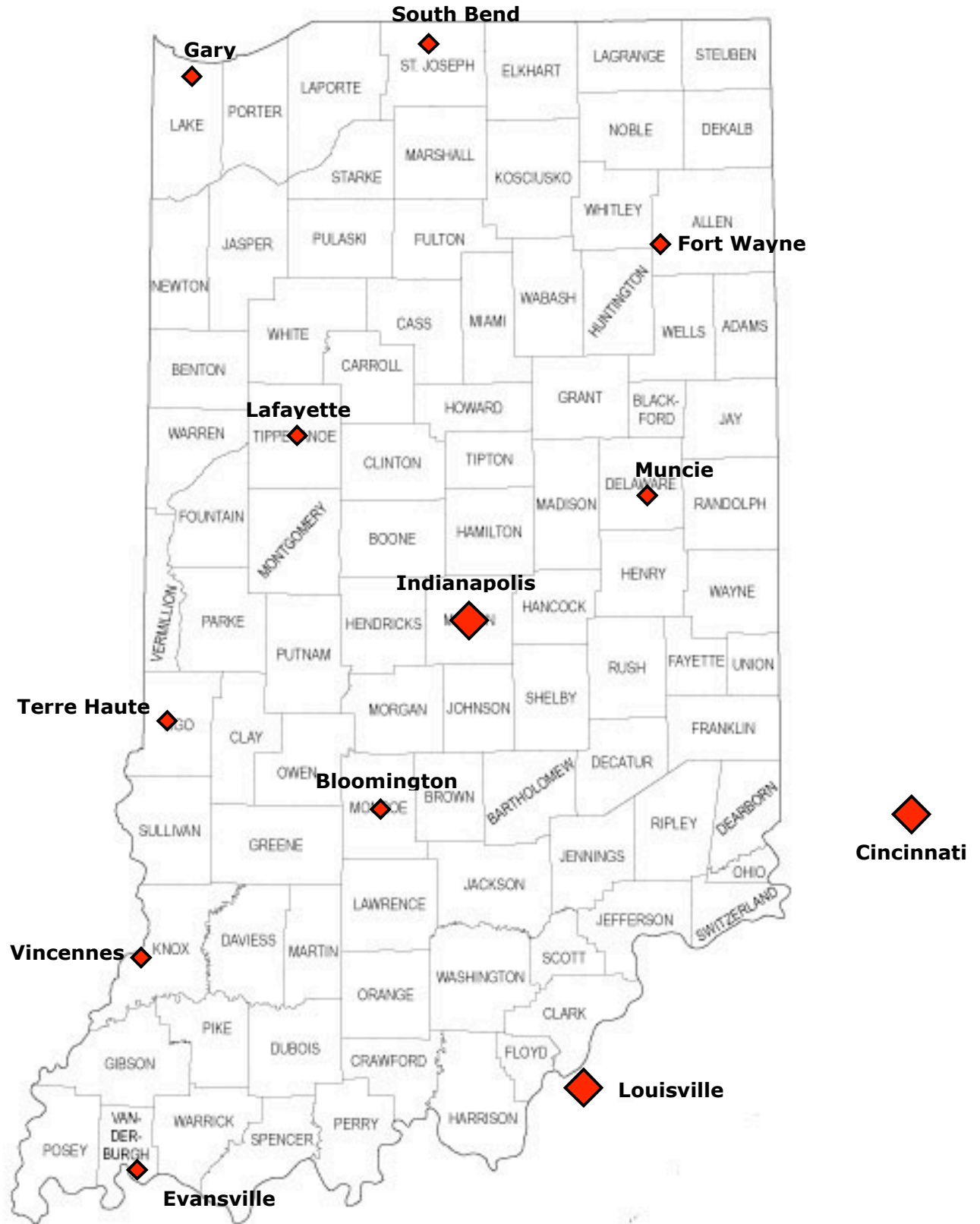
Yet public policy should not pick winners and losers. Unfortunately, existing public farm programs have done just that. By specifying which products will be supported, these subsidies have encouraged some farmers to produce commodities that, otherwise, they would not choose to grow. By throwing cash after commodities, public policies have drawn potential wealth out of rural communities, even as some farmers have prospered. When tax incentives are offered, often those best placed to take advantage of tax write-offs thrive, while other hard-working Hoosiers are disadvantaged. By focusing on long-distance travel for food, local markets have been overlooked.

There would be no logic to abandoning commodity production; these products are sorely needed, and Hoosier farmers are expert at producing them. Yet different incentives must be created, so that both farmers and rural communities are better rewarded for this production. Existing infrastructure is fully adequate to handle large-scale shipments of food commodities to different places.

What Indiana lacks is an infrastructure devoted to local food trade. This is the proper role for public investment. The best next steps for developing this infrastructure are listed below. Each is outlined in greater depth at the end of the report.

1. Food practitioners around the state need to be more closely networked with each other, to improve coordination across food initiatives, and to make sure that practice is as efficient as possible. This networking will take advantage of a Hoosier tradition of including all stakeholders and perspectives.
2. Indiana should focus its efforts on expanding the local foods movement that has built for over forty years.
3. Farmers report that responsive meat processing for beef, pork, chicken, and other meats is seldom available in proximity to Hoosier farmers who are attempting to meet local demand for meat. Developing this capacity is a high priority.
4. Stronger local distribution networks, local aggregation facilities, and processing plants for produce are also critical; several such initiatives are underway across the state, which require greater investment. Others must also be created.
5. Food safety has become a prominent concern across Indiana. Ensuring food safety is obviously a high priority, yet the state is split about how to achieve this. Some say that the more direct connections made between farmers and consumers, the greater the safety that can be created. Some dispute this, and also point out that for more distant transactions, where farmers and consumers cannot know each other, technology will be an essential component of food safety regimens. A thorough exploration of this topic is beyond the scope of this study. However, one conclusion is clear: Efforts to assure safe food must not place larger farms and businesses at an advantage over the small. Food safety approaches must be scale neutral. Food safety approaches must also build the capacities of consumers to make smart decisions while shopping, preparing, and eating food.
6. Networking food-related businesses into intentional clusters can help stabilize local economies, and will create larger economic multipliers.

Indiana's food system should build health, wealth, connection, and capacity in communities across the state. Following these recommendations will help advance those purposes.



Map 1: Indiana

Hoosier Farmer? The Emergent Food Industry in Indiana

Indiana's food industry is experiencing tremendous changes that roll across the state as steadily as a summer storm.

A vital consumer movement seeking healthier food choices, born forty years ago in Bloomington, has expanded and matured. Now, people all over Indiana seek to know the farmer that feeds them, and to see with their own eyes the farms where their food was raised.

When the Indiana Farm Bureau surveyed consumers a few years back, recalls president Don Villwock, "We learned that the public likes farmers, but they don't like farming. They don't necessarily like or understand modern farming practices." Along with other agricultural groups, the Farm Bureau decided it needed to communicate better with its customers.

Farm Bureau public relations director Andy Dietrick says communications really opened up when the Indiana Humanities Council (now Indiana Humanities) announced it was embarking on a two-year statewide conversation about food. Entitled "Food for Thought," the initiative included a number of components: public events with nationally known chefs; special dinners focused on food topics; local events highlighting regional cuisine; partnerships with food festivals and food-related events throughout the state; a presence at the Indiana State Fair where Hoosiers could tell their food stories; and a food-themed traveling exhibit that was seen by more than two million visitors.

"What was interesting to us when we first heard about 'Food for Thought' was that there weren't any farmers involved. How can you have a discussion about food without the folks who actually grow it?" asks Dietrick. "So our ag outreach coalition, Indiana's Family of Farmers, became the title sponsor of 'Food for Thought' and offered Indiana Humanities our help with funding, program ideas, statewide contacts, and the expertise that farmers bring to the food discussion."

Once farmers became involved, they learned that they had much to benefit by speaking directly with other stakeholders of the food system. It was, indeed, the same process that Bloomington food leaders had pursued forty years before: Create a more inclusive process in which all voices can be heard; ensure that women's leadership can surface; convene people to meet face-to-face with a great deal of respect and far from the political fray; and discuss everything — until by seeing all sides of many issues, clarity emerges. Such patient base building has typically been necessary to build lasting initiatives that make long-term impact. Yet now the discussion was happening at the level of the state government, and the state's largest farmer organization.

Moreover, the 2007 U.S. Census of Agriculture showed Farm Bureau leaders that their constituency was changing. As Dietrick recalls, "The only farms that were growing in numbers were the very large farms, those of over 3,000 acres, and the small farms, of 10-50

acres.” In fact, he adds, “The highest growth, both in numbers and percentage, was in these smallest farms. When we looked at the map, we found that the highest concentrations of new growers were around the metro areas — Fort Wayne, Evansville, and Indianapolis — where markets were available. Farmers were obviously finding paths to connect to customers in these regions.” He continues that this marks a consumer preference for freshness. “For many foods, the more local it is, the fresher it will be, and the better it will taste.”

Dietrick thinks farmers may find market openings by connecting with smaller stores. “Although efforts are being made to create space for local foods at the larger stores (Marsh, Kroger and Wal-Mart, for example), smaller stores spread out across Indiana, especially in urban areas, could provide more opportunity for local food production.”

In essence, the Farm Bureau was discovering that the discussion on agriculture became transformative as more stakeholders were brought in to augment the experience of the farmers themselves. Much of the forward movement occurred precisely because consumers and farmers connected in new ways, raised new issues, and took seriously the concerns of people who had not been at the table before. In late 2011, that discussion culminated in the formation of My Local Indiana, an association formed to build relationships between smaller growers, local markets, and consumers looking for locally produced meat, eggs, dairy, and produce.

Which new leaders, and farming styles, are emerging in Indiana?

The change was also propelled by young farmers who realized that they would have to farm in very different ways than their parents to carry forward the family farms where they grew up, or to fulfill the emerging consumer interest in a more direct connection to a farmer. Sadly, many also discovered they could not afford the farms their parents had built. Many emerging farmers also discovered there were severe limits to the ability of a mature commodity industry to reward farm labor financially. Pursuing a diverse set of strategies, geared carefully to their locations, interests, and market opportunities, Hoosier farmers have created many new approaches.

Neil Moseley, 28, a young farmer starting an operation near Clarks Hill, has set out to make his Pleasant Acre Farms “cutting edge for the U.S.” Working closely with his father Jim, he chose farming after starting out as a draftsman because “I like fixing problems and taking on new challenges.” He considered following his father in farming “but I didn’t see a new niche that I could fill” until he researched the growth of the local food movement and expansion of farmers’ markets. Then he started selling vegetables directly to consumers.

“I didn’t like the idea of wholesaling,” Moseley says. He wanted a direct connection to the consumer, not only for himself, but also to benefit the person who buys his food. “Most people have no idea how their food is produced,” he says. Now, “People are changing their thought process about food. I think people got sick of not knowing where their food came from. People almost got scared.” Even now, he adds, “I have customers who want to pick up their food at the farm,” even though the farm would deliver to a farmers’ market near them. “They want to visit us. They go way out of their way to see the farm.”

“I want to step it up one step higher, but to stay in direct connection with the consumer.” Moseley says he is looking for a balance between wholesale and direct sales. “I’d like to stay on the smaller scale, to sell to local restaurants but not the larger chains. I like that I can call up a local chef on his cell phone, and we can discuss what we both need. When it gets too big, you have no idea where the food goes. Educating our customers is very important to us.” He hopes to diversify, rather than getting large, to find new sources of income.

Moseley is converting a former hog barn into hydroponic vegetable production (*see page 90*). “Animal production has taken a big hit,” Moseley says. “We foresee that there will be a lot of animal facilities empty over the next ten years. So, we’re asking ourselves, ‘what else can you do with them?’ We think we’re creating a model. We think our hydroponic operation will give the local foods movement some legs. This will help solve the problem of supplying markets year round.” Moseley hopes to sell his produce to nearby restaurants and small wholesalers such as This Old Farm (*see page 114*), and at two nearby farmers’ markets, in addition to a Community Supported Agriculture (CSA)¹ operation he runs. Through the Alliance, connected to This Old Farm, he also sells produce to Green Bean Delivery (*see page 118*).

Adam Moody, a fifth-generation farmer in Ladoga, west of Indianapolis, made a dramatic turnaround in his farming when he realized he could not make a good livelihood as long as he was simply a producer of standardized commodities. “Being a commodity producer works if you are the biggest and the cheapest,” Moody says. Moreover, “Our state is importing 85 to 92% of its food. Agriculturally, if we limit ourselves to commodities, we are destined to become a Third World state.” In response, Moody decided to vertically integrate, creating his own food business by purchasing a nearby processing plant, and then opening up retail outlets in three locations. “The business that succeeds at this will be treating the public like a ‘person,’ not a ‘statistic,’ and like a ‘customer,’ not a ‘consumer.’ This can be done by innovating the entire system toward the wants of these customers, not toward the efficiencies of the industry.” He now says his financial returns are higher than for many banks (*see page 93*).

For Pete Eshelman, farming is a third career, after playing professional baseball and running a sports and entertainment insurance business. His family moved from Boston to the Roanoke area after being recruited by a Fort Wayne insurance company. Later, he started his own sports and entertainment insurance business in the basement of his house, then moved his business to the small town of Roanoke. Soon he found himself at the center of efforts to revitalize the town. He and his wife established a private dining room in Roanoke to entertain clients from around the world. This grew into a culinary destination named Joseph Decuis, which includes an award winning gourmet restaurant, retail store, inn, and a farm that supplies food products for the business. Now the revitalized town of Roanoke is becoming a regional and national destination for the “Farm to Fork” culinary experience. (*see page 108*).

¹ In a Community Supported Agriculture (CSA) farm, consumer members purchase shares at the start of the season. This means the farmer has sufficient money to plant or feed livestock, it also means the consumer shares much of the risk of farming with the farmer. As produce and livestock are harvested, CSA shareholders receive regular shipments of food in exchange for their investment.

Michigan City's Pete Scherf, also a business owner, sought to farm after he found himself growing weary of the business world — it was not feeling rewarding. After several years of research and reflection, he decided farming would nurture his interest in problem solving, and allow him to work for himself rather than manage employees. With his wife Rhonda, he is now launching a 25-cow dairy that will bottle its own milk for sale to local customers, many of whom have second homes near Michigan City on the lake. He is keeping things small because he does not want to feel like the machinery of his farm is running him; he wants to feel in command. Income from his business makes it possible for him to finance his own transition, and to explore options that another farmer might not have (*see page 101*).

Greg Gunthorp raises pastured pork the way his family has done for four generations on their land in Lagrange, in the northeastern corner of the state. "We always sold them [our hogs] as commodities, but as commodities we got the low end of the market." When prices fell to intolerable lows in the late 1990s, Gunthorp did some research in farm magazines to see what other producers were doing to recover. Many were going back to simpler ways of raising pigs — "the same techniques my family had been using all along." Gunthorp decided that since he already produced the quality consumers were seeking, he would market his pigs directly.

"No longer would I grow a shipment of pigs only to find out what price buyers would give me at the end of the process," he recalls. "I spoke directly to consumers to find out what they wanted, and what they would pay." After selling at farmers' markets in Chicago, he met a chef who asked him to supply his restaurant. One by one, he built connections with many high-end customers. Given his customers' ability to pay a high price, Gunthorp was able to build up his business, eventually expanding to the point where he could process his own animals on the farm, keeping even more of the value of the hogs for himself (*see page 97*).

Building new market relationships

It would seem that "the market" works well for those lucky enough to have means, and who hold access to high-end consumers. Yet not all farmers have resources of their own to launch a farm. Many feel lucky to purchase land if they can, and certainly depend on others — or conscious public investment — if they are to connect with the infrastructure that will allow them to readily find consumers. Other farmers have gone after the steep challenge of growing food for low-income consumers. None of the growers are well rewarded by food markets that currently exist. Yet these farmers, too, are helping shape the landscape of options open to both Hoosier farmers and consumers.

Like Gunthorp, Chris Birky also raises hogs, but he has decided to add catering for local customers to his farm business since he enjoys cooking, which creates more value than the farming itself. "This is the land where I grew up," Birky says of his farm outside Kouts, south of Valparaiso. "This was land my grandfather and father also farmed." His brother Greg began farming here in 1976.

When Chris started a separate farm in 1990, he said, "I was stubborn enough to keep raising hogs." Falling into financial trouble because of low hog prices, Chris joined his brother on

the family farm. They realized they needed to diversify, so they opened a “country market” on the farm.

Although the brothers supplemented their livestock and meat sales by selling specialty items like sweet corn and pumpkins directly from the farm, it was not enough. By focusing too narrowly on commodities, Birky was caught up in the same price debacle that had trapped Adam Moody. Unlike Moody, Chris Birky ended up with debts he could not pay. He mortgaged his home so he could consolidate into a plan to repay his creditors. His determination to repay these debts in a very real sense was a blessing, since, he says, it forced him to find more profitable ways to use the farm. He now caters for local functions. “It is not about making lots of money, but about sustaining the family farm and the way of life that goes with it,” he adds. These value-added avenues do augment the income he earns from selling hogs and balance his work load. Now he sees a clear path to getting his finances resolved over time and truly enjoys seeing the products he raises go directly to the consumer (*see page 99*).

Not far away, in an urban neighborhood of Gary, farming is also seen as a tool for revitalization. When two churches merged in 2004 to become the Christ United Methodist Church, one of the old church buildings was left vacant. On that property, says Pastor Katurah Johnson, the merged congregation plans an historical plaque commemorating the old church, and contemplates creating an urban garden. They were inspired in this effort by the Black Oaks Center in Pembroke, Illinois, that has created four urban “sustainability tracts” and aims to grow its own food while remaining off the grid.

Erick and Jessica Smith bought This Old Farm, an 88-acre parcel of land near Darlington, in 2000 and proceeded to build a solid CSA business. They built a solid customer base but found they could not ship to larger markets until they could sell in quantity. So, they formed a collaboration, “The Alliance,” of growers who aggregate the products they raise on their small farms into larger loads for urban consumers in Chicago, Indianapolis, and Lafayette. They’ve persisted despite a devastating fire. One of the members of the Alliance is Neal Moseley (*see page 90*).

Andy Vasquez has been farming near Kouts since 1994. On 20 acres, he raises more than enough to sell from a farm stand three days a week, to ship produce to three local restaurants and two natural foods stores, and to supply two schools. He calls his farm JnJ Organics, although he has decided not to apply for organic certification due to the recordkeeping involved. He would like to ship to local grocery stores, but there is no distributor who can carry his produce to these buyers. So Vasquez would like to raise money that would enable him to pull away from farming, and to organize some of his neighbors into a co-op where people could “leave their egos at the door.” As chair of the local Republican Party, and president of the RC&D (Resource Conservation and Development) District, he feels he is well placed to bring people together.

Stan Skillington added poultry processing to his farm business, responding to an outpouring of interest from his neighbors who loved the flavor of his free-range chickens. Yet ironically, he was forced to shut down commercial meat processing, not because of any failed inspections — there were none — but because the state of Indiana both mandated inspection and did not provide funding for inspection. He scaled back to personal

processing only, because he could not get inspectors to come to his farm. Ultimately, state officials were quite flexible in attempting to find a resolution, he adds, but ultimately Skillington was forced to close his processing operation because county officials would not allow him to sell his own chickens at the local farmers' market unless they were inspected by the state. Skillington stopped raising chickens commercially and is now exploring other options, including buying milk from Pete Scherf to make yogurt (*see page 101*).

Drew Cleveland, regional manager for the Farm Bureau in six east central counties of Indiana, says, "I grew up on an almost 500-acre farm." When he decided to enter farming, "It was very competitive to buy land. Land prices are extremely high (\$8,000 - 10,000 per acre), and rents are extremely high," he adds. At such land prices, "I'm not going to farm the way my father did." Cleveland is starting his own farm on 90 acres. He now raises one acre of vegetables, and hopes to soon extend his growing season using high tunnels (relatively simple metal frames with transparent plastic covering that heats like a greenhouse). Cleveland supplements this income with his job at the Farm Bureau, and by raising corn and beans. He is also exploring other options such as adding an orchard, or building an on-farm dairy to bottle his own milk.

Cleveland adds that he was inspired in his farm design by his travel to other countries. "I was able to visit Costa Rica," he says. "They have a lot of small producers down there. Three acres is considered a large farm. I also traveled to Zimbabwe, and they raise everything under the sun on small farms. If you don't have government commodity programs, things become more open."

The Sisters of St. Francis in Oldenburg have a long history, dating back to 1854, of producing their own food for the residents of the convent and the students at the attached school. Yet the farm languished in the 1980s as convenience foods became widely available. By 1991, the sisters rededicated themselves to running their farm as a way to nourish the community around them, and to serve as a symbol of the order's commitment to stewardship. They named it Michaela Farm after the first sister who directed the farm long ago. Producing beefalo, apples, and a variety of vegetables, the farm now has attracted 87 Community Supported Agriculture (CSA) members, mostly in Cincinnati. They sell some of their product through the Findlay Market in central Cincinnati, and have developed several value-added products like dried herbs. In 2006, the farm helped to create the Laughery Valley Growers Co-op, a group of 15 growers who wanted to reach larger markets. Robert White, an advisor to the sisters and to the Indiana Cooperative Development Center, says that "Michaela Farm serves as the anchor to the co-op, accounting for nearly 40% of the co-op's sales." To do more, he adds, "There needs to be a facility where we can pack produce for larger markets." Michaela Farm once had its own small refrigerated truck, he adds, but was forced to give that up. White adds that the farm also needs money for regular staff. Relying upon volunteers who come for the summer, he says, holds some uncertainty. "We don't know who they are until they get here. Moreover, there aren't that many people who know farming skills, and the work ethic is not what it used to be" (*see page 121*).

Albert Armand, a grower in Westport, southwest of Greensburg, has been raising vegetables for local residents and commercial processors for twenty years. As a pioneer, he entered the produce market before it was popular. At first, he says, "It didn't take off. The consumers were not ready." Moreover, he was not entirely understood by his neighbors. "We kind of

got these looks from our neighbors. They'd say, 'You can't make any money with vegetables. That's just the way poor people farm.'”

Yet over two decades he built a diversified farm raising tomatoes, sweet corn, pumpkins, watermelon, cucumbers, ornamentals, and flowers. “I always go back to what my grandmother told me,” he says, “don't put all your eggs in one basket.”

Now consumers are ready. By engaging them, and putting a story to the food, he attracted great loyalty. “I want to look them [consumers] in the eye and know they're coming back next month,” he adds. He said that due to high corn prices he expects in 2011, he may have an unusual year: For the first time, “My row crops may make more money than my vegetables” (*see page 127*).

Emerging new farmers

Although consumer interest is strong, “We don't have enough farmers willing and able to sell to these markets,” cautions Roy Ballard, Purdue Extension Educator in Hancock County. “There has been a significant change in the consumers' perspective. They are verbalizing a demand for a different kind of product, different types of options in the way food is delivered, its ripeness, its quality, and price.

“Most of the farmers who already sell directly to consumers have reached a limit on what they can or wish to produce. They don't want to expand. Only a small group wants to engage with larger buyers, and that is a key group for us to work with.” To expand successfully, he adds, “They must have a substantial core group of growers.” As one step, he is working on aggregation centers or food “hubs” where a group of small growers can collectively sell enough produce to meet the demand of institutional food buyers. He sees especially strong potential east of Indianapolis. “There is a strong core of growers in that region, and wonderful access to the Interstate transportation network. In two hours, you can be in Columbus, Cincinnati, Dayton, or Louisville.”

Ballard points out that on the commodity side, “We're still a corn and soybean state. But there the markets are very consolidated, and it is an uphill battle to enter them.” The Farm Bureau's Andy Dietrick adds, “I've been talking to younger conventional farmers, asking them, how do we get more people involved in agriculture? What does that pipeline look like? With capital and acreage hard to come by, smaller operations may offer an alternative entry point.”

Moreover, connections to urban areas may be important for more than markets — it helps with off-farm income. “Very few of the new farmers are going to be just farmers. They will have to have another job to provide additional revenue or benefits,” says Dietrick. “In the past, the Farm Bureau had taken the position that only full-time farmers were true farmers, but we're getting past that ‘us versus them’ way of thinking. If you are growing it and selling it as part of making your living, then you are a farmer.” But, Dietrick adds, “One of the biggest obstacles to growing new farmers is how utterly hard the work is.”

Cissy Bowman, a pioneer in organic agriculture and former member of the USDA's National Organic Standards Board, agrees. “I grew up in the inner city, and I wanted to get back to

the land. After many years, I have six acres. It is the hardest work I have ever seen.” Yet she adds that her farm has cultivated great interest from young farmers. “I have a lot of interns work here. They are now in their thirties. They are dedicated to local foods. How are we going to help them get into farming, especially if they have no money?”

Robert White, former senior policy analyst for the U.S. Senate Agriculture Committee and Director of USDA Rural Development, now consultant to the Indiana Cooperative Development Center, also finds there is considerable opportunity in smaller-scale farm operations. He adds, “You can make a six-figure net income on one acre if you do it right.” However, White continues, Indiana has not yet developed a culture that wholeheartedly embraces rural entrepreneurship. “One of the issues we have in rural Indiana is that, if you are an entrepreneur and you fail, you are often looked down upon for doing something different.” He adds that only a few pockets of rural Indiana support risk-taking.

Several pockets that have supported entrepreneurial initiative have been supported by Purdue Extension, buoyed by the fact that each Indiana county retains its own office, in part paid for by county funds. This assures a responsiveness to local farmers that has been weakened in other states that have consolidated into regional offices. This is an exceptional strength that should be protected.

Meanwhile, the entrepreneurial movement that erupted in the 1970s in Bloomington, as farmers chose to grow for local markets, and residents decided they wanted better food options, still builds strength. Co-op groceries have “popped up all over the state,” says Debbie Trocha, director of the Indiana Cooperative Development Center (with offices at the state headquarters of the Indiana Farm Bureau). “In some communities people want organic food, not just local. Most want more than access, they want some control over their food as well.”

Food impacts public health

Forty years ago, food leaders in Bloomington worked out of a concern for health. This still continues, of course, with attention to this issue spreading to more official quarters over the past four decades. Today the U.S. Centers for Disease Control and Prevention (CDC) tracks a national epidemic of obesity that has broken out across the nation over the past two decades. In Indiana 66% of residents are overweight or obese, with 36% weighing more than they should, and 30% considered obese.

Diabetes has become a major health concern, as well, with 9.8% of Hoosiers diagnosed with diabetes. The medical costs for diabetes-related health conditions are estimated at \$3.7 billion for the state of Indiana — an amount that rivals the value of the annual corn crop.

About 48% of state residents report that they engage in 30 minutes of moderate or 20 minutes of vigorous activity 3 or more times a week. Only 21% of Hoosiers say they eat the recommended five fruits and vegetables per day, which is viewed by medical experts as a minimum diet to protect against cancer. Not all Hoosiers are covered by insurance, either — 18% of adults lack health insurance.

Meanwhile, food consumption habits contribute to the leading causes of death. A high-calorie diet, combined with a lack of exercise, accounts for one-fifth of the annual deaths in the U.S.² Six of the fifteen leading causes of death nationally are related to poor diet and low physical activity.³ Indiana certainly is part of these trends.

Foodborne illness challenges Hoosier health

Several of the major public health questions currently under discussion center around the risks of foodborne illness. Indeed, this is a significant medical issue, causing an estimated 3,000 deaths per year nationally, and incurring costs of more than \$152 billion of medical expense in the U.S. (\$3 billion in Indiana) annually.⁴ This is a staggering figure, equivalent to nearly half of all the revenue earned by the nation's farmers selling all of the crops and livestock they raise each year.

Yet Hoosiers propose widely divergent strategies for addressing these risks. Many farmers and buyers are persuaded that some farms are too small to warrant detailed certification or inspection procedures. The potential costs of close oversight and inspection may not be warranted by the volume of food sold by any one individual farm. No public interest is served, this position argues, by county or state officials intervening between a small farm and its direct customer.

Amish farmers selling through produce auctions have successfully made the case that since the elders of the community meet on a weekly basis to discuss agricultural practices, and the farmers have an ongoing discussion and training about how to produce food safely, the community has adequate safeguards in place to protect consumer health.⁵

Yet for the largest vegetable and fruit producers, close attention to production practices is seen as essential to buyers who want their customers — who cannot know the farmer directly — to have solid assurance that safe practices have been followed.

The question of who is liable for this risk is quite contested. Many produce farmers have been required to buy a \$5 million insurance policy to protect them from liability in the event of a disease outbreak. Some cooperative produce pools are trying to buy joint insurance that covers all members of the co-op that have a GAP (Good Agricultural Practices) plan, certification, or stronger safeguards. Some institutional buyers have even agreed to indemnify the farmers they buy from, in order to reduce the financial burden on the farmers.

² McGinnis, J.M. & W.H. Foege (1993). Actual causes of death in the United States. *JAMA* 270(18):2207-12; and Mokdad, A.H, J.S. Marks, D.F. Stroup, & J.L. Gerberding (2000). Actual causes of death in the United States. *JAMA* 291(10):1238-45 [with published corrections in *JAMA* (2005), 293(3), 293-294].

³ Heron M., D.L. Hoyert, J. Xu, C. Scott, & B. Tejada (2008). *Deaths: preliminary data for 2006*. National Vital Statistics Report 56:16. http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_16.pdf.

⁴ Scharff, R.L. (2010). *Health-Related Costs from Foodborne Illness in the United States*. Pew Charitable Trusts. Available at www.MakeOurFoodSafe.org. While the study originally attributed 5,000 deaths per year to foodborne illness, the government has revised its estimation model, and now says that 3,000 deaths occur each year.

⁵ See, for example, Meter, Ken (2010). *Ohio's Food Systems: Farms at the Heart of it All*.

Meat inspection has been somewhat trickier, because greater health risks are associated with meat. No clear pattern emerges from our interviews. County, state, and federal officials are sometimes viewed as helpful, and sometimes as obstacles.

At the state level, funding cutbacks have created exceptional tensions, since farmers who are told they must submit to state inspection find that state inspectors cannot visit their farms due to budget cutbacks.

Food practitioners across the state call for inspection practices that do not discriminate against small producers. They argue that these should offer minimal intrusion into the market, yet provide adequate safeguards to consumers. Exactly how to do this has not yet been determined.

Low-income Hoosiers are often marginalized

A significant segment of Indiana's population is unable to gain adequate access to food due to poverty. More than 28% of Hoosiers earn less than the income level at which children qualify for free or reduced lunch at school (185% of the poverty level).⁶ Even though low-income Hoosiers spend \$3.5 billion each year buying food, existing markets consistently provide low-quality foods to these consumers. While some \$503 million⁷ is given to low-income residents in SNAP benefits (formerly called food stamps; now called Supplemental Nutrition Assistance Program) each year, even more money (\$549 million) is given to the state's farmers, largely to plant commodity crops such as corn, wheat, or soybeans that are used for industrial processing — not eaten directly by Hoosiers.

That the tenth-most prominent farm state in the U.S. could be suffering ill effects from its food supply, and finding that one-quarter of its residents do not have adequate access to food, is a mystery amidst the most highly developed, and arguably most productive, agricultural system of the world.

Hunger is always caused by breakdowns in social connection and political inequality. There is no way to resolve hunger simply by producing more food, nor can technological improvement, by itself, solve hunger.

Commodity industries plan to expand dramatically

Responding to the prospect of hungry Hoosiers and billions of hungry mouths to feed abroad, many Hoosier farmers express an energetic sentiment that American farmers must feed the world. World population is growing fast, this view holds, and it is up to America to step up to the plate and produce as much grain as possible so that the world may eat.

⁶ Source: U.S. Census Bureau. The Indiana Department of Education notes that 43% of Indiana's students qualify for free and reduced price meals. *See* <http://compass.doe.in.gov/Dashboard.aspx?view=STATE&val=0&desc=STATE>

⁷ This figure is the 30-year average from 1980 to 2009; actual SNAP coupon use was far larger in 2010, at \$1.4 billion.

One farmer in Southwest Indiana, who is already harvesting exceptional yields of 200 bushels per acre of corn, says he wants to do even more. “Monsanto tells us they want us to double production out here by 2030.” His crop expert agrees this is attainable.

This is a formidable goal, and many Hoosier farmers seem ready for the challenge. They speak of planting corn even more closely together, fertilizing more precisely, and finding new hybrids that are modified to produce as much as possible.

The hopes for such intense output also rest upon sophisticated new technologies. One computer-assisted technology especially piqued interest: variable rate systems. Using detailed, electronic land and soil maps that have been developed at land grant universities over the past several decades, crop technicians can identify precisely which fields are best suited to a certain crop, such as corn.

Soils are tested for nutrients at close range — one test site for every two and a half acres — and technicians insert these findings into computer models. The computers calculate the optimal yields for each area of the farm, and make detailed recommendations for seed density and nutrient applications that will achieve those yields. These soil maps are then transferred directly to computers located in field equipment. Precise applications of nutrients and seeds, changing by the second as the tractor moves down the field (variable rate), is said to ensure the best possible results. Using satellite imagery, it is then possible to check the field later to assess growth patterns, and suggest flow rates for the next pass over each field. Once combining begins, software can gauge which parts of the field had the best yields and transfer that data to the computer as well. Over several seasons, using this technology, it is said that input applications can be minimized, and output increased.

Other large farmers have found niche markets that allow them to transcend the limitations of the commodity market. They argue that only by connecting closely with large industrial customers can they be assured of lasting trade, given the vagaries of global markets. To reduce risk, some of these farmers also rely on cooperative arrangements for purchasing inputs or selling their products. Even at this high level of production, it would seem direct connection with the consumer is critical.

Anne Schmelzer, former program manager for entrepreneurship and diversified agriculture at the Indiana State Department of Agriculture (ISDA), points out that her department has only been in existence for six years. Still, she feels the agency has a critical role to play in knowing where resources are, and then connecting people with each other to strengthen the state’s network of food initiatives into what she calls a “family of businesses.”

Her colleague Gina Sheets, director of economic development, adds that ISDA “plays a huge role in educating the legislature” about food issues and concerns. Sheets says the agency has met with Wal-Mart officials who asked how to make contact with Indiana farmers. ISDA is also negotiating with CSX Railway, encouraging them to build a dedicated set of tracks for what is being called a “Green Express” to bring produce from Florida farms to markets in Chicago and Indiana. This proposal also suggests that Indiana farms can ship their food products to Florida when the southern weather gets too hot for food production and harvesting.

Planning for food is also happening at the local level. The Northwestern Indiana Regional Planning Commission (NIRPC) recently adopted a Comprehensive Regional Plan that includes unusually thorough attention to agriculture. “More than 50% of our land is devoted to agriculture, yet only 0.5% of our population earns its living by farming,” the plan states. Noting that “the minimal 0.1% of our farmland that grows fresh fruits and vegetables makes up a full 5% of the total market value of agricultural products for the region,” the plan calls for a greater balance between local, regional, and global markets to bring resilience to the region. This is to be accomplished by strengthening public/private partnerships that increase regional investment. “The local food system will have the most impact if public/private partnerships are able to jump-start the creation or rehabilitation of appropriately scaled infrastructure.” The inclusion of food planning in the Comprehensive Regional Plan is part of the larger Northwestern Indiana Local Food Study, being conducted by Kevin Garcia and Beth Shrader of NIRPC. A final report of the study’s findings will be released by the end of 2011.

Farm returns are weaker than commonly thought

The Associated Press reported on September 1, 2011, that a Purdue economist predicted record farm income for the state based on strong demand for grains in global markets. “Purdue’s Chris Hurt says Indiana’s 2011 [net] farm income could approach \$4 billion. That would eclipse the state’s previous [net] farm income record of \$3.2 billion set in 2008.”

Indeed, farmers across Indiana report in glowing terms the money they earned in 2010, and their satisfaction with demand for commodities like corn and soybeans. The market for corn has held strong due to demand for ethanol, which now accounts for about 40% of use. Exports constitute another 14% of the corn market.⁸

Yet Hoosier livestock producers are equally unanimous in pointing out that they cannot profitably feed their animals with grain prices as high as they are. High commodity prices are also encouraging input dealers to raise the cost of farm inputs, squeezing farmers over the long term. Experts report that the world supply of phosphorus is peaking, which will make the U.S. increasingly dependent upon Morocco and China for this essential nutrient. Already over half of America’s nitrogen (urea) is imported from abroad.

Dr. Hurt himself adds that these exceptionally high grain prices are unlikely to last (*see page 136*). Moreover, it would be important to note that while \$4 billion of net farm income is an exceptional year, it is not a record. Adjusting for inflation, net farm income in Indiana is projected in 2011 to be about the same as it was in 1949. Returns were even higher in 1973, when Hoosier farmers earned a net income of \$6 billion.

Nationally, USDA economists project that net cash income from farming (cash receipts less production expenses) in 2011 will be lower than it was in 1929⁹ — after nine years of a rural depression that was a leading cause of the Great Depression.

⁸ USDA ERS Feedgrains data base. <http://www.ers.usda.gov/Data/Feedgrains/>.

⁹ When adjusted for changes in the cost of living.

Indiana farmers sold \$7.8 billion of food commodities per year (1980-2009 average),¹⁰ spending \$7.6 billion to raise them, for an average net gain of \$200 million each year. This amounts to a net income of \$3,000 per farm, or 2.6% of sales.

Although farmers earned a surplus of \$6 billion producing crops and livestock over the years 1980 to 2009, bringing significant value to the state, farm production costs exceeded cash receipts for 13 years of that 30-year period. Moreover, 44% of the state's farms and ranches reported a net loss in 2007 (Census of Agriculture).¹¹ Overall, Indiana farmers and ranchers earned \$1.1 billion less by selling commodities in 2009 than they earned in 1969 (after adjusting for inflation) — despite the fact that farm productivity doubled¹² over that period.

Moreover, farmers spend an estimated \$3.5 billion per year¹³ buying farm inputs that are sourced outside of the state. This means that even in a year in which farmers individually make money, the state itself may see its resources draining away.

Meanwhile, in the tenth-largest farm state of the U.S. — in a country that prides itself on “feeding the world” — Indiana does not even feed itself. Hoosiers spend \$16 billion per year buying food, \$14.5 billion of which is sourced outside of the state.¹⁴

Thus, total loss to the state's farm and food economy is nearly \$18 billion of potential wealth *each year*. This loss amounts to more than double the value of all food commodities raised in the state.

If the purpose of a food system is to build health, wealth, connection, and capacity in Hoosier communities,¹⁵ the prevailing food system is failing on all four counts. Even in years when Hoosier farmers earn a profit, their input purchases take money out of the state, while consumers are forced to buy foods from distant farms. Health outcomes are unsettling in a state that prides itself for “feeding the world.” Food is one of the leading causes of death in the U.S., rivaling tobacco, costing taxpayers hundreds of billions of dollars. Farmers and consumers are feeling divorced from each other, not connected. And in part due to convenience foods, consumers know less about their food, including its source and how to handle it safely, than they would have known decades ago.

Hoosiers face a significant question: Should future investment be focused on feeding the world, or on feeding Hoosiers? Given the extensive infrastructure already in place to assure efficient production and transport of commodities, what should be the priority for creating

¹⁰ Data from the Bureau of Economic Analysis; <http://www.bea.gov/regional/reis/>. Figures above are adjusted for inflation.

¹¹ Some of these losses reflect accounting procedures meant to minimize tax payments.

¹² Total factor productivity for agriculture data by state (Table 19) downloaded from <http://www.ers.usda.gov/Data/AgProductivity/#datafiles>.

¹³ Estimated by the author using data from the 2007 Census of Agriculture, and intended to understate the total.

¹⁴ Estimated by the author using data from the Bureau of Labor Statistics Consumer Expenditure Survey, and consistent with figures provided by farmer/entrepreneur Adam Mooney.

¹⁵ See Meter (2009). “Mapping the Minnesota Food Industry.” Crossroads Resource Center: <http://www.crcworks.org/mnfood.pdf>.

infrastructure for the future? If both cannot be pursued simultaneously, what is the proper course?

Overall, what are the next steps for Hoosiers who wish to build a healthier food system? Before we can look at practical steps, it would be important to summarize what this report has found to be the most emergent qualities of our current the food system.

What is emerging in the food industry

A maturing movement to build community-based food networks now finds itself encountering significant gaps. Consumer interest is rising rapidly, outpacing the ability of farms to meet this demand. It would seem that the very size of the food industry, as well as its focus on exporting food out of Indiana, is helping to create market failure, from the perspective of Hoosiers who wish to eat foods grown close to home by farmers they know.

As the following narrative will show, several important themes have emerged:

Indiana is coping with immense change by collaborating with exceptional directness, honesty, compassion, and resilience.

1. New forums have been developed by several state organizations and agencies that have created a broad discussion of the potential for Indiana to feed itself.
2. Indiana consumers want better food choices and want to know who grew their food.
3. Indiana farmers are also beginning to seek a closer connection to those who eat the foods they grow.
4. Hoosiers value direct and long-term connections; forging stronger, direct personal connections will help create new ways of doing business that give the state more economic stability over the long haul.

The commodity economy does not directly feed Indiana residents; Indiana must grow new farmers.

1. An estimated 85-92% of the food Hoosiers eat is sourced out of Indiana.
2. The commodity economy poses risks for even successful cash grain farmers; many farmers say they have to detach from the commodity economy to make a sustainable livelihood.
3. Despite its status as the 10th largest farm state, 28% of Indiana's population lives below the poverty level at which children qualify for free or reduced school lunch.
4. Indiana's low-income residents collect \$1.4 billion in SNAP benefits, covering almost 30% of their food budget; while Indiana farmers collect an average of \$550 million in farm supports — which subsidize farmers to grow commodities like corn, soybeans, and wheat that are not directly eaten by state residents.
5. There are not enough farmers in Indiana growing food to meet Hoosier demand for local foods.

Indiana endures considerable expense because of the costs of treating food-related health conditions.

1. The medical costs of treating diabetes in Indiana total an estimated \$3.7 billion.
2. Faulty diet, combined with a lack of exercise, is now a leading cause of death, rivaling tobacco.

Some farmers have established solid market channels.

1. Those who were the first to raise food for local sales in the 1970s were new farmers with limited means; many of these farmers made little money for decades, but created the conditions under which new farmers can thrive today.
2. Many of those farmers and chefs who have become well known for offering local foods since 2000 did so by using wealth previously built in some other line of work and were able to invest that money to launch successful farms. This path is only open to people of means. The “market” rewards such early adapters, but primarily if they sell to higher-end customers. Moderate- and low-income Hoosiers are often left out.
3. The primary “market-based” solutions have worked because farmers with some means are selling to wealthier customers, or have the means to purchase an entire supply web.
4. Farmers and consumers of limited means will be served only if new infrastructure is built that creates local trade efficiencies. This will require both private and public investment.

Infrastructure is the most critical gap.

1. Growers and food experts alike say the primary obstacle to growing local food sales is a lack of supportive infrastructure (smaller farm equipment, green energy, greenhouses and hoop houses, warehouses, freezers and cold storage, processing facilities, distribution networks, and knowledge) that creates more efficient local food trade.
2. The Farm Bureau’s Tiffany Obrecht points out that Indiana has plenty of meat processing capacity, but very little that is responsive to the needs of emerging meat producers. Farmers report needing to schedule time one year in advance to assure a processing slot. They also report a lack of processors that are flexible in offering custom services. Many farmers are quite distant from the needed small and medium-sized processors.
3. Produce growers across Indiana point out that local distribution networks that can efficiently transport food from small and mid-sized farms to larger buyers are lacking.
4. Significant public investments have been made in creating export-based infrastructure, while very little attention has been given to connecting local consumers with local farms.

Indiana need not spend more money than it spends now, but must spend it in different ways, if all Hoosiers are to have access to healthy fresh food grown inside the state.

1. Farmers with limited means will have great difficulty entering the market unless supportive infrastructure is built through public action and investment.
2. Low-income consumers are unlikely to be able to afford quality food as long as the consumer market focuses on selling food to those in higher income brackets.

As Andy Dietrick puts it, “For me, at the end of the day, I often find myself thinking of the single moms who are out there struggling to feed their children. What have I done today to make it easier, or more difficult, for them to put food on the table? What have I done to help them eat well?”

Hoosier Farmer?

Indeed, as the Farm Bureau learned, it is a time to like farmers and to question everything not only about farming, but also about how food gets to Hoosier tables.

The main private and public investments that can create better conditions would be to invest in infrastructure that creates efficient local food trade. Since public monies have been in part devoted to building an export-based infrastructure, tax funds have been instrumental in building the very system of economic relationships that extracts potential wealth from Indiana communities. This certainly means that Hoosiers know that public investment can make a strong impact. Now, it is time to redirect that investment toward achieving benefits for the state’s own residents.

No discussion that focuses solely on farm income, separate from health outcomes and poverty, is likely to provide answers. Indeed, Indiana must focus attention on the entire food system and how it connects to public health. Reweaving connections among Indiana producers and consumers is clearly key to helping Hoosier farmers and low-income Hoosiers create solutions that suit their own needs.

With this in mind, let’s review the history of Indiana food and farming.

Where does Indiana go from here?

This review of emerging trends in the Indiana food system has uncovered a wealth of detail, covering historical trends that shape the choices Hoosiers face today, economic forces that shape the business options available, and the practical experiences of those most intimately involved with these emerging trends.

Each of the interviews above illuminated complex issues that face Hoosier farmers and consumers. It would be nearly impossible to analyze all of the issues presented, or to suggest all practical paths for the future. Nevertheless, several potential courses of action stand out as critical to take.

1. **Food practitioners around the state need to be more closely networked with each other**, to improve coordination across food initiatives, and to make sure that practice is as efficient as possible. This networking will take advantage of a Hoosier tradition of including all stakeholders and perspectives.

This position has been most forcefully advanced by Roy Ballard, Purdue Extension educator in Hancock County. “There are lots of good folks doing good work who are often going in the same direction but don’t know much about each other. Perhaps we will begin to find ways to be more aware of what each of us is doing, and better to find ways to collaborate so we can efficiently use limited time and resources as we move forward together.”

These convenings provide critical groundwork for all of the rest of the strategies listed below. Yet bringing people together must accomplish more than simply putting people into the same room or convention; it should focus people’s attention on common goals and build both professional and political trust. Over and over again, business, farm, health care, and food system leaders have all said that the future is being created by people who hold relationships of trust. People who share considerable sense of mutual respect and trust can frame better strategic approaches, and also can respond with greater flexibility to unpredictable conditions that may occur in the future.

Hoosiers have strong traditions of being inclusive and ensuring that all voices are heard. Clearly, upholding these cultural traditions will ensure that solutions generated are unique to Indiana, and will find a lasting home here. Such convenings may be organized along regional boundaries (for example, Northeast, Southeast, Southwest, Northwest, and Metro Indianapolis), or they might be organized along specific industries (for example, pork producers, beef processors, or produce distribution groups), or methodologies (grass-fed cattle farmers), or may cut across disciplinary lines (food and public health, or green energy use on the farm and in food industries).

One essential set of experience that can inform this work is the work performed at the Leopold Center for Sustainable Agriculture at Iowa State University under Rich Pirog, who convened several working groups that included residents, farmers, businesspeople, scholars,

nonprofit staff, students, and others into working groups.⁶¹ These “communities of practice” allow participants to build mutual trust, to become informed about emergent trends, to participate and learn from groundbreaking research, and to reflect together on their practice. It has been a forceful method for ensuring a solid foundation for local foods efforts in Iowa. Moreover, Pirog has now moved to Michigan State University, so his work brings him closer to Indiana. He has offered specific training for people who wish to develop a close community of practice. His model combines convening the community frequently with small research grants that can help new ideas be tested quickly, with collaborative reflection.

The community of practice model is also a highly effective approach for working in a rapidly changing setting. As members of the community meet regularly, they can track emergent trends and begin to respond as required. This is a highly resilient approach.

2. Indiana should focus its efforts on expanding on the local foods movement that has built for over forty years.

Some whose interest in local foods is new have not had occasion to learn that discussion of local foods goes back at least forty years (and indeed even longer). The most visible manifestation of this is Bloomingfoods Cooperative in Bloomington. The most effective way to advance efforts to ensure Hoosiers have access to home-grown food is to build on this legacy, rather than trying to replace it, or work around it.

For one thing, it is critical for those who invested in the past decade to give credit to those who worked diligently with little reward to create the possibility that locally grown foods would be sought after by Hoosier consumers. It may be possible to turn a better profit in this industry now than it was in 1976, but that does not make those who do any more accomplished than those who laid this groundwork.

Launched in 1976 with a \$30,000 loan from a local resident, the co-op now counts nearly ten percent of Bloomington’s population as members — and ranks among the city’s top 20 employers, with a payroll of \$4 million per year.

Moreover, keeping this history in mind allows Hoosiers to relieve the pressure they feel to turn quick results. Much of this work is very long term; it cannot always be hurried along even by spending a great deal of money toward that hope. There is certainly a sense of urgency as we imagine the 9 billion mouths the world will have to feed by mid-century; yet this urgency should not be used as an excuse for imposing short-term fixes that harm our ability to sustain our lives over the long haul.

As Hoosiers look for “anchor institutions” that can help provide the backbone for the emerging local foods movement, it would be important to consider whether the network of Indiana co-ops that already exist might already be serving that function. As community owned facilities, each expresses a unique set of working agreements by local residents. Each has responded to customer desires for healthy foods; most know all of the growers who

⁶¹ <http://www.valuechains.org/>

wish to supply that market already. Each is self-organized, making each a potent center of knowledge about how the local foods movement can continue to be self-organized. Each has invested resident capital in a vision for the future, and the co-ops are already linked through mutual purchasing agreements and joint training programs. Many, like Bloomingfoods, reach out to diverse constituents.

This is not to suggest that the food movement of the next forty years will look exactly like the movement of the past forty years. It *is* to suggest that the next phases of the work should build upon this established foundation, rather than erode it. Other anchors may be found, such as hospitals, public health agencies, farmers organizations such as the Indiana Farm Bureau, or community colleges, universities (such as Purdue) and colleges. Yet the place to start is with those who have labored to build a strong foundation all along.

It should also be kept in mind that many Hoosier farmers have thrived with limited technology. The examples of how Amish, Mennonite, and Hutterite communities have thrived by collaborating, and limiting their use of technology to tools that do not create a sense of dependency, stand as a strong reminder that adopting larger technology is not always the best strategy. This, too, is a strong foundation that should be built upon, especially as we plan for a post-oil economy.

3. Farmers report that responsive meat processing for beef, pork, chicken, and other meats is seldom available in proximity to Hoosier farmers who are attempting to meet local demand for meat. Developing this capacity is a high priority.

The meat farmers interviewed for this report have all in some manner found ways to own, or connect to, responsive meat processing capacity, in some cases owning the entire supply web under one person. Although Indiana has a wealth of processing capacity, little of it is available to farmers who wish to make use of special cuts, or who wish to offer higher quality products to their customers. Many farmers must drive long distances to find a processor who will follow their instructions; indeed some farmers resort to hiring more than one processor for successive steps because no single one has the capacity to respond to grower needs.

The prime example of success in this regard is Moody's Meats of Ladoga, which has been able to vertically integrate the entire beef business from grass to retail store under one business. Adam Moody now boasts of 69% growth in 2009, and of gaining better financial returns than a bank.

The successes of farmers with means, or with access to high-end markets, to locate suitable meat processing should be celebrated; yet it must also be kept in mind that this does not, in itself, provide the best possible meat options to the 28% of Hoosiers who are low-income. Public action may be required to ensure that all Hoosiers have access to the healthiest meats possible. Investments in regional infrastructure that ensure safe warehousing and storage, efficient local transport and marketing may be critical in addressing the protein needs of all Hoosiers.

Pursuing this direction will hold economic importance, since the ability of livestock producers in Indiana to build wealth has been steadily eroding since the late 1970s. Restoring the ability of Hoosier farmers to create wealth by producing meat and dairy products will be an essential path if Indiana is to build a stronger economy.

4. **Stronger local distribution networks and processing plants for produce are also critical;** several such initiatives are underway across the state, which require greater investment. Others must also be created.

Almost every produce farmer interviewed for this report has mentioned the need for efficient local produce distribution. New efforts such as the Food and Growers' Association of Laughery Valley and Environs, This Old Farm's "Alliance" and Green Bean Delivery show the urgent need to create these channels. Farmer Adam Moody adds that produce processing (quick freezing, canning, packing, etc.) is critical in extending the ability of produce farmers to supply year-round markets in the state.

Clearly, some effective, larger produce distribution networks already exist. These are very proficient at conveying fresh foods to Indiana grocers, but many of their suppliers are distant. Some are also so large that they have little financial interest in smaller flows of food from small farms to nearby consumers. Several farmers interviewed here are involved in devoted efforts to create local distribution networks; most are undercapitalized. Both public and private investment will be required to expand these networks.

It should be kept in mind that if Indiana develops distribution networks and facilities that run on locally produced green energy, these local networks will hold a competitive edge as fossil fuel prices rise. The time to start constructing these systems is now, while we still have fossil fuels to use in their construction.

Season extension is a critical related goal that can also be accomplished by building energy-efficient hoop houses and greenhouses that can raise fresh greens and vegetables in early spring and late fall. Root cellars, warehouses, and packing sheds will need to be built to help extend the reach of Hoosier growers who wish to extend seasonal sales. Some of these facilities may be suited to public investment, with the understanding that access to food is as important as access to sewer or water systems. In other cases, private investment will be critical.

5. **Food safety has become a prominent concern across Indiana.** Ensuring food safety is obviously a high priority, yet the state is split about how to achieve this.

Some say that the more direct connections made between farmers and consumers, the greater safety that can be created. Some dispute this, and also point out that for more distant transactions, where farmers and consumers cannot know each other, technology will be an essential component of food safety regimens.

The example of Stan Skillington is a sobering one, of a poultry farmer who was required to undergo inspection by the state of Indiana, but learned the state was not able to pay for an

inspector to come on Saturday when Stan had enough labor to do the processing. As a result, he has abandoned commercial poultry production even though demand is skyrocketing.

This story alone shows that stricter regulations do not automatically mean greater compliance, nor better outcomes. The delicate balance of proper policy rests on requiring enough oversight to assure safety without unduly burdening farmers or distributors, while keeping costs to a minimum.

A thorough exploration of this topic is beyond the scope of this study. One conclusion is clear: Efforts to assure safe food must not place larger farms and businesses at an advantage over small; food safety approaches must be scale neutral. Small farmers are essential to the overall resilience of the food system, since smaller farms can adapt more readily to changing conditions, and also offer beginning farmers an opportunity to launch farms. While some castigate smaller farms as “too small” to perform proper safety procedures, this is not a valid argument. It is equally likely that smaller farms can manage more closely and comprehensively, and certainly have more ease in tracing potential difficulties. Farms of all sizes must operate safely.

Food safety approaches must also build the capacities of consumers to make smart decisions while shopping, preparing, and eating food; ultimately, informed consumers and diligent producers will be the strongest line of defense against potential food risks.

Indiana should think critically about the issue of insurance. As several interviewees have pointed out, being insured against food contamination is not always a robust strategy, since it may be too late for the consumer once food has been tainted. Insurance does have the advantage of forcing producers to pay for the costs of potential damage, which may offer a strong incentive to reduce contamination sources. It certainly can help cover the costs of potential recalls or disease. Yet there is no inherent reason that insurance, in itself, will reduce the risks of foodborne illness, nor is there any clear reason that external insurance firms should profit from the potential for foodborne illness in Indiana. If some form of indemnity is desired, the state should explore Indiana-based insurance pools, perhaps among growers or among state residents.

Finally, it should be kept in mind that even under the current inspection regime, foodborne illnesses currently cause Hoosiers to pay roughly \$3 billion in medical costs, despite the presence of fairly stringent regulations.

6. Networking food-related businesses into intentional clusters can help stabilize local economies, and will create larger economic multipliers.

If one looks at the maps contained in this report, and if one pays attention to the many linkages that food businesses have built across the state, it is clear that solid networks of cooperation have already been built by food entrepreneurs. These include, but are not limited to: (a) cooperative grocery networks and related distribution; (b) meat processing networks; (c) produce distribution networks; or (d) clusters of businesses that occupy the same farm.

One mark of successful business clusters is that firms agree to communicate with each other about matters that do not involve revealing competitive secrets, even if they also compete at times when it is appropriate. One prime example of effective communication is the relationship Chris Eley of Goose the Market describes he has with hog farmer Greg Gunthorp; the two confer so that the growth of one reinforces the growth of the other. By expanding in harmony with each other, and by trading with each other, clusters like these create economic stability and resiliency for Indiana.

The business clusters must be expanded and strengthened. By creating trade within the state of Indiana, they will ensure that a dollar earned by a Hoosier stays in the state for a while. This is to say they will create higher economic multipliers, which in itself will expand the impact of food-related economic development.

Indiana state and local governments may currently spend as much as \$1 billion per year to incentivize community economic development. As much of this money as possible should be devoted to creating and strengthening effective food business clusters. This will not strictly be a business matter. Effective clusters rely on motivated and respected employees, on nonprofits that build social networks and convene stakeholders to set a common vision, on educational institutions, and also on supportive public policy. It is a fallacy to think this can be accomplished by businesses alone.

The best investments in fostering effective business clusters will be infrastructure investments: distribution channels, warehouses, cold storage, green energy sources, efficient local transportation facilities, knowledge, tax policy, and information technology that are designed to build health, wealth, connection, and capacity in Indiana communities. Offering cash incentives for specific commodities is a failed strategy, since it extracts wealth from Indiana communities, and tends to select specific winners and losers.

Finally, it is important to note the era we are in. This will be a time of great uncertainty. Our business leaders are wrestling with competing world views. On the one hand are those who say that expansion is right around the corner and that we can borrow our way to a far more prosperous future, and on the other are those who argue that rural America is coming to resemble a Third World area, and that more humble expectations for growth and development are more appropriate. Importantly, the leaders who are making the most headway in food entrepreneurship, as indicated in the interviews, are the latter. Those who are trying to “bring the food economy to scale” often find that this is not rewarding either to customers or to farmers, as many interviews show.

Moreover, the food system we have is built upon a massive expectation that oil will continue to be plentiful and cheap. Both of those assumptions are breaking down rapidly. Our food system will also undergo unpredictable change due to climate change. Smaller, more flexible networks, self-organized by Hoosiers who are responsive to changing conditions and effectively networked, will hold an edge in the future.