

21st Century Agribusiness vs Sustainability/ Farmers Markets

Beside the “fiscal cliff,” a big problem we face today is world hunger and how to feed people. From Colonial times up to the late 19th Century most people lived on farms and small rural towns close to where the food was. Early food problems in our country was distribution.

how to get the food to the people or get people to the food.

Today’s 21st century agribusiness is capable of providing a lot of food to our Country’s population, but the methods used by these corporations are being questioned because of health concerns and sustainability. These concerns have recreated the old time farmer’s markets to become a popular alternate food source.

These early farmers grew produce and raised animals to feed their families. If a family lived in a town and didn’t grow their own food they went out to the farms and purchased what they needed. As the population changed from living in the country to living in cities the farmers started bringing their food crops to public markets in the center of the towns.

The following is a brief history of how these city markets evolved into today’s supermarkets.

The early American public markets were open markets in central city streets and had no buildings or enclosures. These markets were similar to the designs of the European markets where the immigrants had come from. The first one of record was established in Boston in 1634 by order of Governor John Winthrop. New York City’s first marketplace was also established in the 1630’s. There were many marketplaces in the South.

Charleston, S.C. and Savanna, Georgia were some of the earliest. Most southern marketplaces were also used for the sale of slaves.

Many downtown markets have been around for a long time in our country. Early public markets first occurred in eastern and southern urban that had large populations. The urban growth in the southwest and west came after the heyday of the public market. Public markets were a phenomenon in this country. They served for almost 300 years as the primary retail food source in most cities and towns. Before the advent of the automobile downtown open air public markets were on wide city streets where pedestrians and horse drawn wagons could get to and around the markets. The farmers from the countryside would come into the towns and back their wagons up to stalls and sell their produce. Eventually wooden buildings (Mayo 1993) were constructed of very plain and inexpensive materials to house the markets. Committees in the cities were formed to regulate the procedures in the markets and charge fees for the vendors to use the marketplace. This was a major source of income that cities used to fund their services, such as police, fire and trash collection. These “common buildings were easily destroyed by storms and fires and replaced or moved to other locations if business interests needed the old spaces or customers moved to other parts of the city. The markets went where the people were. The location of markets in cities that were big enough to support a market were usually near the towns business center and close to the wharves where there were storehouses and places for ships to unload their goods to be sold at the market.

In St. Louis the first market was established in 1768 at the town’s center adjacent to the Mississippi River.

Market days in early times were usually Wednesday and Saturday. Monday was avoided because people would have to prepare for the trip to market on Sunday which was a violation of the Sabbath. Later more market days were added for the sale of dairy products, meats, fruit, fish, poultry and some vegetables. A daily market was considered to be too frequent because farmers needed time to work on their farms.

Up until the 19th century public market buildings were municipal financial ventures.

Eventually market buildings became two stories tall with the government offices on the second floor. Police and fire stations were also added on to the market building on the ground level. Buildings got fancier as the wood structures were replaced with ones built of brick and stone. Classic styles of columns and pediments were added decorations.

When steel framing became available there could be more open spaces and buildings became narrower and longer. Many market buildings had a cupola with a bell to ring the beginning and end of market hours. The same bell was used as a fire alarm. The more expensive rented spaces were for the better merchants who occupied the space for the entire week and year round, while farmers who came to the market once or twice a week and not in the wintertime were relegated to the outside around the perimeter of the market building.

Butchered meat was an early health concern and public ordinances were developed to prevent the sale of meat that was stale, spoiled, and with “tumors”. As market buildings became larger and more profitable the need arose for a person called a market manager or market clerk to run the market, collect rents, maintain order, establish rules and regulations for the vendors and keep the market clean.

In the 20th Century private investors began to plan, build, and maintain their own public markets. Markets were moved from the middle of center city streets to pieces of land off of and adjacent to the streets as the cities became more congested with people, horse drawn carriages, wagons, public horse cars and finally streetcars. As land in the business areas became more desirable and valuable the markets were shifted to less desirable land near docks and industrial areas. Suburban growth caused by the advent of the automobile, the influx of waves of immigrants into cities, and people migrating from the farms, influenced changes of the size, shape and locations of markets. The demand for larger markets grew and the shape of long narrow markets became cumbersome. Square shapes became more efficient.

Shopping rituals, and consumer demand separated social classes(Mayo, 1993). In the early morning the wealthy with their servants shopped to take advantage of the best products. Caterers for hotels, restaurants, and fashionable boarding houses also came at this time. After 6:00 a.m. women of workers, tenement dwellers, and boarding house keepers came to shop. Although the best items were sold by then people could still purchase good products at lower, reasonable rates. After 9:00 a.m. the poorer people came to the market to purchase the poorer quality meats and vegetables. After this the poorest came to buy what was left. This was mostly bony portions of meat and stale and bruised vegetables, which were sold for almost nothing. Time and prices separated the classes.

Major changes in market design and location were caused by the introduction of refrigeration, and the growth of the trucking industry. Heating systems made winter shopping more comfortable and refrigeration helped prevent food spoilage. With more

and more consumers owning automobiles, the markets shifted from urban areas to the suburbs where people could drive to the market. This caused the need for large parking lots to accommodate the cars. Site location became a very important issue.

Markets were becoming privately owned and grocery stores in suburban locations were giving public markets serious competition. Managers of public markets wanted their buildings located near retail shops and department stores. This arrangement was the forerunner of the suburban shopping center layouts that had the major stores located at the ends with the small shops in between.

Land costs, refrigeration needs, suburban growth, food processing, display methods, food transportation systems, privately owned food corporations, and labor costs all led to the demise of the downtown public market. From the public market came the small family owned grocery stores, then chains of locally owned grocery stores (Rogers, Scotts, and Maloleys) and today the regional/national supermarkets. These supermarkets are a part of the 21st Century agribusiness development.

In the past several years outdoor farmers markets have seen a revival and a growth in popularity. Those of us who lived through the Second World War remember the "Victory Garden". I recall the one my family had in the back yard. We were doing our part to help the war effort, but in addition we had satisfaction from planting, caring for, and harvesting the crops that we had put the time and effort into growing. Today I have a small box garden in the back yard and for the last two years I have worked with young people at the Fort Wasyne Urban League in the summer to raise tomatoe's, lettuce and peppers. Today when I go to a farmers market I can understand the time and effort the farmer puts into growing his produce. Today's markets bring a little something of the

past to our cities. The current Barr Street Market was one of the first ones in our City. The land that the market occupies was donated to Fort Wayne by Samuel Hanna with the caveat that if it changed to anything else it will revert back to the Hanna family or their heirs (haha John Shoaff & Julie Donnell).

What is the definition of a farmers market? It is defined as a common facility or area where multiple farmers/growers gather on a regular basis to sell a variety of fresh fruits, vegetables and other farm products directly to customers (Payne 2000). What do farmers markets have that draw people to them? Nationally there has been an emphasis on improving our eating habits. We are considered an overweight nation where foods that are high in starches, fats, and carbohydrates are heavily marketed on TV, radio, and in print. Our Country's population has a high level of diabetes generally the result of poor eating habits. Many health advocates stress changing these habits by consuming more fruits, vegetables, and grains while eating less foods containing starches, fats, sugars and meat. Because of this, people are looking for alternatives to the large supermarkets where food is wrapped in unappealing plastic containers and appears so impersonal. The buyer is looking for healthier foods that are fresh, of high quality, locally grown, and supporting local farmers (Zepeda & Reid). They like to look at the product, feel it, and select the individual item that fits their need. Shopping at a farmers market can be a more personal type of experience. One where you know and can call the vendor by his or her name. People are becoming more interested in alternative foods such as organically grown and gluten free products and there has been an increase in markets that specialize in these products. Markets that focus on selling organic raised foods seem to be more popular

than non-organic markets. A lot of consumers are concerned about buying vegetables and fruits that have been sprayed with pesticides and fertilized with synthetic chemicals.

“Locally Produced” labels are being used in food cooperatives, health food stores and some grocery stores to promote state products such as “Jersey Fresh” when produced in that state. Local food means many things to many people. A common definition of local is that of food grown within the county where it is being sold. To some it can pertain to food grown within the state, or a neighboring state. A survey found that most vendors (88%) lived within 50 miles of the market and consumers (67%) within 10 miles. The demographics of consumers show that 74% are Caucasian, 14% African Americans, and 6% Hispanic. The shopping experience (meeting the farmer you are buying from), and atmosphere are big factors that draw people to a farmers market. Reasons for not going to a farmers market is distance from ones home, inconvenient hours and limited days of the week when markets are open.

A typical local food shopper is female, college educated, professional, has an above average income, interested in healthy eating, likes to cook, and is into fitness.

Studies have shown (Brown 2003) the reasons consumers use a farmers market includes access to fresh quality food, support of local farmers, and direct contact with farmers. Another commonly mentioned reason was “entertainment”. Alternatives to farmers markets that people use are farm stands, roadside stands, and U-pick operations, but they are not as popular or used as much as farmers markets. People questioned in a survey (Zepeda & Reid 2003) mentioned sustainability as a reason for supporting and using farmers markets.

Another way shoppers have to buy farm fresh products is from a Community Supported Agriculture (CSA) . These are organizations that people can join where he/she pays an annual fee to a farmer and in return receives a weekly basket of fresh organically grown food for however long the season lasts. It is usually about 20 weeks. The farmer uses the fees received to buy seeds, and cover his/her cost of water, power, and the labor to raise the crops. These are growing in number throughout the U.S. There are 2 that I know of in Fort Wayne. One named Green Bean, that also has operations in Cincinnati, OH, and Indianapolis, IN. This organization acquires their produce from local farmers and distributes it locally to their customers. Fewer people use these than the abovementioned alternatives. Some reasons given for not using CSA's (Zapeda & Reid 2003) were lack of choice in mix, amount of produce provided, transportation, and inconvenience in pick-up place or time.

From the viewpoint of the farmer the markets offer the following advantages. By not dealing with the middleman or wholesaler the farmer is able to get a higher price for his/her produce but still keep his prices competitive. For many small farm operations it is the only access farmers have to customers (Payne 2000). It gives the small to medium size farm operation a way to increase their cash flow and supplement their income. Meeting and talking to their customers gives the vender a chance to answer questions about their product, give suggestions on how to use it in recipes, explain the products benefits, shelf life, and uses. It is important that the farmers meet their customers and learn what foods are in demand. This way the vender can have an idea what to plant in future seasons and how much of a demand there is for the produce he/she is growing. Farmers can get a good count of the number of customers to expect on the days the

market is open and determine how much product to bring on any given day, month and season. One big worry that farmers have when bringing their produce to market is waste. They have been able to overcome this by reducing prices toward the end of the market hours, knowing what the customers want and how much, and in many cases taking their excess at the end of the day and donating it to food banks, homeless shelters and churches located in low income areas.

There are a few drawbacks to farmers markets. These include limited times of operation in both hours and days. Most are open only one or two days a week with hours limited to 4-5 a day and a twenty week selling season.. The distances customers have to travel to get to and knowing where the markets are discourages people with limited shopping hours, and lack of transportation. Older shopper may lack the means, energy, and income to shop at the farmers market. Today there is still the perception that produce sold at the farmers markets is more expensive than that sold at the big supermarkets. People who want fresh fruit and vegetables are limited to a few summer months in order to buy them locally. Board of health regulations with the associated costs has limited what can be presented and sold at markets. Foods that are processed, or can quickly spoil and cause illnesses require special attention. Examples are baked goods (ingredients), meats, eggs, chickens fish, and dairy products. If possible a market should have power for refrigeration, safe potable water with good drainage and hand washing facilities. Cleanliness, storage, and security are two other issues that require attention. Is a market a for or not for profit operation. What are the expenses and income from markets? Income is what the vendors pay for space to sell their goods. Expenses include rental of space, staff to operate the market, advertising, utility costs, parking, and trash disposal.

The farmers markets must be doing something right because the big box stores are starting to mimic them. Giant supermarkets are putting labels on produce indicating when and where it is locally or regionally grown, developing organic food sections in the stores, and posting hand out recipe bins with advice on healthy eating. Some chain food stores are arranging their interior layouts to give the appearance and feel of small food areas. These include Trader Joes, Fresh Market, and Whole Foods. A chain in the east, “Wegmans” has carried this further by letting separate vendors operate in certain areas of their store.

Additional facts about farmers markets have shown they have grown nationally in the last several years from 4,685 in 2008 to 6,132 in 2010 (Gardner, S. 2011). The myth about farm markets higher prices has been refuted in a study by the Leopold Center for Sustainable Agriculture (Dec. 2009) that found during peak seasons July through August produce costs equal to or less than the equivalents available in supermarkets. Many farmers markets accept cash, checks, and credit/debit cards. More and more are also accepting vouchers such as SNAP, WIC, SFMNP, and EBT from low income customers. According to the USDA farmers markets that sold organic products reported larger numbers of customers, larger numbers of vendors, and larger monthly sales figures than other non-organic farmers markets. Upwards of 7 out of 10 vendors at farmers markets nationally are selling fruits, vegetables, and meats they raised themselves. Nationally 25% of vendors derive their sole source of farm income from farmer markets sales. A final trivia fact is Lancaster, Pennsylvania’s Central Market 255 years old is the oldest U.S. market still in operation. Nationally 14 markets have been in operation for more

than 100 years and fully 37% of U.S. farmers' markets have been in operation for more than a decade (Farmers Market Today).

There are many other aspects about farmers markets including management, board of directors, successful ones and those that fail and why. Criteria for a market – location, parking, days and hours of operation, selection of vendors and operating budgets all are reasons why markets survive or fail. People that farm organically are also using sustainable methods of farming. That is where I am going now .

A definition of the word sustainable is to support. Capable of being sustained, to keep alive, to keep from ruin, that which supports life, food, and provisions. Sustainable agriculture refers to methods of farming that do not disturb the natural system, that conserve natural resources, that improve the quality of life for farmers, and that ensure the long-term economic success of the farm. It focuses on the principle that we must meet the needs of the present without preventing the ability of future generations to meet their own needs. Stewardship of both human and natural resources is a top priority.

The three main goals of sustainable agriculture are environmental health, economic profitability, and social and economic equity. To understand sustainability one must look at the whole picture from the individual farm , the local ecosystem, and the communities affected by this farming system both locally and globally. This is a systems perspective and it allows one to see through a larger view the consequences of farming practices on both humans and the environment. A systems approach also requires efforts from people involved in research and education as well as farmers, farmworkers, consumers, policymakers, and farm supporting industries.

Transitioning into sustainable agriculture is a process. It is usually done in a series of small realistic steps. The farmer needs to consider economics and personal goals to determine how fast or how far one can go in the transition. It may have to be done in small steps but each one taken no matter how small will contribute to advancing the entire system.

Specific strategies for meeting these goals can be grouped into three broad themes. These are farming and natural resources, plant and animal production practices, and economic, social, and political context.

Theme one farming and natural resources includes ways to conserve water, riparian preservation to protect wildlife, reducing the reliance on non-renewable energy resources, improving air quality, and reducing soil erosion. The second theme production practices has a variety of factors to take into account that are all part of soil management. Included are topography, soil characteristics, climate, pests, local availability of inputs, diversity and individual growers goals. Many practices used by conventional farmers are also used in sustainable farming. The biggest difference is in the use of chemicals that harm the environment on the farms and rural communities. The goal is to develop effective biological systems that do not need high levels of chemical inputs. Sustainable approaches are those that are the least toxic, least energy intensive, and yet maintain productivity and profitability.

In the early part of the 20th century farmers raised both crops and animals on the same land. Crops were raised on the flat and sunny parts of the farm while livestock was put out to pasture on sloped and forested areas. Today, in most cases, the production of crops and livestock is separated. This is a trend toward separation and specialization.

Despite this trend there are still many farmers in the Midwest and northeastern U.S. that integrate crop and animal systems.

Principles described in crop production also apply to animal production. These include management planning, animal selection, animal nutrition, reproduction, herd health, grazing management, and confined livestock production. A brief description of what each entails follows.

1. Management planning – a successful plan includes calendars of operations, stock flows, forage flows, labor needs, herd production records, and land use plans. These give a manager a means of monitoring progress to meet his or her goals.
2. Animal selection – includes the selection of breeds that are appropriate for the farm and ranch resources. This includes feed and forage sources, landscape, and climate in selecting the animals to produce.
3. Animal nutrition – feed costs are the largest single factor in a livestock operation. If feed can be produced from other operations of the ranch then less would have to be imported from off the farm. Careful monitoring of animal condition and performance can keep feed costs down.
4. Reproduction - Good genetic animal stock and quality germplasm improve the herd performance and is a key to sustainability.
5. Herd health - Good animal health influences reproductive success and weight gains. Unhealthy animals waste feed and require additional labor.
6. Grazing management - This involves the proper relationship between the number of stock per unit of land. It must be correct for the type of landscape,

the forage quality, and availability. There will need to be controls to prevent overgrazing of areas while other areas go unused. Overgrazing can result in soil erosion but can be tolerated around water sources (ponds) and feed troughs if adjacent vegetative cover is adequate.

7. Confined livestock production – The key issues here are animal health and waste management in confined operations. Today there is a lot of debate over the moral and ethical issues regarding animal welfare. Confined production is a source of surface and ground water pollution. Waste management systems are expensive, but are a necessary cost of confined production systems. It must be managed with respect to the environment and quality of life in surrounding communities. Livestock waste that is not concentrated and released in pastures that do not overwhelm the nutrient process is currently being looked at with interest

The final area of social, economic and political issues revolves around strategies of preserving our natural resources, improving production practices, and sustainability in agriculture. This requires a effort to change public policies, methods of food processing, and social values. The food system extends beyond just the farm. It involves individuals, institutions, farmers, researchers, manufactures, suppliers, processors, retailers, consumers, and policymakers.

When it comes to the government, new policies need to be put in place to promote environmental health, economic profitability, and social equity. An example is the price support programs that can be restructured to assist farmers to receive

benefits of gains made through alternative practices. Tax and credit policies can be modified to help the small family farm rather than the large corporate farms with absentee ownership. Government and land grant colleges research policies can encourage the development of sustainable methods. Manufacturing orders and cosmetic standards can be changed to encourage the reduction of the use of pesticides.

Land use is an area that needs protection. Urban development and rising land values are threatening to take farm land with its prime quality soils out of production. Inheritance and real estate tax laws force farmers to sell their land to pay the assessments. Land assessed as farmland is one thing but often it is assessed at commercial development rates. Local governments that need tax dollars to cover local municipal expenses hurt the farmers when their land is assessed at the same rate as that of urban landowners. Policies are needed to protect prime soils and regulate development.

We the consumers can play a critical role in creating a sustainable food system. Through our purchases we can send a strong message to producers, retailers, and others in the system about what we feel is important. \Consumers main concerns are food costs an nutritional quality. The challenge is to develop strategies to educate the consumer about the importance of environmental quality, resource use, and social equity are issues that are also considered in shopping decisions.

Some specific things that can be done to the land to keep it sustainable are rotate crops, develop no till or less tillage methods, replace chemical fertilizers with animal and crop wastes, and replace the nitrogen taken out of the soil with plants that naturally replace it. This includes legumes including alfalfa, oats or peanuts. Proper contouring of the land reduces water waste and topsoil depletion. Planting crops that are pest resistant, are less water dependent, can survive in hardier soil and climate conditions are also ways that farmers can replace nonrenewable resources that they take from the environment. Farmers who grow by crops by organic methods usually use sustainable methods that replenish the nutrients in the soil and carefully limit the water they use. A good example of this are the Amish farmers in our community.

Historically farmers used to revive the soil by crop rotation, letting the land flood, and the practice of the use of biochar. An 18th century agricultural experimenter Charles Townsend borrowed from Dutch and Flemish farmers by rotating crops in a careful sequence. This included the planting of clover, wheat, alfalfa, and other small grains. The method produced crops with fewer weed and pest problems. The Romans knew about crop rotation and during the Middle Ages farming was based on letting the land lie fallow (Klinkenborg 2012). Washington and Jefferson practiced crop rotation while many small farmers of the colonies would let their land lie fallow and move on to plentiful adjacent land plant new crops. Other methods that can be used to protect and improve the soil include using cover crops, and covering the soil with plant residue or mulch.

Today's food shoppers are concerned about the effects of artificial fertilizers and pesticides in their food and the effects on their health. They would prefer that the food they purchase be raised in a naturally sustainable way.

The water to produce crops comes from different sources. Natural rainfall is the most efficient and sustainable way for crop growth. Unfortunately many areas have insufficient or uncertain amounts rainfall. To grow crops in these areas requires irrigation systems. For irrigation systems to be sustainable the groundwater taken from wells needs to be replaced by careful management. Careful use will help avoid salinization. This can be done by limiting the amount of water taken from wells to that which can be replaced by natural methods. When ground water is recklessly used farmers need to drill deeper wells. This would make water harder and harder to acquire and in turn become more expensive to extract from the ground. Recent improvement in well drilling techniques, rainwater storage methods, submersible pumps, the development of drip irrigation, low pressure pivots on spaying equipment, and contouring the land to minimize water runoff have made it possible to achieve high crop yields where reliance on rainfall alone made success unpredictable.

Lastly I want to present information about agribusiness. I thank Lockwood Marine for spending time with me explaining agribusiness and his role in the industry. A definition of agribusiness refers to anyone who raises something edible , be it a plant, animal, seafood or fowl and sells it to another person or persons. Based on this definition agribusiness goes back to early mankind. In ancient Roman history where farmers sold food in the markets. I learned about early 19th century agriculture from a Fort Wayne native, Chris Soloman, who grew up on a farm on what is the Dupont Road area. He told how his grandfather and then his father would grow wheat, take it the miller by wagon, have it ground into flour, pay the miller with an amount from the flour produced, and

then use the rest to trade for supplies and dry goods in the nearby town. Today the word agribusiness brings to most peoples minds large commercial farms, animal breeding and milking sheds, chicken production facilities, food processors, suppliers of farm harvesting and planting machinery, fertilizers, chemicals, pesticides companies, trucking of harvested grains, storage silos, and giant supermarkets.

A farmer friend of my son who lives in Minnesota owns 1500 acres of land and leases another 3000 acres. He raises corn to sell to an ethanol plant that is 2 miles from his farming operation. This farmer is getting 220 bushels of corn per acre. His costs run \$3.00/bushel and he is selling the corn for \$7.00/bushel. At \$4.00/bushel times 200 per acre he has a profit of \$800./acre times 4500 acres equals a profit of \$3,600,000. He shares this with two other partner farmers. An interesting side to this is that he owns a share in the ethanol plant. His current concern is that large companies like Cargill and big hedge fund financial people are starting to buy up farmland at very high prices which may be attractive to the people he leases land from. A small farmer with a 150 acre farm that is offered \$8,000./ acre would likely sell out and receive \$1,200,000. Without this leased land my son's friends operations would be minimal and he would probably close up shop.

Since the Second World War there have been dramatic changes in farming. The biggest one is mechanization. This includes the use of all types of machines for planting, harvesting, and transporting of the produce. Farmers now ride in air-conditioned cabs, use satellite imaging to tell them about soil, water and nutrient conditions of their land in order to decide on what seed blends to use that are best fitted to their growing season and soil conditions. Drought resistant farming systems produce drought tolerant crops,

improve water conservation and storage, and reduce or eliminate high volume irrigation systems. The use of the computers, and GPS systems have given farmers a high level of sophistication in operating their farms. They can select seeds to fit the land conditions, minimize their use of chemicals and better control water runoff and waste. Today's farmers are better educated on farming techniques.

The most lucrative and largest farmed crops today are corn, soy and wheat in that order. Oats, barley, and alfalfa are produced in much smaller amounts.

A brief look at Allen County farms (Allen County Extension Service 2007) says there were 1,649 farms in Allen County with an average of 154 acres. In 2011 Allen County raised 79,500 acres of corn with an average yield of 131.6 bu/ac, 99,700 acres of soybeans with an average of 43.6 bu/ac, and 17,800 acres of wheat with an average of 69.2 bu/ac.

The farm process from land to table includes tilling, planting, fertilizing, watering, protecting, harvesting, drying, storing, transporting and selling. Once sold the produce can go to processing and packaging plants, transporting, marketing, and retailing.

Today there are companies that fit different types of operation depending on the areas they control. These include vertically integrated, forward integrated, and backward integrated companies. Large companies that are vertically integrated control the farming (contract), seed supply, chemicals, farm machinery, transportation, processing, packaging, marketing, and retail sales. A forward farming company (Cargill) may purchase distribution centers and retailers. A backward method company (Monsanto)

would be one that controls the raw materials and suppliers. Lateral structured companies purchase firms that make and sell the same product and have similar operations.

Today's farming issues include the cost of fossil fuel, topsoil loss, groundwater depletion, and pollution of lakes and rivers because of runoffs that contain animal and chemical wastes.

Food waste is another issue. One third of the world's food is wasted. This occurs through agricultural production, post harvest handling and storage, processing, distribution and consumption. In the U.S. a large percentage of loss comes from consumers wasting food. It is estimated we as individuals waste 200 – 250 pounds per year. Waste occurs in grocery stores. People will not buy produce that doesn't look pristine and unblemished. Customers demand an extensive selection which causes supermarkets to purchase excess amounts of produce which increases spoilage and increases prices.

Where do we stand in regards to farmers markets with organically grown food and supermarkets with their endless variety of food products being harvested on large industrialized farms throughout the country? One can only shop at a farmers market one or two days of the week during the growing season (20 weeks). There are limited choices at two stores in Fort Wayne that sell organic produce. One is the Three Rivers Food Co-op located at Spring and Sherman streets. The other is the Health Food Store located on North Anthony Boulevard. They both have quality produce, limited selections, and slightly higher prices than the Krogers, Meiers, and Wal Marts. I think most of us do a little shopping at both the organic venues and the superstores. We use the supermarkets for convenience, variety, and prices. Consumers shop at co-ops, health food stores and

farmers markets for quality, freshness, and supporting local growers. Many of these shoppers also worry about chemicals from pesticides and fertilizer used in the large farming operations that work their way into the food and what harm it is doing to our bodies. Concerned shoppers would like to see the big growers use fewer chemicals, prevent erosion by less tillage, and raise farm animals in a healthier less confining environment with fewer antibiotics. In order to make these changes it will take time and gradual steps. The USDA could help by restricting certain practices as well as providing incentives for using sustainable growing methods. A few areas I have left out of the paper because of time and length include GMO's (The New York Times 10/2012), farm laborers, and hydroponics.

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Beside the “fiscal cliff,” a big problem we face today is world hunger and how to feed people. From Colonial times up to the late 19th Century most people lived on farms and small rural towns close to where their food was. In the early days, folks shopped locally or they produced their own food in farms and gardens

These early farmers grew produce and raised animals to feed their own families. If a family lived in a town and didn't grow all its own food, they went out to the farms and purchased what they needed. As the population changed from living in the country to living in cities, the farmers started bringing their food crops to public markets in towns. Later, major population movement into large sprawling urban areas required solving the food distribution problems-- how to get the food to the people or get people to the food.

I learned about early 19th century agriculture from a Fort Wayne native, Chris Soloman, who grew up on a farm on what is the Dupont Road area. He told how his grandfather and then his father would grow wheat, take it to the miller by wagon, have it ground into flour, pay the miller with an amount from the flour produced, and then use the rest to trade for supplies and dry goods in the nearby town. Chris lived to see many changes in farming, and late in his life he decided to leave his family farm to the Fort Wayne Park Department so that children, growing up here and obtaining all their food from the shelves at Krogers, could see how a farm used to operate.

Lockwood Marine spent time with me discussing agribusiness and his extensive role in the industry. Agribusiness refers to anyone who raises something edible, be it a plant, animal, seafood or fowl and sells it to another person or persons. Based on this definition, agribusiness goes back to early mankind—for example, in ancient Roman history where farmers sold food in the markets (The Roman Forum). Today, the word agribusiness brings to mind large commercial farms, animal breeding and milking sheds, chicken production large facilities, food processors, suppliers of farm harvesting and planting machinery, fertilizers, chemicals, pesticides companies, trucking of harvested grains, storage silos, and giant supermarkets.

A farmer friend of my son who lives in Minnesota owns 1500 acres of land and leases another 3000 acres. He raises corn to sell to an ethanol plant that is 2 miles from his farming operation. This farmer is getting 220 bushels of corn per acre. His costs run \$3.00/bushel and he is selling the corn for \$7.00/bushel. At \$4.00/bushel times 200 per acre he has a profit of \$800./acre times 4500 acres equals a profit of \$3,600,000. He shares this with two other partner farmers. An interesting side to this is that he owns a share in the ethanol plant. His current concern is that large companies like Cargill and big hedge fund financial people are starting to buy up farmland at very high prices which may be attractive to the people who lease land to him. A small farmer with a 150 acre farm that is offered \$8,000./ acre would likely sell out and receive \$1,200,000. Without this leased land, my son's friend's operations would be minimal and he would probably close up shop.

Since the Second World War there have been dramatic changes in farming. The biggest one is mechanization. This includes the use of all types of machines for planting,

harvesting, and transporting of the produce. Farmers now ride in air-conditioned combine cabs, use satellite imaging to tell them about soil, water and nutrient conditions of their land in order to decide on what seed blends are best fitted to their growing season and soil conditions. Drought resistant farming systems produce drought tolerant crops, improve water conservation and storage, and reduce or eliminate high volume irrigation systems. The use of the computers, and GPS systems have given farmers a high level of sophistication in operating their farms. They can select seeds to fit the land conditions, minimize their use of chemicals and better control water runoff and waste. Today's farmers are better educated on farming techniques.

The most lucrative and largest farmed crops today are corn, soy and wheat in that order. Oats, barley, and alfalfa are produced in much smaller amounts.

A brief look at Allen County farms (Allen County Extension Service 2007) says there were 1,649 farms in Allen County with an average of 154 acres. In 2011 Allen County raised 79,500 acres of corn with an average yield of 131.6 bu/ac, 99,700 acres of soybeans with an average of 43.6 bu/ac, and 17,800 acres of wheat with an average of 69.2 bu/ac.

The farm process from land to table includes tilling, planting, fertilizing, watering, protecting, harvesting, drying, storing, transporting and selling. Once sold, the produce can go to processing and packaging plants, transporting, marketing, and retailing.

Today there are companies that fit different types of operation depending on the areas they control. These include vertically integrated, forward integrated, and backward integrated companies. Vertically integrated companies control the farming (contract),

seed supply, chemicals, farm machinery, transportation, processing, packaging, marketing, and retail sales. A forward farming company (Cargill) may purchase distribution centers and retailers. A backward method company (Monsanto) would be one that controls the raw materials and suppliers. Lateral structured companies purchase firms that make and sell the same product and have similar operations.

Today's farming issues include the cost of fossil fuel, topsoil loss, groundwater depletion, and pollution of lakes and rivers because of runoffs that contain animal and chemical wastes.

Another issue is food waste. One third of the world's food is wasted. This occurs through agricultural production, post harvest handling and storage, processing, distribution and consumption. In the U.S. it is estimated we as individuals waste 200 – 250 pounds per year. Waste occurs in grocery stores; people will not buy produce that doesn't look pristine and unblemished. Customers demand an extensive selection causing supermarkets to purchase excess amounts of produce which increases spoilage and increases prices.

Although 21st Century agribusiness is capable of providing ample food to our country's population now, sustaining the supply is a concern of planners. A definition of the word sustainable is to support. Capable of being sustained, to keep alive, to keep from ruin, that which supports life, food, and provisions. Sustainable agriculture refers to methods of farming that do not disturb the natural system, that conserve natural resources, that improve the quality of life for farmers, and that ensure the long-term economic success of the farm. It focuses on the principle that we must meet the needs of

the present without preventing the ability of future generations to meet their own needs. Stewardship of both human and natural resources is a top priority.

The three main goals of sustainable agriculture are environmental health, economic profitability, and social and economic equity. To understand sustainability one must look at the whole picture from the individual farm, the local ecosystem, and the communities affected by this farming system both locally and globally. This is a systems perspective, and it allows one to see through a larger view the consequences of farming practices on both humans and the environment. A systems approach also requires efforts from people involved in research and education as well as farmers, farmworkers, consumers, policymakers, and farm supporting industries.

Transitioning into sustainable agriculture is a process. It is usually done in a series of small realistic steps. The farmer needs to consider economics and personal goals to determine how fast or how far one can go in the transition. It may have to be done in small steps, but each one taken no matter how small will contribute to advancing the entire system.

Specific strategies for meeting these goals can be grouped into three broad themes. These are farming and natural resources, plant and animal production practices, and economic, social, and political context.

Theme one farming and natural resources includes ways to conserve water, riparian preservation to protect wildlife, reducing the reliance on non-renewable energy resources, improving air quality, and reducing soil erosion. The second theme production practices has a variety of factors to take into account that are all part of soil management. Included are topography, soil characteristics, climate, pests, local availability of inputs,

diversity and individual growers goals. Many practices used by conventional farmers are also used in sustainable farming. The biggest difference is in the use of chemicals that harm the environment on the farms and rural communities. The goal is to develop effective biological systems that do not need high levels of chemical inputs. Sustainable approaches are those that are the least toxic, least energy intensive, and yet maintain productivity and profitability.

In the early part of the 20th century farmers raised both crops and animals on the same land. Crops were raised on the flat and sunny parts of the farm while livestock was put out to pasture on sloped and forested areas. Today, in most cases, the production of crops and livestock is separated. This is a trend toward specialization, but this kind of separation has a downside—the loss of nitrogen from manure which provided fertilization for crops. Despite this trend there are still farmers in the Midwest and northeastern U.S. who integrate crop and animal systems.

Principles described in crop production also apply to animal production. These include management planning, animal selection, animal nutrition, reproduction, herd health, grazing management, and confined livestock production. A brief description of what each entails follows.

1. Management planning – a successful plan includes calendars of operations, stock flows, forage flows, labor needs, herd production records, and land use plans. These give a manager a means of monitoring progress to meet his or her goals.

2. Animal selection – includes the selection of breeds that are appropriate for the farm and ranch resources. This includes feed and forage sources, landscape, and climate in selecting the animals to produce.
3. Animal nutrition – feed costs are the largest single factor in a livestock operation. If feed can be produced from other operations of the ranch then less would have to be imported from off the farm. Careful monitoring of animal condition and performance can keep feed costs down.
4. Reproduction - Good genetic animal stock and quality germplasm improve the herd performance and is a key to sustainability.
5. Herd health - Good animal health influences reproductive success and weight gains. Unhealthy animals waste feed and require additional labor.
6. Grazing management - This involves the proper relationship between the number of stock per unit of land. It must be correct for the type of landscape, the forage quality, and availability. There will need to be controls to prevent overgrazing of areas while other areas go unused. Overgrazing can result in soil erosion but can be tolerated around water sources (ponds) and feed troughs if adjacent vegetative cover is adequate.
7. Confined livestock production – The key issues here are animal health and waste management in confined operations. Today there is a lot of debate over the moral and ethical issues regarding animal welfare. Confined production is a source of surface and ground water pollution. Waste management systems are expensive, but are a necessary cost of confined production systems. It must be managed with respect to the environment and quality of life in

surrounding communities. Livestock waste that is not concentrated and released in pastures that do not overwhelm the nutrient process is currently being looked at with interest

The final area of social, economic and political issues revolves around strategies of preserving our natural resources, improving production practices, and sustainability in agriculture. This requires an effort to change public policies, methods of food processing, and social values. The food system extends beyond just the farm. It involves individuals, institutions, farmers, researchers, manufacturers, suppliers, processors, retailers, consumers, and policymakers.

When it comes to the government, new policies need to be put in place to promote environmental health, economic profitability, and social equity. An example is the price support programs that can be restructured to assist farmers to receive benefits of gains made through alternative practices. Tax and credit policies can be modified to help the small family farm rather than the large corporate farms with absentee ownership. Government and land grant colleges research policies can encourage the development of sustainable methods. Manufacturing orders and cosmetic standards can be changed to encourage the reduction of the use of pesticides.

Land use is an area that needs protection. Urban development and rising land values are threatening to take farm land with its prime quality soils out of production. Inheritance and real estate tax laws force farmers to sell their land to pay the assessments. Land assessed as farmland is one thing but often it is

assessed at commercial development rates. Local governments that need tax dollars to cover local municipal expenses hurt the farmers when their land is assessed at the same rate as that of urban landowners. Policies are needed to protect prime soils and regulate development.

We the consumers can play a critical role in creating a sustainable food system. Through our purchases we can send a strong message to producers, retailers, and others in the system about what we feel is important. \Consumers main concerns are food costs an nutritional quality. The challenge is to develop strategies to educate the consumer about the importance of environmental quality, resource use, and social equity are issues that are also considered in shopping decisions.

Some specific things that can be done to the land to keep it sustainable are rotate crops, develop no till or less tillage methods, replace chemical fertilizers with animal and crop wastes, and replace the nitrogen taken out of the soil with plants that naturally replace it. This includes legumes including alfalfa, oats or peanuts. Proper contouring of the land reduces water waste and topsoil depletion Planting crops that are pest resistant, are less water dependent, can survive in hardier soil and climate conditions are also ways that farmers can replace nonrenewable resources that they take from the environment. Farmers who grow by crops by organic methods usually use sustainable methods that replenish the nutrients in the soil and carefully limit the water they use. A good example of this are the Amish farmers in our community.

Historically farmers used to revive the soil by crop rotation, letting the land flood, and the practice of the use of biochar. An 18th century agricultural experimenter Charles Townsend borrowed from Dutch and Flemish farmers by rotating crops in a careful sequence. This included the planting of clover, wheat, alfalfa, and other small grains. The method produced crops with fewer weed and pest problems. The Romans knew about crop rotation and during the Middle Ages farming was based on letting the land lie fallow (Klinkenborg 2012). Washington and Jefferson practiced crop rotation while many small farmers of the colonies would let their land lie fallow and move on to plentiful adjacent land plant new crops. Other methods that can be used to protect and improve the soil include using cover crops, and covering the soil with plant residue or mulch.

Today's food shoppers are concerned about the effects of artificial fertilizers and pesticides in their food and the effects on their health. They would prefer that the food they purchase be raised in a naturally sustainable way.

The water to produce crops comes from different sources. Natural rainfall is the most efficient and sustainable way for crop growth. Unfortunately many areas have insufficient or uncertain amounts rainfall. To grow crops in these areas requires irrigation systems. For irrigation systems to be sustainable the groundwater taken from wells needs to be replaced by careful management. Careful use will help avoid salinization. This can be done by limiting the amount of water taken from wells to that which can be replaced by natural methods. When ground water is recklessly used, farmers need to drill deeper wells. This would make water harder and harder to acquire and in turn become more expensive to extract from the ground. Recent improvement in well drilling techniques, rainwater storage methods, submersible pumps, the development of drip irrigation, low

pressure pivots on spraying equipment, and contouring the land to minimize water runoff have made it possible to achieve high crop yields where reliance on rainfall alone made success unpredictable.

The concerns with sustainability in agribusiness today would not have been entirely unfamiliar to the earlier farmers who grew produce and raised animals to feed their families. If a family lived in a town and didn't grow their all own food, they went out to the farms and purchased what they needed. As the population changed from living in the country to living in cities, the farmers started bringing their food crops to public markets in the center of the towns. Later, major population movement into large sprawling urban areas required solving the food distribution problems-- how to get the food to the people or get people to the food.

Public markets evolved to fill that need. Early American public markets were open markets in central city streets and had no buildings or enclosures. These markets were similar to the designs of the European markets where the immigrants had come from. The first one of record was established in Boston in 1634 by order of Governor John Winthrop. New York City's first marketplace was also established in the 1630's. In the South, Charleston, S.C. and Savanna, Georgia were some of the earliest. Most southern marketplaces were also used for the sale of slaves.

These early public markets first occurred in eastern and southern urban that had large populations. Urban growth in the southwest and west came after the heyday of the public market.

Public markets were a phenomenon in this country. They served for almost 300 years as the primary retail food source in most cities and towns. Before the advent of the automobile, downtown open air public markets were on wide city streets where pedestrians and horse drawn wagons could get to and around the markets. The farmers from the countryside would come into the towns and back their wagons up to stalls and sell their produce. Eventually wooden buildings (Mayo 1993) were constructed of very plain and inexpensive materials to house the markets. Committees in the cities were formed to regulate the procedures in the markets and charge fees for the vendors to use the marketplace. This was a major source of income that cities used to fund their services, such as police, fire and trash collection. These “common buildings were easily destroyed by storms and fires and replaced or moved to other locations if business interests needed the old spaces or customers moved to other parts of the city. The markets went where the people were. The location of markets in cities that were big enough to support a market were usually near the town business center and close to the wharves where there were storehouses and places for ships to unload their goods to be sold at the market.

In St. Louis the first market was established in 1768 at the town’s center adjacent to the Mississippi River. Food supplies moved by rivers at that time, later by rail and roads.

Market days in early times were usually Wednesday and Saturday. Monday was avoided because people would have to prepare for the trip to market on Sunday which was a violation of the Sabbath. Later more market days were added for the sale of dairy products, meats, fruit, fish, poultry and some vegetables. A daily market was considered to be too frequent because farmers needed time to work on their farms.

Up until the 19th century public market buildings were municipal financial ventures. Eventually market buildings became two stories tall with government offices on the second floor. Police and fire stations sometimes were also added on to the market building on the ground level. Buildings got fancier as wood structures were replaced with ones built of brick and stone. Classic styles of columns and pediments were added decorations. When steel framing became available, there could be more open spaces and buildings became narrower and longer. Many market buildings had a cupola with a bell to ring at the beginning and end of market hours. The same bell might be used as a fire alarm. The more expensive rented spaces were for the better merchants who occupied the space for the entire week and year round, while farmers who came to the market once or twice a week and not in the wintertime were relegated to the outside around the perimeter of the market building.

Butchered meat was an early health concern, and public ordinances were developed to prevent the sale of meat that was stale, spoiled, and with “tumors”. As market buildings became larger and more profitable, the need arose for a person called a market manager or market clerk to run the market, collect rents, maintain order, establish rules and regulations for the vendors and keep the market clean.

In the 20th Century private investors began to plan, build, and maintain their own public markets. Markets were moved from the middle of center city streets to pieces of land off of and adjacent to the streets as the cities became more congested with people, horse drawn carriages, wagons, public horse cars and finally streetcars. As land in the business areas became more desirable and valuable, the markets were shifted to less desirable land near docks and industrial areas. Suburban growth caused by the advent of

the automobile, the influx of waves of immigrants into cities, and people migrating from the farms, influenced changes of the size, shape and locations of markets.

The demand for larger markets grew and the shape of long narrow markets became cumbersome. Square shapes became more efficient.

Shopping rituals, and consumer demand separated social classes (Mayo, 1993).

In the early morning the wealthy with their servants shopped to take advantage of the best products. Caterers for hotels, restaurants, and fashionable boarding houses also came at this time. After 6:00 a.m. wives of workers, tenement dwellers, and boarding house keepers came to shop. Although the best items were sold by then, people could still purchase good products at lower, reasonable rates. After 9:00 a.m. the poorer people came to the market to purchase the poorer quality meats and vegetables. After this the poorest came to buy what was left. This was mostly bony portions of meat and stale and bruised vegetables, which were sold for almost nothing. Time and prices separated the classes.

Major changes in market design and location were caused by the introduction of refrigeration, and the growth of the trucking industry. Heating systems made winter shopping more comfortable and refrigeration helped prevent food spoilage. With more and more consumers owning automobiles, the markets shifted from urban areas to the suburbs where people could drive to the market. Large parking lots were needed to accommodate the cars. Site location became a very important issue.

Markets were becoming privately owned and grocery stores in suburban locations were giving public markets serious competition. Managers of public markets wanted their buildings to be located near retail shops and department stores. This arrangement

was the forerunner of the suburban shopping center layouts that have the major stores located at the ends with the small shops in between.

Land costs, refrigeration needs, suburban growth, food processing, display methods, food transportation systems, privately owned food corporations, and labor costs all led to the demise of the downtown public market. From the public market came the small family owned grocery stores, then chains of locally owned grocery stores (Rogers, Scotts, and Maloleys) and today the regional/national supermarkets. These supermarkets are a part of the 21st Century agribusiness development.

In the past several years outdoor farmers markets have seen a revival and a growth in popularity. Those of us who lived through the Second World War remember the “Victory Garden”. I recall the one my family had in the back yard. We were doing our part to help the war effort, but in addition we had satisfaction from planting, caring for, and harvesting the crops that we had put the time and effort into growing. Today I have a small box garden in the back yard, and for the last two years I have worked with young people at the Fort Wayne Urban League in the summer to raise tomatoes, lettuce and peppers. Today when I go to a farmers market I can understand the time and effort the farmer puts into growing his produce. Today’s markets bring a little something of the past to our cities. The current Barr Street Market was one of the first ones in our City. The land that the market occupies was donated to Fort Wayne by Samuel Hanna with the caveat that if it changed to anything else, it will revert back to the Hanna family or their heirs (haha John Shoaff & Julie Donnell).

What is the definition of a farmers market? It is defined as a common facility or area where multiple farmers/growers gather on a regular basis to sell a variety of fresh

fruits, vegetables and other farm products directly to customers (Payne 2000). What do farmers markets have that draw people to them? Nationally there has been an emphasis on improving our eating habits. We are considered an overweight nation where foods that are high in starches, fats, and carbohydrates are heavily marketed on TV, radio, and in print. Our Country's population has a high level of diabetes which may be the result of poor eating habits. Many health advocates stress changing these habits by consuming more fruits, vegetables, and grains while eating less foods containing starches, fats, sugars and meat. Because of this, people are looking for alternatives to the large supermarkets where food is wrapped in unappealing plastic containers and appears so impersonal. Buyers are looking for healthier foods that are fresh, of high quality, locally grown, and supporting local farmers (Zepeda & Reid). They like to look at the product, feel it, and select the individual item that fits their need. Shopping at a farmers market can be a more personal type of experience--one where you know and can call the vendor by his or her name. People are becoming more interested in alternative foods such as organically grown and gluten free products, and there has been an increase in markets that specialize in these products. Markets that focus on selling organic raised foods seem to be more popular than non-organic markets. A lot of consumers are concerned about buying vegetables and fruits that have been sprayed with pesticides and fertilized with synthetic chemicals.

“Locally Produced” labels are being used in food cooperatives, health food stores and some grocery stores to promote state products such as “Jersey Fresh” when produced in that state. Local food means many things to many people. A common definition of local is that of food grown within the county where it is being sold. To some it can

pertain to food grown within the state, or a neighboring state. A farmers market survey found that most vendors (88%) lived within 50 miles of the market and consumers (67%) within 10 miles.

The demographics of farmers market consumers show that 74% are Caucasian, 14% African Americans, and 6% Hispanic. The shopping experience (meeting the farmer you are buying from), and atmosphere are big factors that draw people to a farmers market. Reasons for not going to a farmers market is distance from ones' home, inconvenient hours and limited days of the week when markets are open. Costs may be an issue as well.

A typical local food shopper is female, college educated, professional, has an above average income, interested in healthy eating, likes to cook, and is into fitness.

Studies have shown (Brown 2003) the reasons consumers use a farmers market includes access to fresh quality food, support of local farmers, and direct contact with farmers. Another commonly mentioned reason was "entertainment". Alternatives to farmers markets that people use are farm stands, roadside stands, and U-pick operations, but they are not as popular or used as much as farmers markets. People questioned in a survey (Zepeda & Reid 2003) mentioned sustainability as a reason for supporting and using farmers markets.

Another way shoppers have to buy farm fresh products is from a Community Supported Agriculture (CSA) supplier. These are organizations that people can join where he/she pays an annual fee to a farmer and in return receives a weekly basket of fresh organically grown food for however long the season lasts. It is usually about 20 weeks. The farmer uses the fees received to buy seeds, and cover his/her cost of water,

power, and the labor to raise the crops. These are growing in number throughout the U.S. There are 2 that I know of in Fort Wayne. One named Green Bean, that also has operations in Cincinnati, OH, and Indianapolis, IN. This organization acquires its produce from local farmers and distributes it locally to its customers. Fewer people use these than the abovementioned alternatives. Some reasons given for not using CSA's (Zapeda & Reid 2003) were lack of choice in mix, amount of produce provided, transportation, and inconvenience in pick-up place or time.

From the viewpoint of the farmer the markets offer the following advantages. By not dealing with the middleman or wholesaler, the farmer is able to get a higher price for his/her produce but still keep his prices competitive. For many small farm operations it is the only access farmers have to customers (Payne 2000). It gives the small to medium size farm operation a way to increase cash flow and supplement their income. Meeting and talking to their customers gives the venders a chance to answer questions about their product, give suggestions on how to use it in recipes, explain the products' benefits, shelf lives, and uses. It is important that the farmers meet their customers and learn what foods are in demand. This way the vender can have an idea what to plant in future seasons and how much of a demand there is for the produce he/she is growing. Farmers can get a good count of the number of customers to expect on the days the market is open and determine how much product to bring on any given day, month and season. One big worry that farmers have when bringing their produce to market is waste. They have been able to overcome this by reducing prices toward the end of the market hours, knowing what the customers want and how much, and in many cases taking their excess at the end

of the day and donating it to food banks, homeless shelters and churches located in low income areas.

There are a few drawbacks to farmers markets. These include limited times of operation in both hours and days. Most are open only one or two days a week with hours limited to 4-5 a day and a twenty week selling season.. The distances customers have to travel to get to and knowing where the markets are discourages people with limited shopping hours, and lack of transportation. Older shopper may lack the means, energy, and income to shop at the farmers market. Today there is still the perception that produce sold at the farmers markets is more expensive than that sold at the big supermarkets. People who want fresh fruit and vegetables are limited to a few summer months in order to buy them locally. Board of health regulations with the associated costs has limited what can be presented and sold at markets. Foods that are processed, or can quickly spoil and cause illnesses require special attention. Examples are baked goods (ingredients), meats, eggs, chickens fish, and dairy products. If possible a market should have power for refrigeration, safe potable water with good drainage and hand washing facilities. Cleanliness, storage, and security are two other issues that require attention. Is a market a for profit or not for profit operation. What are the expenses and income from markets? Income is what the vendors pay for space to sell their goods. Expenses include rental of space, staff to operate the market, advertising, utility costs, parking, and trash disposal.

The farmers markets must be doing something right because the big box stores are starting to mimic them. Giant supermarkets have begun putting labels on produce indicating when and where it is locally or regionally grown, developing organic food sections in the stores, and posting hand out recipe bins with advice on healthy eating.

Some chain food stores are arranging their interior layouts to give the appearance and feel of small food areas. Think of Trader Joes, Fresh Market, and Whole Foods. A chain in the east, “Wegmans” has carried this further by letting separate vendors operate in certain areas of their store.

Additional facts about farmers markets have shown they have grown nationally in the last several years from 4,685 in 2008 to 6,132 in 2010 (Gardner, S. 2011). The myth about farm markets higher prices has been refuted in a study by the Leopold Center for Sustainable Agriculture (Dec. 2009) that found during peak seasons July through August produce costs equal to or less than the equivalents available in supermarkets. Many farmers markets accept cash, checks, and credit/debit cards. More and more are also accepting vouchers such as SNAP, WIC, SFMNP, and EBT from low income customers. According to the USDA farmers markets that sold organic products reported larger numbers of customers, larger numbers of vendors, and larger monthly sales figures than other non-organic farmers markets. Upwards of 7 out of 10 vendors at farmers markets nationally are selling fruits, vegetables, and meats they raised themselves. Nationally 25% of vendors derive their sole source of farm income from farmer markets sales. A final trivia fact is Lancaster, Pennsylvania’s Central Market 255 years old is the oldest U.S. market still in operation. Nationally 14 markets have been in operation for more than 100 years and fully 37% of U.S. farmers’ markets have been in operation for more than a decade (Farmers Market Today).

There are many other aspects about farmers markets including management, board of directors, successful ones and those that fail and why. Criteria for a market – location, parking, days and hours of operation, selection of vendors and operating

budgets all are reasons why markets survive or fail. People who farm organically are also using sustainable methods.

Where do we stand in regards to farmers markets with organically grown food and supermarkets with their endless variety of food products being harvested on large industrialized farms throughout the country? One can only shop at a farmers market one or two days of the week during the growing season (20 weeks). There are limited choices at two stores in Fort Wayne that sell organic produce. One is the Three Rivers Food Co-op located at Spring and Sherman streets. The other is the Health Food Store located on North Anthony Boulevard. They both have quality produce, limited selections, and slightly higher prices than the Krogers, Meiers, and Wal Marts. I think most of us do a little shopping at both the organic venues and the superstores. We use the supermarkets for convenience, variety, and prices. Consumers shop at co-ops, health food stores and farmers markets for quality, freshness, and supporting local growers. Many of these shoppers also worry about chemicals from pesticides and fertilizer used in the large farming operations that work their way into the food and what harm it is doing to our bodies. Concerned shoppers would like to see the big growers use fewer chemicals, prevent erosion by less tillage, and raise farm animals in a healthier less confining environment with fewer antibiotics. In order to make these changes it will take time and gradual steps. The USDA could help by restricting certain practices as well as providing incentives for using sustainable growing methods. A few areas I have left out of the paper

because of time and length include GMO's (The New York Times 10/2012), farm laborers, and hydroponics.

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