

# BRINGING KENTUCKY'S FOOD AND FARM ECONOMY HOME



**Community Farm Alliance**  
**September 2003**



In this populated, complicated and uncertain world, the security of urban places increases with the diversity and health of rural places.— David Broomhall, from “Communities by Choice.”

## Acknowledgements

---

This Community Farm Alliance document was prepared by Ms. Pernell Plath, CFA Research Coordinator and Mr. Roger Blobaum, Blobaum and Associates, under the direction of the CFA Research Oversight Committee. This committee includes Mr. Martin Richards (chair), Mr. Ben Poage, Dr. Lisa Markowitz, Mr. John Gregory and Ms. Beth Tillery. Adjunct committee members include Ms. Bonnie Cecil and Mr. Wendell Berry.

The Community Farm Alliance wants to extend our sincere thanks to the Ford Foundation for the generous funding that made this research report possible. For ongoing program support, we would also like to thank the Educational Foundation of America, Oxfam America, the Unitarian Universalist Veatch Program at Shelter Rock, the Southern Funding Collaborative, the Catholic Campaign for Human Development, the Commission on Religion in Appalachia, and last, but certainly not least, Farm Aid.

And, as always, the members of CFA wish to honor Kentucky's farm families. It is their enduring dedication to community scaled agriculture that fuels this organization.



## Table of Contents

---

1. Foreword by Wendell Berry	i
2. Executive Summary	1
3. Introduction	3
4. Kentucky Cornucopia Report	6
5. Cornucopia Report Revisited	7
a. Comparing 1980 and 2002/2003	8
b. A Word on Statistics (box)	9
6. Local Food Systems	10
a. Making the Urban-Rural Connection (box)	10
7. Benefits of Bringing the Food and Farm Economy Home	11
a. Local Economies (box)	13
8. Implementing Local Food Systems	14
a. Flow Diagram of a Locally Integrated Food Economy	14
b. Expanding Agricultural Markets in Kentucky	14
c. Processing and Value-Added Agriculture	19
d. Other New Production and Marketing Prospects	22
e. State Support for Local Food System Development (box)	25
9. Consumer Desires and Expectations	26
10. Shaping a Plan of Action	28
11. Conclusions and Recommendations	30
12. Appendix	34
13. Notes	39

## Foreword

---

The members of Community Farm Alliance are passionately dedicated to cultivating and continuing the Kentucky tradition of vibrant and active community economies, rural and urban. For most of Kentucky's



rural communities, and in turn for some measure of Kentucky's cities, tobacco has been the catalyst for their prosperity. It is the program for this crop that gives this generation of Kentuckians a gift for the future- 88,000 small, diversified farms, a base of knowledgeable and skilled farmers, and a renewed interest in the quality of our food. Tobacco may soon no longer be the medium by which these communities sustain themselves.

Nevertheless, we pay tribute to the place tobacco has held in our history.

### James Baker Hall

In the fall of 2004, the University Press of Kentucky will publish a book of photographs entitled Tobacco Harvest: An Elegy by James Baker Hall, Kentucky's 2001-2002 Poet Laureate. The photographs are of a tobacco harvest at Owen and Loyce Flood's Henry County, Kentucky farm in 1973. Author Wendell Berry is a lifelong member of that community and a participant, as were members of his family, in that harvest. The following is an excerpt from his text accompanying James Baker Hall's photographs.

☞ Tobacco [has] been grown commercially in Kentucky from the time of settlement. After the Civil War, with the growth of cigarette smoking, burley tobacco, a bright-leafed and highly flavored variety, became the staple crop of our region and of our region's small farmers. It also became a sort of agrarian passion, because of its beauty at nearly every stage of production and because of the artistry required to produce it. As a year-round crop, highly valued, much talked about, and the lifelong study of its producers, it was a major shaping force of the local culture, of which it was in turn a product. By the time the federal tobacco program went into effect under the New Deal in 1941, much of the state had a highly developed tobacco-growing economy that supported not only thousands of farm families, but also the commercial economies of the small towns and cities.

Harvesting tobacco is hard, dirty, itchy, exhausting work, using up long days in the hot, humid weather of August and September. It is crew work. In a job so demanding, one needs both the help and the company of other people. "Misery loves company" is an applicable saying, but so is another that my neighbor Melvin Ford loved to repeat: "Many hands make light work." I am not so sure that a tobacco cutting could be described as "light work" under the best of conditions, but the work certainly was lightened, and given some estimable pleasures too, by the gathering of many hands.

The crew at work in these photographs... was practicing the ancient custom of "swapping work." They were brought together by necessity and neighborliness, and also by friendship, old association, common history, common knowledge, mutual respect, and compatibility. Every body simply understood: "When I need them again, they'll come. When they need me, I'll go." This understanding extended to all the farm

jobs that required many hands, such as putting up hay and killing hogs. It was a good way to get work done. It was a good way to live.

In earlier times the adjective most honestly earned and most highly prized by tobacco growers was “fine.” There was a clear relation between quality and price, and the skill and effort that went into the production of fine tobacco were repaid. The handling of the tobacco in cutting, hauling, and housing was crucial. You did not drag it over the ground or step on it or do anything else that might break or tear or bruise or discolor the leaves. The ideal was no less than perfection, and sloppy work could bring a severe reprimand, especially if you were a boy or girl still learning.

On this farm in 1973 the old way still prevailed. All of us were doing our best to do the work in the best way, not because of any particular pressure that was being applied, but because that was the way we had always done it. A generally recognized standard of workmanship, and a general respect for it and pride in it, was built into the work. It was a part of one’s upbringing.

Contrary to what some people believe and have said too often, the work, as carried on in this way by friends, is not demeaning or “mind-numbing,” but, though hard, is entirely bearable, and is relieved by a sort of delight to be found in no other way.



The tobacco program was a work of economic justice and entirely defensible—socially, economically, and agriculturally. Now that economy is failing. Because thousands of farm families and the regional economy were still dependent on tobacco, some defenders of the program nevertheless began to argue and to work toward greater diversification of the farm economy of the tobacco regions.

As it turned out Kentucky farmers were damaged less by the medical and moral case against tobacco than by the global economy. The manufacturers, who of course had always disliked the program, were finally able to free themselves of its price constraints by importing cheaper tobacco from abroad. The result is that in 2003 the farm allotments are down by nearly two-thirds from what they were in 1993. Thus both the local tobacco economy of the small farms and the program that protected it have been severely and perhaps mortally damaged.

Now, thirty years later, I look at these pictures with wonder at their clarity and expressive power. They certainly tell how a small company of friends harvested Owen Flood’s 1973 tobacco crop, but they also are reminders of the way people have worked together in all kinds of crops, in many places, for a long time.

We were involved somehow in history. But like the people of any time, we didn’t know how the present would look to us as history, from a future that we didn’t yet know.

 From the forthcoming book, *TOBACCO HARVEST: AN ELEGY*, photographs by James Baker Hall and text by Wendell Berry, to be published by the University Press of Kentucky in Fall 2004. CFA thanks the authors and Stephen Wrinn, Director, University Press, for permission to print this excerpt.

## Executive Summary

---

✎ Exciting change is on the horizon in Kentucky – change that has tremendous potential to revitalize Kentucky’s rural and urban communities. This potential lies in creating LIFE (locally integrated food economies). LIFE has the power to enhance the state’s fiscal and cultural vitality by bringing fresh, nutritious food from local farms to Kentucky’s citizens and by generating opportunities for Kentucky farmers to prosper from their land. LIFE unites urban and rural citizens by creating innovative economic opportunities through a new dynamic of cooperation.

This Community Farm Alliance (CFA) report, *Bringing Kentucky’s Food and Farm Economy Home*, is an attempt to establish where Kentucky agriculture is now, what important changes have taken place over the last 20 years, and a vision of potential economic revitalization for Kentucky’s rural and urban areas. Documenting the nature of Kentucky’s present food economy and suggesting areas for improvement is essential to the statewide food system planning now underway.

In 1983 a report funded by the Rodale Institute, the Kentucky *Cornucopia Project* report, attempted to address the question of how much food consumed in Kentucky is produced outside of the state. *Cornucopia* concluded that Kentucky imported 63 percent of its food in 1980. Some \$1.8 billion flowed out of Kentucky to pay for these imports, which represented roughly \$17,000 of potential income per Kentucky farm. Although these particular figures have not been fully updated since, this report contains a compilation and analysis of currently available data.

Twenty years after the *Cornucopia* report, opportunities for creating a more varied and localized food system are emerging. Tobacco settlement money used for diversification, the state’s long-term agricultural plan, and increasing markets and profits for homegrown products are

combining to transform Kentucky’s food and farm economy.<sup>a</sup> In addition, citizens’ increasing concerns about food security and awareness of the social and stewardship value of mixed-scale crop and livestock farming add to the potential for change.

Locally integrated food economies have intrinsic advantages over an exclusive reliance on global systems. LIFE is more responsive to local needs and supports more small and mid-sized, family-owned farms. As such, LIFE opens the door for a new generation of farmers to prosper. LIFE keeps food dollars local, multiplying wealth by circulating revenue within the community. Transportation costs are reduced, and food is fresher and more nutritious than food shipped from long distances. Finally, locally based agriculture is smart agriculture from a policy standpoint. A local food system is dependable, close at hand and more accessible to community members’ needs.

Current research indicates that consumers are interested in buying locally produced food and will pay premium prices. To do so, they need more information about where they can make purchases, and options must be readily available and convenient. Currently, Kentucky is 43<sup>rd</sup> in the nation for direct sales from farm to table. Clearly, we can do better.

Bringing the food and farm economy home creates and retains wealth through direct and alternative marketing, small-scale processing, value-additions to raw commodities, new crops and livestock and innovative production techniques. Direct marketing approaches, which have grown rapidly

---

<sup>a</sup> In 2002 the Kentucky Agricultural Development Board (the entity established to oversee distribution of half the tobacco settlement funds for agriculture) developed a long-term plan for the state’s agriculture, entitled “Cultivating Rural Prosperity: Kentucky’s Long-Term Plan for Agricultural Development.”

since the late 1980s, include local and regional farmers' markets, roadside stands, agritourism, sales to institutional buyers (such as schools, conference centers, prisons), restaurants, community supported agriculture operations (CSAs), sales to retailers and internet marketing. National fruit and vegetable sales through direct marketing are now estimated to exceed \$1 billion, with more than one million customers shopping regularly at farmers' markets. Additionally, adding more appropriately-scaled food processors is essential to Kentucky's new farm economy. Adding value to our grains, produce, dairy and meat opens new markets, creates brand recognition for farms and farmers, diversifying both farms and the economy. Some other hopeful prospects within the new economy include producing a greater diversity of crops and livestock, extending the production season, adopting organic systems and taking advantage of new-labeling approaches.

Kentucky is the first state to attempt such systematic and comprehensive food system visioning. As such, there are no U.S. models that provide an adequate guide. Kentucky may be able to glean some lessons from Europe, where this kind of planning is being done successfully on a countrywide basis. European country-specific plans typically include transition targets plus a combination of policy changes needed to make these goals achievable. More detailed plans also include evaluations of the present situation, much like the information in this report and specific steps needed to achieve the changes. Plans typically outline five-year targets, tied to 10-year goals and 20-year visions.

After assessing the current state of our food system, as well as reviewing the state's long-term plan for

agriculture, CFA identified the most significant areas that need concerted attention to make progress toward LIFE. These key areas include:

- Supporting business planning and feasibility studies;
- Facilitating microenterprise processing;
- Expanding direct marketing opportunities;
- Creating a thriving system of agritourism;
- Building regional marketing centers;
- Expanding institutional buying;
- Developing collaborative marketing channels;
- Introducing new crops and livestock and production techniques;
- Increasing training, opportunities and support for Kentucky's young farmers;
- Reviewing and overhauling regulations that inhibit progress;
- Monitoring progress;
- Collecting appropriate statistics.

CFA recognizes that transforming our food and farm economy is hardly an easy undertaking; it will require steadfast cooperation by our citizens, nonprofit organizations, government and public institutions, as well as the private sector. Despite the complexity, and at times difficulty, of the road forward, the potential rewards for our state are vast and immeasurable. CFA does not advocate isolationism, but a careful balancing of the need for self-reliance and the benefits of external trade relationships. Considering Kentuckians' need for diversification and widespread support for a new farm economy, we have little doubt that these revitalization efforts will take root and flourish.



## Introduction

☞ Tribby Vice wipes the sweat from his brow after completing the morning's milking. He has tobacco to attend, hayfields to cut, and a cabbage field yet to weed on this hot summer day. His Fleming County farm has supported five generations of Vices—three of which still live on the farm. Making sure that his farm continues to provide for future generations has required more of Tribby than long hours in the fields. It has led him to explore new ways of farming that enhance and protect his community and the environment within which he is embedded.



**Tribby Vice, long-time CFA member, on his Fleming county farm.**

hardship. The average farm income in Kentucky is \$12,000, while the average income in Portland is slightly over \$8,000.

Kentucky, with 88,000 farms, is fourth in the nation in total number of farms and second in number of

family farmers per capita. Most Kentucky farmers have depended on the steady revenues provided by Burley tobacco.

Yet, tobacco quotas have been cut by 66 percent over the last five years. "[After] the tobacco settlement had been announced, farmers knew that the companies would try to make up that money from our income...The farm community in Kentucky began to look at those funds...as funds that should help us build a new future," explains Tribby. That is how House Bill 611 was born. This legislation (HB 611) sets up a democratic, people driven process for spending the first phase of tobacco settlement monies. The money is divided among tobacco producing counties in Kentucky based upon their economic dependence on the crop.

Kentucky's new agricultural future can be seen dawning across the state.

Ivor Chodkowski, certified organic farmer, markets his produce through a community-supported agriculture



**CFA members Ivor Chodkowski and Steve Smith at the Smith family farm.**

project, farmers' markets, stores and restaurants. He also coordinates the Bardstown Road Farmers' Market in Louisville. His experience with direct

Across the state, Reda Clayton escapes the kitchen



**Reda Clayton, CFA member, at her Louisville restaurant, Eve's Sweet Revenge.**

heat to wait on a customer. She and Lita Goodrich, her chef and business partner, opened their café and gourmet-to-go, *Eve's Sweet Revenge*, two years ago. As a successful

African-American female entrepreneur, Reda buys food for the café from local farmers, creates her own recipes, is her own publicist and keeps the books. Reda decided not to open her business in Portland, her Louisville neighborhood, but across town where customers have more disposable income.

Though the urban grit of Louisville and the gentle rolling hills of Fleming County seem to belong to two different worlds, the challenges their residents face are similar. Reda Clayton and Tribby Vice both live in communities confronted with financial

marketing has convinced him of the need to organize consumers, restaurants and others in urban communities to support a more local food economy. He believes that “if I can get Reda better-tasting food at competitive prices, her business has an edge over restaurants serving vegetables from California. If we can help her create jobs and expand into retail sales by processing some of her original recipes in a certified kitchen, then we all benefit.”

One way to bring together urban and rural people, to create economic and social empowerment, to preserve and enhance our farms and communities, lies in creating LIFE - locally integrated food economies. LIFE, or local food systems, have the power to enhance Kentucky’s fiscal and cultural vitality. A local food system allows Kentuckians to benefit by consuming most of their food from local farms, Kentucky farmers to make a living from their land and opens the door for a new generation of farmers to prosper.

Twenty years after the release of the *Cornucopia Project* report documenting the “state of the state” for Kentucky agriculture, change is on the horizon. Tobacco settlement money used for diversification, the state’s long-term agricultural plan, and increasing markets and profits for homegrown products are combining to transform Kentucky’s food and farm economy.<sup>b</sup> In addition, citizens’ increasing concerns about food security and awareness of the social and stewardship value of mixed-scale crop and livestock farming add to the potential for change.

Local food system development creates tremendous potential to bring about tangible,

One way to bring together urban and rural people, to create economic and social empowerment, to preserve and enhance our farms and communities, lies in creating LIFE - locally integrated food economies.

positive change for Kentucky’s citizens. Local food systems have inherent advantages over exclusively relying on global systems because they are more responsive to local needs and support more small and mid-sized, often low-input family-owned, farms. Local food economies also retain a greater percentage of the food dollar within the community, increasing local wealth through the multiplier effect. Transportation costs and related environmental consequences are reduced, and food is fresher and more nutritious than food shipped from long distances. Ultimately, locally based agriculture creates opportunities for people to learn more about agriculture and how their food choices affect land and community.

This Community Farm Alliance (CFA) document is a follow-up document to both the far-reaching CFA plan to regenerate Kentucky’s farm economy, called the *Greenprint*,<sup>1</sup> and the Agricultural Development Board’s *Cultivating Rural Prosperity: Kentucky’s Long-term Plan for Agricultural Development*.<sup>2</sup> These documents include guiding principles and specific recommendations for local development and provide the basis for democratic control of tobacco settlement funds through a system of county councils. In particular, the *Greenprint* asserts that 1) strong local economies are the foundation of a strong state economy; 2) political democracy cannot thrive without dispersed land ownership 3) economic equality requires that those most affected participate in creating economies that serve their needs, and 4) Kentucky must foster a “culture of cooperation” among its rural and urban citizens in order to find creative, innovative and successful solutions to the challenges it faces.

This report, *Bringing Kentucky’s Food and Farm Economy Home*, is an attempt to establish where Kentucky agriculture is now, what important changes have taken place over the last 20 years,

<sup>b</sup> In 2002 the Kentucky Agricultural Development Board (the entity established to oversee distribution of half the tobacco settlement funds for agriculture) developed a long-term plan for the state’s agriculture, entitled “Cultivating Rural Prosperity: Kentucky’s Long-Term Plan for Agricultural Development.”

and a vision of economic revitalization for Kentucky's rural and urban areas. Considering the creativity and skill of our farmers and our abundance of natural resources, it surprises many to find that Kentucky is 43<sup>rd</sup> in the nation in direct farm sales.<sup>3</sup> Documenting the nature of Kentucky's

present food economy and suggesting ways to capture and retain local wealth for our communities is essential to the statewide food system planning now underway.



## Kentucky Cornucopia Report

---

∞ The Kentucky *Cornucopia* report was an initial attempt to address the question of how much food consumed in Kentucky is produced elsewhere. The report was one of 24 prepared nationwide in the early 1980s under sponsorship of the Rodale Institute. *Cornucopia* was composed to alert policymakers and consumers to the growing vulnerability of the nation's food system and to mobilize public support for a more secure, localized and sustainable food supply.

The document urged Kentuckians to think about their food system, asking three basic questions:

- “Where does our food come from?”
- “Where *is* the Kentucky food system headed?”
- “Where *should* the food system be headed?”

The report included a summary analysis of Kentucky's agricultural resources and what is produced on Kentucky farms, an estimate of the types and amounts of food Kentucky imports, estimates of employment and income benefits of producing this food in Kentucky instead of elsewhere, and recommendations for action needed to reduce Kentucky's food imports.

The main findings of *Cornucopia* provide a baseline for assessing changes in Kentucky's food system.

The report estimated that Kentucky imported 63 percent of its food in 1980, and that \$1.8 billion flowed out of Kentucky to pay for it. These food imports represented roughly \$17,000 per Kentucky farm. The report also concluded that the transportation costs involved in bringing all this food into Kentucky totaled \$90 million, that roughly 100,000 jobs were involved elsewhere in producing this imported food and that Kentucky farmers could produce most of this food themselves. *Cornucopia* concluded that producing much more food for in-state consumption offered substantial economic benefits to Kentucky, but that state economic development planners had largely overlooked this potential.

The report also concluded that disproportionate reliance on food produced elsewhere could not be reversed unless 1) Kentucky farmers were willing to produce the food being imported; 2) food grown in Kentucky was put into the hands of locally-based processors and markets so that it was available to consumers, and 3) Kentucky consumers were convinced that Kentucky produced food was as good or better than food produced elsewhere and that they demonstrated that belief in the marketplace.



**Tommy and A.J. Nelson entertaining folks with an old-fashioned hayrack ride at the Henry County Harvest Showcase.**

## Cornucopia Report Revisited

∞ Significant production shifts have occurred in Kentucky over the last 20 years. CFA compared the results of the 1983 report with available data on the situation today, showing a considerable reduction (for certain sectors) in the

**Kentucky is beginning to recognize the enormous potential of the fresh food sector. From 2002 to 2003 vegetable acres are expected to increase around 5 percent to 6 percent and fruit acres by approximately 4 percent.**

state's reliance on food produced elsewhere. We see a concurrent rise in Kentucky's dependence on large out-of-state food processors, at the expense of Kentucky's independent farmers. The most important shift took place in the poultry sector. A rise in poultry integrators has made the state more than self-sufficient in both broilers and eggs. Yet, Kentucky's family farmers lost nearly all income from these products.<sup>c</sup> This is a tremendous change from 1980 when Kentucky imported 91 percent of its broilers and 45 percent of its eggs. Also significant is that Kentucky now produces *more* beef than it consumes and *less* pork than needed to meet state demand.

In 1980 nearly all fruits and vegetables consumed in Kentucky were grown somewhere else, which is still largely the case today. However,



**Ivor Chodkowski's stand at the new Portland Neighborhood farmers' market**

significant progress to reverse these trends is taking place across the state. Official reports for 2001 show Kentucky's total production in this sector is officially valued at about \$19 million. Nationwide, fruit and vegetable sales were roughly \$30 billion in 2001, which breaks down to an average of \$600 million in value per state. With much room for growth, Kentucky is beginning to recognize the enormous potential of this sector. From 2002 to 2003 vegetable acres are expected to increase around 5 percent to 6 percent and fruit acres by approximately 4 percent.<sup>4</sup>

Kentucky has 88,000 farmers, 15,000 fewer than in 1980, but more than enough to replace much out-of-state food with homegrown Kentucky products. Encouragingly, a 1998 survey of 400 Kentucky tobacco farmers found that 48 percent were very or somewhat interested in producing non-tobacco crops on their farms.<sup>5</sup> Although more than one million acres have been taken out of agricultural production over the last 20 years, the state still has 13.33 million acres of high-quality land in farms. When these social and natural resources are combined they form the basis for an unprecedented transformation in Kentucky's food and farm economy.

A review of *Cornucopia's* findings and the food and agriculture situation in the state today has revealed production shifts and trends.<sup>d</sup> The section below presents the most

<sup>c</sup> Vertical "integration," the type of integration to which this sentence refers can be defined as, "the control of two adjacent stages in the vertical marketing channel from producers to consumers" as per the web page: <http://www.ansi.okstate.edu/course/1124/Chap15.ppt>. Integrators, for example, may control the production, processing and distribution of a product.

<sup>d</sup> In some instances, 1980 beef imports for example, the findings are unclear because of the way the information was interpreted. In others, like 2003 fruit and vegetable production, the sector remained exceedingly small and official data for all but two fruit crops is no longer gathered and reported.

significant conclusions from comparing 1980 data with available 2002/2003 data. Highly detailed sector-specific information can be found in the appendix at the end of this document.

### **Comparison of 1980 findings with available 2002/2003 data<sup>6</sup>**

---

- Beef cattle production remains strong, with Kentucky as the largest source of feeder cattle east of the Mississippi. In 2002, 48,000 Kentucky farms reported beef cattle income. However, the loss of cattle feedlot and slaughter capacity that was well underway in 1980 is now almost complete.
- Reflecting the national trend, the pork industry has lost ground continuously since 1980 with the number of hogs on farms falling from 1,000,000 (produced on 21,000 farms)<sup>7</sup> in 1983 to 405,000 in 2001. Only 1,300 hog producers remain with most of them raising hogs under integrator contracts. Although Kentucky produced more pork than it consumed in 1980, it now imports 14 percent of the pork needed to meet consumer requirements. And, much of the pork consumed in-state is slaughtered and processed in out-of-state plants.
- Probably the biggest change over 20 years, however, has been in the broiler industry. The state was importing 90 percent of the broilers needed to meet market requirements in 1980. In an adjustment brought about by integrator contracts, Kentucky now produces far more broilers than are consumed within the state. The troubling side to this rise, however, is that chicken production on small farms without

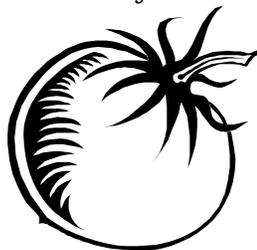


integrator contracts has declined sharply.

- Fish imports into the state have dropped slightly from 99 percent in 1980 to 96 percent today.<sup>8</sup> The state's aquaculture industry is currently gaining momentum, though, and is expanding steadily.
- Kentucky farmers produced 2.22 billion pounds of milk in 1980, more than double its in-state requirements. Production fell to 1.63 billion pounds in 2001, which is still considerably more than was needed to take care of Kentucky's needs. Yet 99 percent of the milk produced was sold directly to plants and dealers. Though the demand for organically produced milk is rising dramatically, Kentucky dairies are not meeting any of the state's need.
  - A major shift in egg production has also taken place over the last 20 years. In 1980 Kentucky imported 45 percent of its eggs, whereas in-state egg production now exceeds consumer demand. The combination of a much larger number of layers with much smaller per capita consumption has led to this change. Farmers without integrator contracts, however, have lost almost all of their egg income during this period.
- In 1980 Kentucky imported almost 100 percent of the common fruits and vegetables that could be grown in the state. In 2002, the fruit and vegetable sector, though growing, remains small. Although little official data is available, it is estimated that 900 producers now share \$19 million in fruit and vegetable income.

Though Kentucky is now self-sufficient in certain food sectors, the rise in industrial-scale farming jeopardizes long-term financial stability. A growing body of literature clearly points to the many problems of a corporate-controlled food economy.<sup>e</sup> Kentucky's self-sufficiency in various food products has been at the expense of increased dependence on the impulses of the large commercial bodies now dominating those categories. These corporations, though touted as job creators and economic generators, have a dubious monetary record when the real costs are computed. Real costs include: large amounts of our tax dollars going for direct subsidies, bringing in outside (and often illegal) labor that depletes local social support services and environmental damage to our water, air and soil.<sup>9 10</sup> Profits go out-of-state and are not recirculated in Kentucky's communities. Further, these companies, without a profit advantage, would readily pull out of our state; we would be left with major gaps in our food system that would then again be made up by imports. Until we can develop a system of decentralized smaller-scale producers, processors, distributors and markets throughout the state, our food supply will continue to be vulnerable to such disruption.

In order to move toward a profitable and sustainable food and farm economy, it is perhaps more important to focus less on the changes over the last 20 years and to reflect more on the present



situation and the many restorative opportunities available to reverse the trend toward agricultural concentration and industrialization. These

opportunities include: exploring cost-saving farm production techniques so that farmers retain a greater share of their income;

<sup>e</sup> See such recent books as *Food Politics* (Marion Nestle), *Fast Food Nation* (Eric Schlosser), *Hungry for Profit* (Fred Magdoff, ed.), *Fatal Harvest* (Andrew Kimbrell), *Stolen Harvest* (Vandana Shiva), *Hope's Edge* (Frances and Anna Lappe).

### A Word on Statistics

The statistics cited in this document represent the most currently available, officially documented data. The Census of Agriculture is conducted every five years. Many of the statistics cited here reflect 1997 numbers. Although the 2002 census is complete, the numbers will not be publicly available until February 2004.

Yet, these statistics only tell part of the story. Official data is no longer being collected for many aspects of the farm economy. Generally speaking, we do not keep statistics regarding alternative marketing methods.

Further, agriculture census figures take time to collect and compile, so are understandably dated the moment they are released. Thus, even the most current figures do not necessarily reflect the entire picture. The present impact of Kentucky's locally driven farm economy is far more substantial than one might immediately recognize through official numbers alone.

expanding production of farm-raised livestock products and locally grown fruits, nuts, vegetables and herbs; increasing in-state value-added and appropriately-scaled processing capacity; boosting production of edible grains and dried beans; encouraging more in-state production of hay, alfalfa and other livestock feed, and finally; developing new ways to market locally produced and processed food in Kentucky's cities and countryside markets.

With the current infusion of resources from HB 611, Kentucky is emerging as a leader in a growing movement among states and communities to develop local food economies that respond to the needs of their citizens, rather than on the priorities of a corporate-controlled food economy.

## Local Food Systems

∞ Locally integrated food economies, or local food systems, have the power to enhance the economic and social vitality of Kentucky's farms and urban areas. **The basic idea is to create a system where people grow and eat food closer to home.**<sup>f</sup> Jennifer Wilkins of Cornell University provides a more scholarly definition, stating that they are systems in which food production, processing, distribution, and consumption are integrated to enhance the environmental, economic, social, and nutritional health of a particular geographic location.<sup>11</sup> **A locally integrated food economy allows Kentuckians to benefit from consuming most of their food from local farms, Kentucky farmers to make a living from their farms and provides opportunity for a new generation of farmers to prosper.**

LIFE can take many different forms depending on the needs of local people. No one standard formula exists, but components are often similar. A common theme for all approaches is that they help farmers capture a larger share of the food dollar by providing consumers with fresher food at lower cost. For example, community members can help create a more viable agricultural economy by buying directly from farmers through farmers' markets and community supported agriculture



<sup>f</sup> There are many nuanced definitions of a "local food system" and the terms "local," "regional," and "community" are often used interchangeably in referring to these systems.

### Making the Urban-Rural Connection

Kentucky demographics are changing. Traditionally a rural state, Kentucky's population is now approximately one half rural and one half urban. While Kentucky strives to meet the challenges presented by this new dynamic, it also presents remarkable opportunities for both urban and rural areas.

Rural and urban areas are fundamentally interdependent. Urban areas provide important markets and value-added and processing opportunities. Conversely, rural places produce high quality fresh food for city dwellers, provide green space and enriching experiences (festivals, on-farm tourism, etc.) where tired urbanites can go to refresh and renew their spirits. Importantly, many farmers are also stewards of land. Economic development aimed at strengthening these connections will benefit all. For example, the mixed-income West Louisville area would be an ideal location for a regional marketing center that would serve the needs of both neighborhood residents and local farmers.

projects and by joining food cooperatives and buying clubs that purchase homegrown products.

Institutions, such as grocery stores, restaurants, schools and government cafeterias can buy directly from farmers and promote the sale of Kentucky grown seasonal foods. Whatever its exact form, **economic cooperation, diversity, balance and adaptability are key.** When farmers cooperate with farmers and consumers with farmers, there are marked economic and social benefits. And cooperation is part and parcel of diversity – diversity of crops, diversity of markets, diversity of relationships. In turn, diverse systems are more adaptable, balanced and responsive to the land.

## Benefits of Bringing the Food and Farm Economy Home

Locally integrated food economies are inherently more sustainable than an exclusive reliance on global food systems, for a variety of reasons. First of all, LIFE supports more small and mid-sized, usually low-input, family-owned, farms. A greater percentage of the food dollar stays within the community, increasing local wealth through the multiplier effect. Transportation costs and related environmental consequences are reduced. In general, locally grown food is fresher and more nutritious than food shipped from long distances. By their decentralization and regional focus, these systems are more responsive to local needs. Finally, with LIFE customers and farmers can come to know one another, creating mutually supportive relationships, and raising consumer awareness of the many dimensions of their food choices.

LIFE enriches local economies in a number of ways. First, local production and marketing keep a greater percentage of the food dollar within the community and increase regional wealth through the multiplier effect. “The multiplier effect is defined as the relationship between some initial change in an economy and the succeeding economic activity that is generated as a result of that initial change.”<sup>12</sup> The Kentucky *Cornucopia* report in 1980 conservatively stated that the Kentucky employment multiplier for agricultural production is estimated at 1.3 and the multiplier for



local food processing is 1.5, and these figures are still considered reasonable.<sup>13</sup> Thus, 10 new farm jobs in Kentucky would generate three additional jobs in the farm service sector of the local economy, and 10 new local processing jobs would generate six additional jobs

in the community.<sup>8</sup> An income multiplier effect also applies to regional cash generation. According to these multipliers, every \$1,000 increase in net

farm income would generate an additional \$930 of income in the community, creating a total of \$1,930 of new wealth.<sup>h</sup> Using these multipliers, the *Cornucopia* report estimated that the high

level of food imports in 1980 cost Kentucky 126,000 jobs. Current estimates find that if Kentucky were to raise its per farm average direct marketing sales to the national average, it would generate an additional farm-level income of \$7.9 million and have an estimated statewide economic impact of \$15.8 million.<sup>i 14</sup>

*Cornucopia* concluded that the state’s economic development planners largely ignored potential job and income growth that could result from reducing food imports. Today’s state officials are much more connected with the potential, though hurdles still exist. Calculating the multiplier for bringing Kentucky’s food and farm economy home and the number of jobs and increased income that would be generated is beyond the scope of this report. It would be substantial, however, and this benefit

<sup>8</sup> Employment Multiplier: 10 (new jobs on farm) x 1.3 (economic multiplier) = 13 total jobs (3 new); 10 (new jobs in processing) x 1.5 (economic multiplier) = 15 jobs (5 new).

<sup>h</sup> Income Multiplier: \$1,000 (new income) x 1.93 (multiplier) = \$1,930 (\$930 in new income).

<sup>i</sup> Estimated Ky. 2002 sales/farm - \$4,031 x 1,748 farms = \$5.3 million (Assumes a continuance of the 92-97 growth rate to 2002). Estimated average U.S. 2002 sales/farm - \$7,573 x 1,748 farms = \$13.2 million (Assumes 2002 number of farms involved in direct marketing has not decreased from 1997 levels).

needs to be acknowledged, calculated, and documented.

A significant part of the multiplier effect is that local farm owners are generally more likely to spend their money on community goods and services. Anthropologist Walter Goldschmidt, in his groundbreaking study of two communities in California (one surrounded by small-scale family farms, another encircled by large corporate farms) found that, “in towns surrounded by family farms, the income circulated among local business establishments, generating jobs and community prosperity. Where family farms predominated, there were more local businesses...”<sup>15</sup> Moreover, small farms actually have a greater total output than larger farms, meaning that when all goods produced on the farm are considered (not simply yield per single crop type), small farms produced more.<sup>16</sup> Small organic farms also generally hire more people than large factory farms, thus creating more jobs. These farms commonly require between 20 percent and 100 percent more labor than a large conventional farm.<sup>17</sup> Other economic benefits include greater support of community food retailers and distribution networks, including farmers’ markets and community supported agriculture projects, as well as the indirect economic benefit of increased biodiversity. Smaller farms tend to be far more ecologically varied than larger farms, thus the community gains the aesthetics and environmental services of this diversity; both of which translate to increased profits through tourism and the incalculable cost-savings from normal ecological functioning (i.e. filtering drinking water, reduction in soil erosion, pollination from bees, etc.).

Since agriculture uses more oil (petroleum) than any other single industry in the U.S., ways to save energy in this sector are vitally important to long-term stability. Kentuckian Wendell Berry states bluntly, “That we should have an agriculture based as much on petroleum as on the soil – that we need petroleum exactly as much as we need food and must have it *before* we can eat— may seem absurd.

It *is* absurd. It is nevertheless true.”<sup>18</sup> Food in our global economy typically travels between 1,200 and 2,500 miles from farm to fork. This “food miles” problem has been documented in “Food, Fuel, and Freeways: An Iowa Perspective on How Far Food Travels, Fuel Usage, and Greenhouse Gas Emissions,” a study published by the Leopold Center at Iowa State University.<sup>19</sup> It found that a meal of pot roast, potatoes, and vegetables typically travels up to 5,000 miles to reach a dinner table in Iowa. The same ingredients purchased locally, the research team found, would have traveled less than 100 miles.

The Kentucky *Cornucopia* report noted in 1980 that the number of trucks hauling food into the state, if parked one behind the other, would form a line from Louisville to Los Angeles and back. The line would be much longer now. Intercity truck traffic almost doubled between 1980 and 1999 (from 555 billion miles to 1.1 trillion miles).<sup>20</sup> Much of this truck traffic is hauling food.

Food harvested and consumed within a shorter period of time tends to retain higher nutritional value than food with lengthy transport and storage time.<sup>j</sup> Furthermore, food that must be able to withstand extensive shipping



and handling is usually grown specifically for these characteristics and is harvested before it is fully ripe. As such, other important food qualities, such as taste and nutrition are necessarily ignored (as a California tomato purchased in the winter here in Kentucky clearly demonstrates). Correspondingly, when produce is harvested before it completely ripens the item does not have a chance to develop its full nutritional capacity. Locally grown food can be grown for the needs of people, rather than the demands of factory production.

---

<sup>j</sup> Post-harvest handling also plays a major role in nutrient retention of fresh produce.

By their very nature, local food systems are able to respond more effectively to local needs, especially in times of crisis. The average U.S. city only stocks enough food to last for one week; major disruptions in supply lines, for any number of

reasons, could seriously threaten food security. Any system that is highly centralized and dependent on volatile supplies of nonrenewable oil is very much susceptible to disturbance.

Also, both the USDA and the Food and Drug Administration have sounded

the alarm in recent months about food safety in this country's globalized, yet exceedingly concentrated, food processing and distribution system.<sup>21</sup>

Congressional auditors warned recently that the country's food supply is vulnerable to attack because the government cannot ensure the security of processing plants and all the infrastructure that is used to transport this food (roads, trucks, computers, etc.). Produce imports now account for 38 percent of all fruit and 12 percent of all vegetables that Americans eat each year.<sup>22</sup>

Decentralized production, processing and distribution channels are far less attractive targets because fewer people would be affected by any single act of sabotage.

Additionally, local food systems are more equipped to provide a food safety net for less-advantaged citizens. LIFE research can target needs more clearly and determine ways to meet those necessities. For example, America's Second Harvest of Kentucky's Heartland purchases catfish, beef and sausage and receives produce donations

from Kentucky farmers for over 1,000 programs that provide for needy Kentuckians throughout the state. Other cases abound. The point is that these types of projects are initiated by local people meeting community needs using at-hand resources.

### Local Economies

Local food systems are vital components of local economies. Locally-based economic development focuses on the particular assets and needs of a region. Like local food systems, local economies build wealth by circulating dollars within a community. Local economies also spur creativity and entrepreneurship by providing people with opportunities to use their skills and talents to establish vibrant businesses. Community-based economic systems are more responsive to the needs of the local people they serve, by having a real stake in the prosperity of the area. In addition, local economic infrastructure helps communities withstand fluctuations in the global economy. Cyclical economic downturns are buffered by strong regional business relationships. Part and parcel of local economies, LIFE generates viable and stable affluence that addresses the needs of ordinary people first.

Finally, local food production can be increasingly region specific, raising crops and livestock for regional preferences and requirements, rather than for a standardized group of distant consumers.

The last mentioned benefit of LIFE is

one of the most complex and perhaps most significant of all. Local food systems are able to address quality of life issues to a far greater extent than the impersonal globalized food system that we now have. Local foods provide venues for interpersonal and ecological relationships surrounding food for both urban and rural citizens. Often local farms offer opportunities for people to work or visit, through volunteer work, field days, u-pick operations or farm stands. Congruently, the unique ways of marketing locally grown food, such as farmers' markets, farm stands and community supported agriculture projects enable customers and farmers to meet face to face and come to know one another. Finally, LIFE helps nurture that sense of place that is so important for developing and sustaining one's "roots." Having a connection to an area greatly affects our level of commitment to that community's long-term sustainability. Re-connecting people with food production is one of the most significant ways in which people can come to understand agriculture and their own role within the food system.

## Implementing Local Food Systems

Over the past twenty years, farmers and consumers have been working together across Kentucky to develop more localized food systems.

### Community Farm

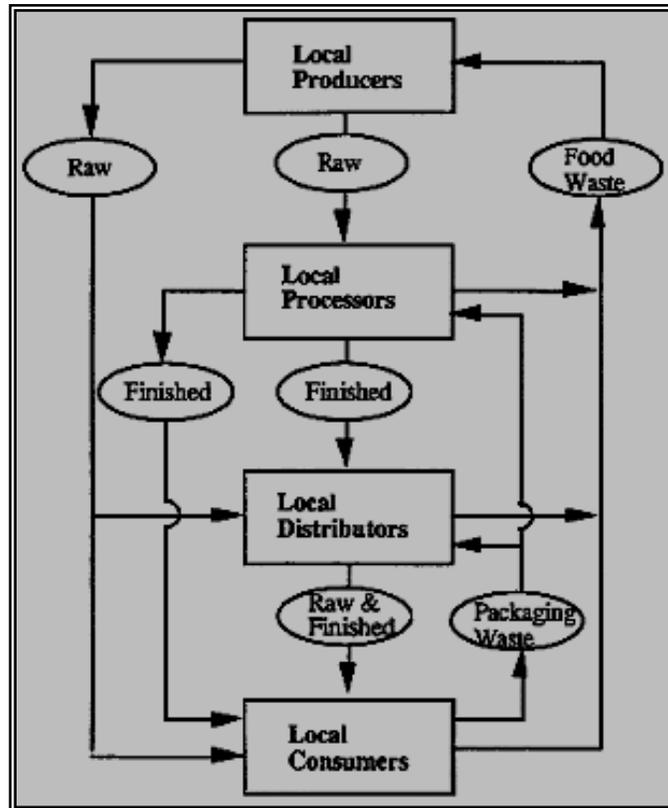
Alliance members have been tapping into these cooperative opportunities with great success.

Although most of this activity has been in the fruit and vegetable sectors, many initiatives are also dealing with meat, dairy products, eggs, herbs, fish and grains.

Kentucky's history of tobacco production has helped keep many of our farms small and family-operated. As tobacco quotas continue to decline, and with the potential for a quota buyout, Kentucky farmers are searching for new opportunities to keep their families on the farm. Past efforts aimed at diversifying production have not always been successful due to the lack of a systematic and integrated approach to production, processing, marketing and distribution. Farmers lost money and became wary of "new" crops. But recent developments attributable to HB 611 have dramatically changed the situation.

Kentucky's Long-Term Plan for Agriculture, with the distribution of Master Settlement Funds from the tobacco industry and House Bill 611 creates an unprecedented opportunity for our farmers to shift to more diverse enterprises with less risk than before. A concerted and thoughtful effort that places the needs of real people at the center is

helping to revitalize Kentucky's food and farm economy.



**Flow Diagram of LIFE**  
Reprinted from Integrity Systems  
Cooperative, Inc. See note #45 for citation.

Distributing and marketing homegrown products are perhaps Kentucky's biggest challenges with developing LIFE. Though many options exist, farmers are not always aware of all the alternatives, let alone the rewards and risks of each. Marketing plans must be tailored specifically to the needs and interests of each operation, as well as the feasibility of various options. The information on Kentucky's expanding markets, listed below, highlights

available information. Yet, no one remedy will meet all needs. The answers are as varied as the people and

communities of the state. Nevertheless, cooperation and diversity are the themes that will interweave successful approaches.

### Expanding Agricultural Markets in Kentucky

Direct and alternative markets have grown rapidly since the late 1980s. Kentucky's direct marketing sales per farm have expanded 16.3 percent since 1992.<sup>23</sup> These marketing approaches include such things as local and regional farmers' markets, roadside stands and agritourism, sales to institutional buyers (such as schools, conference centers, restaurants), community supported agriculture operations (CSAs), sales to retailers and

internet marketing. This approach received official recognition when direct sales were included for the first time in the 1992 Census of Agriculture. National fruit and vegetable sales through direct marketing are now estimated to exceed \$1 billion, with more than one million customers now shopping regularly at farmers' markets.<sup>24 k</sup> These marketing approaches are significant because they provide farmers with a greater share of their product value, and offer consumers a personal connection to fresh and wholesome homegrown food.

**Farmers' Markets.** The U.S. Department of Agriculture reports that more than 3,100 farmers' markets, including 84 in Kentucky, were operating in 2002. That number nationwide increased 79 percent between 1994 and 2002.<sup>25</sup> Most of Kentucky's markets are open air and



**A young girl dances at Pete and Brenda Cashel's highly successful annual music festival at their farm near Harrodsburg. The Cashels are long-time organic farmers and CFA members.**

operate two or three days a week from April or May through October or November. Kentucky has 1,410 farmers who sell at these markets,<sup>26</sup> contributing an estimated \$6,720,000 to Kentucky's economy.<sup>1</sup> These markets operate in 68 Kentucky counties and almost half accept

coupons under the Women, Infants, and Children (WIC) Farmers Market Nutrition Program.<sup>27</sup> This federal program provides additional coupons to WIC participants

for purchasing fresh fruits and vegetables at participating farmers' markets. A 2001-2002 University of Kentucky survey of vegetable producers found that nearly 78 percent of the state's fruit and vegetable growers are involved in direct marketing, and that most of their sales are at farmers' markets.<sup>28</sup>

**Community-Supported Agriculture (CSA).** CSAs are partnerships between farmers and community members in which the risks and rewards of farming are distributed more fairly. CSA members purchase a share of a farmers' crop in the beginning of the season, which provides the farmer with operating capital and a guaranteed income. If yields are high, members enjoy the abundance, if yields are low, they accept this too. Thus, the community member becomes more in touch with agricultural issues and has a stake in the success of the farm they support. Members get the freshest possible produce and can be more confident of the safety of their food by intimately knowing the practices used to produce it. CSAs also offer other member benefits, such as harvest festivals and dinners, on-farm work experiences and other activities specifically designed to bring people together and foster a sense of community. CSAs are one of the most significant ways for people to bolster their local farms and communities. CSAs



**Nana Yaa, storyteller, thrills visitors at the new CFA organized Portland Neighborhood Farmers' Market in Louisville.**

<sup>k</sup> The evolution of farmers' markets, CSAs, and other direct marketing approaches is discussed in detail in a 1997 report issued by the Henry A. Wallace Institute for Alternative Agriculture.

<sup>1</sup> Approximation made by multiplying a conservative estimate of \$200 in sales per farmer per market (for 24 weeks).

have spread rapidly around the country since their introduction to the U.S. in 1985. As of January 1999 there were about 1000 CSAs across the U.S. and Canada.<sup>29</sup>

A database operated by the Alternative Farming Systems Information Center lists 15 CSAs in Kentucky.<sup>30</sup> The listing includes the name of the CSA farm and its operator, an address and phone number and other contact information, and a description of the area served.

**Roadside Stands and Agritourism.** A total of 59 roadside stands were certified by the Kentucky Farm Bureau in 2003.<sup>31</sup> Brochures and a web site show the location of each roadside stand, provide directions and phone, address and email, as well as dates of operation and listings of types of produce available. The term “roadside stand” does not fully describe the scope of many of these produce-marketing operations since a number of them also provide other kinds of services, including school tours, hayrides, gardening classes, open houses, picnic facilities, special holiday events and harvest festivals. Including roadside stands, at least 182 Kentucky farms are currently engaged in various forms of agritourism. Agritourism combines agriculture with tourism to create unique on-farm experiences for visitors. Tourism is the state’s third largest industry, contributing \$8.8 billion to the economy.<sup>32</sup> With a recent addition of Agriculture Development Board funding for development of this sector, opportunities are expected to expand. Agritourism can generate substantial amounts of income through food and craft sales, bed and breakfasts, school tours, farm activities, etc.

**Direct Sales to Restaurants.** Restaurant sales are a relatively easy marketing entry point for farmers willing to develop direct relationships with individual chefs. Many restaurants now actively seek out small farmers willing to provide and deliver high quality local produce and livestock products. Also, at least one “matching service,” called the Grower Chef Hotline has emerged recently.<sup>33</sup> This service primarily operates in the

Greater Cincinnati/Northern Kentucky area. Although no data is available regarding the volume of restaurant sales in Kentucky, a number of farmers are making these sales on a regular basis. Especially with the rise in groups such as Chefs



**The Patron’s food booth at the Henry County Harvest Showcase. Proprietor, chef and CFA member Amber McCool buys fresh and local for her Louisville restaurant.**

Collaborative 2000, which promotes cooking with fresh foods, using local ingredients has become very popular, particularly in upscale restaurants.<sup>34</sup> Yet, this trend is hardly limited to only fine dining establishments. Many family oriented restaurants are beginning to see the taste and community-building benefits of locally grown items. The Kentucky Department of Agriculture, in their “Kentucky Grown: 2002 Farm Direct Food Products Directory” lists 78 restaurants and retail outlets that currently purchase food from Kentucky farmers.

**Direct Sales to Large Food Retailers.** Many forces have come together to alter the nature of food retailing in the U.S. Social, technological and economic conditions have changed the dynamics between retailers and consumers, retailers and suppliers and between suppliers and producers. As a result, power structures have shifted, with retailers gaining more control at the expense of (non-retail brand) food manufacturers and farmers. Thus, consumer demand via food retailers will continue to shape the climate, good or bad, within which farmers operate.

The Kroger Company, a Cincinnati-based chain

that dominates food retailing in Kentucky, has joined with the Kentucky Department of Agriculture to promote Kentucky grown products through the Kentucky Fresh logo program. The logo can be seen in at least 82 of its 98 stores. Additionally, Kroger has indicated growing interest in natural and organic food items with the launch of their “Naturally Preferred” brand of products.<sup>35</sup> This announcement, supported by a “Health Conscious, Earth Conscious” theme, does not necessarily translate into immediate interest in buying directly from farmers or cooperatives. But, it does suggest the possibility of an opening for Kentucky producers of certified organically grown products. The company’s web site also did note that it hoped to gain a competitive edge by selling locally raised and organic poultry, “all natural pork,” and organic produce.

Now the largest grocery retailer in the nation, Wal-Mart, has 35 supercenters in Kentucky. Some of these stores are now purchasing Kentucky products and participating in the KDA “Kentucky Fresh” initiative. Wal-Mart’s Michael Salisbury, a major produce buyer for the chain, put together a network of 40 independent growers to supply their stores. Though not directly promoting natural or organic foods at this time, with the dramatic growth of this sector, Wal-Mart is sure not to be too far behind, especially with their new line of smaller grocery stores called Neighborhood Markets.

Supermarket chains selling organic and/or locally grown produce generally require large volumes at one time and it appears unlikely, based on available data, that many Kentucky producers are willing or able at present to meet this demand. A University of Kentucky producer survey suggested that most, but not all, producers prefer farmers’ markets to wholesaling because they have found wholesaling offers lower prices and requires meticulous product uniformity and post-harvest handling.<sup>36</sup>

The majority of people, even those who place a high priority on purchasing locally produced food,

still shop at chain supermarkets.<sup>37</sup> Thus, bringing Kentucky products to the bulk of the population in the near term will require more connections with these outlets. A two-way stream of education and cooperation would facilitate such relationships – with farmers meeting retailer needs for uniformity and quality and retailers adjusting their demands for quantity and price to meet the abilities of smaller farmers. If large retailers are to become important markets, sales by farmers to cooperative and private wholesalers and brokers will become increasingly important. For smaller independent farmers, community-owned coolers and grading and packing facilities would help with accessing these markets.

Though these large retail markets have many potential rewards, they also involve numerous risks. In the case of Wal-Mart, according to a report to the National Farmers Union, “Wal-Mart’s large size and market power causes concern as it integrates backward in the food system...”<sup>38</sup> Typically, only the biggest producers even have a chance to supply Wal-Mart’s enormous demand within its national distribution network. As such, producers’ operations are encouraged to grow increasingly large. Nebraskan Randy Cruise, CEO of Farmers Premium Produce commented that, “We had to go out and get larger ourselves to even walk in the door.”<sup>39</sup> Though producers are exhorted to expand operations, no long-term guarantees are offered to reduce farmer risk. Mike Gallo from Joseph Gallo Farms in California states candidly, “First of all, they want you to sell at a very low price. Second, they want you to pay money up front in order to do business with them. Then, if somebody comes along and says, ‘Hey, we’ll give [Wal-Mart] more money,’ they throw you out – without you having the time or distribution to get a return on your investment.”<sup>40</sup> Wal-Mart’s huge product demand minimizes opportunities for smaller farmers wishing to enter larger distribution chains. Moreover, their cost reduction efforts are further increasing producers’ risks and driving producer profit margins ever lower.

**Direct Sales to Smaller Retailers.** Smaller retailers offer substantial marketing options for Kentucky's



**Produce department at the Good Foods Co-op in Lexington. Good Foods regularly stocks products from Kentucky farmers.**

family farmers. Frequently these retailers do not require huge quantities of produce and are more willing to cooperate with farmers on the logistics of ordering and delivery. These retailers would include smaller-

scale chain grocery stores, locally owned independent stores, gourmet

food shops, natural food stores and produce markets.

**Direct Sales to Government Facilities and Institutions.** Convincing government agencies and institutions like schools and hospitals to buy directly from Kentucky farmers is not a new idea. The Kentucky *Cornucopia Project* report noted that the state park system had spent \$2.4 million in 1980 on locally produced food and that other state agencies had added another \$2.3 million to the total. The report estimated that the eight public universities had probably spent \$5 million that same year on locally produced food, bringing the total to almost \$10 million.

Since then institutions that provide one or more meals daily to large numbers of individuals (school lunch programs, nursing homes, colleges and universities, correctional institutions, hospitals) have purchased increasing amounts of locally grown food. The KDA anticipates that produce sales to state institutions from 2002 to 2003 will increase by 300 percent.<sup>41</sup>

Kentucky's local buying law adopted in 2002 establishes a pilot project with the Kentucky Parks Department for the purchase of Kentucky farm-raised catfish and fresh produce if they are available, competitively priced and meet quality standards.<sup>42</sup>

**Marketing Cooperatives.** Marketing cooperatives have many benefits to offer Kentucky producers by combining smaller quantities of product and reducing the (on-farm) labor demands for grading, packaging and marketing for individual farmers. Farmers who cannot or do not wish to deal directly with the public may find this approach especially appealing. One vegetable co-op marketing executive in Kentucky reports that for some crops, farmers can make between \$500 and \$1000 per acre, after costs of production.<sup>43</sup>

Four major vegetable marketing cooperatives are now serving Kentucky growers.<sup>44</sup> These cooperatives are the Central Kentucky Grower's Association of Georgetown, Cumberland Farm Products, Inc. of Monticello, Green River Produce Marketing Association of Horse Cave, and West Kentucky Growers' Cooperative of Owensboro. Other, smaller and less formal cooperative marketing ventures operate throughout the state. For example, farmers who combine and sell product at farmers' markets or in their own farm stores, and CSAs with multiple producers.

**Brokers.** Kentucky has a growing number of privately owned produce brokers. At least three produce brokers are operating in the Louisville area, none specializing in local food, but increasing the amounts that they carry. Sysco Corp., a large-scale national distributor, has also begun buying and selling local Kentucky products. The degree to which farmers are profiting from such relationships has yet to be determined, since a major drawback of this marketing method is that substantial profit can be lost to intermediaries.<sup>45</sup>

An example from outside of Kentucky of a project

that is working to make brokering a convenient and profitable option for farmers is the Red Tomato. The Red Tomato is a nonprofit brokering network that has been highly successful in the Northeast U.S.<sup>46</sup> Michael Rozyne, co-founder of the Equal Exchange Coffee Company, started this organization in 1997. One of his primary motivations for initiating the group was to ensure that farmers received a fair price for their products. The nonprofit is only a brokering service; farmers still make the deliveries themselves. Their primary customers are retail outlets and other brokers, finding fewer logistical barriers than working with institutional clients.

Though this nonprofit works well for the New England region, the infusion of tobacco settlement funds to defray start-up costs may make cooperatively run brokers a more appropriate option for Kentucky. These brokers could specialize in local products and link with regional marketing centers to form distribution networks.

**Regional Marketing Centers.** Regional marketing centers integrate a diverse array of operations under one roof. These facilities could include such elements as farmers' markets, processors, cooling and packing facilities, certified kitchens and wholesalers. A recent feasibility study by UK found that 70 percent of surveyed farmers were either very or somewhat interested in marketing through one of these outlets.<sup>47</sup> Currently, one marketing center is being constructed in Bath county.

Regional marketing centers have great potential to connect Kentucky's urban and rural people. Placing these centers in urban areas, especially economically depressed districts, would bring fresh nutritious food, jobs and economic development.

Farmers would benefit from the lower capital start-up costs for the site and a ready labor force. CFA member Kelly Ragan and others have identified West Louisville as an ideal location for such a marketing center.

**E-Marketing.** E-commerce, loosely defined as conducting business over the Internet, is penetrating agriculture at a rapid rate. It is estimated that more than 10 percent of all U.S. agricultural sales will be conducted over the Internet in 2004.<sup>48</sup>



Another person who hasn't been paying attention.

Using the Internet to help link farmers and consumers is being demonstrated as a direct marketing approach in Kentucky. The Farm Bureau roadside directory initiative cited above is a non-government example. Also, the Division of Horticulture and Aquaculture of the KDA has a "Buy Kentucky Products" section online.

In 1999 KDA became the first state department of agriculture in the country to offer agricultural producers a free web site to promote their farm products. These web sites are listed in directories reached by accessing the department's online KDA Country Store and Farm Store.<sup>49</sup> A wide variety of products are represented, with the number of listings in each directory ranging from eight on the Trout Directory to 185 on the Fruits and Berries Directory.

### **Processing and value-added agriculture**

Appropriately-scaled processors and other value-added initiatives are other significant components of building a new food economy. Unfortunately, raw agricultural commodity prices remain low, which presents challenges for many farmers to make an adequate living from commodity sales alone. Adding-value opens new markets, creates

brand recognition for farms and farmers, and adds another form of economic and production diversity to farm operations.<sup>50</sup> As a result, capturing and increasing the value of farm products through processing and other value additions is imperative for Kentucky's family farmers.

Appropriately-scaled food processors, or microenterprises, are an essential component of Kentucky's farm economy. Large processors typically require a considerable volume of produce; hence they only do business with commensurately big farms, or brokers and cooperatives. This arrangement leaves out small- and medium-sized independent farmers. Additionally, large processors typically pay woefully low prices since they still handle products as commodities. Also, mass-produced products do not necessarily meet the needs of Kentucky's consumers, as the rise in niche and specialty products has shown.<sup>m</sup> These microenterprises are flexible enough to gear up and down for different products as seasons and demands change. Though each individual business may not process large amounts of goods, a network of such processors throughout the state could add substantial value to Kentucky's economy. In the Northeast U.S., for example, these types of processors comprise the largest, and only growing, segment of the food manufacturing industry.<sup>51</sup> The University of Kentucky's Value-Added Food Processing Incubator offers free help for producers and non-farm entrepreneurs wanting to develop such enterprises. The Incubator, once fully staffed, will provide assistance all along the way, from feasibility studies, to taste tests, to the logistics of production.<sup>52</sup>

**Produce.** Regulatory barriers to home and small-scale processing of locally grown food are often cited during attempts to develop on-farm microenterprises. This problem in Kentucky is being alleviated, to some degree, by a new home-

processing law (House Bill 391) enacted in 2003.<sup>53</sup> New regulations and a training and certification program facilitating home processing and direct marketing of homegrown home-processed foods is being implemented in Kentucky as a result of HB 391. The measure exempts from previous certification requirements the home-processing of foods that do not pose a significant health risk, such as jams, jellies and baked goods. The bill also applies to home processing of acid-modified and low-acid foods, such as pickles and salsa, and low-acid foods, such as pressured canned vegetables, which previously carried extensive regulations. HB 391 will make these products more affordable to produce, by re-writing facility requirements to better accommodate the home processing environment and by providing in-state certification. The measure does not relax health and safety standards, but defines how locally grown foods will be processed and labeled for sale in small markets such as farmers' markets, roadside stands, and on-farm sales.

Though HB 391 certainly helps farmers process their own products, Kentucky still needs microenterprise non-producer processors and retail sales of home-processed foods. Even under HB 391, farmers are unable to sell their home processed foods in retail outlets, thus dramatically reducing the potential of these sales. As for non-farm processors, a guidebook on microenterprises makes the point that, "the fate of small farms may be linked to non-farm small-scale food processors..."<sup>54</sup> Simply growing and marketing food is an extremely time-consuming activity, without adding further processing to the mix. Thus, farmers would benefit from having others beside themselves able to manufacture value-added products. Access to public certified kitchens where producers and non-producers alike can process Kentucky products is essential. Currently, Kentucky has no certified incubator kitchens available for public use.<sup>55</sup>

**Dairy.** Of the 1.66 billion pounds of milk produced in Kentucky in 2001, 1.63 billion was sold directly to plants and dealers. An additional 32 million

---

<sup>m</sup> Specialty products can include such things as low-sugar products for diabetics, foods without ingredients that commonly cause allergic reactions, ethnic foods and other products that are specific to Kentucky's consumers.

pounds was used on-farm, including seven million pounds for producing milk, cream and butter.<sup>56</sup> Though small, this figure is not insignificant. It suggests both a will and a means for developing microenterprise dairy processors in Kentucky. Until recently, suitably scaled equipment has not been readily available. Now, pasteurizers, churns,



insulated tanks and bottlers are all relatively easy and affordable to obtain. Milk, butter, ice cream, soft and

hard cheeses and yogurt can all be manufactured from cows' or goats' milk in microenterprises.<sup>57</sup> A recent article for dairy farmers stated, "On-farm processing isn't for everyone; but the prospect for the small dairy farmer to make bigger profits is predominant. With the right environment, planning, marketing mix and equipment, this concept can add substantial value to their product."<sup>57</sup>

**Meat.** Although cattle and calves generated \$541 million in gross receipts in 2000—almost as much as tobacco—value-additions could provide a much larger economic boost to the state and to local communities. Decentralized processing facilities and forage-finished beef retain much of the value for Kentucky's farmers and provide consumers with a tastier, safer and more wholesome product.

Kentucky has only 19 USDA-inspected livestock slaughtering and processing facilities, and 39 that are classified as "Kentucky Exempt Plants"; i.e., exempt from inspection, which allows them to custom process.<sup>58</sup> These facilities can slaughter and process up to 1,000 cattle, and most of them also slaughter and process hogs. Despite this capacity, however, only 15,000 to 25,000 cattle are finished in Kentucky feedlots. Thus, most

slaughterhouses are not operating to full capacity and rely heavily on processing hunted deer and other animals to stay afloat. Finishing more cattle within Kentucky's borders should be a high priority.

This limited slaughter capacity was acknowledged in the Agricultural Development Board's long-range plan. It recommends upgrading small in-state meat plants, adding poultry to the beef and pork slaughtered and processed now, and doing more to capture the value of offal and other byproducts. Rather than increasing numbers of feedlots, forage fed and finished beef offer a value-added, economical and sustainable option. A recent taste-test of chefs found that meat raised and finished on forage is as tender and tastier than grain-fed beef.<sup>59</sup> Beef raised on forage is also higher in CLA (conjugated linoleic acids), which have numerous health benefits including fighting cancer and protecting nervous system functioning.<sup>60</sup>

The Direct and Local Meat Marketing Project, underwritten by the Kentucky Department of Agriculture, University of Kentucky, and Partners for Family Farms, was recently launched to facilitate production and marketing of Kentucky meat products. The project has cited success in getting local meats into farmers' markets, health food stores, supermarkets, and on the menus of high-end restaurants. The project emphasizes the need to have livestock processed under USDA inspection, the importance of business plans for livestock farmers involved in direct marketing of meat, the development of meat cutting skills, assistance in complying with state and federal requirements for labeling and selling meat products and research on consumer buying habits and attitudes toward "locally produced" labeling.

The Community Farm Alliance's *Greenprint* suggests expanding integrated locally based and value-added beef options. "A flexible network of producers would allow those who only want to raise feeder calves to sell to a neighbor and the neighbor could in turn feed them out to slaughter

---

<sup>n</sup> Though, it should be noted that heavy government regulation can make starting a dairy processing enterprise more complicated and expensive than would be otherwise.

weight,” the report suggested. Further, “If a local slaughterhouse is added to the network, as well as local retail outlets, all of the profit from Kentucky feeder calves could re-circulate within the state.” Such a network has begun along the Green River basin with the Green River Area Beef and Forage Initiative.

The *Greenprint* report also calls for USDA-inspected mobile units to slaughter and process pastured hogs and poultry. Stationary plants, it noted, could replace mobile units after reliable markets are developed. The first unit, proposed through a collaborative effort of non-profit organizations, universities, farmers, consumers and others was built in 2001. Funding for the unit came from grants obtained from the Kentucky Department of Agriculture and the USDA SARE (Sustainable Agriculture Research and Education) program. An aluminum cargo trailer was transformed into a State-approved mobile processing unit, which is housed at the Kentucky State Research Farm in Frankfort and provides a legal and feasible means for processing poultry and shrimp. Though not USDA-inspected, the unit is inspected by the Kentucky Department of Health. Products processed in the unit are available for sale anywhere in the state of Kentucky. Training farmers for using the unit continues. Plans are in the works to set-up several other “docking stations” (with electricity, water, sewage) for the mobile unit throughout Kentucky.

### **Other New Production and Marketing Prospects**

---

Bringing the food and farm economy home opens opportunities for new crops, new ways of producing, and new forms of marketing. These prospects create real potential for increasing and retaining farm income, providing more variety of local and fresh products for Kentuckians and increasing the overall economic and environmental sustainability of our state.

**New Crops and Livestock.** The Agricultural

Development Board’s plan includes a list of selected new and emerging commodities currently being produced in Kentucky and noted that many involve small-scale production targeted to specific markets. The list includes chestnuts and pecans, meat and dairy goats, wine and table grapes, blackberries and raspberries, mushrooms, culinary and medicinal herbs, pastured poultry, sweet sorghum, Edamame (edible) soybeans, hybrid striped bass and freshwater shrimp, as well as other farmed fish products. Production in many of these areas is taking off throughout the state, with remarkable success.

**Season-Extended Marketing.** Fruit, vegetable and herb growers can develop and hold new markets and receive higher prices by having fresh produce available earlier and later than unprotected crops produced outdoors. Using greenhouse technology to add several weeks at the beginning and end of the growing season can increase farm income. Although year-around production usually is limited to permanent heated greenhouses, models now exist for year-around production without heat.<sup>61</sup> In 1998, \$745,000 worth of food crops was produced in Kentucky greenhouses.<sup>62</sup>



Kentucky farmers are also using walk-in tunnels, floating row covers and cold frames that do not require supplemental heat as low-cost season extenders. Walk-in tunnels, which are frames covered with plastic, can produce several kinds of early and late crops. They also can produce such crops as lettuce, carrots, parsley, and scallions during the winter months. Paul and Alison Wiediger of Smiths Grove, Kentucky, have eight years of experience growing lettuce, spinach, mesclun, kales, mustards, and other gourmet salads in tunnels throughout the winter months and getting tomatoes to market well before field

grown production becomes available.<sup>63</sup>

The Agricultural Development Board's long-term plan noted that many tobacco greenhouses in the state are used for only a few weeks of the year. Since Kentucky has the nation's fourth lowest electric utility rates, the board report suggested programs to retrofit these greenhouses to grow winter vegetables and flowers. Using this low-cost electricity should be explored. However, even with low electric costs, these greenhouses can be extremely expensive to heat. Passive solar greenhouses, that require little to no external heat (depending on outside temperatures and crops produced) can be built for as little as \$500.<sup>64</sup>



Production approaches combining existing infrastructure and developing new, when appropriate, may be the most cost-effective and sustainable option.

Small farmers also can extend the marketing season by producing squash, root crops, potatoes, and other easily stored crops that can be fall harvested and sold to chefs and other special markets at higher prices during the winter.

**Organic Production.** The market for food grown organically on U.S. farms is increasing at an annual rate of at least 20 percent and is expected to exceed \$11 billion in 2003.<sup>65</sup> This high rate of growth, which has continued since 1989, makes organic the fastest growing segment of U.S. agriculture. In 2003, at least 2.34 million acres of certified organic cropland and pasture are being farmed in the 48 contiguous states.<sup>66</sup> Currently, Kentucky has approximately 85 certified organic producers, growing on around 5000 acres. At least 100 others produce organically, but have chosen not to become certified, primarily because their local markets do not require it.<sup>67</sup> Although some organic farms in states like California are large operations, most organic food is grown on small farms, and

many of these farmers are involved in direct marketing.

Organic products typically command substantial premiums in the marketplace.<sup>68</sup> Yet, even without premiums, producing crops organically is often more profitable for other reasons.<sup>o</sup> <sup>69</sup> Organic

production substantially reduces input costs for farmers, allowing them to retain more farm revenue for themselves and their families. Organic systems also tend to be more drought and stress tolerant, thus providing higher yields in less than ideal times.

The Organic Foods Production Act of 1990 was fully implemented by the USDA last October and is

expected to stimulate a higher growth rate in the organic sector. Kentucky and 18 other state governments have their own organic programs, which operate under special provisions of the 1990 law. It provides, among other things, for USDA accreditation of both private and state certification organizations. USDA also is making available for the first time a cost-share program that reimburses organic producers for 70 percent of the cost of certification with a payment ceiling of \$500.

Organic farming has developed slowly in all the Southeast states and remains a small, specialty niche in Kentucky's produce industry. However, a recent article by Ag Worldwide reports that **Kentucky's certified organic sector has been growing faster than the organic sectors in all but one neighboring state**, suggesting that the state's organic vegetable growers may be positioned to capture market share in more regional markets.<sup>70</sup> Although most organic vegetables are sold at farmers' markets in Louisville and Lexington, the publication reported, some Kentucky organic producers have established markets in Knoxville

---

<sup>o</sup> Labor costs can be higher for organic farms, though various researchers dispute the extent to which these costs influence profitability.

and Nashville and small quantities are being sold as far east as New Jersey. The Kentucky Department of Agriculture also reported that significant expansion in Kentucky's certified organic row crop and livestock sectors will likely occur this year as well.

Organics in Kentucky can be very lucrative for farmers, including those producing milk, meat and grain, who are able to identify organic markets and service this fast growing sector. These market outlets include supermarkets, where more than half of U.S. organic sales are made. Profit potential is enhanced by reports showing that the high premiums received so far in the marketplace, including premiums for organic soybeans and grains produced for animal feed, are being maintained.

**New Labeling Approaches.** Although the certified organic label is probably the best-positioned alternative food label in the marketplace, there is growing consumer interest in an assortment of other farm-related labels. Many offer market

opportunities for small farmers who do not want to meet strict organic requirements but are interested in capturing other kinds of market premiums. Many at the same time are new or not well established or documented and, as a result, are confusing to farmers and consumers alike. The extent of these many attempts at differentiation in the marketplace is seen in a label description and rating directory available on the Consumers Union website.<sup>71</sup>

The KDA has developed its own label to help Kentuckians identify homegrown and processed food. The "Kentucky Fresh" and "Kentucky Proud" logos will replace a series of other labels developed by the department, creating a unified system for identifying Kentucky products. The logos were developed as a result of a KDA survey of Kentucky consumers that indicated their desire to purchase Kentucky products, but that they did not know how to identify them.



## State Support for Local Food System Development

Funds for agricultural development from the Master Settlement Agreement with the tobacco companies and the passage and implementation of HB 611 have created a unique opportunity for Kentucky to shift its agricultural system away from one dependent on tobacco and a few other products to a diverse, vibrant agricultural economy. Throughout this process, Kentucky state agencies and public institutions have become much more aware of the need to broaden Kentucky's agricultural base. After the release of CFA's *Greenprint* and the subsequent Agricultural Development Board's (ADB) Long-Term Plan, the state is strengthening existing initiatives and launching new ones. A select list of state efforts is outlined below.

The ADB administers grant money that supports projects aimed at increasing production and improving marketing. Many important projects have won approval and are being implemented across the state. Important marketing approaches include such things as improving farmers' markets structures, developing certified kitchens for local processing and labeling and new urban-based markets for Kentucky grown food.

The Kentucky Department of Agriculture's Office for Agricultural Marketing and Product Promotion is collecting and providing substantial information to help consumers, policymakers and others understand the components of our food economy. Directories that they have published or help sponsor include a *Farmers Market Directory*, an *Organic Producer Directory*, a *Farm Direct Food Products Directory* and a *Fruits and Berries Producer Directory*. The new "Kentucky Fresh" logo initiative also helps consumers quickly identify Kentucky products. To further increase awareness of and support for local farmers, KDA is offering money for restaurateurs, called the "Restaurant Rewards" program that reimburses them for advertising expenses related to local product promotions.

The Safe Meat Marketing Alternatives Through Research and Technology (SMMART) is a collaborative project of KDA, Partners for Family Farms and Kentucky State University. The "Directory of Kentucky Livestock Processing Facilities" that they published is an indispensable document for creating a locally-based livestock production and distribution network. The group also developed a plan for a multi-species mobile meat-processing unit.

The New Crop Opportunities Center at the University of Kentucky is now providing production and marketing information on new crops and value-added versions of current crops. Its projects include analyzing the profit and risk potential of growing specialty grains, researching greenhouse production of bedding plants, vegetables and herbs, testing of novel soybean varieties, research on problems and opportunities involved in growing specialty peppers, greens and high-value gourmet crops.



## Consumer Desires and Expectations

Numerous surveys and other research provide evidence that consumers are beginning to change the way they think and feel about food. This research is being conducted by a diverse set of



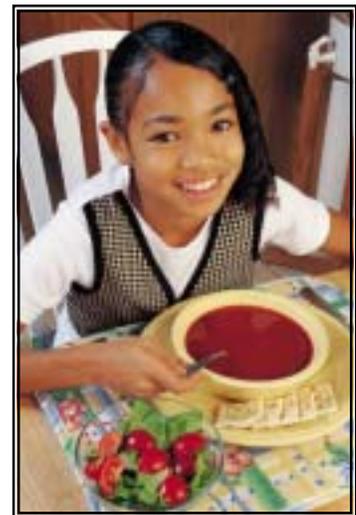
interests, from food corporations to universities and nonprofits interested in understanding alternative food systems. Food safety scares both abroad and in the U.S., environmental and health effects of industrial agriculture, as well as a desire to preserve family farms and obtain the freshest possible foods have all fed into this growing awareness of where food comes from, how it is produced, and who produces it.

A 2002 survey of 1600 consumers on their attitudes toward buying local foods, conducted by Greenburg Quinlan Rosner Research, Inc., found that 83 percent of those surveyed said that they do buy locally grown foods.<sup>72</sup> People's reasons for purchase were that the food was fresher (44 percent), because they want to support their local community and local farms (40 percent), and because it tastes better (12 percent). The most commonly purchased local foods were vegetables (70 percent) and fruit (59 percent). For the 13 percent who did not purchase local foods, their main reasons were lack of information about where to buy local foods and inconvenient purchase locations. The survey also found that when given more information about local buying, the most convincing reasons were the same reasons that they

had made purchases in the first place (freshness and supporting local community).

A survey of 500 households in four Midwest states documented similar consumer attitudes.<sup>73</sup> The 79-page report of this USDA-funded survey, entitled "Attracting Consumers with Locally Grown Products" focused on consumer attitudes toward local livestock products.

Overall, the majority of the households surveyed were very supportive of purchasing locally grown or produced food direct from farmers or from grocery stores and restaurants. But their responses strongly suggest that they want the differentiation in the marketplace to go beyond "locally grown." The additional attributes identified are superior taste and quality, high level of nutrition and healthfulness, support of local family farms, food safety and freshness. The respondents reported they would willingly pay the going retail price for locally grown or processed food, and that they would have no problem paying a premium of 10 percent or more for an "improved" product. Nearly two thirds reported they would purchase locally grown and produced products if they were more conveniently available. More than half of the households had



purchased meat direct from a farmer or at a farmers' market and half of those who had purchased it said they were influenced to do so because they knew who raised the animals. Additional desired attributes for meat were food safety, USDA inspection, tenderness and juiciness, farm-fresh taste, and ease of preparation. One

third of the respondents who purchased chicken locally said they did so because they liked the taste and because they considered it healthful and nutritious. Several projects around the country are demonstrating that “buy local” campaigns that include components like tasting events, advertising and other promotion, farmer visits to retailers, and farmer directories result in steady increases in sales to both urban and rural consumers.

A recent Natural Marketing Institute survey of 1,912

Americans found that after September 11, 2001, 30 percent are increasing their focus on personal health and wellness.<sup>74</sup> A full 8 percent indicated that they plan to increase their purchases of natural and organic foods. Locally produced foods are well positioned to ease concerns over nutrition and food safety and security by providing consumers with tangible information on how their food was produced and by whom.

Another survey, which involved researchers from 12 universities and 819 randomly selected respondents, showed growing consumer concerns about global sources of food and questions about whether or not it is produced with environmentally safe methods.<sup>75</sup> The researchers found that 77 percent of the respondents favor family owner-operated farms over those run by corporations, that 53 percent prefer to buy food they know has been grown on small rather than large farms, that more than 70 percent said they would be willing to pay more for locally produced food, and that 60 percent would be willing to pay more for food produced without chemicals.

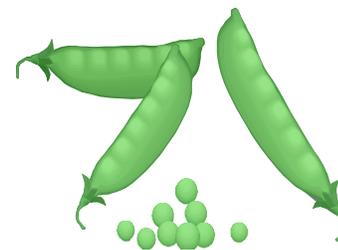
Closer to home, the Kentucky Department of Agriculture conducted a survey that showed that



consumers were willing to pay more for fresh locally produced food. The results were used to support its new “Kentucky Fresh” logo initiative. University of Kentucky research also showed that a significant number of Kentucky consumers are willing to go out of their way to purchase local meat products and pay moderate premiums of up to 20 percent.<sup>76</sup>

From the above research, we can generalize that consumers are interested in buying locally produced food and will pay premiums, but they need more information about where they can make such purchases, and options

must be readily available and convenient.<sup>P</sup> More extensive survey work exploring the specific attitudes of Kentucky consumers toward locally produced food, especially those in urban areas, would be helpful to farmers and policymakers. Most importantly, we need to identify purchase barriers and the best ways of overcoming those sticking points.



---

<sup>P</sup> When considering positive responses from consumers about local foods, we must keep in mind that other data shows that Americans eat more than half of their meals away from home and that most of these meals are consumed at fast food establishments and at schools and other institutions that typically do not buy directly from farmers. This trend is not necessarily discouraging, however. Many institutions and locally owned family and fast food restaurants are beginning to serve more local foods as consumer demand increases. Thus, great potential exists to feed scores of people with local products who may not purchase and prepare their own fresh foods.

## Shaping a Plan of Action

Information in this report strongly suggests that many the 1980 Kentucky *Cornucopia* report's conclusions remain valid today. The emphasis then was on the state's heavy reliance on food produced elsewhere and the potential benefits to farmers, to rural communities, and to consumers that could be realized by producing as much of this food as possible in Kentucky.

**The conditions now are ripe for change.**

The report concluded that this dependence could be reversed and the potential benefits realized if 1) Kentucky farmers were willing to produce the food being produced elsewhere; 2) this Kentucky-grown food was put in the hands of processors and retailers and others so it was available to consumers, and 3) Kentucky consumers were convinced that this Kentucky produced food was as good or better than imported food and that they demonstrated that belief in the marketplace.

**Now, 20 years later, the emphasis is on the need to transition out of tobacco. The conclusion is that the best way to do that is to grow much more food on family farms in Kentucky, to process as much of it locally as possible, to add value at the community level, and to reach out to consumers as partners in this effort. An overall conclusion is that these steps will also strengthen Kentucky's economy, both locally and overall.**

Few resources were available to implement the conversions recommended in 1980, so there was little follow-up. The conditions now are ripe for change. Available resources include \$1.7 billion (dispersed over 25 years) of tobacco settlement money and a commitment to use it to support these changes, as well as a system of active county councils established to help shape the outcome. On the consumer side of the equation, opportunities for change include widespread concern about where and how food is produced and the concurrent desire to buy local. The challenge now

is to channel these extraordinary resources toward the action that is needed.

Kentucky is the first state to attempt such systematic and comprehensive food system visioning. Unfortunately, no U.S. models serve as an adequate guide. This kind of planning is being done successfully on a countrywide basis in Europe, however.

European models, which have focused primarily on the organic sector, have been successful partly because of the kind of public and government support and commitment that is now available in Kentucky. The action plan suggested for Kentucky is not about organic, but is about a new farm economy. Nevertheless, the general approach adopted in Europe may provide some valuable guidance.

The country-specific plans in Europe typically include conversion targets plus the combination of policy changes needed to make these goals achievable. The more detailed plans also include evaluations of the present situation, much like the information in this report and specific steps needed to achieve the changes. These tend to be five-year plans, for the most part, tied to 10-year goals and 20-year visions.



One of the newest plans, announced recently by the United Kingdom, addresses a situation where 70 percent of the organic food consumed in the country is imported and only 30 percent is produced by a fast-growing

organic sector. The action plan lays out strategy for reversing this trend so that 70 percent of the organic food consumed in the UK is produced there and only 30 percent is imported. A stakeholder group representing a wide range of farmer, trade, consumer and other interests shaped the UK's government sponsored plan. Their comprehensive design includes many elements that are relevant to Kentucky. Aspects of their strategy include:<sup>77</sup>

- Specific, reachable targets;
- Coordinated functioning of the entire food system, including retail, wholesale, consumer and farmer;
- A council to oversee the process and ensure that targets are met;
- Generous subsidies to encourage production transition;
- Increased funding for research on production techniques. Also more demonstration projects and farms;

- More training opportunities for farmers and small-scale processors;
- Increased institutional (government) purchases;
- Agreements with supermarkets to source more organic food from within the UK. Target purchase amounts were based on survey research for what constitutes the greatest potential opportunities;
- Development of diverse markets. The project is not only about organic, but also about advancing local food economies. As such, farmers' markets, CSAs and other direct markets are being encouraged;
- Increased farmer collaboration and consumer education.

Drawing from these models, Kentucky needs to develop specific objective targets for our economic transition, as well as ways to measure such progress.



## Conclusions and Recommendations

∞ This final section sums up some of CFA's suggestions included throughout this report, including some recommended actions and several policy changes. We fully recognize the many challenges ahead. Transforming our food and farm economy is hardly an easy undertaking; it will require steadfast cooperation by our citizens, nonprofit organizations, government and public institutions, as well as the private sector. Despite the complexity and at times difficulty of the road forward, the potential rewards for our state are vast and immeasurable. Considering Kentuckians' need for diversification and widespread support for a new farm economy, we have little doubt that these new efforts will take root and flourish.



A few of CFA member Jennifer Gleason's value-added products.

➤ **Support Business Planning and Feasibility Studies.** To fully embrace the opportunities presented by the new farm economy, Kentuckians need appropriate feasibility studies and business plans. Becky Naugle from Kentucky's Small Business Development Center realizes this basic necessity. She and others with SBDC are beginning to train farmers to create *their own* business plans through the "Tilling the Soil of Opportunity" curriculum. Farmers and other entrepreneurs, like Jenny Evans of Evans Orchard and Cider Mill, have created their plans and are beginning to realize the benefits of a solid foundation for their businesses. Feasibility studies that reflect the changing consumer climate, recognize the nature of relationship-based marketing and the benefits of slow, steady growth (as well as the inherent risks) are also badly needed. The USDA funded Kentucky Center for Cooperative Development and Community Ventures, Inc. are two organizations that are beginning to address this gap. Expanding

access to these studies for Kentucky's farms and communities is vital.

➤ **Facilitate Microenterprise Processing.** Across the state, Kentucky's farmers and non-farm entrepreneurs are adding value to homegrown products. Kentuckians are skilled at churning out delicious baked goods, jams and jellies, ham, sauces and jerky, to name just a few. Jennifer Gleason's Sunflower Sundries creates wholesome and flavorful products that are being sold at farmers' markets, online and in stores. Encouraging such profitable enterprises should be a high priority for the state. Kentucky has no certified public kitchens incubators where our products can be turned into high-value goods. Addressing this shortcoming is critical. Additionally, our schools, engineers and inventors can use their own unique talents to create more efficient and low-cost processing equipment for microenterprises.

➤ **Expand Direct Marketing Opportunities.** Increasing the opportunities for farmers to sell their products directly to their customers is crucial. The tremendous growth of the Lexington Farmers' Market alone displays the potential rewards to both the community and producers from these direct relationships. Urban areas, of all sizes, are budding markets. Community supported agriculture operations provide great rewards to both farmers and consumers by creating mutually supportive connections. Placing markets and CSA distribution points in places where people already visit, such as near downtown businesses, outside churches and community centers, and in or around places of work draw people who might not otherwise travel off the

beaten path for local foods. Regular hours and comfortable settings (with shade, pavilions, music, and other entertainment) make these direct market opportunities important destinations for Kentuckians. The Woodford County farmers' market is an example of a market that has been thoughtfully integrated with the other festivities at the annual Twilight Festival. Agritourism is an extension of this concept, developing opportunities for people to visit farms and buy products directly at the farm gate.

➤ **Create a Thriving System of Agritourism.**

Agritourism can generate substantial amounts of income through food and craft sales, bed and breakfasts, school tours, farm activities, etc. Tourism is the state's third largest industry, contributing \$8.8 billion to the economy.<sup>78</sup> In order to create a thriving system of agritourism farmers will need to overcome the barrier of high liability insurance premiums. The state could actively promote and advertise Kentucky farms as part of the current tourism promotion package. Agricultural Development Funds can offset some of the initial start-up costs.

➤ **Build Regional Marketing Centers.**

Kentucky could develop 10 to 12 regional agricultural marketing centers to serve up to a dozen counties each. Local residents could choose appropriate facilities from a menu of options such as a farmers' market, coolers and storage, washing, packing and grading centers, processing, certified kitchen, store front, hay auction and many other possibilities. Staffing needs of such centers, marketing specialists and brokers who link farmers with chefs and restaurants could be funded with agricultural development funds.

➤ **Expand Institutional Buying.** The Kentucky Department of Agriculture is predicting a 300

percent increase in produce sales to state institutions from 2002 to 2003. Institutional buying such as a farm to school program provides farmers with a large, stable, and consistent market. Although an obvious piece of building a local food economy, the primary barrier is a lack of opportunity for farmers to market cooperatively. However, there must be a coordination mechanism in order for a group of farmers to supply a school system with many different foods. Cooperative networks need technical and start-up assistance in order to realize this potential.

➤ **Develop Collaborative Marketing Opportunities.**

Not all farmers have access to direct markets, nor care for dealing directly with the public. Even farmers who primarily use direct-marketing often have surplus that could be funneled through pooled, collaborative marketing channels. By "collaborative" we mean a distribution system that pools product from different farms for sale to retailers, institutions, and others, while still

ensuring that farmers receive a *fair price* for their product.

Such distribution systems could be cooperatives, like Cumberland Farm Products, or private distributors like Creation Gardens in Louisville. Informal

collaborative marketing, whereby farmers sell each other's products in their farm stores or farmers' market stands, and/or non-profit brokers have a great deal of potential for equitable economic returns to farmers.

➤ **Introduce New Crops and Production Techniques.**

Kentucky's skilled farmers and amiable climate are ripe for producing a bounty of diverse crops and livestock. Our farm equipment is well suited to the requirements of a wide array of crops. Our rolling countryside is ideal pastureland. Our farm culture retains the value of cooperation, workmanship and



hands-on labor that come from our history of tobacco production. These assets lend themselves to creating a new, dynamic economy that is rooted in Kentucky's traditions and landscape.

Examples abound of Kentucky's farmers broadening their horizons to increase income and to meet local needs.

From Paul and Lindy Huber's alpacas to David Wagoner's zucchini, farmers are realizing



**Leo and Jean Keene's Blue Moon Farm stand at the Lexington Farmers' Market.**

both the tangible and intangible

value of their mixed crop and livestock operations. Increased income and gratifying relationships make their efforts worthwhile.

Though produce (fruits, vegetables and herbs) represents an area of tremendous growth potential, since nearly all these foods are currently brought in from out-of-state, the new farm economy is not limited to these crops. Edible grains, fibers and fuel, flowers, fish and other type of livestock are all vital components of our food and farm system.

New ways of producing are also essential to keep production and subsequent food costs down, to preserve environmental quality and to create sane work schedules for farm families. Shifting livestock production from confinements and feedlots to pasture and hoophouses, retaining farm income by transitioning away from high-input agriculture to organic and IPM (integrated pest management) strategies and exploring efficient labor-saving production methods are all possibilities to explore. Ken Mattingly of Kenny's Country Cheese raises his cows on pasture and has

shown that Kentucky farmers can and do produce first-class dairy products. Edward and Janet Jenkins sell their eggs, chicken and beef to grateful Kentuckians who know the true value of good food. Charles and Janet Lake of Lake's Botanicals are helping preserve Kentucky's forests while organically cultivating the high-value herb, goldenseal.

- **Increase Training, Opportunities and Support for Kentucky's Young Farmers.** Continuing a family's farm tradition (or creating a new one) brings both great risk and reward for Kentucky's young people. Many Kentucky farm families actively discourage their children from farming because of the risk, stress, low financial return and long hours. As the average age of our farmers continues to rise, the need to reverse these trends increases. The Kentucky Agricultural Finance Corporation partnering with Farm Services Agency will be able to provide direct or guaranteed financing on two types of programs assisting young farmers. Training to develop specific skills, with production, post-harvest handling, packaging,



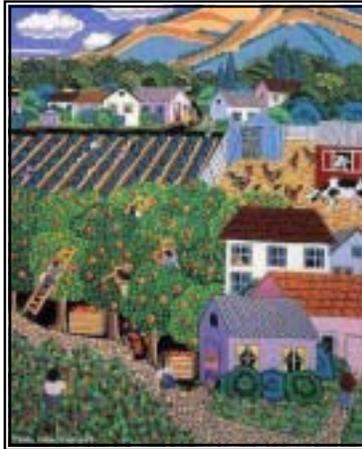
**A Portland Farmers' Market customer rests after shopping.**

marketing, etc. is also necessary. Kentucky's educational institutions, including k-12, colleges and universities, could adopt and develop curricula that will facilitate such skill development. UK Extension's field days and educational materials are very important, and their continued development is crucial. Dr. Marion Simon and Mac Stone of Kentucky State University also recognize farmers' needs for such skill development. The Third Thursday

sustainable agriculture workshops that they coordinate are premiere examples of training opportunities held once a month.

➤ **Review and Overhaul Regulations that Inhibit**

**Progress.** Farmers can sometimes face challenges with direct and alternative marketing from government regulations that were developed for large-scale production (for example, licensing requirements to sell eggs in retail outlets). The passage of HB 391, the home-processing bill, was a major victory for Kentucky farmers wishing to add value to their products without the intense start-up costs of constructing a certified kitchen. Expanding this approach is necessary if Kentucky is to reach our full potential.



➤ **Monitor Progress.** When HB 611 was passed, criteria were incorporated to evaluate the success of the legislation. The measures included: numbers of families farming, increases in farm income attributable to state programs, amounts of farm income attributable to state programs, numbers of diversified operations, and numbers of different types of diversified efforts within a county, including the efforts that have failed. These excellent, but tough, standards require ongoing attention to ensure that progress toward creating a new farm economy continues.

➤ **Collect Appropriate Statistics.** In order to effectively monitor progress on other measures of success with creating LIFE, appropriate statistics must be collected. Kentucky farmers and policymakers need to know much more about the amounts of various food products that are produced and consumed in Kentucky. For example, relatively few statistics are kept of fruit and vegetable production, direct sales to restaurants, unmet demand for various

products, etc. This baseline information is essential for determining the most effective allocation of time and financial resources.

From much of what we have written here, one could come away with the impression that global and local are mutually exclusive concepts, with no common ground between them. Though

Community Farm Alliance fully believes that the establishment of more localized economies is dramatically important, we also recognize the interconnectedness that we, as a “global community,” have come to share. **We do not advocate isolationism. What we do advocate is self-reliance.** Self-reliance implies the reduction of dependence on other places, but does not deny the desirability nor necessity of external

trade relationships.<sup>79</sup> There are various instances in which outside trade is more advantageous than treating communities as hermetically sealed units with nothing coming into or flowing out of their borders. However, in general, greater self-reliance creates stronger communities. The challenge ahead is to carefully balance the need for self-reliance with the benefits of external relationships. A closing quote from the authors of “Coming into the Foodshed” appropriately encapsulates this report’s underlying inspiration.

*Ultimately, what sustainability requires of us is change in global society as a whole. We need the recovery and reconstitution of community generally, not simply in relation to food. But, though we may be able to think like mountains, we must act as human beings. To begin the global task to which we are called, we need some particular place to begin, we need some particular place to stand, some particular place in which to initiate the small, reformist changes that we can only hope may some day become radically transformative. We start with food. Given the centrality of food in our lives and its capacity to connect us materially and spiritually to each other and to the earth, we believe it’s a good place to start.<sup>80</sup>*

## Appendix: Sector-specific summaries comparing 1980 and 2002

---

**Beef.** Twenty years ago the *Cornucopia Project* identified beef as a sector that fell far short of meeting in-state consumption needs. It stated that Kentucky was producing 82.4 million pounds of beef, far short of the 247.1 million pounds consumed. The bottom line, according to the report, was that the state was importing 67 percent of its beef and that its consumers were paying \$444 million for beef produced elsewhere.

Although the official 1980 beef production statistics provided were incomplete, the *Cornucopia* report noted that most of Kentucky's livestock production was "exported to other states for finishing." This may help explain how a state like Kentucky, which ranked No. 11 among the states in 1980 for the size of its beef and dairy cattle sector, could be considered a major beef importing state. The *Cornucopia* report apparently considered all the Kentucky feeder calves fed out and slaughtered in other states and then returned to Kentucky to be sold as finished "imported" beef. This appears to account for the uncertain conclusion that Kentucky was a beef importing state in 1980.

Twenty years later, it appears that Kentucky's beef production numbers and the structure of its beef sector have not changed much. Although the state was the largest source of feeder cattle east of the Mississippi in 2001, it lacks an integrated system for producing and processing beef that would enable it to capture the full economic benefits of the beef production sector. Most of Kentucky's cull beef and dairy cows are slaughtered at the closest out-of-state plant in Nashville. And almost all its calf crop is sold and fed out in big feedlots in places like Iowa, Kansas and Oklahoma and slaughtered in huge packing plants in states like Illinois, Iowa or Nebraska. Structural changes over the last 25 years that have led to concentration in the beef industry and left Kentucky without any important beef feedlot or slaughter and processing capacity are well documented.<sup>81</sup> Though forage-fed beef is a promising

alternative to feedlots for finishing cattle, this sector still has room for research and development.

Gross receipts from cattle and calves in 2001 totaled \$541 million, almost as much as tobacco, and 48,000 of Kentucky's farms had income from beef production. The Kentucky Agricultural Statistics Service reported that Kentucky farmers' marketed more than one million cows and calves in 2001, nearly all as feeder calves or veal calves finished out and slaughtered elsewhere or as cull beef and dairy cows slaughtered elsewhere.<sup>82</sup> At the average dressed out weight of 744 pounds for slaughtered cattle, this would have produced 631 million pounds of beef, far more than the 272 million pounds consumed in the state.

The challenge is to begin bringing cattle feeding and slaughter back to Kentucky so producers can gain the value-added benefits. Even though Kentucky has the capacity to slaughter up to 1,000 beef cattle per week in 63 small plants scattered across the state, the Kentucky Agricultural Statistics Service reported that only about 300 per week were actually fed out in state feedlots in 2001.<sup>83</sup> It is unclear how many of these fed cattle were actually slaughtered in Kentucky. And it also is likely that some forage-fed beef cattle may also have been slaughtered in these small plants. Based on the average 2001 dressed-out weight for slaughtered cattle and average beef consumption of 67.2 pounds per person, a total of 367,000 beef cattle would have to be fed-out and slaughtered each year in Kentucky to meet the state's beef consumption requirements. Thus, the state has a need to increase slaughter capacity by at least 315,000 beef cattle per year, ideally through a system of local lockers that are able to meet custom slaughter demands and reduce farmer travel time. Unfortunately, very few USDA-inspected red meat processing plants in Kentucky will take animals from independent farmers.

**Pork.** In 1980 the *Cornucopia Project* concluded that pork was the only Kentucky meat category that met in-state consumption requirements and also produced

a significant amount marketed elsewhere. The project report showed that Kentuckians consumed 250 million pounds of the 399 million pounds of the pork produced in the state that year. Over the last 20 years a small drop in per capita pork consumption (from 57.3 pounds to 51.7 pounds), a small increase in Kentucky's population, and a steady and significant decline in overall hog production have combined to wipe out the state's pork surplus. Kentucky produced 177 million pounds of pork in 2001, more than 30 million pounds short of an estimated consumption of 208 million pounds.<sup>84</sup>

Kentucky now ranks No. 13 on the list of hog producing states. The number of hogs on Kentucky farms dropped to 405,000 head in 2001 from 1,220,000 in 1980 and the number of Kentucky producers fell to 1,300. A report prepared at the University of Kentucky has concluded that the loss of close access to slaughtering facilities has led many producers to stop raising hogs.<sup>85</sup> It stated that four hog slaughtering plants in the Kentucky area have closed over the last 15 years and that 90 percent of Kentucky's producers in 2001 had to ship their hogs to plants in Louisville and Paducah in Kentucky, to Logansport and Delphi in Indiana, to Beardstown in Illinois, and to West Point in Mississippi. Kentucky farmers' marketed a total of 885,000 head in 2001 and most of these hogs were raised in larger operations under integrator contracts.

However, Kentucky does have a growing market for small hog farmers' marketing and/or processing pork locally. The basic marketing options are to market freezer meat (whole, half, or quarter carcass) directly to consumers, to market individual cuts directly to consumers, or to market wholesale products through a restaurant, distributor, or other retail outlet.<sup>86</sup> A directory of Kentucky livestock processing facilities compiled in 2000 lists 63 small livestock processing facilities scattered across the state and all but two provide custom hog slaughtering services.<sup>87</sup> Some also provide special value-added services like sausage making and ham curing.

Research sponsored by a direct and local meat marketing project shows a significant number of Kentucky consumers are willing to go out of their

way to purchase local meat products and to pay moderate premiums of up to 20 percent.<sup>88</sup> The research suggests that these consumers tend to be older individuals with more disposable income who remember what it was like to buy meat before the adoption of boxed beef and case ready packaging. They also tend to look for such product attributes as no added antibiotics, no added hormones, organically produced, and locally fresh.

**Fish.** In 1980 the *Cornucopia Project* estimated that Kentuckians were importing more than 99 percent of the 46.5 million pounds of fresh, frozen, and canned fish consumed in the state that year. The total produced in the state that year was only 65,000 pounds.

These figures have changed little over 20 years with only \$1.1 million in Kentucky fish income reported by official sources in 2001. With U.S. per capita consumption of fish and shellfish of 15.3 pounds this year, which adds up to about 60 million pounds for Kentucky consumers, a state aquaculture task force reported that Kentucky still imports 96 percent of the fish consumed in the state.<sup>89</sup> Kentucky's production includes about one million pounds per year of rainbow trout and channel catfish and the outlook is considered good for such new species as hybrid striped bass, paddlefish, and freshwater shrimp. Four fish and shellfish producer directories (catfish, trout, freshwater shrimp, and other) are on the Kentucky Department of Agriculture web site. The agency estimates 40 families are in the freshwater shrimp business.

Despite the current size of Kentucky's aquaculture industry, the state is well poised to greatly expand production. Kentucky has the climate and topography to raise both warm- and cold-water species, with current production centered most strongly on bass, catfish, paddlefish, shrimp and trout.<sup>90</sup> Kentucky State University recently opened a \$10 million Aquaculture Research Center, the KDA has also published an Aquaculture Directory filled with information that farmers need to begin or expand production, a shrimp mobile-processing unit has been established, and cost-share money is available for pond construction. At the same time, a

number of grassroots leaders are advancing this sector through their pioneering efforts.

**Sheep and Lambs.** Kentucky at one time was a major producer of sheep and lambs with as many as 1.22 million head on farms. But numbers have gradually fallen and only 21,000 were on Kentucky farms in 1980. The number on farms and the lamb crop marketed are roughly the same today.<sup>91</sup> Kentucky imports approximately 90 percent of its lamb and mutton, so with an estimated annual consumption of 3,233,415 lbs. for the state, Kentucky needs to produce roughly 290,000 additional pounds to be self-sufficient. Increasing numbers of ethnic minorities entering the state will likely increase demand for these meats even further.<sup>92</sup>

**Goats.** No information was gathered on goats for the *Cornucopia* Report, so a comparison between then and now is difficult. Yet, goat production is becoming increasingly important, so this sector merits attention. Kentucky is now the number three producer of meat goats in the nation.<sup>93</sup> In fact, the goat industry is the fastest growing segment of Kentucky agriculture.<sup>94</sup> In 2003, an estimated 70,000 goats are being raised in Kentucky on approximately 2500 farms.<sup>95</sup> The average flock size per farm is 26 head.

**Chicken (broilers).** The *Cornucopia* report in 1980 focused attention on the fact that Kentucky as a state with more than 100,000 farms was producing only 3.2 million broilers and, as a result, had to import more than 90 percent of the broilers needed to meet market requirements. With growth in industrial poultry production over the last 20 years, a dramatic adjustment has taken place. The Kentucky Agricultural Statistics Service reported several months ago that the state now produces 253.4 million broilers, far more than the 64.5 million needed to meet in-state broiler consumption.<sup>96</sup> It is estimated that everyone in Kentucky would have to eat more than one broiler per week to consume all the broilers now produced in the state.

Though the market value of Kentucky's broiler production has increased over the 20-year period from \$3 million to \$504 million, unfortunately, nearly all broilers are produced by farmers with integrator

contracts. USDA's Economic Research Service may provide a clue to the number of broilers still produced on small farms in Kentucky.<sup>97</sup> It reports that cash receipts for the state for 2001 included \$991,000 for "farm chickens." Free range, organic, and pastured poultry provide a direct marketing alternative for small farmers, with at least 18 producers now, and many others gearing up for production.<sup>98</sup> One USDA inspected poultry processing plant is being constructed near Bowling Green, but no others exist.

**Eggs.** The number of layers has increased in Kentucky from 2,523,000 in 1980 to 3,798,000 in 2001 and the value of the state's egg production has more than tripled over 20 years to \$72.7 million. Though, per capita consumption of eggs has declined steadily over this period. The combination of a much larger number of layers with much smaller per capita consumption has enabled the state to move up from 1980, when it imported 45 percent of its eggs, to the situation today where all in-state needs are met with eggs produced in Kentucky.

Small farmers, however, have lost virtually all of their egg income during this period of notable growth. A report by the American Egg Board shows that 290 egg producing companies with flocks of 75,000 hens or more now produce 95 percent of all the eggs produced in this country.<sup>99</sup> Another 360 companies with 3,000 hens or more produces almost all the balance.

**Dairy.** Kentucky farmers produced 2.22 billion pounds of milk in 1980, more than double its in-state requirements. Production fell to 1.66 billion pounds in 2001, still considerably more than was needed to take care of in state needs, and 99 percent of the milk produced was sold directly to plants and dealers. The number of farms with milk cows declined to 2,900 in 2001 with an average of 44 milk cows per farm.<sup>100</sup> Only 16 million pounds of manufacturing grade milk was sold in 2001 to the 16 dairy plants that produced cheese and other consumer products.<sup>101</sup>

Farmers are steadily increasing their amount of niche marketing throughout the state, producing a variety of products including hard and soft cheeses, yogurt, and ice cream. Also, the market for organic milk is

steadily increasing and represents a dramatic area of potential growth, as this milk is currently being shipped in primarily from Wisconsin, Idaho and Maryland.

**Wine.** Information on wine production and distribution in Kentucky was not gathered for the 1983 *Cornucopia* report. Nevertheless, as a growing industry in the state, reporting current baseline information is important. In 2001 eight wineries produced more than 4,700 cases of grape wine in Kentucky. At least three more wineries have opened since then. According to KDA, by 2007, Kentucky wine production is expected to reach nearly 34,000 cases, or about 2 percent of the state's wine sales.<sup>102</sup> Unfortunately, quite a bit of the grape juice to produce the wine is being imported from out-of-state.

**Fresh Fruits and Vegetables.** Twenty years ago, according to the *Cornucopia* report, Kentucky imported most of the common fruits and vegetables that could be grown in the state. Official 1980 statistics were published for fresh market production of potatoes, lettuce, cabbage, tomatoes, sweet corn, snap beans, onions, sweet potatoes, cucumbers, peas, broccoli, eggplant, apples, peaches, and melons, as well as for bell peppers and potatoes grown for processors. But the state agricultural statistics agency did not gather production information on more than 20 other fruit and vegetable crops.

In 1980, the available statistics showed the total percentage of in-state fresh market demand met by Kentucky producers of the most common fruits and vegetables was 21 percent for potatoes, 1 percent for lettuce, 21 percent for cabbage, 21 percent for tomatoes, 10 percent for sweet corn, 21 percent for snap beans, 5 percent for onions, 19 percent for sweet potatoes, 68 percent for cucumbers, 100 percent for peas, 69 percent for broccoli 55 percent for eggplant, 32 percent for apples, 78 percent for peaches, and 1 percent for melons. In the processed vegetable category, Kentucky farmers produced more than enough bell peppers to meet in-state processing needs and 20 percent of the potatoes needed for in-state processing (potato chips). The *Cornucopia Project* also concluded that the fruit and vegetable sector accounted for only three-tenths of one percent of the

value of Kentucky agricultural products sold in 1980.

The fresh fruit and vegetable sector 20 years later remains extremely small with the total value estimated at about \$19 million in 2001. Average per farm cash receipts for vegetable producers was \$23,521 in 1986-1988. By 1996-1998 that figure had increased 30 percent to \$30,646.<sup>103</sup> In fact, it has remained so small during this period that the state agricultural statistics agency has discontinued publishing production numbers for all categories except apples (7.4 million pounds in 2001), and peaches (1.8 million pounds in 2001). However, it is possible to identify good information that generally describes Kentucky's vegetable and fruit sector in 2002. A produce marketing survey carried out at the end of the 2001 and 2002 growing seasons by the University of Kentucky concluded that approximately 900 producers, slightly more than one percent of the state's farmers, are growing vegetables and fruits on a commercial scale.<sup>104</sup> The survey report concluded that many producers seeking alternatives to tobacco production have turned to vegetable and fruit crops for additional farm income, that almost half of the producers responding to the survey had less than seven years of experience producing commercial vegetable and fruit crops, that 27 percent of the respondents were small operators with total agricultural sales of less than \$20,000, and that Kentucky produce is primarily grown as a supplemental crop on relatively traditional farms.

The survey respondents reported average vegetable acreage of eight acres and average fruit acreage of two acres. The acreage represented in the survey showed the main crops grown in 2002 were apples, snap beans, cabbage, cantaloupes, sweet corn, peaches, bell peppers, pumpkins, white potatoes, summer squash, strawberries, and watermelons. The UK survey report concluded that Kentucky's produce sector has grown rapidly during the last three years, that more than half of the survey respondents indicated they plan to expand fresh produce production, and that the future outlook appears favorable. Crops showing important production increases were winter squash, snap beans, cantaloupes, summer squash, grapes, blackberries, and other berries (raspberries, loganberries, and

blueberries). The main barriers to expansion identified were low prices, lack of markets, and harvest labor shortages.

A series of Kentucky Cooperative Extension fact sheets provides U.S. production and marketing data and bits of Kentucky information on apples, snap beans, bell peppers, blackberries, blueberries, broccoli, cabbage, cantaloupes, sweet corn, cucumbers, eggplant, Edamame (edible) soybeans, peaches, potatoes, pumpkins, squash, strawberries, tomatoes, and watermelons.<sup>105</sup> These are of little help in providing 2003 baseline information, however, because Kentucky production data in most cases is not provided.

One exception is information in the broccoli fact sheet showing 50 acres were grown in 2002 with estimated production of 6,800 pounds. This is far short of the more than 14 million pounds of broccoli consumed annually in Kentucky and produced elsewhere and strongly suggests that broccoli is an important unrealized production opportunity for small vegetable producers. Some Kentucky information also is provided on pumpkins (220,000 pounds produced in 2001), strawberries (about 400,000 pounds produced in 2002), tomatoes (about 500 acres grown in 2001), and blueberries (35 acres in 2002).

The 2001-2002 survey report also indicated that nearly 90 percent of producers use either direct markets or cooperative marketing associations to market their produce and that only a small amount is sold now through the internet or direct to retail, wholesale, restaurant, processor. The most frequently utilized marketing channel is direct marketing (78 percent of survey respondents) and cooperatives or marketing associations (27 percent of respondents).

Survey respondents cited lower prices and volume and quality requirements as barriers to seeking wholesale marketing opportunities and only 5.8 percent of the producers surveyed reported they had started wholesaling. In some cases, it was reported, this was done to move produce that could not be marketed elsewhere. This data strongly suggests that serious barriers still discourage producer interest in sales of locally grown produce to large retailers or to

schools, state agencies, and other institutional buyers. One potential opportunity to increase these sales is the rise in appropriate scale brokering services that can handle marketing, pool smaller quantities of produce, and help with sorting, grading and packaging. Other opportunities for farmers include tapping into small-scale processing facilities, smaller retailers (such as natural food stores and community-owned groceries), as well as direct sales to restaurants and caterers.

Total per capita consumption of the 129 commercially available fruits and vegetables for which the U.S. government has production data rose 24 percent, from 573 pounds in 1970 to 711 pounds in 1997.<sup>106</sup> With Kentucky's 2001 consumption of fruits and vegetables estimated at roughly 2.75 billion pounds, including out-of-season vegetables and fruits and bananas, citrus and other tropical fruits, it is clear that current production is severely lacking in terms of meeting in-state needs and that there is enormous potential for future expansion on Kentucky farms. Future potential for expansion is documented in national baseline financial projections showing per capita consumption of all fruits and vegetables is expected to increase 5.8 percent from 2000 to 2009 and that total fruit and vegetable receipts are expected to rise by 25 percent.<sup>107</sup>

**Canned and Frozen Fruits and Vegetables.** Twenty years ago, according to the *Cornucopia Project* report, nearly 100 percent of all canned and frozen fruits and vegetables were imported. The main exception cited was bell peppers. Although frozen fruits and vegetables are popular with consumers, this sector remains undeveloped in Kentucky and virtually all canned and frozen food consumed in the state is grown and processed elsewhere.

**Miscellaneous.** According to 2001-2002 Kentucky Agriculture Statistics, the floriculture industry generated \$31,442,000; nurseries, greenhouses and sod added \$27,410 to Kentucky's economy; miscellaneous other crops amounted to \$6,703,000 (includes sunflowers, other seeds, other field crops and mushrooms) and bees and honey generated \$307,000.

## Notes

---

- <sup>1</sup> Community Farm Alliance. “The Greenprint: A Long Term Plan for Kentucky’s Agricultural Economy.” Frankfort, Kentucky. October 2001.
- <sup>2</sup> Kentucky Agricultural Development Board. “Cultivating Rural Prosperity: Kentucky’s Long-Term Plan for Agricultural Development.” Governor’s Office of Agricultural Policy. 2001.
- <sup>3</sup> Van Erden, Don. “Direct Marketing of Agricultural Products: A Kentucky Opportunity.” Presentation at the *Infrastructure for Delivery of Direct-Marketed Products: A Rural Development Project*” organized by Partners for Family Farms. August 29, 2003. Lexington, KY.
- <sup>4</sup> Ernst, Matthew D. “Highlights from 2001-2002 Kentucky Produce Market Surveys. AEC-EXT 2002-05. Department of Agricultural Economics. University of Kentucky. November 2002.
- <sup>5</sup> Kentucky Health and Agricultural Forum. “Highlights of the Kentucky Farmer Survey.” March 1998. <http://www.virginia.edu/ien/tobacco/KentuckyHighlights.html>
- <sup>6</sup> Most of the statistics cited in this section have been derived from the Kentucky Agricultural Statistics Service. “Kentucky Agricultural Statistics: 2001-2002.”
- <sup>7</sup> National Agriculture Statistics Service. *Agricultural Statistics Database*. “Hogs and Pigs: Number of Operations.” <http://www.nass.usda.gov:81/ipedb/>
- <sup>8</sup> Kentucky State University. “Aquaculture in Kentucky.” <http://www.ksuaquaculture.org/Kentucky%20Aquaculture.htm>
- <sup>9</sup> Moore, Stephen and Dean Stansel. “Policy Analysis: Ending Corporate Welfare as We Know It.” Cato Institute, Policy Analysis #225. <http://www.cato.org/pubs/pas/1b>
- <sup>10</sup> National Interfaith Committee for Worker Justice. “Poultry Justice Campaign: Tell Tyson to Pay.” <http://www.nicwj.org/pages/Facts>
- <sup>11</sup> Wilkins, Jennifer. “Community Food Systems—Linking Food, Nutrition, and Agriculture.” Cornell Cooperative Extension. [www.cce.cornell.edu/food/expfiles/topics/wilkins](http://www.cce.cornell.edu/food/expfiles/topics/wilkins)
- <sup>12</sup> Broomhall, David. “The Economic Contribution of the Food and Agricultural System in Indiana.” Staff Paper #96-18; Dept. of Agricultural Economics Purdue University. August 1996. <http://www.agecon.purdue.edu/crd/pdf/sp9618.pdf>
- <sup>13</sup> Markley, Kristen and Duncan Hilchey. “Adding Value for Sustainability: A Guidebook for Cooperative Extension Agents and Other Agricultural Professionals.” *Community Agriculture Development Series*. Pennsylvania Association for Sustainable Agriculture and the Farming Alternatives Program; Department of Rural Sociology, Cornell University.
- <sup>14</sup> Van Erden, Don. “Direct Marketing of Agricultural Products: A Kentucky Opportunity.” Presentation at the *Infrastructure for Delivery of Direct-Marketed Products: A Rural Development Project*” organized by Partners for Family Farms. August 29, 2003. Lexington, KY.
- <sup>15</sup> Rosset, Peter M. “The Multiple Functions and Benefits of Small Farm Agriculture.” FoodFirst Policy Brief No. 4. September 1999. <http://www.foodfirst.org/pubs/policy/pb4.html>
- <sup>16</sup> Ibid.
- <sup>17</sup> Ibid.
- <sup>18</sup> Berry, Wendell. *The Unsettling of America: Culture and Agriculture*. San Francisco, Sierra Club Books. 1977.

- 
- <sup>19</sup> Pirog, Rich, and Timothy Van Pelt, Kamyar Enshayan, and Ellen Cook. "Food, Fuel, and Freeways: An Iowa Perspective on How Far Food Travels, Fuel Usage, and Greenhouse Gas Emissions." Leopold Center for Sustainable Agriculture. Iowa State University. June 2001.
- <sup>20</sup> Bureau of Transportation Statistics. "Table 1-44: U.S. Ton-Miles of Freight (Millions)." U.S. Department of Transportation. <http://www.bts.gov>
- <sup>21</sup> Skrzycki, Cindy. "A Heaping Helping of Food Security." Washington Post. Page E1. April 1, 2003.
- <sup>22</sup> Pirog, Rich, Leopold Center for Sustainable Agriculture. Personnel Communication. August 1, 2003.
- <sup>23</sup> Van Erden, Don. "Direct Marketing of Agricultural Products: A Kentucky Opportunity." Presentation at the *Infrastructure for Delivery of Direct-Marketed Products: A Rural Development Project* organized by Partners for Family Farms. August 29, 2003. Lexington, KY.
- <sup>24</sup> West Kentucky Corporation. [www.thinkwestkentucky.com/agriculture/farmers](http://www.thinkwestkentucky.com/agriculture/farmers)
- <sup>25</sup> USDA's Agricultural Marketing Service. [www.ams.usda.gov/farmersmarkets/facts](http://www.ams.usda.gov/farmersmarkets/facts)
- <sup>26</sup> Sidebottom, Anna Lucio. Personal Communication. July 2003.
- <sup>27</sup> Kentucky Department of Agriculture. "The Kentucky Farmers' Market Directory." [www.kyagr.com/mk](http://www.kyagr.com/mk)
- <sup>28</sup> Ernst, Matthew D. "Highlights from 2001-2002 Kentucky Produce Market Surveys. AEC-EXT 2002-05. Department of Agricultural Economics. University of Kentucky. November 2002.
- <sup>29</sup> UMass Extension. "What is Community Supported Agriculture and How Does It Work?" <http://www.umass.edu/umext/csa/about.html>
- <sup>30</sup> Alternative Farming Systems Information Center. "The Community Supported Agriculture (CSA) database." National Agricultural Library. [www.nal.usda.gov/afsic/csa](http://www.nal.usda.gov/afsic/csa)
- <sup>31</sup> Kentucky Farm Bureau. "Roadside Farm Markets." [www.kyfb.com/federation/Member percent20Benefits/roadside.asp](http://www.kyfb.com/federation/Member%20Benefits/roadside.asp)
- <sup>32</sup> Kentucky Agri-tourism Working Group. "Issue White Paper: Establishment of an Agri-tourism Industry in Kentucky."
- <sup>33</sup> Grower Chef Hotline. <http://www.greenapron.com/pages/62996/index.htm>
- <sup>34</sup> Chefs' Collaborative 2000. <http://www.chefscollaborative.org/>
- <sup>35</sup> Kroger Corp. "Kroger Launches 'Naturally Preferred' Brand of Premium Natural and Organic Products Nationwide." Press release. [www.kroger.com](http://www.kroger.com)
- <sup>36</sup> Ernst, Matthew D. "Highlights from 2001-2002 Kentucky Produce Market Surveys. AEC-EXT 2002-05. Department of Agricultural Economics. University of Kentucky. November 2002.
- <sup>37</sup> Greenburg Quinlan Rosner Research, Inc. "Report on Building Support for Buying Local." Foodroutes Network. 2002.
- <sup>38</sup> Karaim, Reed. "Doing Business By Wal-Mart's Rules", *Top Producer Magazine*, November 19, 2001.
- <sup>39</sup> Ibid.
- <sup>40</sup> Ibid.
- <sup>41</sup> Anderson, Jessica. "Farm-to-School Program Brings Fresh Produce Back to School!" *Marketing Matters*. No. 4, Issue 3. Kentucky Department of Agriculture's Office of Agricultural Marketing and Product Promotion. August 15, 2003.

- 
- <sup>42</sup> Community Farm Alliance. "Highlights from General Assembly 2002." *CFA Newsletter*. June 2002. Page 5.
- <sup>43</sup> Hollderan, Bill. "Consider Cooperative Marketing." *Marketing Matters*. No. 4, Issue 3. Kentucky Department of Agriculture's Office of Agricultural Marketing and Product Promotion. August 15, 2003.
- <sup>44</sup> Kentucky Department of Agriculture. <http://www.kyagr.com>
- <sup>45</sup> Integrity Systems Cooperative Co. "Adding Values to Our Food System: An Economic Analysis of Sustainable Community Food Systems." United States Department of Agriculture, Sustainable Agriculture Research and Education Program. Utah State University; Logan, Utah. February 1997.
- <sup>46</sup> Rozyne, Michael. "Red Tomato –Plan for 2002 (draft)." Institutional Markets: Supply Chain Development and Risk Management Strategies. Practical Farmers of Iowa Winter Workshops. January 24, 2003.
- <sup>47</sup> Woods, Timothy A., Heath Hoagland, Brent Rowell, and James Mansfield. "Feasibility Study for Kentucky Regional Marketing Facilities." University of Kentucky, Depts. of Agricultural Economics and Horticulture, and the Kentucky Department of Agriculture. September 1999.  
<http://www.uky.edu/Agriculture/AgriculturalEconomics/publications/marketingfeasibility.pdf>
- <sup>48</sup> Mueller, Rolf A.E. "Emerging E-Commerce in Agriculture." University of California. Agricultural Issues Center. AIC Issues Brief No. 14. December 2000.
- <sup>49</sup> Kentucky Department of Agriculture. "Country Store" and the "Farm Store." [www.kyagr.com/buyky/index.html](http://www.kyagr.com/buyky/index.html)
- <sup>50</sup> Markley, Kristen and Duncan Hilchey. "Adding Value for Sustainability: A Guidebook for Cooperative Extension Agents and Other Agricultural Professionals." *Community Agriculture Development Series*. Pennsylvania Association for Sustainable Agriculture and the Farming Alternatives Program; Department of Rural Sociology, Cornell University.
- <sup>51</sup> Gillespie, Gilbert and Duncan Hilchey. "Small-Scale Food Processing Project: Adding Value for Sustainability." Community and Rural Development Institute. [http://www.cardi.cornell.edu/case\\_studies/hilchey.cfm](http://www.cardi.cornell.edu/case_studies/hilchey.cfm)
- <sup>52</sup> University of Kentucky. "The Value-Added Food Processing Incubator: Where the Sage Meets the Sausage." *The Magazine*. UK College of Agriculture. <http://www.ca.uky.edu/agc/magazine/2002/Summer2002/Articles/htmlfiles/foodprocessing.htm>
- <sup>53</sup> Community Farm Alliance. "HB391 Signed into Law." *CFA Newsletter*. June 2003.
- <sup>54</sup> Markley, Kristen and Duncan Hilchey. "Adding Value for Sustainability: A Guidebook for Cooperative Extension Agents and Other Agricultural Professionals." *Community Agriculture Development Series*. Pennsylvania Association for Sustainable Agriculture and the Farming Alternatives Program; Department of Rural Sociology, Cornell University.
- <sup>55</sup> King, Betty. Personal communication with CFA organizer, Shana Herron. July 3, 2003.
- <sup>56</sup> Kentucky Agricultural Statistics Service. "Kentucky Agricultural Statistics: 2001-2002."
- <sup>57</sup> Johnson, Kristin. "Big Rewards in Small-Scale Dairy Processing." June 2000. [http://www.moomilk.com/archive/tech\\_44.htm](http://www.moomilk.com/archive/tech_44.htm)
- <sup>58</sup> University of Kentucky, Cooperative Extension Services. "Directory of Kentucky Livestock Processing Facilities." <http://www.uky.edu/Ag/AgEcon/publications/ext2000-09.pdf>
- <sup>59</sup> Harrington, Tim. "Go Grass!" *The News Leader*. July 31, 2003.
- <sup>60</sup> Mercola, Joseph. "Scientific Literature that Supports the Health Benefits of Grass Fed Beef." <http://www.mercola.com/beef/references.htm>
- <sup>61</sup> Coleman, Eliot. "The Winter-Harvest Manual: Farming the Back Side of the Calendar." *Four Seasons Farm*. Harborside, Maine. 1998.

- 
- <sup>62</sup> National Agriculture Statistics Service. "Greenhouse Produced Food Crops by State: 1998." Table 37. <http://www.nass.usda.gov/census/census97/horticulture/table37.pdf>
- <sup>63</sup> Wiediger, Paul and Alison. "Walking to Spring: Using High Tunnels to Grow Produce 52 Weeks a Year." Au Naturel Farm. Smiths Grove, Kentucky. 2002.
- <sup>64</sup> "Solar Greenhouses: Horticulture Resource List." Appropriate Technology Transfer to Rural Areas. <http://attra.ncat.org/attra-pub/solar-gh.html>
- <sup>65</sup> Economic Research Service, USDA. "Organic Farming and Marketing." <http://www.ers.usda.gov/briefing/Organic/>
- <sup>66</sup> Greene, Catherine, and Amy Kremen. "U.S. Organic Farming in 2000-2001: Adoption of Certified Systems." Agriculture Information Bulletin No. 780. U.S. Department of Agriculture, Economic Research Service. February 2003.
- <sup>67</sup> Kring, Chris, Kentucky Department of Agriculture, Office of Agriculture Marketing. Personnel Communication. July 2003.
- <sup>68</sup> Barkley, Andrew. "Organic Food Growth: Producer Profits and Corporate Farming." Presentation at the 2002 Risk and Profit Conference, Department of Agricultural Economics, Kansas State University, Manhattan, Kansas, August 15-16, 2002.
- <sup>69</sup> Integrity Systems Cooperative Co. "Adding Values to Our Food System: An Economic Analysis of Sustainable Community Food Systems." United States Department of Agriculture, Sustainable Agriculture Research and Education Program. Utah State University; Logan, Utah. February 1997.
- <sup>70</sup> Ernst, Matt. "Kentucky's Organic Vegetable Acreage to Increase." *Ag Worldwide*. [http://www.agriculture.com/default.sph/agNotebook.class?FNC=ArticleList\\_Aarticle.html\\_8251\\_815](http://www.agriculture.com/default.sph/agNotebook.class?FNC=ArticleList_Aarticle.html_8251_815)
- <sup>71</sup> Eco-labels. "Consumers Union Guide to Environmental Labels." <http://www.eco-labels.org/home.cfm>
- <sup>72</sup> Greenburg Quinlan Rosner Research, Inc. "Report on Building Support for Buying Local." Foodroutes Network. 2002.
- <sup>73</sup> University of Nebraska-Lincoln. "Attracting Consumers with Locally Grown Products." The Food Processing Center, Institute of Agriculture and Natural Resources. The North Central Initiative for Small Farm Profitability. October 2001. [www.farmprofitability.org/local.htm](http://www.farmprofitability.org/local.htm)
- <sup>74</sup> Purefood. "Since 9/11 Americans' Food Safety Concerns & Organic Food Buying Have Increased." November 27, 2001. <http://www.purefood.org/Organic/foodsafety112801.cfm>
- <sup>75</sup> Wimberley, Ronald. "The Globalization of Food: How Americans Feel About Food Sources, Who They Trust, Food Security, Genetic Modification, Food Labeling and the Environment." <http://sa.ncsu.edu/global-food>
- <sup>76</sup> Burdine, Kenneth H., and Leigh Maynard and Lee Meyer. "Consumer Willingness to Pay for Local Meat Products." Agricultural Situation and Outlook-Fall 2001. ESM-27. University of Kentucky. October 2001.
- <sup>77</sup> Farms Estate Committee. "Organic Farming Scheme - Action Plan to Develop Organic Food and Farming in England." November 19, 2002. <http://www.devon.gov.uk/dcc/committee/reports/dr02125.html>
- <sup>78</sup> Kentucky Agri-tourism Working Group. "Issue White Paper: Establishment of an Agri-tourism Industry in Kentucky."
- <sup>79</sup> Kloppenborg, Jack, et. al. "Coming into the Foodshed." *Agriculture and Human Values*. 13:3 (Summer), 1996.
- <sup>80</sup> Ibid.
- <sup>81</sup> Ward, Clement E., and Ted C. Schroeder. "Structural Changes in Cattle Feeding and Meat Packing." Extension Facts No. WF-553. Oklahoma Cooperative Extension Service. Oklahoma State University.
- <sup>82</sup> Kentucky Agricultural Statistics Service. Kentucky Agricultural Statistics 2001-2002 Bulletin.

- 
- <sup>83</sup> Floyd, Laura Beth, and A. Lee Meyer, Benjy Mikel, Beth King, and Kenny Burdine. "Directory of Kentucky Livestock Processing Facilities." Agriculture Economics Extension Report No. 2000-14, 2000-09. University of Kentucky. August 2000.
- <sup>84</sup> Kentucky Agricultural Statistics Service. *Kentucky Agricultural Statistics 2001-2002 Bulletin*.
- <sup>85</sup> Skillman, Laura. "Meat Goat Industry Continues to Grow in Kentucky." University of Kentucky, College of Agriculture. April 9, 2003. <http://www.ca.uky.edu/agc/news/2003/Apr/goats.htm>
- <sup>86</sup> Floyd, Laura Beth, and A. Lee Meyer, Benjy Mikel, Beth King, and Kenny Burdine. "Directory of Kentucky Livestock Processing Facilities." Agriculture Economics Extension Report No. 2000-14, 2000-09. University of Kentucky. August 2000.
- <sup>87</sup> Kentucky Department of Agriculture, University of Kentucky, and Partners for Family Farms. "Meat Processing and Marketing Techniques for Local and Direct Markets." Final Report of Kentucky Direct and Local Meat Marketing Project.
- <sup>88</sup> Burdine, Kenneth H., and Leigh Maynard and Lee Meyer. "Consumer Willingness to Pay for Local Meat Products." Agricultural Situation and Outlook-Fall 2001. ESM-27. University of Kentucky. October 2001.
- <sup>89</sup> Kentucky Aquaculture Task Force. "Kentucky Aquaculture Plan." Report to the Governor and the Legislature.
- <sup>90</sup> Kentucky Department of Agriculture. <http://www.kyagr.com>
- <sup>91</sup> Kentucky Agricultural Statistics Service. *Kentucky Agricultural Statistics 2001-2002 Bulletin*.
- <sup>92</sup> Hammond, Claude E. "Getting their Goat." *The Lane Report*. August 2003.
- <sup>93</sup> Lane, Ed G. "Lane One-on-One: Billy Ray Smith." *Lane Report*. August 2003.
- <sup>94</sup> Kentucky Farm Bureau. "Goats Gaining Ground in Kentucky." *Kentucky Farm Bureau News*, online addition. Vol. 3, No. 3. March 2003. [http://www.kyfb.com/federation/News\\_percent20&\\_percent20Publications/kfbnews/2003/mar\\_03/pg4-5a.htm](http://www.kyfb.com/federation/News_percent20&_percent20Publications/kfbnews/2003/mar_03/pg4-5a.htm)
- <sup>95</sup> Skillman, Laura. "Meat Goat Industry Continues to Grow in Kentucky." University of Kentucky, College of Agriculture. April 9, 2003. <http://www.ca.uky.edu/agc/news/2003/Apr/goats.htm>
- <sup>96</sup> Kentucky Agricultural Statistics Service. *Kentucky Agricultural Statistics 2001-2002 Bulletin*.
- <sup>97</sup> U.S. Department of Agriculture. "Kentucky: Leading Commodities for Cash Receipts, 2001." Economic Research Service, State Facts. Top Agricultural Commodities.
- <sup>98</sup> Kentucky Agricultural Statistics Service. *Kentucky Agricultural Statistics 2001-2002 Bulletin*.
- <sup>99</sup> American Egg Board. "Egg Industry Fact Sheet." September 2002.
- <sup>100</sup> Kentucky Agricultural Statistics Service. *Kentucky Agricultural Statistics 2001-2002 Bulletin*.
- <sup>101</sup> Ibid.
- <sup>102</sup> Schreiner, Bruce. "Ky. Winemakers Market Operations." October 2, 2002. *Washington Post*. <http://www.washingtonpost.com>
- <sup>103</sup> Woods, Timothy A., Heath Hoagland, Brent Rowell, and James Mansfield. "Feasibility Study for Kentucky Regional Marketing Facilities." University of Kentucky, Depts. of Agricultural Economics and Horticulture, and the Kentucky Department of Agriculture. September 1999. <http://www.uky.edu/Agriculture/AgriculturalEconomics/publications/marketingfeasibility.pdf>
- <sup>104</sup> Ibid.
- <sup>105</sup> Ernst, Matthew D., and Tim Woods. "Marketing Fact Sheets." University of Kentucky, New Crop Opportunities Center. 2002. <http://www.uky.edu/Ag/HortBiz/pubs.html>

---

<sup>106</sup> U.S. Department of Agriculture. “Food Consumption, Prices, and Expenditures, 1970-97. Economic Research Service.

<sup>107</sup> Acharya, Ram, and Richard Adu-Asamoah. “Fruit and Vegetable Baseline Projections.” National Food and Agricultural Policy Project. Arizona State University. January/February 2002 newsletter.