

SMALL FARM DISINVESTMENT IN EASTERN NEBRASKA:
SEEKING SUSTAINABILITY IN THE PERIPHERY

By

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ABSTRACT

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In the 20th century U.S. farming began to change its structure from an autonomous structure to a co-dependent, and highly industrialized structure. Industrial farming pushed many farmers out of business, as they were unable to stay on the “tread mill” of production that necessitated technology inputs and vast acreages to net larger yields for a meager return at the commodity market. Many farmers and their families were displaced into the neighboring cities and town to seek out work, often times in the burgeoning service sector that developed in the years after World War II. As a result, farmers and farming communities lost their connection to the land as the farming process became alienated from its producers and consumers. Urbanization increased and the remaining farms in the peripheries of urbanizing cities were increasingly in danger of being supplanted by urban development. Rising land valuations and taxes have made it difficult for farmers to continue their operations, leading to further displacement. As a result of the stated factors of displacement, many farmers began to rethink their modes of operation by reinventing the farming process. For the respondents in this study, that meant creating a

sustainable form of agriculture that would help them stay viable, and more importantly maintain their culture.

The primary point of this research is to better understand the current state of the changing form of agriculture taking place in Eastern Nebraska. Essentially, How are the expanding suburban peripheries affecting the farms? What are the farmers doing to maintain their viability? How can they increase their viability through sustainable practices?

The local food movement occurring in Eastern Nebraska is a step closer to sustainability; the process of responsible stewardship in land maintenance, farm practice, and reconnecting with the community. I begin the paper with a brief history of U.S. agriculture that has brought forth the exacerbated industrial structure. The paper then proposes how social capital may create a viable connection between the farmer, consumer, and service sector that may ensure a cooperative network system benefiting all.

This qualitative research involves 30 interviews with small niche market farmers, specializing in produce, fruits, dairy, meat, and a variety of mix-use goods. The study found that these farmers are experiencing some of the same displacement factors affecting the larger commodity farms: rising land and tax valuations, input costs, and cultural differences among farm and non-farm neighbors. The paper concludes with some recommendations that may aid the local food movement to become more sustainable and most importantly, increasing farm viability for future generations.

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CHAPTER 1: INTRODUCTION

This thesis began as a personal quest to understand the underpinnings of the social affects upon agriculture. Coming from a Nebraska farm family my interests began to revolve around the viability of the farming culture, or agriculture, and how it would survive the growing global market. Those interests gained momentum after working on my family farm from 2002 to 2004, where I observed the decreasing value placed upon agriculture as farmers were dropping out of their operations, unable to keep up with the international demands and low market value for their commodities. In addition, the suburban fringes of Omaha and Lincoln (Nebraska's number one and two most populated cities) have been growing laterally at a rapid pace (Nebraska Census 2000), placing added financial pressures on farmers as land valuations and taxes increased, making it difficult for farmers to stay in their operations. I felt there had to be an answer for the failures that have haunted the industrial agriculture structure—something more viable, more sustainable perhaps.

Enter my newfound interest in sustainable farming as a viable solution to the woes of industrial agriculture. Sustainable agriculture seemed like the answer to revive the interest in the fate of agriculture, only if more people understood, for example, the benefits of local food and the personal contact between the farmer and community.

The sustainability of the local food system offers a glimpse of a viable future for the environment, farmer, and their community. Models of success are already in place throughout the Midwest, namely the numerous farmers/vendors supplying farmers'

markets and CSA operations, which are popping up in local communities. The rise in farmers' markets and interest in local food lend to evidence of a growing support by individuals and communities. With better access and knowledge of local food, connecting with their local producer communities is directly responsible for the viability of local farms.

In the summer of 2006 I began to look at local farms that were mainly producing for local communities in and around Omaha and Lincoln. I wanted to find out whether or not the local food movement was sustainable enough to withstand the factors that have historically pushed other farmers out of business. I interviewed 30 niche farmers in Eastern Nebraska, who mainly marketed to farmers' markets, managed CSAs (Community Supported Agriculture) or marketed directly to communities and the service sector. My questions were based on whether their operations were sustainable, what social as well as environmental factors were currently affecting their operation, and how they viewed their operation in the future. Essentially, I wanted to know if their operation could remain viable as well as sustain them and their families.

This thesis begins with chapter two, which covers the developments and transformations of the U.S. farm structure during the 20th century. Post Depression era facilitated the formation of a co-dependent and highly commodified agricultural structure, which through expansion and increased mechanization many farmers were unable to "keep up" with the treadmill of industrial agriculture. World War Two increased production and global participation. As a consequence farms grew in size, as

did the harmful byproducts of environmental degradation and population pressure, globally and locally.

In response, to the destructive nature of the current agricultural structure, measures have been taken to research a different modes of production; something more sustainable for consumer and environment.

Chapter three looks at sociological theory that offers insight to the possibility of rebuilding the fading farm culture that was present prior to the industrial model now in place. The local sustainable food movement taking place in the U.S. stresses the connection between farmer and community, building bridges between communities in order to increase viability for those associated with the farming operation.

Chapter four discusses the research methodologies used in this study, the survey tool, discussion of respondents, my observations and use of secondary data.

Chapter five analyzes the interviews conducted over the course of the summer research. The main areas of interest are why farmers got into their operation, as well as why they choose to stay in the operation; off farm employment; ease of transitioning into current operation; community support for their operation; and their five year plan.

Chapter six discusses the major points from the previous chapter, offering further insight into how farmers in the study are struggling with some of the same issues that have affected farmers in the past. The discussion sets up the final chapter, which offers some recommendations and ideas that may help farms increase their viability and garner the necessary community support for their future generations.

CHAPTER 2: LITERATURE REVIEW

Farm Structure: A Brief Sketch of the Last Century

In the beginning of the 20th century, 33% of the U.S. population lived on farms. By the end of the century, this number was down to 2% (Lobao and Meyer 2001:103). These figures shed light on the fact that a large amount of land has been increasingly worked by fewer individuals; farms are getting larger, but fewer in number.

What factors have contributed to the dramatic decrease of number of farms? By looking at the pattern of decreasing farms numbers, with the presence of larger operations, we may infer the economic model of capitalism is running its course. “Farming is now a commodity-based industry in which the profit margin depends upon the actions of millions of farmers across the country and even the world, in addition to the action of corporations, consumers, and governments” (Bell 2004:45). Ideally, capitalism is an efficiently operated model where cost of production is low, aimed toward acquiring an abundant surplus of goods, such as commodity grains, for maximum capital gain. “Under capitalism, the separation between producers and their means of production, the commodification of labor, and the private ownership of means of production on the basis of the control of capital (commodified surplus) . . . [is] oriented toward profit maximization” (Castells 2000:16).

Mechanization¹

With the mechanization of farming, there is an increase of productivity due to larger, and more durable machinery, hybrid seed, and petro-chemicals replacing manual labor.² The average acreage farmed prior to the introduction of the tractor, for example, was about eighty acres; the tractor alone was able to increase this average to 240 acres. Aiding the mechanization of farmland coincided with other technological innovations, such as the introduction of chemical inputs: anhydrous ammonia as a nitrogen input, pesticides and herbicides promised farmers and the Ag industry freedom from nature's wraths (Finlay 2004).

The mechanization of the farming industry is directly responsible for displacing manual hired labor (Bertrand 1951; Pfeffer 1992), and more importantly, family based labor (Tolley and Farmer 1967). The structural change in the family farm has been facilitated, but not necessarily a direct consequence, by technological advances (Flora, Flora, Spears, Swanson, Lapping, and Weinberg 1992). Flora and her colleagues claim there are other factors attributing to the decline of the family farm, mostly increased economic competition (market forces) and federal policies that required the acquisition of technology to "keep up" (Flora et al. 1992:36).

The acquisition of technology is not an equal opportunity process; those who are entrepreneurial and "non-risk" adverse, are more likely to adopt a technological

¹ Mechanization, for this thesis, refers to the various forms of technological advancement that have supported the expansion and subsequent consequences of agricultural structure. These advancements include, but are not limited to: farm machinery, petro-chemicals, hybrid seed, and global positioning systems (GPS).

² For a more complete impact assessment of the consequences of the mechanization of farming, see Berardi (1981); Flora et al. (1992); Lobao and Meyer (2001).

innovation due to their capital holdings. Larger and more capital rich farms are more likely to adopt new technologies that will help them maintain the competitive edge. For smaller farm operations, there is a disadvantage in obtaining new technologies since they are unable to compete financially with the larger and more productive farms (Committee to Review the Role of Publicly Funded Agricultural Research on the Structure of U.S. Agriculture 2006; Saltiel, Bauder and Palakovich 1994; Pfeffer 1992; Buttel et al. 1990). These findings are supported in the adoption/diffusion research of Everett Rogers when he discusses early adopters of hybrid seed corn in Iowa, “the innovators had larger-sized farms, higher incomes and more years of formal education”(Rogers 2003:34). Farmer’s capital holdings, both economic and physical, were apparent factors in innovation adoption.

There is evidence that not only were larger farms more able to compete with the rising demand for technology through their willingness to adopt, but they were able to maintain their farms’ competitiveness in regards to what the market demanded, such as large productions of commodities; the more land (physical capital) the more commodities able to be produced (economic capital). With technology, comes expansion.

Expansion of farm size has been supported by economists throughout recent Ag history. Many assert that the expansion of farm size is beneficial; however, these economists overlook possible social costs of expansion (Nuckton, Rochin and Gwynn 1982). With a shift toward a mechanized industry, the social costs grew for farmers and laborers; no longer were most payments going to farm laborers, rather payments were going towards loans for more technology and land (Flora et al. 1992). The social costs

may be more clearly defined as “the cost of economic activity that affects society as a whole or the depreciation of social capital, human labor, or the environment” (Vago 2004:326; Stabile 1993). The cohesion of farming communities began to dissolve as the relentless pursuit to acquire more land often put neighbors at odds; larger farmers with larger capital holdings were in a position to buy up land, as well as place higher bids on cash rented plots. By setting the bid high, smaller, younger, and less lucrative farm operators are unable to stay in agriculture.

Rural sociologist, Michael M. Bell, describes this process as “knocking a few producers off the treadmill to make room for those remaining to grow bigger and maintain a decent income despite lower profit margins” (Bell 2004:43). The “treadmill” that Bell discusses, is a metaphor to describe the cyclical process of capitalism; the notion of producing an excess or surplus of one commodity (for example corn), which indirectly, through the methods of the market, pushes smaller producers out of business. Larger producers continue to get larger by simply ratcheting up the “speed” of the treadmill, saturating the commodity markets, concomitantly “weeding out” competitors who are not as mechanically and technologically advanced. Therefore, smaller farming operations have to drop out since they do not have the resources (acres to farm nor the technology and economic capital) to keep up with the lowered market value.

The facilitation of this treadmill cycle is partially supported by the mechanization of agriculture. With the development of new technology comes a change of structure and costs leading to a technologically oriented society, rather than a cooperative and more communal social structure of prior years; the old handicrafts and skills die (Lewis 1956)

and we begin to see the consequences of a push towards maximization of profits and a decline of the previous structure.³

The New Deal

With the introduction of the New Deal in 1933, there arose “cooperative individualism”⁴ between the farmer and the state (Grant 2002). Farmers were now being relieved of the harsh conditions of the droughts (which created the infamous Dust Bowl/Dirty Thirties) through compensation for soil conservation, as well as payments for over production of commodities; “For the first time, the federal government used agricultural regulations, commodity production controls, and government crop subsidies to speed the farm recovery” (Grant 2002:70). However, some felt the “New Dealers” were only introducing a welfare system that would do more harm than good for not only U.S. agriculturalists, but for U.S. society as well (Auerbach 1969). Ironically, between 1940 and 1986, farm numbers diminished 62%, while government agencies set up to support farms increased 45% (United States Department of Commerce 1940, 1986). The introduction of crop subsidation and controls can be presupposed as being direct linkages to the current ills of agriculture; surpluses of commodities naturally create a lowered market value enabling only the larger operators to stay in the business of farming (Bell 2004). In addition, the network between farmer, banker (loans for technology/land), and

³ Essentially, with the technological influx the farm structure changes; no longer are laborers needed for manual labor, nor are certain skills retained, such as tilling practices, storage of seed for next planting cycle, incorporation of livestock for fertilization, etc.

⁴ This term identifies the cooperation between farmer and outside agency, in this case the government, as taking care of the immediate needs of the farmer. Individualism, alone, is defined broadly as “any set of ideas emphasizing the importance of the individual and the individual’s interests” (Marshall 1998: 304).

government can be understood more clearly as the “cooperative individualism”, reifying the dependence of farmer upon state.

The War Effort

Since the New Deal era, special support has been given to large commodity growers in specific regions of the country, i.e., southeast peanut growers and Great Plains corn/bean farmers, thereby feeding into overproduction (Buttel 1983; Cochrane 1979). Increased production for World War II placed demands upon the farm sector, although many farmers were reluctant to expand operation. Great Plains farmers, however, did increase their yields only with the promise of government underwriting the risks of producing more. “Despite having 33,000 fewer farms in 1945 than at the beginning of the decade, plains farmers enlarged their tilled cropland by 17 million acres—a 21percent expansion. In five years, plains farmers increased their annual harvest of wheat by 173 million bushels and their harvest of corn by 356 million bushels” (Grant 2002:179).

Consequently, more grains were produced for the war effort, as well as setting the standard of the present structure of agriculture. Unfortunately, the rising demand and increased use of technology knocked a number of farmers out of business setting up the current treadmill of agricultural production and co-dependence upon government policy (Grant 2002).

From Production and Manufacturing to Service

Technological innovations offered some advantages for producers in the farming sector. However, this prosperity preceded the consequences of its establishments as predicted in early socio-economic theory surrounding post-industrialism. With the

progression towards industrialization, economic activity shifts from production to services, where we see a demise in agricultural employment, followed by the decline of manufacturing jobs; the more advanced an economy, the more focus of its employment and production will surround service sector jobs (Castells 2000; Bell 1976).

Castells continues with an important point about knowledge production. He states, “[t]he appropriate distinction is not between an industrial and a post-industrial economy, but between two forms of knowledge-based industrial, agricultural, and services production” (Castells 2000:219)⁵. Essentially, through changing structural components of society, there is a shift in how one is exposed to new knowledge, i.e., through practice, extension agents, media, and inter-group (community based) interaction (Rogers 2003). This knowledge production will be further emphasized in later sections of this thesis.

What needs to be stressed at this point is the demographic change that occurred with the shift from production to service. The service industry peaked in the 1950’s as technology was diffused into almost every corner of everyday life; homes were equipped with new appliances, television was on the rise, and the automobile necessitated expanding roads and services (Vago 2004; Wajcman 1991). This allowed for greater mobility for urban and rural alike; new service jobs employed members of the family, children as well as adults. Farming became an industry to feed the expanding urban and world populations.

⁵ Castells’ research in his text is largely about the changing social structure abutted to technological advancements. What is important is the knowledge production that he speaks about, and how that knowledge is exchanged, and through which channels. Michael Bell touches on this (Bell 2004) when discussing dialogic versus monologic discourse and knowledge exchange.

As farms industrialized, farm sizes grew larger; more technologies were introduced on and off the farms. Surpluses allowed for more manufacturing in the urban areas, resulting in a quarter million people leaving the farm for work in the cities⁶. “Large sections of the center of the country, from the Dakotas down to west Texas [Great Plains], lost populations; families moved to the ‘rims’ of the nation” (Bell 1978: 193).⁷

Nebraska is no exception to the change of industrial focus; Omaha, for example, is home to a number of telemarketing firms and corporate Ag headquarters, such as ConAgra. Just as other aspiring cosmopolitan cities, Omaha offers a number of restaurants and services, which provide ample opportunity to draw human resources away from the farm.

80’s Farm Crisis

In the 1980’s, U.S. farmers were experiencing their worst financial crisis since the 1930’s (Murdock, Albrecht, Hamm, Leistriz, and Leholm 1986). According to a core of researchers, “this [80’s Farm Crisis] was brought [on] by the conjunction of a number of factors in the 1970’s, including: accelerated demand for grain on world markets, public policies that encouraged massive capital investments and expansion of production, and a political-economic context that encouraged land speculation” (Buttel, Larson and Gillespie, Jr. 1990:151). Just as technology encouraged increasing one’s land holdings, so too did speculation as land was sought for the promise of expanding one’s harvest, as

⁶ Most of those leaving the farm were laborers, not necessarily the farmer.

⁷ The “rims” are described as the metropolitan coastal areas, as well as the Great Lake regions. Much of this shift occurred as a result of Depression years and the subsequent Dust Bowl era, followed by the production demands of WWII (Bell 1978; Gregory 1991).

well as the possibility of high land valuations for future sales. These faltering speculations directly correlated to the further exacerbation of farm structures in the eighties, alongside shrinking export markets. Additionally, “Reaganomics” and the emergence of foreign commodity competition, i.e., Argentina and Brazil, culminated in a “decapitalization” of American Agriculture, mostly affecting the Great Plains and Midwestern farmers (Buttel et al. 1990:152). No longer were Mid-American farmers leading in global production, as outside competition from the aforementioned nations wrestled away capital rich grain and livestock markets previously held by domestic producers. Thus, Midwestern farmers began to feel the economic squeeze of the 80’s gripping their livelihood.

The crisis created a mass exodus of farmers who were unable to payback high interest loans from bank lenders due to the concomitant decline in grain prices and land values; thirty percent of farmers had a debt-equity ratio of over 40 percent; over 33% of the farmers studied suffered a net loss in 1984 (Murdock et al. 1986). Banks were more prone to invest in other communities, such as retirement communities, that promised a higher return on their investment (Flora et al. 1992: 128). Banks found investing in non-agricultural communities to be a lower risk on their investment, however, by doing so banks indirectly affected farm structure by not investing in rural, farm communities, and therefore supporting the downward spiral of U.S. farms.

Taking a more nuanced approach to looking at some of the effects of the 80’s crisis—off-farm employment began to rise. Research conducted in Missouri and New York details the social-psychological impacts of downward mobility upon farm families.

Displacement forced families to look for work in often unavailable job pools in urban centers, therefore leaving them ill-equipped to deal with the longevity of rural poverty encompassing them (Hefernan and Hefernan 1986; Graham 1986). Another study observing gender roles found that in a great proportion of displaced Midwest farmers and their families, the women of the household were first to take off-farm jobs in the urban service sectors (Lobao 2006; Lobao and Meyer 1995). Thus, restructuring the household along with the familial roles took shape, as it is the woman, more often than not, who is responsible for not only farm work, but domestic chores, and the public work sphere as well.⁸ (Bell 2004).

The results of the 80's farm crisis can still be seen in the contemporary structure of agriculture; the extension of high output by larger and fewer farms, low commodity prices and the annual decline of farm family operations. Essentially, as Michael Bell puts it, "the crisis of the 1980's never truly ended" (Bell 1999: quoted in Kimmel and Ferber 2006:123).

As a reaction to the 80's Crisis, farmers began to rethink the structures controlling their destinies, and some decided to take control of their futures, offering them not only the ability to maintain their farming culture, but also change the way agriculture is practiced and perceived by farmers and non-farmers alike. Most notable are the Practical Farmers of Iowa (PFI) (Bell 2004), emerging in 1985, in the middle of the 80's Farm Crisis; PFI has been Iowa's leading example of sustainable agriculture ever since (Bell

⁸ The importance of gender roles in the farm structure is noted later in this essay; I only introduce this now for the sake of setting up the discussion that is to come.

2004; Peter, Bell, Jarnagin and Bauer 2006). PFI farmers are promoting sustainable, low input farming operations, while conducting their own research on their farms and exchanging their knowledge with other farmers interested in sustainable agriculture⁹ (Bell 2004; Lighthall 1995).

This shift of practice and knowledge is unique to contemporary agriculture where over the past century practice and knowledge exchange has traditionally come from a top-down (government/land grant university-farmer) interaction (Hassanein and Kloppenburg, Jr.1995), unlike the grassroots style of practice and exchange developed in Iowa. The top-down interaction and exchange of knowledge, normally occurring between farmer and a government agency, such as the USDA, does not take into account the value of personal and local knowledge shared by the farmer and his/her farming neighbors. Local knowledge can be best understood when considering those farmers who are historically connected to the land, they know the tendencies of their herds and the optimal timing of when to rotate pastures. Conversely, the top-down knowledge exchange alienates the farmer from personal knowledge of their farming operations, ultimately decreasing farm autonomy while increasing dependency upon outside sources.

⁹ “Low input” essentially means they are reducing the amount of chemicals and energy that is normally used by modern and past conventional farm practices.

Agriculture and the World-System

The city sits like a parasite, running out its roots into the open country and draining it of its substance. The city takes everything to itself—materials, money, men—and gives back only what it does not want; it does not reconstruct or even maintain its contributory country.
—Liberty Hyde Bailey (quoted in Flora et al. 1992: 108)

Agriculture is utilized by communities for their reproduction, however this process has been shifted from one of utility to industrial; the latter has created a number of negative consequences, nationally and globally. Globalization is the current structure controlling the exchange of commodities, working as a homogenizing agent across nation states as they (Second and Third World states) adopt technology, services, and consumption patterns from First World Nations (McMichael 1996). From a capitalist's point of view, it is a logical business strategy to expand your consumer base, reaching across nation state borders, while keeping costs low. The desire to accumulate wealth is embedded in American food industries and is reflected in the quote by a CEO from Nabisco, a company now owned by Phillip Morris, the largest food conglomerate in the U.S.; “[o]ne world of homogeneous consumption . . . [I am] looking forward to the day when Arabs and Americans, Latins [sic] and Scandinavians will be munching Ritz Crackers as enthusiastically as they already drink Coke or brush their teeth with Colgate” (DeLind 2003:283).

With the increasing demand for goods, there is a concomitant increase in the demand for more raw materials (in this case agricultural commodities). With the central aim of expanding markets through globalization, there is a need for cheaper, more efficient methods in the production of agricultural goods. Subsidies, technology and

corporate interests have aided this process. As those markets globalize, farmers must produce larger amounts of grain for both national and international communities. From a world-systems approach¹⁰, it can be understood how societies reproduce through group interactions; industrial agriculture reproduces through its interactions with the state, in the form of subsidation, directly affecting the production and accumulation of commodities. Immanuel Wallerstein defines the world-system as a single division of labor comprised of multiple cultures (Wallerstein 1974). The single division of labor essentially means the labor process is comparatively similar throughout the world, with the main purpose of exchanging fundamental goods such as food and raw materials that are necessary to reproduce the daily lives of the members of that culture (Chase-Dunn and Hall 1992). On a macro scale, the exchange network crosses a number of borders, passing through differing cultures that are often composed of distinct language systems and modes of cultural and economic reproduction. On a micro scale, such as local food systems in the urbanizing cities in Eastern Nebraska, one may see the parallels to the macro as the rural and urban interface are distinctly different in cultural practices, beliefs, expectations, production and consumption patterns. The micro/macro pattern will be further explored in a moment.

With growing world populations, the need for accessible food supplies further necessitates a proactive drive towards surplus; thus, we see the connection with capitalism and its relation to the utilization of technological advancements, labor, and

¹⁰ For the purpose of this thesis, I minimize the world-system, equating its definition towards the micro structure of agriculture in the U.S., while discussing the interface of farm and non-farm populations; I will refer to the “periphery” as the farming communities and the urban as the “core”.

consumerism for the maximization of profits. Accompanying this process is the disconnect of community relationships through the increasing demand of individualistic behavior, leading to a number of social and environmental issues such as those experienced with the technological push in the 20th century.

Commodities on the world market are intended for world population consumption, while maintaining a hegemonic standard of distribution that creates a stratified power relation where developing countries are dependent upon developed countries, such as the U.S. (Chase-Dunn and Hall 1992). Chase-Dunn offers some structural constants of the world-system, further clarifying agricultural structure. He lists the constants as: 1.) *Capitalism*: the accumulation of resources by means of the production and sale of commodities for profit; 2.) *The interstate system*: a system of unequally powerful sovereign national states that compete for resources by supporting profitable commodity production and by engaging in geopolitical and military competition; and 3.) *The core/periphery hierarchy*: in which core regions have strong states and specialize in high-technology, high-wage production while peripheral regions have weak states and specialize in labor-intensive and low-wage production (Chase-Dunn 1996:86). As this cycle reproduces itself (see Appendix B), we see a cyclical pattern of *population growth*, (Chase-Dunn and Hall 2002; Anderson 1994)¹¹ where under

¹¹ I am adapting the iteration model of Chase-Dunn and Hall 2002, to help visualize and understand the cyclical process, both negative and positive relationships of population reproduction through interaction with technology, conflict and state organized hierarchal intervention. My explanation of the model is not as in-depth as the original authors, and I stop short of going into the counter relationships, positive and negative, between stages, i.e., negative relationship between hierarchy formation and circumscription. These relationships, although valid, are not described in full for reason of keeping to the point of the cyclical process of the exogenous variables in the reproduction of farm structure/ rural/urban interface.

favorable conditions, such as climate, the population growth will exceed the carrying capacity of an environment [within a] community, county, and state—in the presence of increased technological innovation. Population growth leads to *intensification*, (Harris 1977:5) such as “the investment of more soil, water, minerals, or energy per unit of time or area” (Chase-Dunn and Hall 2002:200).

With more farmland being sought for cultivation, coupled with irresponsible conservation practice and increased chemical inputs, the integrity of the natural resources of soil and water will be diminished, leading to *environmental degradation*. As degradation increases, there is a rising socio-economic cost for the production of food goods and raw materials to support the core (Chase-Dunn and Hall 2002). Consequently, this rising cost and accessibility to raw materials and the production of food directly influences *population pressures*, as farmers will have to search for viable farmland further from the periphery where land valuations are lower, land is more available since it is not exhausted by laterally expanding populations in the core. However, the cost of travel, time and fuel, must be considered as additional factors of rising costs of production. Hence, this population pressure leads to *migration*, as core populations essentially emigrate from the center of the core to the periphery of the core, or suburbs, where the shift of greater access to food, and other consumables is most readily attained (Putnam 2000). Additionally, families may seek the slower paced lifestyle and reduced congestion of the suburban fringes. Expanding suburban amenities and the spaciousness unmet by their previous urban neighborhoods entices those to move outwards. “As long as new lands are available, population pressure can be relieved by migration” (Chase-

Dunn and Hall 2002:200); urbanization spreads laterally, taking up viable farmland (peripheries) for production in the urban centers, such as Omaha and Lincoln, NE (core).

On a macro view of world populations, world-systems analysis views immigration as following this pattern of land consumption by population growth, pressure and eventual movement to new areas. In the context of core populations moving outwards toward the periphery, there lies the possibility of *circumscription* and subsequent *conflict*. The prior condition, circumscription, “occurs when the costs of leaving are higher than the costs of staying” (Chase-Dunn and Hall 2002:200). Non-farm residents seeking solace in the rural periphery will inevitably find country life and culture much different than in their previous neighborhoods in the core; they may experience “farm noise”, “farm smells” that will reduce their initial ideas of country life (farmfoundation.org). Likewise, farmers are already embedded in their geographical position, physically and culturally; depending on the farm, there may be the legacy of previous generations in which the farm family will want to maintain, therefore, disregarding the non-farming, rural neighbors’ complaints. Therefore, *conflict* occurs, necessitating government policy to ensure the farmer’s right to continue their operation, such as right to farm ordinances (farmfoundation.org).

Connecting Community

To reduce the severity of circumscription and subsequent conflict, there needs to be a tangible exchange between the two parties, i.e., farmer supplying non-farming resident/community with food goods. This relationship can be seen within the local food networks of farmers market systems and CSAs.

If farmers and non-farming neighbors are unable to “meet in the middle” with some tangible exchange (or intangible exchange through communicating differences effectively) they will increase the likelihood of circumscription. “Circumscription increases the likelihood of higher levels of conflict in a situation of population pressure (increased population in traditionally agricultural zones) because the lack of exit makes continued occupation [of residence] the only alternative, despite higher costs in doing so” (Chase-Dunn and Hall 2002:201) In this case, I consider the higher costs as relocating either farm operation, or non-residential location. In addition, “high costs” relate to possible litigation that may cease farm operation, due to expensive legal fees.

Enter the next step, *polity expansion & hierarchy formation*, leading to government policy and continued maintenance of government/farm hierarchy. Farm policy has been embedded in farm structure since the initiation of the Federal Farm Loan Act (FFLA) in 1916, as the first extension of federal responsibility for farm credit, characterizing the political/economic development of agriculture, most prominently after the New Deal (Shulman 2003). What the FFLA essentially did was take away autonomous control from the farmer, leaving them co-dependent upon subsidies and loans to operate their farm according to governmental market ideals. As market ideals revolve around the capitalistic model of production and ceaseless accumulation, the necessity of acquiring technological innovations is again apparent. Michael Bell supports this claim of farm policy (subsidies) negatively affecting the current farm structure, “[i]n the United States, our agricultural subsidies, as we have seen, encourage ever-increasing production, which has the effect of driving down the prices farmers receive [at the

commodity market], which in turn leads them to try to stay on the treadmill and solve the farmer's problem by increasing their production even more" (Bell 2004:244); the more production, the more surplus and ecological degradation. He continues to drive home the point of added technological advances affecting farm structure, "[t]he situation is so bad that, in order to prop up the prices farmers get, so that they don't all fold at once, we burn corn in our cars in the form of ethanol and we have an aggressive food export policy" (Bell 2004:244).

In this case, globalized economies are formed, exporting and importing from a number of peripheries, i.e., foreign countries alienating the farmer from their produce. The rise of the second to final stage of the Iteration model, *technological change*, leads back to increased *population growth* in the core; as a direct consequence of increased productivity and extraction of foods and raw materials from the periphery food prices are lowered for increased consumption and subsequent reproduction of population growth.¹² Much of the social changes come in the form of population growth, requiring larger outputs of farm goods, through acquiring machinery (technology), and labor, leading to the increase of production of commodities.

Production of U.S. agriculture in the 20th century is the result of the expansion of resources used to produce commodities, mainly land and water (Albrecht and Murdock 1986; Cochrane 1979). As the farm becomes more specialized, technologically, it will then become more efficient, as well as grow in size and capacity of output.

¹² I am not advocating that cheap food is detrimental to overpopulating the world, but simply stating a fact that the reproduction of societies is greatly dependent upon accessible food goods, which we can see in every aisle and export policy affecting other nation states. For more info on the variety of choices of food and the impact of agricultural policy affecting third world nations, see Schwartz (2004) and Bell (2004).

The above model offers a basic idea of how the process of the world-system of globalized trade and U.S. farm structure interact, most important how the micro sub-system of local connections between expanding cores and the affected periphery reflect the larger system. The cycle pulsates as it runs its course, expanding and contracting as population puts pressure on peripheries, leading to hierarchical intervention allowing a recession in conflict, via possible government policy, such as the “right-to-farm”¹³ ordinance (Modelski and Thompson 2002). However, through additional government policies and the continued global commodity structure, technology and intensification still remain, through the continued population growth.

The pulsation of agricultural systems coincides with human interactions with the environment, mostly through the overproduction of land, enabling the extraction of raw materials from rural peripheries, for use in the core. Increased transportation through technology and development increased land exploitation, further affecting local communities’ economy and population; farms, production, and communities then relocate to more productive plots to meet core interests and needs (Chew 2001).

The degradation Chew discusses in his research may be the most pertinent aspect to consider when understanding the affects a globalized economy has on the environment. The intensification of farm production wreaks havoc on the environment, therefore, introducing the necessity of conservation practices, which is also another example of government polity and intervention.

¹³ The “Right-to-Farm” statute was introduced in Missouri in 1982 in response to saving family farms from being shut down in response to public complaints of stated nuisances, i.e., smell and noise, which is common when non-farming communities reside near farms. For further details, see Constance, Kleiner, and Rikoon (2003). Nebraska initiated their statute in the same year, see Farmfoundation.org.

The necessity of understanding a world-system approach in agriculture is to have a better understanding of the grand scale which agriculture plays in the world economy. Throughout the last century farm structures have waxed and waned, depending on the population, market demand (price), as well as the environment.

The Movement Toward Sustainable Farming

The structure and practice of U.S. agriculture over the past century has caused severe unforeseen environmental consequences that could be detrimental for the future of both agriculture and natural resources (Bird and Ikerd 1993). In response to this concern, the Food, Agriculture, Conservation, and Trade Act of 1990 (1990 Farm Bill) required the U.S. Department of Agriculture to look into sustainable Ag research and education.¹⁴ Prior to this date, Dale Rodale initiated the idea of sustainable practice through researching the natural resources on which U.S. agriculture is based, and through the utilization of these resources, instituting high-production initiatives, and developing a partnership with nature for the goal of producing sustainable food, feed, and fiber in an environmentally sound manner (Rodale 1984).

Eventually, Rodale's ideas and leadership in sustainability would lead to the implementation of the Low Input Sustainable Agriculture (LISA) program, which was then expanded further, with the help of the 1990 Farm Bill, thus creating the Sustainable

¹⁴ There is not a clear, universal definition of sustainable agriculture (Pfeffer 1992). However, I have found the following to be adequate and representative of the attitudes conveyed by the farmers in this study. "For a farm to be sustainable, it must produce adequate amounts of high quality food, protect its resources and be both environmentally safe and profitable. Instead of relying on purchased materials such as fertilizers, a sustainable farm relies as much as possible on beneficial natural processes and renewable resources drawn from the farm itself" (Reganold, Papendick and Parr 1990:112).

Agriculture and Research Education (SARE) program (Bird and Ikerd 1993).¹⁵ Although an extension of the state, offering financial assistance to sustainable farmers, the SARE program differs in the fact that it also educates and conducts on farm research promoting sustainable change in agriculture and community integration.

Putting a Face on Food

Maybe one of the most important features of sustainable agriculture is the interaction amongst farmers and members of the community. The interaction between community and farmer has gone on since the beginning of time, as agriculture has linked societies together for the common purpose of survival. The advent of the “farmers market” is difficult to trace, but farmers have always been the stewards of the countryside and the backbone for reproducing society. Currently, farmers’ markets are becoming increasingly more available in communities across the U.S. According to the United States Department of Agriculture, farmers’ markets have increased more than 7 percent between 2005 and 2006 (USDA 2006). Agricultural Marketing Services (AMS) Administrator, Lloyd Day, states that “[t]hese statistics show farmers’ markets continue to be an increasing source of income for our nations farmers . . .their popularity with consumers is growing and buyers enjoy fresh, locally grown products” (USDA 2006: 1).

Smaller farms specializing in direct food distribution, such as Community Supported Agriculture (CSA) are connected directly to the consumer, bypassing any sort of middle entity for processing and packaging. Contemporary CSAs were adapted from

¹⁵ SARE is part of the USDA research and extension program intended to further enhance sustainable agriculture through grants. For more information visit: <http://www.sare.org>.

the Japanese tradition, *Teikei*, which roughly translates to partnership or cooperation, although some would offer *Teikei* the more philosophical translation, “food with the farmer’s face on it” (Henderson 1999). “It is a model that advocates a direct, face-to-face relationship between those who grow food and those who eat it. It is designed to reduce the physical, social, and mental distance that now characterizes the global food system” (DeLind 2003:194). Changing the interface between producer and consumer essentially changes the way people understand and *identify* what agriculture is and once was; food for the people, provided by the people.

Local Food: Defining Social Change

Looking at some of the social change literature, I have found a comprehensive understanding of the social change process in the work of Steven Vago (2004), who offers five interrelated components, which help identify the structural changes currently taking place in agricultural practice and production.

Vago lists the five following components as—*Identity*: type of change that refers to a specific social phenomenon undergoing transformation such as a definite practice, behavior, attitude, interaction pattern, authority structure, productivity rate, etc.; *Level*: location in a social system where a particular change takes place (individual, group, organization, institution, and society); *Duration*: how long a particular change form endures after it has been accepted; *Magnitude*: incremental or marginal, comprehensive, and revolutionary; and *Rate*: based on arbitrary scale, such as fast or slow, continuous or spasmodic, orderly or erratic (Vago 2004:10).

The *Level* of change that Vago discusses can be seen with the progression of sustainable agriculture within certain sectors of society, namely rural areas affected by structures that have failed to meet the personal and ideological needs of the individual farmer, affiliated groups, i.e., consumers, and the general society (Bird and Ikerd 1993). Both farmer and consumer work together, such as in the CSA system where the social change of agricultural production is a part of both of their worlds. It is a shared commitment, a symbiotic relationship existing between members and farmers (Groh and McFadden 1997). In addition, another level directly affected by the benefits of sustainable agriculture (CSA and direct local marketing) is the involvement of the family. The barriers of national and world markets no longer marginalize the involvement and competition of the family farm unit (Hall 2003).

What is difficult to interpret regarding this type of social change is the *duration* of the change. The idea of sustainable agriculture is a fairly young concept, for it wasn't officially instilled into widespread recognition here in the U.S. until the passing of the 1990 Farm Bill (Bird and Ikerd 1993). However, it is a fair claim that a form of sustainable agriculture was in place prior to the introduction of chemical inputs and the mass expansion of the mid-twentieth century, only taking a minor hiatus as the structure shifted to industrial agriculture. For the most part the industrial structure of agriculture is still present, but its shortcomings are now being realized. With more research being conducted here in the U.S. (SARE) and abroad in the European Union (E.U. Commission-Agrinet), sustainable modes of agriculture appear to have a duration period that may outlast its previous hiatus.

The duration of sustainable change correlates with the *magnitude* of change. Is sustainable agriculture a growing phenomenon or simply a passing fad? Vago speaks to the longevity of fads as being short-lived (Vago 2004). Since agriculture links society with one common thread, providing all of society with sustenance, there is little doubt that the interest of food will wane. However, this still doesn't describe the possibility of a sustainable form of agriculture maintaining its presence. What can be assumed is the future of farming, sustainable or conventional, depends largely on whether or not the lateral growth of urban centers (cores) continues to sprawl into the rural areas (peripheries). According to the Farmland Trust website (farmland.org N.D.), Nebraska suffered a 64% increase of viable farmland lost to development between the years of '92 and '97.

The final evaluation of defining social change, per Vago, is the *Rate* of change. The rate of adoption of sustainable agriculture can be best defined on an arbitrary scale of "erratic" to "continuous". There is little research involving the adoption/diffusion of sustainable agriculture in the U.S., however, if we follow the adoption/diffusion literature and consider the characteristics of adopters/innovators, we should have a good idea that those looking to adopt a practice or innovation have larger capital holdings, more education, and tend to be more entrepreneurial (Rogers 2003). The rate of adoption can be based around *perceived needs*, where it will be in the farmer's, community's, and/or state's need to change their modes of production (Vago 2004). Considering the world-systems model discussed earlier, if the cyclical pattern holds and population trends

continue to rise concomitantly with ecological degradation, there may be no other choice but to adopt a sustainable model of production.

CHAPTER 3: THEORY

Thus far, this study has been able to show how the cyclical pattern of population pressure affects the livelihood of the farmer and his/her operation; as suburbanization moves laterally, land valuations increase, which invariably moves the farmer to either sell out the operation, and/or move further from the periphery for less expensive land. On a micro-level (domestic rather than global) the world-system model explains this cyclical pattern. The dire concern here is the future availability of viable farmland, most importantly those farms supplying local food; with the expanding peripheries, there is little room left for smaller producers, as the larger, industrial-based farming operations will be the only producers able to keep up with the rising land valuations. The latter is able to keep up with the help of generous government subsidation, whereas the former, the smaller, local producers are more reliant upon local communities to support their operation.

The commodity driven, industrial model has proven it is not sustainable—economically, environmentally, nor culturally speaking. The key component for agriculture reform is the focus on the relationships built between the farmer and the consumer. Sustainable agriculture may answer the questions for the environment and the healthful choices for the consumer, but it is the consumer and service sector that are ultimately going to support the future *viability* of the local farmer.

The face-to-face exchange of ideas and culture between farmer and community is vital; building trusting relationships based on mutual interest and support is what this

chapter aims to get across. Taking a look at the differences of communities, more specifically the rural and urban communities, the following concepts and theories offer insight for communities to develop an invested interest in their local farmer.

Gemeinschaft and Gessellschaft

German sociologist, Ferdinand Tönnies (1887), defined the contrasting relationships between urban and rural communities with the introduction of the concepts of *gemeinschaft* and *gessellschaft*; the former is descriptive of rural communities where a society is “based on personal relationships and face-to-face interactions in which social relations are valued as an end in themselves” (Flora et al. 1992:15). *Gemeinschaft* may be seen in the support between the local farmer and the local community; the farmer provides local food for local consumption. The customer/farmer relationship in a CSA, farmers market, or direct marketing, is a relationship with a means to an end for all parties involved in the exchange. The relationship strengthens between community and farmer as knowledge and trust are built through direct support for one another’s interest, all-the-while reinforcing farm autonomy and culture. Essentially, *gemeinschaft* represents the socio-psychological values/mores, and interpersonal relations that bond individuals and groups together (Christenson 1984)—much like the intergroup solidarity of local food support groups and their growers.

Gessellschaft, on the other hand, is able to describe the urban, industrial nature of commerce in a non-personal environment. Flora et al. (1992) defines *gessellschaft* as, “a society based on impersonal, formal, and contractual relationships for which social relations [are] simply a means to an end (p. 15) . . . where most people do not know one

another well, worth is based on what people do and not who they are, the culture is heterogeneous, and people have relatively little attachment to each other or to the community” (p. 64). *Gessellschaft* represents the business culture of the greater majority of U.S. and other industrialized societies where mass production and maximization of profits is heavily sought. “. . .[R]elationships are rationalistic in structure, instrumental in form, individualistic in motivation and exploitive in consequence” (Christenson 1984:162).

The last two adjectives of Christenson’s take on *gessellschaft* parallels the commodity driven, capitalist economic model currently in place; the individualistic motivation of capitalism exploits the producer as they are alienated from their labor, socialized to adopt (acquire) more machinery, as well as expand their land holdings for increased output of their commodities. In consequence, the treadmill speeds up for farmers as they try to keep up with the rising demands of production to meet a standard of living the market prices are not able to offer. In addition, with expansion there is the continued negative consequences for the integrity of the environment; soil degradation, water contamination, and chemical laden food products. Understanding these consequences has created the need for a reevaluation of how agriculture and community interface.

Social Capital

One of the concepts applied to communities is the concept of “social capital”. Social capital, defined by Pierre Bourdieu, is, “[t]he aggregate of the actual or potential resources, which are linked to possession of a durable network of more or less

institutional relationships of mutual acquaintance and recognition-or in other words, to membership in a group” . . . He continues defining social capital as, “transforming contingent relations, such as those of neighborhoods, the work place, or even kinship, into relationships that are at once necessary and elective implying durable obligations subjectively felt (feelings of gratitude, respect, friendship. . .)” (Bourdieu quoted in Paxton 1999: 92).

When Bourdieu discussed his definitions of social capital, he applied it mainly to the interworkings and relationships of the elite classes as a means to reproduce their position in society—mainly through closed-off networks benefiting only their upper class standing. However, social capital is not exclusive to the elite, for it may be applied to almost any community regardless of class, structure or geographical location (Putnam 2000). Strong social capital requires developing reciprocal trust between two or more people in order for relations to thrive. Reciprocal trust is what Bourdieu would define as the “obligations subjectively felt”; these obligations are not in the form of indebtedness to one another as understood in a financially institutionalized arena, such as paying back a loan to a bank, but rather the unconditional responsibility of returning a favor in order to continue and ensure a future relationship that will benefit both parties within the given community.

James Coleman holds the same values as Bourdieu when defining social capital. Coleman’s view of social capital is that it, “inheres in the structure of relations between actors and among actors” (Coleman 2002: 98). Therefore, according to this point of view, social capital is not an individual trait that one intrinsically acquires, but it is rather a trait

of the collective group within one's community. This communal trait involves the existence of agreed upon norms, trust networks, effective sanctions and obligations that bond the community together.

According to Nan Lin, both Coleman and Bourdieu agree that to improve the life chances of an individual within a collective community, there is the necessity of dense or closed networks within that community, with a surplus of assets, (social, economic, cultural, and physical). This is essentially a means by, "which collective capital can be maintained and reproduction of the group can be achieved" (Lin 2001: 8). This reproduction of a group within a closed community is readily seen in elite groups and is often what Bourdieu refers to when discussing social capital. However, this network can also work for non-elites as well, for it is a function of that collective or community, to produce the environment members of the community agree upon as being in their "best interest." Members of the community are able to communicate with one another, relating their desires of what community cohesion is, such as parents relying on other parents to watch after their children, home, or assets.

Coleman discusses the idea of closure within communities as being the necessary variable in maintaining, for instance, children from dropping out of school. By the notion of strong support system within the community, parents, other members of the community, and persistent schoolteachers ensure that children from communities with closure are going to succeed at a higher rate than those who are not members of such a community (Burt 2001). This habitual process of raising children in such a community

theoretically will instill the same norms within the children, and as they grow to adulthood they will carry on their obtained patterns of socialization.

With a high level of social capital and sound social structure, closure can enable a stronger communal cohesion through the maintenance of norms. “Norms arise as attempts to limit negative external effects or encourage positive ones” (Coleman 2002: 114). This creation of norms via the concept of closure is what has kept a positive communal relation and structure and it is what I hypothesize will enact a stronger social cohesion for rural/urban relations through norms created for consumption of quality, local food.

Subsequently, building social capital within these communities will inevitably support small farm operations based in specialty production for local/regional consumption. As norms are implemented and practiced, they are reproduced for the next generation, promising the maintenance of a high level of social capital.

Social Capital and Viable Farms

Socialization does not occur overnight.¹⁶ Rather, socialization takes time and is a way of developing community through the reproduction of standards or norms adopted by a group. In urbanizing regions of the country, such as Eastern Nebraska, where populations are encroaching on rural communities, the threat of losing ones closure of community—the small town “feel” and culture is in jeopardy. Not only is this culture in

¹⁶ “Socializing” in this thesis suggests the establishment of new practices through informed education and understanding of the benefits of strong communal bonds and support for local food. Farm parents may socialize their children to be sustainable farmers for future succession. Non-farming families may socialize their children to understand the importance of a healthy diet and environment through their support for local farms and a sustainable agriculture structure. The socialization process is multi-faceted and includes a number of individuals, institutions, organizations, and businesses.

jeopardy, but a way of life and how that life is reproduced is in jeopardy as well. When considering the agricultural community, this way of life and culture may not be feasible to maintain as suburbanization raises non-farm rural populations; land valuations and tax bases increase, leaving small farms unable to remain viable. However, through progressive rural development, social capital may be constructed with the prospect of socializing the community into building a respect and pride for their neighboring farmers and their products, which will possibly lead to increased local and regional markets. These newly achieved markets are a process of building pride amongst the locals and tourists alike who benefit from the goods produced by the farms (Ray 1998).

This rural development plan can be seen in local communities: farmers' markets, CSA operations, and agri-tourism where local residents are able to buy produce from the farms and remain within the adjacent communities without traveling long distances for quality products and entertainment. Hence, the residents of these communities are concomitantly building norms of purchase and support, as well as closure as they are staying within the confines of their community—directly leading to increased social capital through established local relations. However, there is not always the promise of a successful institution of social capital, as many people coming from the outside of the community, such as tourists, are not permanent “residents” of the community and therefore are not going to add to strengthening social cohesion for immediate community members (Lee, Árnason, Nightingale, and Shucksmith 2005). This may hold true in some instances, but overall, what is most important to note is the overarching theme of building

enough immediate local community support for a local farm product that will invariably build more support for the farmers and their operations, helping them to remain viable.

To establish social capital in any community it is imperative to have a high level of trust, reciprocity of obligations between the members of the community ensuring community closure, and the establishment and reproduction of communally constructed norms. Essentially following the *gemeinschaft* model creating pride in ones community (such as a farming community), social and economic relations between rural and non-rural residents are increased. Hence, social capital as a means to save small farming operations may be achieved.

Primarily there is an importance to curbing suburban sprawl into the rural areas. Theoretically this can be attained through a specialized local food market between proximate farm and non-farming communities. This accomplishment will only be realized if the two communities, especially the non-farming communities are able to take an interest in their farming neighbors' products and practices, such as the sustainable agriculture operations in this study that foster the improvement of natural resources, and consumer health.

Creating a standardized system of norms to surround local food production may provide future relationships between these communities based in the best interest for both farmer and consumer; the greater interest in community is vital in deterring the indifference of farm displacement by non-farming neighbors. The standardized system or norms is only possible with the help from a number of community organizations,

businesses, and individuals understanding the benefits available to them. However, the connections to be made require effort and some strategy.

Bridging and Bonding

The process of building social capital requires initiative on both sides; urban and rural communities are distinctly different in regards to socialization and community cohesion. The latter tend to be more embedded in their environment and culture, whereas the prior are less inclined to have direct connections to one another as they are spatially detached and therefore do not interface as frequent as rural communities (Putnam 2000).

Ultimately, the reconnection is possible through the bridging of interests between adjacent communities, such as peripheral rural and urban (suburban) community interface. The concepts of bonding and bridging social capital lend insight into understanding the differences between rural and urban communities. Rural communities are usually more cohesive, altruistic, and civically engaged, whereas urban communities are more disconnected, less unified, and composed of diverse cultural backgrounds and practices that are not congruent with their rural neighbors (Putnam 2000). Local food and its producers aim to reconnect these two communities through the understanding of one cultural constant, the need for a reliable and healthful source of sustenance. However, there is a barrier to gaining the support of the indifferent communities that do not readily understand the importance of local food, and therefore are not supporting the local food endeavors.

First, we must break down bonding and bridging to have a better understanding of the importance of the two concepts. Putnam defines bonding social capital as, “a kind of

sociological Super Glue, whereas bridging social capital provides a sociological WD-40. If you get sick, the people who bring you chicken soup are likely to represent your bonding social capital” (Putnam and Feldstein 2003:2). It must be understood that bonding social capital is much like the familiar cohesion between family bonds and those of close-knit communities, such as those found in the rural sector. There is a trust, a bond and an understanding that the members of these communities are reliant on the reciprocal nature of their relationship in order to continue the lifestyle to which they have grown accustomed.

This common bond is not necessarily connected to outside communities, such as (sub)urban communities, and vice versa. Hence, we see the necessity of bridging social capital in order to connect to outside (non-farm) communities with the end result of benefiting all players in the communities under the reciprocal actions of its members.¹⁷ In this case, we are discussing the direct exchange of benefits between the farmer and the community; the farmer provides the community with quality, local food, and the community offers the farmer viability through the monetary exchange for goods produced. The end result is a support network that takes into the account the importance of each entity’s role for their shared survival.

¹⁷ It would be incorrect to say that only non-farm communities need to be bridged to farming communities for the support of the local producer. As this research shows in Chapter 5, farm communities not “in tune” with the local sustainable food movement are not willingly accepting the higher prices placed upon various farm produce and mix-use products. Therefore, it is equally important to gain the support of those, rural and urban, not aware of the benefits of local food versus commodified, pre-packaged and processed food items found in the super markets and big-box stores.

To ensure this beneficial production of bridging social capital, there is a final concept that must be considered: a mode of exchange that involves the community, farm, and a third factor, the service sector.

Exchange Network

The sustainable agriculture/local food movement and its mode of production is much more in tune with bringing back social capital to its local communities that was once present in the earlier part of the 20th century; thus, reestablishing a community based on *gemeinschaft*. The current downward spiral we are witnessing in the corporate-capitalist model of accumulation is not to be changed over night; rather it is a structure that is to be manipulated over time to work in the favor of the small farmer and the adjacent communities.

3-Line Exchange Network

If we are to study the graphical depiction of the "3-Line Exchange Network"¹⁸ (Whitmeyer and Cook 2002: 275) we will see the unbalanced exchange between A-B-C, where "B" is the beneficiary of the exchange agreement between "A-B" and "B-C". We must view this model for a better understanding of the current Industrial Ag structure where, ("A") represents the local industrial farmer shipping grains to ("B"), the commodity grain markets and Ag corporations. ("B") then redirects the commodities and receives a monetary exchange from local and international communities, livestock feeders, end user/processors, and wholesalers ("C"). Now we are able to visualize the

¹⁸ See Appendix C, for interpretation of models

alienation between the producer (“A”) and the consumer (“C”); the producer does not have a direct connection with the end product nor the end user, therefore the fruits of their labors are not realized. The only connection between the producer (“A”) and the end product user (“C”) is the scant market return (“B”). As this process was established and has intensified over the last century, leaving those farmers with limited capital struggling to keep up with the exchange treadmill.

Triadic Exchange Network

When considering the local food system now taking a foothold in the Midwest, including Eastern Nebraska, Whitmeyer and Cook’s exchange-model may be tweaked a bit to represent a triangular structure, not linear. This way all will benefit, providing a better balance, increasing social capital all the while reducing the negative consequences of the current agriculture structure.

In the triangular model, we have the small farmer (“A”) adjusting their operation as to create a specialty market, i.e., organic production, vegetables, fruits, nuts, crafts, eco/farm tours, in addition to countless other options. This specialty market will benefit the farmer to maintain a viable operation as it will appeal to the local service sector or market (“B”) via creating farmers’ markets, which will attract local consumers (“C”) to already established local businesses, as well as creating demand for other markets such as specialty food stores and restaurants.¹⁹

¹⁹ Many of the farmers’ markets I attended over the duration of this study were located near or on the premises of a variety of businesses that were not directly associated with the farmers’ market. Through cooperation between local businesses and farmers’ market vendors and managers, there is a promise for increasing the local influx of patronage to the service sector and farmers’ markets.

With the growing interest in local food (USDA 2006), the local communities (“C”) will be directly supporting the local service sector (“B”) by shopping at the specialty stores and markets, as well as supporting their local farmers (“A”). By purchasing farm products at specialty food stores, *and* by frequenting their farmers’ markets and on-farm operations, such as CSAs, this may increase farmer income and the viability of the farming operation. Theoretically, as this process of exchange grows it may be presupposed that social capital within the rural/suburban fringe will create a social structure that will deter indifference for local producers, consequently curbing conspicuous, lateral urban developments into viable farmland; thus, not encouraging farm displacement.

Consequently, this increase in social capital may cohere networks of interests within communities, both rural and urban, ensuring the decrease of incessant capital accumulation and subsequent mass ecological degradation through the increased interest of the communal well being via local market exchange.

CHAPTER 4: METHODOLOGY

Approach

During the summer of 2006, I conducted thirty, in-depth interviews (see Appendix A) of specialty, niche farmers in Eastern Nebraska.²⁰ The sample of farmers' markets was derived from a USDA Farmers' Market list where I was able to make my initial contacts through introducing myself at the Omaha and Lincoln farmers' markets, as well as Blair's farmers market. In addition to the USDA list, I used the "Buy Fresh, Buy Local Nebraska" member guide.²¹ This guide allowed me to pinpoint particular types of farmers, such as those selling meat goods, vegetables, herbs, fruits, flowers, dairy, and other mix-use products.

From those first respondents, I utilized the "snowball" technique to gather contact information for additional respondents in the area. The "snowball" technique allowed me to contact similar farmers (through word-of-mouth) within a network of Omaha, Lincoln, Fremont, and Blair farmers' market producers. It was necessary to use this technique in order to save time since I only had a three-month period to work with before my return to Humboldt State University.

²⁰ This study is mix-mode analysis, where both qualitative data (face-to-face, in depth interviews) and quantitative data (mostly utilizing secondary statistical data from other sources, i.e. Leopold Center and the USDA) were used. Mix-mode analysis offers a broader understanding of the subject at hand; qualitative and quantitative data alone are normally sufficient in social science inquiry, however when both are available the two methodologies may speak to one another offering additional data and findings. Additionally, incorporating a mix-mode sample it allows for greater savings of time and money (Dillman 2000).

²¹ For a list of Nebraska farmers' markets see: <http://www.agr.state.ne.us/pub/apd/produce.htm>.; For information regarding the "Buy Fresh, Buy Local" campaign and its members, see: www.foodroutes.org.

Survey Tool

To accommodate another study based out of the Center for Great Plains Studies at the University of Nebraska-Lincoln, I constructed a questionnaire (Appendix A), which focused on content relevant to both this thesis as well as their national study on farm viability. Question topics ranged from: *farm history, land (geological factors; rent/own/lease), community relations, input costs, operation disinvestment (selling out), income, and farmer opinion (policies, five year plan).*

Respondents

The sample of farmers interviewed was composed of 13 women and 17 men. Most of the respondents included family members in their operation as the primary source of labor. There were also respondents who were partners that relied upon the labor inputs supplied by the partnership, which may or may not have involved family. Lastly, there were a few of the respondents who worked solo, with very little to no family or outside labor.

The interviews lasted anywhere from a half hour, to two hours in some cases. The location of the interview often depended upon the length of the interview, for example the interviews located on the farm tended to be longer with stronger elaborations, whereas the interviews conducted at the farmers' markets were shorter and more concise. My reasoning for the difference in length is assumed to be that the farmers' markets were a distraction as the farmer was in the process of selling goods; therefore they were shorter on time to elaborate on certain topics. In addition, with the presence of other farmers,

family members and customers, the farmer seemed to withhold information about techniques and strategy related to their farm practices.

Market Observation

I spent a lot of time gathering data from various farmers' markets in Eastern Nebraska, enabling me to observe the consumer-farmer interaction, marketing techniques and trends. The chance to observe the markets adds some verification to how many of the farmers responded, such as whether or not consumers were doing more socializing versus shopping. It was beneficial to discern the difference of size of the markets and whether or not certain products, or services were be available to customers—what products and varieties of products were available at the markets, versus other markets.

Omaha and Lincoln are the most populated cities in Nebraska, therefore, market location directly affected vendor/consumer participation; the larger the city, the more interest in the farmers' markets. Additionally, the larger markets in Omaha and Lincoln are located in the downtown sectors of the cities, which also have larger student populations due to the market's proximity to the local universities. Research has shown that farmers' markets and CSAs tend to be numerous and more successful when there are larger numbers of students (Guthman, Morris and Allen 2006).

Secondary Data

The qualitative data gathered is supported by secondary quantitative data acquired from the USDA and various independent qualitative studies from around the nation, such as the Leopold Center at Iowa State University. The USDA study (2006) is a preview of

the forthcoming study that analyzes the consumer trends of farmers' markets in Nebraska. Due to the time constraints of this study, I chose relevant data that paralleled the interests of the findings in this study. In order to validate these parallels, an in-depth quantitative/qualitative study of the consumers attending the Nebraska farmers' markets in this study would be required. This would allow for the farmers in the study to have a better understanding of the exact purchasing patterns and reasons for attending their particular market.

CHAPTER 5: ANALYSIS

Industrial agriculture and urban sprawl have taken their toll on Midwestern farms; farmers compete with the factors of affordable land, technology, and high input costs. Additionally, as farmers wrestle with non-farm community concerns of farm noise, smells, and “unsightly” operations, while trying to eek out a living on substandard returns at the commodity markets, the odds for future viability wane.

The farmers in this study utilize non-conventional methods of production; they do not farm large acreages nor incorporate large doses of chemical inputs. The average amount of land farmed by the respondents is around 61 acres, and if there were any chemicals used, it was minimal to none. Many of the farmers used sustainable agricultural methods, incorporating livestock and other natural methods of crop fertilization and rotation.

This chapter analyzes five points of interest: *Reasons for getting in, off-employment, ease of transition, community support* and the respondents’ *five-year plan*.

- *Reasons for getting in:* What are the major reasons these farmers have transitioned into a more sustainable farm operation versus pursuing other possible sources of income? Some of the reasons considered are financial, personal, healthful and ethical.
- *Off-farm employment:* How are the farmer’s making ends meet? The farmers in this study, just as their conventional neighbors, often need supplemental income to ensure the maintenance of the household and farm structure. It is most essential to have available off-farm income in the winter months, the season when most farmers are inactive and regrouping for the upcoming spring planting. Just as important, the off farm income provides the necessary benefits of health insurance, retirement plans, profit sharing, and other perks not readily available to farming operations.

- *Ease of transition*: How were the farmers in this study able to transition into their operation? It is much easier for a farmer to establish their operation if they already have the social, physical, human, and economic capital in place. In other words, farmers who have networked with other sustainable farmers in order to gather needed education, for example, have essentially established the *social network* or *social capital*. *Physical capital* can be understood as access to available ground, machinery, tools, and out buildings; *human capital*, the “know-how” to farm or skills, as well as the available labor in the form of family, as well as hired labor. *Economic capital* is the basic understanding of capital: money, investments, grants, etc.
- *Community support*: How well does the local community support the farmers in this study? What are the perceptions of the farmers regarding community support? The community inevitably supports the sustainable farming movement; farmers’ markets, and CSA systems could not be possible without the help of the local community. The analysis discusses some of the views of how farmers gauge the reasons customers may or may not choose to support their operations; proximity to markets; and marketing techniques to establish customer relations to ensure their own viability for future farming operations.
- *Five-year plan*: What is the general outlook for the farm’s future? It is pertinent to understand whether the farmers’ current operation is sustainable enough to manage the exogenous influences of rising land valuations, taxation, market competition, personal physical condition, and the probability of child succession of the farm.

Getting In

Most of the farmers interviewed over the course of the summer were a mix between transitioning commodity farmers and “new” farmers; the former often having been affected by some of the same factors that have historically affected farmers, such as rising land valuations, low market values, and government intervention. Likewise, the new farmers are also experiencing some of the same aforementioned conditions that have driven out conventional farms, from both past and present. Overall, the farmers interviewed were concerned about sustaining their livelihoods, the health of their children, and aiding the sustainable agriculture movement. Additionally, many have gotten into sustainable agriculture upon identifying the environmental and health issues that harm the land and consumer.

These days we're using too many chemicals and I think that's why we have so many sicknesses. –Farmer 23

I was looking for something to make a positive movement in my life and on consumption. [Farming] seemed like a positive vehicle socially, culturally, and environmentally . . . food seemed like a like a good vehicle for that message, everyone needs to eat. –Farmer 4

The altruistic nature of this farmer to do what he thinks as being a positive step towards a more sustainable practice, both culturally and environmentally, is shared by a number of farmers in this study. The sustainable agriculturalist understands that either for financial or personal reasons, they are unable to maintain the status quo of industrial agriculture pervading Nebraska and the rest of the nation. One of the Dodge County farmers responded with a similar altruistic response when asked how he and his family got into raising natural meats:

We have always been interested in alternative agriculture, growing things organic. We finally got to the point when our kids got older that we wanted something to do. We grow our own food because it's healthy for us, so we decided to do it for other people, too . . . I know a lot of these farmers and

how they raise confinement hogs and all of the steroids and antibiotics they pump into these animals, that ain't for us. So, if we can sell something healthier to somebody and make them feel better that's what we want to do.
 –Farmer 5

Health

Many of the farmers interviewed often made comments concerning the well being of their own health, as well as that of their children; what they fed them, and the type of environment in which they were being raised was equally important.

The following comment is comes from a pair of respondents who are partners in raising local food. They do not refer to themselves as farmers, per se, rather, “market growers”:

I've been gardening all of my life and both of us have the same views about feeding our families, we don't want to use the pesticides and the chemicals and the synthetic fertilizer. Everything we feed them is free of hormones and antibiotics . . . We were a dual income family for a long time and we didn't have any children, but then when I had my first child you begin to worry about what they consume. I'm seeing the little girls developing so fast and I hear about the hormones in the milk and meat, so I started looking for chemical/hormone free food and I really wanted the stuff that I'm growing because I know where it's coming from and that's also why we want to sell to people so they know what they are getting. We could sell to the small food outlets, but we want the consumer to know their farmer and if they don't, we lose that connection with the public. That connection is the kind of business that we want to have; we want that face-to-face contact.
 –Farmer(s) 11/12

There are studies supporting this idea of synthetic applications contributing to the rapidity of the physiological processes in youth, namely that of young, prepubescent girls (Guillette, Conard, Lares, Aguilar, McLachlan, and Guillette, Jr. 2006; Andersson and Skakkebaek 1999). In addition, there are concerns about the health of farmers and their families who are regularly exposed to the numerous chemicals applied to their crops, as well as the use of heavy machinery (Cross and Edwards-Jones 2006; Courteney 2006). The farmers in this study believe there is a high likelihood that agricultural chemicals are directly related to demise of the world's health, in humans and the soil.

The following comment from a natural meats producer introduces the desire of some farmers to provide a healthful environment in which to raise their children:

About 1980 I moved to a farm in Southwest Pawnee County. I had three young boys and I was looking for a lifestyle that basically, I was looking for raising good food and a good place to raise a family. We started the farm operation mostly conventionally but we had a component that was raising food instead of commodities. Commodities are not necessarily taking into account quality and nutrition; it's mostly concerned with the buying and selling of pounds of beef or bushels of grain. When you sell food, you're selling the food and the nutrition and the values that go with it. So, we started raising for our family . . . –Farmer 17

Other farmers enjoy the solitude that farm life offers, concomitantly reducing stress while maintaining their health as a form of exercise they normally may not get in a conventional farming operation.

. . . [I] don't know what I'd do [if I didn't farm]. I had open heart surgery and the doctor told me not to “get a riding lawn mower, you walk.” And then that is what is keeping me going, I don't even have to take medication, plenty of fresh vegetables . . . as long as I don't get handicapped or something like that, I just feel like it is a boon to me to go out and just like this morning I went out and hoed some weeds and that helps me. It's relaxing and I feel that if more of the young kids got into gardening they would stay away from the drugs; they get depressed and they think they need drugs to get back into shape. I think it is helpful to garden and healthful and I enjoy this. But, my wife tells me I should get out [of farming], but I tell her that if I quit, I might get sick. –Farmer 23

You have to love it, enjoy it, you have to like working because it is time consuming because the garden keeps you very busy, but it is a good place to go for therapy. We always say if you're frustrated go to the garden when it's nice in the evening or morning and forget about all your frustrations. So, it's good for people's morale and your attitude but you have to like it, being outdoors. –Farmer 25

Autonomy

For other farmers, it was the autonomy of doing what they loved to do. They were able to diversify and make ends meet with innovative ideas, a desire to succeed, and maintain their identities. Upon meeting with another meat producer at the farmers' market in downtown Lincoln, the personal convictions of autonomy became apparent:

. . . [W]e enjoy raising livestock, we still think it's a good way to add value to our grain operation on the farm. It is very time consuming and demanding, but we wanted to stay in the livestock business at the point when the small guys went out of business, the independents were going fast. The other thing that we didn't want to do was be a contract grower; we didn't want to put up a thousand head finishing barn and raise something for Cargill or someone. We still wanted to maintain our independence. – Farmer18

Another farmer, who has been working with her family farm for the past 39 years, discusses the benefits farm life has offered her and her family:

It's just been our life. It started out as a hobby and we enjoy what we do. We love watching things grow and I don't think there is anything else we'd like to do. It's nice to be self-employed and I've never worked away from the home, and I was lucky to be home to raise the children and to work alongside my husband. It has kept the family closer. –Farmer 25

A dairy and natural meats producer interviewed, previously holding a position teaching at a local university got into the sustainable agriculture movement with a little encouragement from her husband. She enjoys her life on the farm, the hard work driving her to provide the optimal environment for her family:

For [my husband], he didn't want an office job, he didn't want to live in town and his dad farms and he likes animals. For me, I'm really into the food thing. I like knowing where my food comes from and it's really good for my boys to be out on the farm. I like the interaction with the customers, the people. I could be plunked just about anywhere and be happy and successful. I like to work hard and do a good job and that will get me to where I need to go. So, whether I'm milking a cow or doing data entry, I'd be happy. –Farmer 19

It is rare for a farming family to enjoy the autonomy of farming to supply their overall household income. Often it is inevitable that secondary employment of some sort may need to be implemented. Many of the farmers in this study are able to, or are currently attempting to incorporate some other means of income into their operation.

Off-Farm Employment: Making Ends Meet

Farmers have always had to improvise and diversify their operations in order to remain viable. Historically, we saw the labor transition from the farm to the urban core, mainly by the women and mothers of farm families. In contemporary agriculture and within this study, the role of off farm employment was evident, as both men and women of the farm were often employed in one or more professions other than farming. The supplemental income provided much needed benefits not provided by the farming operation alone, such as health insurance and retirement plans. For those farmers in the interviews, the majority were unable to fully sustain their household income solely through their annual farm incomes, and more often than not incorporated another business on their farm or held off farm jobs.

I was able to interview a longstanding organic farmer living in the midst of an encroaching housing development and surrounded by conventional farming operations outside of Bennington (NW of Omaha). When I asked him what some of the drawbacks may be about farming in his part of the country, he replied with little hesitation:

The economics. There's no way you can do it, and that is why small farmers are starting the CSA's and farmers' markets so they can stay there. They might also have a job off the farm. The young man that farms our land has a construction job in the wintertime laying blocks. He also plows snow.
-Farmer 10

This farmer is near retirement, leaving most of the workload to his hired hand, while he mainly works in his greenhouse and gardens growing produce and herbs for local restaurants in Omaha. He and his wife barely earn enough from the farm production, and rely on playing the stock markets for extra income.

Farming has traditionally always required farmers to diversify their operations to stay viable. With the advent of subsidies, pressures have been relieved for some of the larger farms, but the smaller operations still scramble for supplemental income. When asked if his

farm production was adequate enough to sustain his family's household income, this farmer replied:

It supplies a supplemental income . . . I have a construction business that is a nice marriage with the farm, the equipment involved with that allows me to work directly with the farm, too, i.e., skid loader, nail guns, etc. Otherwise I couldn't afford that in addition to the other inputs for the farm. That's the good part of the overlap of the two businesses. The construction carries the farm. We decided several years ago that money came easier from the construction business. When you're on that cash-flow basis where you're waiting for the next paycheck from the sales at the farmers' market, there's no depth and that's an uncomfortable feeling. The construction business has offered depth. –Farmer 4

This farmer was able to utilize his available construction equipment to aid his farming operation, and more importantly help him and his family with a steady income throughout the year. This is a fortunate situation to be in, and echoes of farm structure of the past where the livelihood of the family farm was maintained on the farm. This pattern of integrating all possible assets into the farming operation is one of the identifiers of sustainable agriculture (Bird and Ikerd 1993).

A farming couple from West Point, NE, in addition to their free-range meats and eggs, manufacture aprons on their farm. When I asked if he or his wife hold off farm employment, he replied:

No, I should say yes and no. We manufacture aprons and we sell them wholesale around the country, but we manufacture them on our farm. We actually have a small building that the raw product comes in and we manufacture them right there. –Farmer 14

Another natural meats and produce farmer and his wife, who is also his business partner, are both rural mail carriers. When asked about their transition from their previous conventional farming practice, which eventually evolved into their present operation, they stress the importance of having supplemental income to get them through the tough times:

[We were farming about] 400 acres, mostly corn and beans, I had a lot of alfalfa, we had a lot of livestock and back in '94 and '95 when the market went to heck, it took us out of farming; we had a lot of money tied up in livestock and we lost a lot of money... I couldn't even cover my feed costs.

So, you have that many hogs and you lose that much money, the bank comes up and wants their money. At that point, I was lucky I was already working at the post office, still workin' construction part-time. So, now I'm still workin' for the post office and I have a retirement plan. I know I get a paycheck every week. –Farmer 5

This farming partnership relies on their husband's supplemental income and has adjusted their future plans according to benefits available to them and their families:

At this stage, we're looking at another 15 years until retirement and that is so iffy, no Medicare, we don't know what will be available. But, if we have a small, viable business, and with our husbands retiring from their jobs, we'll be able to maintain the business for a little longer. –Farmer(s) 11/12

I was able to interview the widow of a grain/beef farmer who details some of her past experiences on the farm, offering insight to the waning farm culture of the past:

I was mainly mother/housekeeper/gardener. We had our own milk from our cow but we raised beef from our cattle. We were not big beef farmers. We mainly had thirty head. We got out of that when we got too old to chase them when they got out of the fence. There comes a time when you have to make changes, keeping up with the fences and taking care of the cattle was too much for [us]. I don't know what year that was. What we'd do is buy cattle and raise them up. We never had a big cowherd. We had some pigs and sheep when the boys were in 4H, but basically our farm was right here on the 320 acres and we had no income other than what we earned from the farm. We didn't live from paycheck to pay check, but from crop to crop, which is a big difference. We never bought an automobile without paying cash for it; we did that with the summer wheat crop... I guess it was around the 4th of July. That would cover that. But that isn't so today, of course. They put the hay up three times a year, we lived on what earned, we didn't spend what we didn't have, and we were as happy as if we were in our right minds [laughs]. –Farmer 2

Upon interviewing this respondent, it occurred to me how the farm structure has changed since her days with her family farm, raising cattle, growing produce for her family—spending only what they earned. She told me later in the interview that as time progressed, her boys left the home and she began to can less, they dissolved the beef cattle business, and with the increased access to urban amenities, their farming became less sustainable and developed into what we see today as a commodified, industrial grain

farm. She later took on jobs with the local church and real estate company, therefore exemplifying the farm family within a farm structure that necessitates off-farm employment. However, the importance of this interview is the reflection of a period when on-farm income sustained the family through measures that incorporates resources available to the farmer.

Ease of Transition

Farming is a capital-intensive operation and the start-up costs alone can greatly hamper the net returns in the initial years of production. Few of the farmers in this study were able to buy their land with personal funds; most acquired land through the sale or lease agreement from a parent, relative, family friend, or neighbor. One of the first interviews conducted was with a farm couple who, upon their return from a stint managing an organic farm on the west coast, were fortunate enough to have a landowner offer a test plot to do a trial run with their operation:

. . . [T]he first year back, it was sort of a pilot run to see if we could do any good here. We did that on a piece of borrowed ground from a retired psychologist who had a couple of horses and wanted to help out a small family. We worked off his ground for one season and then we, my family bought a farm and started working small, just a couple of acres, to four, six then ten. We own 38 acres, and farm about 12 that is in vegetables, cut flowers, cover crops, and the rest are alfalfa. We never exchanged any money, we just supplied him with produce and we still do today. He even had a couple of garden tractors that helped us out at the time, too. We were more gardeners with little machinery; so, that was very generous.
—Farmer 4

Having this connection with the psychologist, and being able to use the land and machinery, this farming family had a leg up on getting into their operation. Without the available social capital, the hurdles to entering into such an endeavor may not have been as easy. Another pair of CSA farmers told me about how their plot came with the house they both rent just southwest of Lincoln:

. . . [W]e moved out here and basically talked our landlord into it [laughs]. Initially, we said we want a garden, and they said we could use the abandoned pig lot back there. We said, “no, no, we want a big garden to market.” They like it, they think it’s pretty cool and they show people.
–Farmer 7

These farmers were fortunate to have such flexible landlords who were supportive of progressive ideas. Given the highly conventional farm culture in the area, there could easily have been some misgivings about allowing this young farm couple such an open opportunity to pursue their goals.

In the next comment, a family CSA farm outside of Lincoln details a support group that is interested in implementing more local food in the area. One of its members offered them some land for their operation:

We had a gardener member come to us and say we were a good investment. He was part of our core group; we had a core group in Wisconsin, and a core group is a group of individuals that are concerned about the farm and in participating at a higher level. They might even do thing like [publish] the newsletter or do the bookkeeping, or whatever. . . Anyway, through that, this guy, we were talking about buying some land and he stepped forward and said he had a small inheritance and he thought it was a good investment and he was basically our loan. We [also] used NIFA (Nebraska Investment Finance Authority)²², they have an Ag loan that was tax free, well, it was a very low interest rate, around 1 percent. We also got small loans from our parents to build this house.
–Farmer 28

Some farm families were able to utilize investments that they either already had prior to getting into their operations, or they invested over a period of time to get to where they are now.

The way we got ahead in the ownership of our land was 12 years ago we started purchasing homes and we would fix it up and every third year we would sell it and repeat this until we were able to by a home and pay for it. That has made a big difference. –Farmer 15

²² NIFA is a financial loan organization intended to help out individuals such as, first time home buyers, beginning farmers, entrepreneurs, and ironically enough, developers. For more information visit: <http://www.nifa.org>

The patience displayed by this family is essential for obtaining their end goal. Just as with the weather, and the other unforeseen hurdles that may arise with farming, patience and perseverance are necessary personal attributes.

Financial Assistance: Policy, Grants, Loans

All the farmers in the study needed some sort of financial assistance, and few actually took advantage of any government sponsored programs such as SARE (Sustainable Agriculture and Research Education), or EQIP (Environmental Quality Incentive Program)²³. Many of the respondents were wary of any sort of government intervention or help, holding the idea that there may be some sort of “string” attached to the policy/grant that may take away from the autonomy or future viability of the farmer.

Past intervention of government in agriculture has facilitated the current conventional structure of agriculture, which has decreased farmer autonomy in their operation, often relying on subsidies and loans to get farmers to the next season. Therefore, farmers have little reason to believe that increased government interest in locally produced foods will garner more favorable results. In some cases, government intervention directly affected their previous operations, leading the farmer to consider other options. One farmer describes the decline in her family farm after I posed the question, “How has farming in this part of Nebraska benefited your operation?”:

It has had its ups and downs, sometimes the government interfered, for instance we were feeding cattle, back-grounding cattle—getting small cattle and then raising them to sell to feeders. We did well, then one year the federal government decided to buy out all of the dairy cows, it cost us around \$60K. That is what put us out of the cattle business and hurt the farm overall. There was an overabundance of milk and to help the retiring dairy farmers out, the government would buy their cattle and sell them for beef. Therefore there was an overabundance of beef on the market, which hurt us. It killed the market. This was in the early 80’s. That pretty much is what lost the farm, with the ups and downs, and major losses, some poor

²³ For more information regarding EQIP visit: <http://www.nrcs.usda.gov/PROGRAMS/EQIP/>

decisions on our part and the bankers didn't help us out either, they made poorer decisions than we did. –Farmer 1

A natural meats producer in Dodge County formally raised hogs before the larger producers and government policy undercut him and his family. When asked the question “Have you ever taken advantage of any farm policies” his reply was:

We've tried but we're always told that we're too far down on the list or we just missed the deadline, etc. We just haven't been able to take advantage of any. There was one time when we lost our hog operation and there was a meeting about the government subsidizing the hog farmers. We went to the meeting and what we were told that we weren't big enough producers. They wanted to bail out the big producers first, such as Tyson, ConAgra, all the big confinement lots that have 3-4000 head of hogs, they got the money from the government, we didn't get a dime. To me that ain't right. –Farmer 5

Upon interviewing some natural meat producers it becomes more apparent how government intervention has hampered farm viability, as well as possible consequences of intervention:

. . . [T]hat's a kind of a sore subject for us, because when we started this there were some groups that were doing this, there were some families and they got the grants. We just didn't qualify because we were too little of a family. The grant process, of all those people that got grants, I can think of two that are still in the business. And they got a lot of money out of that deal. If I could have gotten half of that money . . .and what makes me mad is that here we have been doing it for a while and you can get all kinds of money for feasibility studies and I didn't need that; I knew what worked and what didn't work. I needed physical assets and the money for that kind of stuff is really hard to get. So, we got no grant money, it was out of our own pockets and with a little sweat and effort. I've never applied for a SARE grant, but I probably should. –Farmer 18

. . . [I] specifically am very much against government funding because there are always some sort of strings attached. There are different programs out there as far as buying/renting, I don't even know what they are, but we have refused those. There are several hundred dollars every year they want to give us, but we have actually refused because we just don't want them. The biggest thing is to get the government out of the way—that is the biggest obstacle for the small farmer. They've tried giving us money for everything, subsidies for that and this. If they just let us sell our product and lift the county codes and stuff like that. I don't expect to eliminate all of it; I want to maintain a certain amount of health [code]. There is just so much red tape involved, fees and things just to sell our product. And to get our full value we have to sell retail and just to do that there are miles and miles of government red tape that they could eliminate. At least streamline it and have a liaison

that lays it out for us: I'm selling beef, what do I have to do? You have to do this, this and this...I've gone to three or four different agencies and asked how they [beef] should be processed and I get a different answer every time. The inspectors come around and I get a different answer from each and every one of them. So, farmers don't know what to do.

–Farmer 14

We did not go for any grants through the government. The government does not ever give anything away for just being nice, that's the truth of it. We still receive cards and checks in the mail from them asking us to sign up for something. We just got a card in the mail saying they needed inventory of every animal on the farm. I was thinking, what in the world for? We still don't know why. They said we needed to have that and of course constitutionally we know we don't need to have that. –Farmer 15

There are some [programs] out there available to me but I haven't taken advantage of them. Part of the reason is, is it's sort of a fantasy world to work in an operation that is supported by someone else. Number one, I don't think they should have to support my operation, number 2, what happens when the support is gone? Do I fall on my face? A lot of supporters don't want to hear this but a lot of the people fall on their faces when the support is withdrawn. So, we've tried to build something that is sustainable. –Farmer 17

So, there is a mistrust amongst the smaller producers when it comes to inquiring into government help; the suspicion of “strings being attached” is overwhelmingly present. The sustainable agriculture movement is very aware of the larger farm structure that has altered the way food is produced, a loss of autonomy leading some to disinvest, while others search for better answers to maintain their farm viability.

Community Support

It is difficult to say exactly how large of a demand there is for sustainable agriculture and its supporting markets in Eastern Nebraska. The Leopold Center at Iowa State University in Ames, Iowa conducted a nationwide, non-random internet survey measuring consumers' understandings of what “local food” means. The study measured consumption patterns in the Boston metropolitan area, the Midwestern states of Iowa, Kansas, Nebraska, Wisconsin, Illinois, Indiana, and Minnesota. In addition, the Pacific

Northwest (Seattle and the surrounding metropolitan area) was surveyed as well (ISU Business Analysis Laboratory 2003).

What is interesting, for the sake of understanding public perceptions of what is considered “local”, is that “more than 40 percent of respondents from Seattle and Boston and nearly 39 percent of Midwest respondents considered local as ‘grown in my state.’ Approximately 35 percent of the Midwest respondents and 26 and 31 percent, respectively, of those responding in Boston and Seattle, considered local to be a distance of 100 miles or less from farm to store” (p. 38).

All of the markets researched in this study were located in accessible communities. The farms supplying the produce were well within a 100-mile radius of the farmers’ markets, as were their direct market clients, such as restaurants, schools, specialty and local chain grocery stores.

Additionally, produce from farmers' markets has been shown to be preferable to produce from grocery stores (Sommer, Stumpf, and Bennett 1984). When asked what they thought to be the main draw to farmers’ markets, the vendors supported the statement saying that people come for the fresh produce, the kind that cannot be found in stores. From the standpoint of the farmer’s interviewed in this study, a majority believe that the consumer attends farmers’ markets not only for the food, but for the social aspect of connecting with friends, and also as a sort of ritual.

There’s a lot of fresh baked items, sweets that people like to come to buy. We learned to recognize the people that live locally, that come every Saturday to get their fix of fresh produce or whatever. It’s kind of interesting to see the kind of people that crawl out of the woodwork. There are a number of vendors that produce meats, meats without any hormones, or just farm fresh meat, and eggs; some organic things that people like. I would say it is the produce [overall] that brings in the majority of the people, there is a lot of [foot] traffic and people are willing to spend a little extra because that stuff is labor intensive . . . you always see people with their dogs, going down there on their Saturday morning walk, getting their produce and then heading home. There are all these different things that draw people there for one reason or another. –Farmer 1

The comment that people are willing to pay more, because the labor input reflects a quality product, is supported by the Leopold Center's national survey. "Responses were similar across the three geographic regions, with more than 70 percent of Midwest and Boston-area respondents being willing to pay 1 to 15 percent more for locally grown foods and food products with low environmental impacts in transportation" (ISU Business Analysis Laboratory 2003:42). To add to this, 33 percent of the respondents answered that "freshness" was the leading reason for buying locally. Even more interesting, 75 percent of respondents prefer to buy from local farmers, regardless of their standards of production, i.e., organically grown versus input laden products (p. 51).

A market/CSA farmer from the Lincoln area adds to this idea of fresh produce garnering a higher price, as well as the social atmosphere aiding interest in farmers' markets. He and his partner have been working with local community gardens and have since branched out into the CSA market, but most of their income is derived from the farmers market. When asked why people may choose to shop at farmers' markets versus the local grocery and supermarkets, he had this to say:

The interaction with the farmer, they [consumer] like to meet the farmer and ask questions about their products and get a direct answer. Entertainment is another reason. I wouldn't say it is to come down and get cheap food, it's actually more expensive than a grocery store, but the quality is much better.
-Farmer 7

Another farmer I interviewed, a meat producer, in the same location, agrees with the customer wanting to get to know the producer, although he does hint at convenience as being a concern for the local producer. When asked what he thinks draws customers to the farmers' market, he replied:

It's because of the quality of produce, and a lot of it is relationships, I think it is. People lack that today, you can go to Wal-Mart or whatever, we're kind of a Wal-Mart society these days. We have sold meat to the same people for seven years and they trust me if there is a problem they know they can get their money back and they know they are going to get a consistent good

product. People want to know where their food is coming from, health issues are more of an issue, how the animal is raised and what do you feed them. People are looking for that type of product more these days than in the past. I know most of my customers by first name, not all of them, but I at least recognize them all by their face. People don't always get that in the store.
—Farmer 18

Customer service is seen here as offering increased loyalty; if there is a direct connection between farmer and consumer, then there is a chance for maintaining those relationships and possibly garnering future customers.

The following comments come from another meat producer who, when asked the identical question, shares some of the same views formerly stated:

I think it's the people, the social interaction. I think it's the assurance that they [customer] can know where the food is coming from and these are people who value foods and actually much of the world values food more than Americans do. Farmers' markets are a big thing world wide, local food is popular and it is becoming more popular in the states. We've gone through this era where we want cheap food in a centralized area but now we're realizing that wasn't as satisfying as we thought it would be, so now were going back to reconnecting the farm, farmers and consumers. I can't overemphasize freshness; every egg that I sell is less than a week old when a customer buys it. A "fresh" egg that you find in a grocery store is already 30-35 days old. Same with a chicken; when I sell fresh chicken it is one day away from being butchered. In a grocery store it's 2-3 weeks from the time it was butchered. So this cannot be done in the industrial sector and that is our advantage. —Farmer 17

The farmers in this study understand the importance of getting to know the customer, which has proven to benefit the farmer as well as the consumer; the farmer is able to continue with their operation and the customer is able to benefit from the fresh and healthful choices offered by the farmer. By building the network of trust between the customer and farmer, there is a hope that customers will not defect to a super market, or another food outlet offering them the convenience of "everything under one roof".

The fact that farmers are unable to provide a variety of goods for their customers, the convenience of supplying non-food/food perishable items, may be the single biggest drawback for attempting to solidify and maintain a long-lasting relationship with the customer.

In addition, the inconsistency of seasonal marketing will inevitably increase the defection of consumers back to the “one-stop” grocery outlet. When asked what they thought might deter someone from attending the farmers’ market, these two partners replied:

Unless it was horrifically inconvenient for them, I can’t think of anything better for a city dweller than to drive a couple of miles to the market and meet with people and get the feedback from the producer about what we do. We tell them if they want to come out and see what we do, we welcome them. You can’t get that just anywhere. That would be a tremendous amount of comfort for me to have that kind of relationship with my producer. I’ve had an artist group come out and paint, I’ve had a horticulture group come out and see our tomatoes, they graze a bit.

They continue with their marketing techniques that further involve the development of intimate consumer/farmer relations:

What has helped us in marketing is that we are civil with the people, we don’t push the sale on them, we just talk to them like they are people. They learn to trust you. If they think you’re a sales person, they tend to back off, but if you treat them like a person, they come back. And if they want something else, we direct them to another vendor that can help them. We’re all in there for the same thing and we want to help each other out. We virtually sell out our produce every week, so there’s enough vendors for everyone. Farmers 11/12

These two market growers optimistically see the advantages of the farmers’ market system; getting to know one’s farmer and socializing, all within driving distance from the customer’s home. Access to this farmers’ market is a non-issue, for it is located in the parking lot of a high-end, specialty food store in West Omaha, surrounded by suburban neighborhoods and acres of shopping centers and parking lots. However, access to the other markets in the area *could* be an issue. There is still deterrence for consumers to take the time

to maneuver downtown Omaha, and Lincoln; those markets may be less convenient than a grocery store, with less uniformity of choices available in one area, creating a competitive disadvantage for vendors to compete with large supermarkets. When asked what might deter consumers from attending farmers' markets, a majority of the respondents agreed with the idea of convenience drawing consumers to the large supermarkets and neighborhood grocery stores:

Convenience is the major issue to why people don't buy more food [at the farmers market]. If we had more markets that were accessible there would be more interest. We need the Wednesday market, Thursday market, whatever. So, that's why people go to a regular grocery store, it's easy and it's full time. I can go to Russ's 24/7. I have to think out what I'm going to buy and prepare for the week when I come to the farmers' market and a lot of people don't want to do that. It's also just a matter of educating the people to how to use the products they find down here. That's why we want to get a chef down here and display cooking these vegetables that are in season.
 –Farmer 7

This farmer sees the importance of garnering any possible angle to help educate the customer in order to create a loyalty base. Many consumers may have a basic understanding of how to cook with most of the items available at farmers' markets, but for some of the more specialized or "exotic" products, with which customers may not be familiar, it would be helpful to educate them. In this case the farmer proposes an onsite chef who could offer insight to how consumers may prepare meals utilizing "in season" produce.²⁴

²⁴ "In season" produce consumption is a traditional form of utilizing what is available locally. With the advent of a globalized food system, it is much easier for consumers to eat almost whatever they desire, no matter the season. This obviously has its perks for the consumer, but the health benefits are sacrificed as non-local crops are not as fresh as local crops, nor is the local economy benefiting from sending money to a large food chain wholesaler. In addition, the ecological degradation taking place in order to manufacture large amounts of food for global and domestic consumption must be weighed heavily when considering the added benefits of consuming locally, in season products.

Proximity to Markets

For other farmers I interviewed, convenience was not necessarily an issue as their customers rely on their farmers for the quality products to which they have grown accustomed. I interviewed a farmer from West Point, NE who markets his raw milk and free-range meat products at the Village Point Farmers' Market in West Omaha. He explains customer loyalty for his products:

If we can get people in touch with their food, how it is raised, what a chicken is, what a cow is, where their milk is coming from, bring their kids out and they become attached to the farm; we become their farm. We have one kid that comes out and we have a cow named "Cherry". He goes to school and tells his friends that he drinks "Cherry Milk". And that's the type, that's our philosophy, know your farm, know your farmer and then bring people to the farm, which is a hard thing to do, people are busy, but people will travel over 70 miles from Omaha to come and pick up milk, and when they pick up their milk they pick up other things, too. –Farmer 14

People are not always willing to travel such long distances, however, and this farmer later tells me that it has been more beneficial for his operation to seek out the markets, such as the Village Point market in order to sell his products at their true market exchange value.

The proximity to large markets is both an advantage and disadvantage as farmers are able to garner the large customer base of the city, and their willingness to spend more, but the farmer may eventually have to face the deciding factor of whether to up and move their operation or stay and fend for their operation. Omaha is a suburbanizing city, encroaching on the very farmland that is supplying its communities with sustenance. This farming family, whose farm is situated just to the northwest of Omaha, produces raw milk, vegetables, and chicken eggs:

We're a small "mom and pop" operation, our customers are our social life. . . . We treat people with respect, the way they want to be treated. People drive out here from Omaha, some from Bellevue. I want to provide as many things for them as I can, so they have a "draw cart".

My milk customers are starting to appreciate my vegetables. If we were 50 miles out of town, I don't know if we would make it, but being where we are, time will tell. –Farmer 13²⁵

The proximity to Omaha has its advantages, for customers are able to travel a short distance to the farm and pick up their produce. Unlike the aforementioned farmer from West Point, whose operation is much further from any major metropolitan area, must rely on locals to buy up their goods, or travel the seventy-plus miles into Omaha to tap into the larger market.

We're from a heavy beef-producing county that provides a lot of beef for the entire country and most of Nebraska. The type of beef that we are selling is a grass based beef and doesn't go over well with the feedlot producers. So, we decided to come to a larger market here in Omaha, we're selling in front of a Wild Oats and the people here are knowledgeable about the products we're selling . . . in a small community that is so ag oriented and when I go to sell beef for \$4 around, they're used to buying it off the hoof and they know what it costs and it's a lot less than \$4 a pound. When they buy radishes here in Omaha they get a bunch for a dollar and they expect that. They expect it to be less at the farmers' market than the grocery store. So, in some ways since they are so agricultural and have grown up around it, [they ask] how can I charge so much for my food? Their thinking is, I can do that, but they don't do that and "since the store is selling it for \$.50, you don't have to ship it all over the place, so why are you charging me a dollar?" They aren't seeing that those [vegetables] are massed produced, they're sprayed and they don't see the other benefits. The rural areas around here, everything is row cropped, everything is sprayed and when you talk about organic, natural, they kind of boo you and so we've had to come into the larger cities where people are less oriented that way and much more open to less pesticides. So, that has hindered us being in an Ag community.
—Farmer 14

I later interviewed a woman who is farming with her husband just outside of Omaha. She supports the idea previously stated that the demographics of a community make a difference when marketing produce. When asked about the benefits of farming in Eastern Nebraska, she replied:

²⁵ His comment that they are a "mom and pop" operation is a reality for all of the farmers' market vendors and CSA operators, as they are not providing food solely, but they are providing a service that is distinct from the service provided by the local super grocery market outlets, but they are in competition for providing a service, nonetheless.

I think just the fact that we live so close to Omaha, that helps a lot. If you are in a farming community and all you have are other farmers it would be hard to sell to them what you have, but since you have the city, it is easier.
–Farmer 26

Factors of market and education (knowledge of products) begin to surface, as the respondents understand where their stronger markets are. Another pair of market farmers discusses their heirloom tomato production and the importance of knowledge and proximity to a cosmopolitan demographic:

We stopped doing the Blair market because we had to find the right market for the produce we were growing. There just wasn't the demand for our produce in Blair as there was in Omaha. We needed the demographic, the cosmopolitan venue. The Blair market and the downtown (Omaha) farmers' market was cost prohibitive for the small producer and all of the sudden Village Point market arrived last year and that was great.²⁶ That became a reality then to create a serious business . . .the heirlooms have a low shelf life and are produced to be eaten as fresh as possible, that's why you can command a higher price for these products. And if you take these tomatoes to the smaller markets, the people don't understand them and they (the toms) might be cracked. But that's what these types of tomatoes do, they crack once in a while and the people in the West Omaha market understand that because there is higher level of education and exposure to these types of produce. –Farmers 11/12

The education level of the consumer tends to make an impact in regards to the type of customers who frequent the farmers' market. Nebraska farmers' markets' consumer demographic trends tend to resemble that of middle to upper class, Caucasian, college educated, urbanites (Institute of Agriculture and Natural Resources 2001).

Increasing Customer Base

The farmers in this study feel that consumers' market choices will also be affected by the consistency of the food options available to them. For instance, if the neighborhood farmers' market offers only a variety of one tomato, potato, lettuce, etc., and the consumer

²⁶ This farmer and her partner explained that the “prohibitive” nature of the downtown farmers' market in Omaha is due to the high stall fees, the lack of parking for customers, and an overabundance of crafts rather than farm food products. They do most of their marketing at the Village Point Farmers' Market in West Omaha, where there is plenty of parking and “reasonable” stall fees.

may find that item in their local grocery store or an equidistant super market, which may also offer lower prices, there is a good chance they will forgo a trip to the farmers market and opt for the “sure bet”. This is exacerbated in the winter months when farmers’ markets are closed for the season. Consumers have little choice *but* to shop where food is available.

One CSA and market farmer had this to say:

Southeastern Nebraska is not a strong vegetable and fruit producing region, at best it is only seasonal. We’re not as innovative as some parts of the world, such as the Netherlands with their fleets of greenhouses; you got bell peppers coming out of the Netherlands in the middle of winter, vegetables from the desert in Israel. There are things that can be done through innovations that will extend growing seasons. This part of the country hasn’t really done much, we have a fairly short growing season with not a whole lot of producers trying to lengthen that season, so people have to shop somewhere during those off seasons. The Whole Foods and Wild Oats, they’re targeting the health conscious consumer and high-end gourmet ones [consumers]. They offer diversity in the produce line you may not find at Baker’s. So, somebody who really likes produce, Whole Foods may pull them in more consistently. We have a lot of customers that overlap, somebody wants broccoli and nobody at the markets has what they’re looking for, so they come down here [farmers’ market]. That’s really the ideal consumer, if you can get from a health perspective, eating in season is an advantageous thing, but most of us are pretty spoiled and we can get just about anything under the sun; if we want bell peppers in January you can go to the store and pay \$2.50 a piece that come from some other country.
–Farmer 4

What the farmer highlights here is the fact that consumers *do* have a number of options due to the increased amount of produce available at grocery stores. Farmers markets naturally grow their produce according to seasons, and depending on the given season, only certain items are available, often leaving consumers to shop elsewhere. Americans are fairly busy with the daily grind of work and time is of essence when considering what and how ones family will consume. This farmer adds to the notion of why consumers may forego the farmers’ market and opt for the convenience of a supermarket:

Time. Time and the fact farmers’ markets are seasonal. You have to buy things that are in season, people are coming to us already asking us if we have corn, and corn won’t be ready for several weeks at the earliest. They come first thing in the spring and ask us if we have tomatoes, you know? And that’s the learning, that would be a good thing that anyone could do is

to inform the public to eat seasonal. There are certain health benefits to eating seasonal. We have to buy produce from Peru and all these other places. If you would eat more seasonally, and diversify your diet... people want grapes year round and well, grapes don't grow all year round here.
-Farmer 14

Marketing Techniques

One of the main purposes of this study was to see how farmers could gain more support from the local community. It would seem logical that with more community awareness of local food and the value of developing positive relations with their local farmers, farm viability could increase concomitantly decreasing possible displacement. The farmers' markets offer a chance for the farmer-consumer interface, providing the chance for customers to become educated about farm practices, the importance of a healthy diet for themselves and family, as well as understanding how their participation directly affects the future of their local farmer and food supply.

One method of education already provided was the idea of having a chef in the Downtown Lincoln Farmers' Market (Haymarket). Consumers would be able to learn first hand through observing, sampling, and inquiring about cooking methods and ingredients. Another idea provided to me through a market farmer in the Blair Farmers' Market was to offer recipes for the customers.

We try to publicize more and have a customer appreciation day where we gave free samples of our products and served lemonade, and I think that brought in a lot of people and that helps sell some of your items. We would hand out recipes with our items and then that prompts the person to go home and try that. So, there are little things to attract people and bring them here so that's what we try to do, or entertain the kids with candy or a little pumpkin in the fall so the kids are interested, too. So, the kids are going to grow up knowing about the farmers' market, too, and they will come as they get older. -Farmer 25

Not only are they providing educational materials for customer loyalty, but also they are preparing for future loyalty by reaching out to the younger generation in hopes they will grow to appreciate the farmers' market and the value it adds to their lives. In the same

interview, she told me how every year there is a sweet corn festival in their community, where their farm supplies the corn and the community has grown quite fond of this farmer's participation. She explains:

. . . [T]hey like the dependability that we are going to do it . . . we supply the corn, so we have to get 200-300 ears of corn for that evening. People in the community are always asking about the corn and they look forward to that and it draws people closer together. –Farmer 25

Drawing the people closer together is the key to increasing farm and community relations. With more people looking forward to a festival that emphasizes the importance of farm produce, increases awareness for the need to preserve such structures in order that the farmer may continue to provide food and entertainment for the community.

Five Year Plan

Towards the end of the interviews, the final questions were related to what the farmers' intentions were for their farm and to what extent they believed they may or may not remain in their farming operation. The majority of the respondents have no intention of getting out of their operation in the near future. However, they did express concern about certain factors that may attribute to the disinvestment of their operations. Reasons for disinvestment varied from insufficient help, health, lack of family succession, rising land valuations, taxes, and development.

Labor Inputs: Physical Health, Strength, and Endurance

The labor-intensive profession of farming takes its toll on the body, and if the farmers are older, nearing retirement, they are wary about the size and amount of labor they are able to put into their operation. Some were able to involve family in their operation, while others hired local neighbors, friends, or went through an employment agency. Without available labor, a farmer's dedication to their operation can be discouraged by the long

hours working in the field, and battling the elements, such as the summer heat wave Nebraska was experiencing throughout this study.

For this market farmer, her family farming operation was booming, they offered their local community food and the community provided them with the needed labor to increase their production:

. . . [W]e went into truck farming and we actually had a co-op in our neighborhood and we raised 250 acres of cabbage for three years. Then when our sons graduated from high-school and moved away, and all of their friends from the football team and wrestling team moved, too, we didn't have the laborers [so] we decided to get out of the truck farming. –Farmer 25

Now their operation is much smaller, using 10 acres with a greenhouse, versus the initial 250 acres during their stint in truck farming. On a much grander scale, she and her husband have also been farming commercially for over thirty-six years, farming up to 3,000 acres at one point. She told me that as they have gotten older, they have had to downsize that operation, and now they commercially farm closer to 800 acres, with some of that rented out to other farmers. She mentioned they do receive some labor help from returning customers who were just kids when they first met the farmers, however, there is not the level of help they once knew when their children and their friends were available. Without labor, there is only so much an operation can accomplish. She and her husband are also looking to retire within the next five years; hence, with minimal labor available and retirement in the near future, expanding is not a viable option.

This Douglas County farmer comments on the importance of having family involved in the operation:

. . . [T]here is this thing with family, too . . . the multi-generational thing. There are enough things that happen out in the business world that if something were to happen, tempers would flare and things would go to hell in a hurry. But with family you tend to forget and forgive; [without family], sometimes [animosities] tend to fester and grow more. –Farmer 13

Other farmers commented on their personal experiences with family labor, health and endurance:

. . . [W]e're gonna have to hire someone when our daughter goes to college next year. My son just went off to college in North Carolina; he was a big help, so, we lost a lot of help when he left. –Farmer 5

My health. I have arthritis and it gets pretty hard to do too much work . . . I imagine that when I stop doing this, my garden will cease to exist. –Farmer 6

It's a lot of work, I'm feeling the midseason drain right now; it was really hot today. But you get a certain high at the farmers' market, all the customers and people, and normally I'm upbeat, but it was so hot today that I wasn't able to do much pedaling as well as I usually do. –Farmer 19

Although not close to retirement, when asked what would cause her to disinvest in her operation, this market farmer replied:

Well, I guess if I was going to move away from the area. If my son wasn't interested in the farm and I was older and couldn't do it any longer and I couldn't pass it down. I wouldn't sell it just for the money because I'm still actively using the land. The property when we bought it was 20 acres and it could be subdivided into two plots and the land that is next to mine has been sold once and it went for \$85,000 at that time but it has been bought and it sold for \$150,000. So, since we bought our ground seven years ago it has already increased in value, and we've made some improvements. We paid \$55,000 and probably put in \$30,000 of improvements into it and I guess it would be worth well over \$100,000. But, not a lot of people are interested in land with a greenhouse, but there is a good well there that wasn't there before. –Farmer 30

Her son helps out with the farming operation, and markets with her on Saturdays.

He is getting closer to graduating from high-school and there is no telling what will happen with her labor pool once he is absent from the operation. She has tried hiring outside help in the past, but that has proven to be unreliable. With only one person laboring in the Midwestern summer heat, the drudgery of the operation can easily get to the most determined farmer.

Burn-out

The summer of 2006 was met with harsh weather with temperatures hovering around the century mark during the market season. However, when trying to eek out a living in a small-scale operation, there is little else for one to do except to keep going forward. Upon asking the farmers what may influence them to sell out their operation, one of the responses that surfaced quite frequently was the fact they were tired, physically and mentally:

Our biggest reason would be just growing tired, mentally and physically. We've even talked about quitting in the last few weeks. It seems like every few months we wring our hands and ask ourselves is this really worth it because we're not making a lot of money and we really . . . I think our gross sales last year was around \$25,000, and most of that went to expenses and we ended up netting around \$7,000. That's a ten-hour day job seven days a week to make \$7,000 is too much work. We can't sustain that and we hope in the next year or so we can turn that around.
–Farmer 14

Another family farming operation divulges some personal issues that have attributed to their dismay with continuing their operation:

We just get tired, physically. The physical tiredness you can't get over, but life hands you things that seem very overwhelming. We had to send out our son to a home last summer and that was very overwhelming for us. And just something like that, between that [emotional stress] and physical stress, everything seems harder and you think, if God could only provide a really good buyer [laughs]. You'd love to just take a break. Or a major illness would take us out of it. But in reality when the work is all done and we're here [at the farmers' market] and we're interacting with the people, I realize that I'm enjoying myself so much. I love Saturdays, talking with people. So, it would have to be physical/mental burnout, or someone just coming in and offering us a large amount for the operation. –Farmer 15

Whatever the reasons may be, there still seems to be the drive to continue with their operations. Whether it be for the sake of an autonomous lifestyle, or the simple pleasures of the farm life and its culture, some farmers just want to stay in:

Every morning around 5:00 I question, is this worth it? What I try to do . . . economics would be the reason [for getting out]; if we're just not getting the return for the hours that we're putting in. It's close, this year we're having a good year but our costs are up. Health would be one reason; what we do is very physical. We like what we do here, so that weighs in a bit on what we would do. –Farmer 18

Population Pressure: Expanding Peripheries

The residents in this part of county (Washington County) are seeing the development coming and it's coming fast! No plan for it, just letting it happen. So pretty soon this is going to be like suburban Chicago, and people don't want that. I would die if someone bought the land across from us and were going to develop it. I'd try to get out of here; it would make me crazy. They said that the farmers are starting to adopt an attitude that they are getting ready to retire and their kids don't want to farm and the only way they can make money from the farm is to sell it to a developer. It wouldn't be so bad if they were to sell it to a developer with some guidelines that detailed what they could and couldn't do with the land. You would think that farmers that have spent their entire lives working that land would try to preserve it to some extent. –Farmer(s) 11/12

According to the Nebraska Census (2000), Lincoln has grown 17 percent between 1990 and 2000; Omaha has grown 16 percent. However it is the outer limits of these towns, the suburban fringes of Omaha, for example, that are experiencing a population explosion with Bellevue (south of Omaha) increasing 44 percent, Papillion (south of Omaha) 58 percent, and Elkhorn (west of Omaha) at 333 percent in the ten-year span! It continues to expand further, as Omaha recently annexed Elkhorn, and Blair, Bennington and Ft. Calhoun are all seeing a larger number of houses going up and people moving in.

Farming operations, specifically those in and beyond the peripheries of urbanizing cities will have two options: pay the increasingly higher land valuations and taxes, or sell their land for an exorbitant amount for development. The latter may offer financial security for a retiring farmer or one looking to escape the laborious daily grind and uncertain future of farming. However, for those wanting to stay in farming, but unable to meet the rising land prices and taxation, or avoid the encroaching non-farming communities, they inevitably have to move further away from the periphery's edge. The move offers lower land prices, but if

there is one or more people working off the farm to make ends meet, the commute time into the city may summon undesirable costs. A farmer in Dodge County responds to the urbanizing nature of Fremont, NE, as its border's edge near his farm. He had this to say when asked about his relations with his non-farming neighbors:

. . . [O]ur other neighbors are not very appreciative of the livestock. About a dozen [neighbors] got together and tried to get a petition up to try and force us to sell our livestock. Some of them claim they moved out to the country but not to live next to animals. That's the problem we're having with city people moving out to the country; they want to move to the country, but they don't want to put up with the animals. City people move out and they wanna think they live in Regency (Omaha neighborhood). –Farmer 5

In the 2000 census of Nebraska townships, Fremont is ranked sixth amongst the most populated cities in Nebraska (Nebraska Census 2000). Between 1990 and 2000 it experienced a 6 percent population increase, mirroring the expanding peripheries of Omaha and Lincoln.

A Douglas County farmer who has been in the area for over 60 years raising vegetables for local markets, as well as oats, flax seed, and beef, discusses his views on how development has affected the neighboring farms, and how it may affect his own:

There's a housing development right when you come in, they have a well that is used for their water, and that worries us a little. They own, I think they have 5 acres, they all have their sprinklers running day and night and all of that water is coming out of the ground. I don't know what is going to happen. The well drillers say we can stop them from using the water but we'd have to get a lawyer. They're close to MUD's water line, because the lake west of Bennington, those people get water from MUD, I'm sure.²⁷ So, these people over here, I'm sure when they run out of water they're gonna make sure they can get some from there. What we're gonna do in the interim...that's depressing too. We keep watching the water level, and so far it hasn't been affected, but I don't know now. –Farmer 10

Natural resources are a delicate subject with farmers and the presence of non-farm neighbors who do not understand the process of farming are not going to see the necessity of preserving natural resources such as water. Water rights tend to get muddled as

²⁷ Metropolitan Utilities District

subdivisions and farmers find it difficult to compromise over whom and to what extent has priority over water (Flora et al. 1992). The encroaching lake lot development is posing possible water issues for this farmer, furthering the tug-of-war that continues between farm and non-farm neighbors. Not only do these housing developments create possible resource issues, but they also endanger more farmland through their initial planning.

I interviewed a Washington County market gardener who lives close to the aforementioned farmer. Her family's farm is in danger of being flooded as the local NRD's (Natural Resource District) dam proposal would redirect water to make more fabricated lake lots, which are presumed by opponents to be for future development (Gaarder 2006). When I asked her if indeed her farm would be flooded and for what reason are dams going up, she replied:

Oh yeah, it would flood the farm. Years ago, back in the 60's there was a flood down by 66th and L, from that there were some preventative measures. There's a lot of industry in there now, and they wanted to prevent that from happening again. They had 20 some dams proposed originally, they built a few of them and a bunch of area farmers got together and went to Washington [D.C.] to protest and got the rest of them stopped. Now, if you look at 144th and Fort St. and all the houses, this [water] has all got to go somewhere. I don't think it's a bad idea, but when you have a farm history of generations and you might lose your land . . . I can understand [the concern for the dams].

P.I.: Does this [dam building] lead to more development?

As they have put up the dams, the need has gotten greater. In the last 10 years south of [Bennington] was all farmland, now it's all housing. The little town of 800 is like 4,500 in homes. I used to know everyone, now I don't know anyone. It's spreading and it's coming over to Washington County. We live basically west of the Blair airport, and all of that around there is being developed. So, it's coming. –Farmer 6

This particular farmer and her husband have expressed they enjoy their lifestyle and will try to make it work as long as they can. Her husband is nearing retirement from their conventional farming operation, and she from her niche farming/direct market sales. They understand that without a stable income, they will have little choice but to sell off their farm

ground to whomever places the highest bid. When asked if developers have approached them, she replied:

We get calls, but I have caller id and I just don't pick up or return their calls. But, I suppose eventually . . . we have a lot of farm neighbors that have over 2,500 acres, so I guess we'll try to sell to them . . . or the developers, who knows? We'll stay on the farm as long as we physically can. –Farmer 6

Another farmer west of Omaha, situated just outside of Valley, has had some success in direct marketing potting plants in the local farmers' markets, as well as landscapers. His primary form of income, however, is grain farming. He and his two boys are farming 350 acres in an area where population pressures are beginning to be felt:

I would like to expand [the potting plant operation] if I can, if I can see a good turn around and a good profit. I'd like to expand. Also, my sons are getting old enough now where if they could maybe take on more of the farming responsibilities I could spend more time on the plants. I would love to make this business to where it could support the household income, but with farming, and I own most of my land, so the taxes take a pretty good chunk out of the overall income. –Farmer 24

His land valuations are rising each year as more homes are built near his farm.

When I asked about his intentions for his operation in the next five years, he replied:

As long as we can keep the tax valuation down to farm values, cause we have had to go in and protest and they have brought them back down, but it seems like the next year they turn around and do the same thing right over again. It gets a little old when you have to go in every year to get the prices down, and that is our main concern as long as we can keep it close to farm value, we'll probably, you know, if they raise it upwards to \$5K [per acre], then they tax it at that and then you have to look at it if it's worth holding on to. But, like I said the farm has been in the family since 1947 or '48, I think [that's] when my folks moved up here, so, it's the only place I have ever known. So, it would be hard to leave here, but I guess there always comes a time, I guess when you have to change. –Farmer 24

As the above farmer just stated, there comes a time when we have to change. This is a reality for all of us, and for farmers it means to diversify their operation, sell their land, rent it, or pass it down to the next generation. Not all of the farmers interviewed had children, but if they did have children, it was too soon to determine whether their offspring would succeed them or opt to go into another profession.

Selling Out

When asked what they intended to do with their farms when facing retirement, or the possibility of being “pushed off” their land due to rising land valuations and subsequent higher taxation, the answers were mixed; most farmers wanted to stay in farming and were willing to move to another location where land values are more affordable. Some farmers will take the money, use it to plan for retirement, pay off debt, and/or look for affordable land further from the periphery. In addition, when asked if they would prefer to sell to another farmer in order to maintain the ground in agriculture, most displayed an agrarian attitude, versus a more industrial take where they might offer the land to a developer.²⁸

Many farmers in this study were willing to take the “best offer” on their land value. When asked whether he would be interested in selling to another farmer or to a developer, this Lincoln farmer replied:

Oh, I would try not to sell it to somebody that isn't in Ag, but that wouldn't be the deciding factor. When I retire I have to sell, there just isn't an option. You have to take the best offer, and I would definitely try to sell it to someone in Ag if I could. But we don't really have that much land.
–Farmer 9

His current operation is on five acres, with the utilization of greenhouses to help extend his growing season. When he mentions that they “don't really have that much land”, he is inferring that his farm neighbors are probably not going to have much interest in such a small plot. On the flipside, a developer could fit a few homes in those five acres.

The following two comments are from farmers who are looking to eventually move their operation due to the encroaching peripheries of Omaha and Fremont:

We're in the slow food movement, enzymes, live food, healthy. Those kinds of people are what is keeping our business going and there is a movement there that is growing and whether the highway will come in here and force us out, it's a scenario where the highway is supposed to expand

²⁸ For a more complete background on “agrarian” and “industrial” attitudes regarding agriculture, see Barlett 2006; Molnar and Wu 1989

and come right through where that barn is. Her dad used to say that he was born here and he's going to die here, he don't say that anymore. My son and him would love to go somewhere else and get about 2 thousand acres and farm like conventional farmers. I don't want to farm with chemicals.
–Farmer 13

He and his wife are scheduled to lose their farm in 2013, as the highway that runs by their farm is going to be expanding into four lanes. This will create a faster commute for those working between Omaha and Fremont, but it will inevitably be the end of this farmer's operation at the present location.

In a similar situation, a natural meats farmer from Dodge County is being threatened by population pressures and is looking to move his operation:

Our biggest concern is that the guy that just bought the whole section of farmland around us just sold it to put in a development. What's gonna happen when they start puttin' in those houses? I don't know how we can stop this from happening . . . I can't afford the farm ground at the rate these guys are payin'; outrageous amounts that they're selling to developers. I just don't have the capital to compete with what they're payin' and keep it in agriculture and make a livin'. There's just no way of doin' it . . . we'll probably have to go northwest, maybe up by North Bend or Scribner. That will make it pretty tough to drive into Omaha everyday to go to work.
–Farmer 5

Both he and his wife are rural postal carriers, and their main office is located about 30 miles east in Omaha. With a move further away from Fremont and Omaha, their commute will grow, and this could affect time spent on the farm operation, as well as their overall fuel expenditures, as they seek out larger markets.

The following comment from a natural meats producer emphasizes the anxiety that farmers are faced with when deciding to stick with it, and when the time comes to get out, looking for someone to succeed them:

As far as developers, we're twenty minutes from Lincoln and three miles from Crete; that will be an issue because land has sky rocketed around us. It would be very tempting [to sell out], we had 80 acres a mile away from us that sold for \$4,000 an acre. [If I had to sell, I would sell to] a young farmer, if they could afford it. My son is in Lincoln and he won't farm, but I have a nephew that is into farming and I wouldn't sell unless I really had to.
–Farmer 18

There is a difficult choice to sell or try and maintain the operation in the face of rising land valuations. To add to this pressure, there are few young farmers, including offspring that are able to continue with an endangered operation as available capital, experience, and managerial skills may be lacking. However, the bottom line is most important, and the farmer must ask whether or not they are realistically able to continue, or are there better options available to them.

CHAPTER 6: DISCUSSION

My initial question leading into this study was, what are the consequences of suburbanization upon Eastern Nebraska farms? Essentially, In what ways is population pressure affecting farmers in and beyond the peripheries of major Nebraska cities such as Omaha and Lincoln? More specifically, How are the farmer's in this area dealing with the pressures? How can farmers ensure that these pressures are not the end-all to their operation? Although the research conducted was a non-random sample of small, niche marketers mainly, the findings were indicative of the pressures identified on much larger sized farms in the Midwest. These pressures parallel what farmers have experienced, on one level or another, in the 20th century, as well as in contemporary times.

The farmers in this study, however, are not truly representative of the larger, more industrial sized farms that are prevalent in the Midwest; the mean average of acres farmed in this study totals 61 acres, versus 946 acres farmed by the larger industrial farmers (Nebraska Farm Bureau 2007).²⁹ In addition, the market system is quite different as the commodity markets, which serve the larger industrial farms, are much less community oriented; that is they are less reliant upon local support in the form of farmer-consumer relations. The specialty/sustainable agriculture operations in this study are more reliant upon marketing directly to a number of outlets, which include specialty food stores, super markets, restaurants, farmers' markets, and individual customers.

²⁹ 61 acres is actually a bit high, as there were some outliers who farmed over a hundred acres, mostly those with natural meats operations.

Getting In and Ease of Transition

The rising awareness among the farmers in this study is representative of other sustainable farmers who are or have gotten into their current practices due to outside pressures—financial, social, health or environmental. The latter two reasons are more representative of the farmers’ personal inclinations rather than the direct influences that traditionally affect the commodity producers. Regardless, the interesting point here is for most of the farmers that chose to get into their present operation, the majority of them were not initially commodity farmers, rather they were continuing a hobby, or a personal interest. Only a few of the farmers were converts from conventional farming to their current sustainable farming operation. In addition, those farmers that transitioned into their current operation were heavily involved in some sort of livestock operation, with a few mixing both livestock and grain production.

For those farmers with previous experience in livestock and grain production the transition may have been easier due to the established understanding of how livestock benefits their grain production in the form of fertilization applications. Also, they already had the established physical and human capital variables of knowledge and skill. However, their transition to their sustainable operation required new sources of knowledge as contemporary chemicals and antibiotics were no longer administered in their operations. So, there was a learning curve with the production of new knowledge fostered through networks on the local level, mainly through university extension, interaction with specialty farming groups and organizations.

The “new” entry farmers—those who had little agricultural experience or simply building on a gardening hobby—developed their operations by piecemeal; they had to acquire the physical and human capital over a longer period of time. All of the farmers in the study had some sort of additional financial aid from another person or source that was not directly related to their operation. For some it came in the form of another business established by themselves and their families, a spouse holding another job in one of the many local towns or cities. Others were fortunate enough to have family that would pay for something as basic as rent and electricity, enabling them to save their income to reinvest in their operations.

Five Year Plan

None of the farmers led me to believe they had any definite plans to cease their operations in the near future. When asked what their five-year plan entailed, the majority had plans to expand their operations with hope for creating a more sustainable operation to where they could support their household based on their farm income alone. As mentioned in the analysis, there are concerns about topics, such as rising land valuations, non-farm neighbors, health, age, as well as other concerns not directly mentioned: insurance, advertising, cost-share, pest and weed control. If these factors cannot be managed properly, the likelihood of farmers remaining in their operation will undoubtedly diminish. Some of these factors, such as health insurance, benefits, and advertising costs are manageable by the off farm employment by the farmer, and/or spouse.

Crop insurance is another issue, for there is not a clear understanding of sustainable agriculture, nor how to meet its needs. A small survey was conducted by the Center for Rural Affairs (CFRA) and the Sustainable Agriculture Learning Initiative (SALI), which surveyed bank lenders, crop insurance agents, and sustainable agriculture producers in Nebraska. The study found that more than 17 percent of the crop insurance agents had never heard of sustainable agriculture and roughly a third (32 percent) had “some knowledge” (Center for Rural Affairs 2003). What the study recommends is for increased education for agents and lenders, to create an awareness of sustainable agriculture in order that the producers may gain the same benefits as conventional producers. However, the study does not spell out how producers or sustainable agriculture educators may facilitate this learning process.

Larger commodity farmers have traditionally been aided in insuring their crops through the government—hail damage and drought being the two main areas of coverage.³⁰ In this study, a few farmers adamantly refused seeking help from the government, regarding government help as a deterrent for their operation. However, there are some government policies that are working in the farmer’s favor, such as Nebraska Legislative Bill 924, which “clarifies that agricultural property cannot be designated as ‘blighted’ by local governments and therefore cannot be subject to condemnation” (castlecoalition.org 2006). With this bill, there is some hope for the farmers in this study who expressed concern about development affecting their farms in the near future.

³⁰ For additional information regarding crop insurance, see: <http://www.iii.org/media/hottopics/insurance/crop/>

Additionally, many of the farmers were interested in creating new forms of income that would work well with their farming operation, such as technological inputs. Again, historically, farmers have benefited from loans and subsidations for increasing technology and yields. It is not recommended for the farmers in this study to repeat this pattern of dependence upon government, for the consequences may eventually parallel the negative consequences present in contemporary agriculture; the possibility of fewer sustainable producers with large land holdings. To ensure that this sort of pattern does not reproduce itself for future generations, it would be advisable for sustainable farmers to utilize the government as a last resort. By distancing the farm operation from government intervention, farmer autonomy may be increased and reproduced as a social norm for succeeding farming generations.

Succession

The succession rate is too difficult to gauge at this point in time; many of the farmers with children are unsure whether or not their children would be interested in succeeding them. More than half of the farmers believed they would not have someone available to succeed them; this included partnerships or hired help. The barriers for child succession revolve around the fact that many children have great access to off-farm opportunities, which often provide financial security and benefits unavailable to them on the farm (Pfeffer 1992). In addition, children growing up on the farm may understand the demanding workload necessary to create a successful operation; off farm labor is often less “back breaking”.

It is important for farm parents to provide the child with an environment that offers a positive experience, including them in all aspects of the operation. This would increase the human capital on the farm to provide needed labor inputs as well as increased economic capital through expanding sales and market share. Through increasing the child's specific skills in the farm operation, research shows that the possibility of succession will increase (Glauben, Tietje, and Weiss 2002). Therefore, if succession is a priority for current farmers with children, by incorporating the work ethic and providing needed skills for the child to succeed, the viability of the farming operation may be protected.

Building Social Capital

Bridging the Gap

Help from friends and family enabled some farmers to build their current operation. As the farmers have entered into the market to sell their products, they have benefited greatly from the farmers' market above all other outlets mentioned. Ultimately, it is the consumer who ensures that the farming operation continues to produce; without the interest in local food, there is little that these small producers will be able to do. Although not as widely utilized, direct marketing to the service sector is essentially where the farmer may begin to close the knowledge gap regarding their operation and the benefits of local food consumption. The triadic model of exchange offers the incentive for farmers to connect with the consumer and service sector; the latter is lagging in interest compared to the prior. Basing the exchange model on basic economic

understandings of the law of supply and demand, the service sector is soon to follow the interests of the local consumers. Essentially, there is a need to bridge relations between the farmer and the consumer—who is more inclined to shop at the larger superstores for their goods.

This, however, is not easily accomplished due to the limitations that the farmers in this study expressed, such as labor and physical capital inputs, as well as the inability to produce year round.

Education

The majority of the farmers in this study felt consumer education would increase interest in their products and the knowledge of the benefits their operations bring to the consumers and the local economy. My original presupposition is based on this fact alone; that with increased education and availability of local food, there will subsequently be a larger support system for the local food movement. Essentially, through the education of these consumers, social capital will increase in the form of social participation and support of local markets, thus enabling the farmers to continue with their operations. However, the building of social capital is not guaranteed the farmer; in this case, the consumer, farmer, their affiliated organizations and established networks must work together in order for the sustainable means to a sustainable end are secured and reproduced (Flora and Flora 2003). Nonetheless, the farmers in this study support the idea, although few actually spelled this out, that education is the key for more increasing local consumer interest. Many of the consumers are unaware of the benefits of sustainable local food products— not only the health benefits, but also the environmental,

and economic benefits (ISU Business Analysis Laboratory 2003). For example, the concept of “eating seasonally” is not something current U.S. society is accustomed to, as they are able to go to the super markets and buy everything that is produced on a global scale. Therefore, the education of consumers, whether it be through brochures distributed at farmers’ markets, cooking demonstrations, festivals or farm visits, is a vital component to ensuring the viability of the farmers.

In addition, many farmers when asked if they did any marketing for their business replied that they were wary of doing too much advertising. First, advertising can become fairly expensive and the capital holdings dedicated to the farming operations in the study were on average, low. Second, there is the fear of not being able to meet the demands of the consumer. Therefore, additional advertising, coupled with the inability to meet the demands could prove to be detrimental when considering all of the other variables that require capital: farm inputs, taxes, market fees, and maintaining household demands. It may not be the best business strategy at this point, and most are content with word-of-mouth advertising.

There is an active effort to advertise for local food consumption presently with the “Buy Fresh, Buy Local” campaign. The aim of this campaign is to get more people interested and educated about the benefits of local food production and the establishment of local community support around agriculture and its farmers; “increasing the accessibility, visibility, and viability of a locally based food system, benefiting farmers, consumers and businesses with higher quality foods and retention of resources in the local economy” (www.foodroutes.org). It is still too early to determine whether this campaign has increased awareness about local food in Eastern Nebraska. However, the

importance of this campaign is twofold: the consumer is becoming educated in the benefits of local food, and the farmer is able to forego unnecessary advertising costs.

Knowledge Exchange

It is vital the farmers maintain and seek to create a stronger social network with current farmers in sustainable operations for the benefit of exchanging knowledge, as well as sharing human and physical capital. The latter two are basic principles of co-op farming, such as cost and labor share. For example, there are a couple of farming operations in this study practicing co-op methods, specifically in dairy and natural meats production. These farmers understand that by sharing costs with others, farmer can ultimately create a swifter means to an end; sustainable and viable operations.

The knowledge exchange, in this case local knowledge exchange, is far more cost and time efficient than depending on classroom time, extension agents, trial and error. There is evidence that the local knowledge production and exchange of that knowledge is more valuable and contextual than the top-down exchange that classroom and university extension can provide (Hassanein and Kloppenburg 1995).

In addition, through exchanging knowledge, poor operation management can be reduced; the influence of other successful farmers in the sustainable movement can aid newcomers as well as established farmers who are unfamiliar with particular methods.

Farmer's have to be willing to work together:

Farmer's have to realize, all farmers, that we're in this together. I don't want to sound communistic or socialistic, but we have to realize that at some level we have to cooperate together, collaborate together, and a lot can be gained from doing that. I think one thing that is encouraging is this sustainable Ag movement; there's a lot of cooperation. There is some fair competition, but cooperation is most important. –Farmer 17

Working together may help farmers become better farmers, and help them attain viability. Therefore, to save time and money, the farmer who looks to produce year round to garner income to create a more sustainable operation, is encouraged to utilize the available networks. Failing to produce year round is to possibly lose the support of the service sector, and most importantly the loyalty of the local consumer. Without access to local food, the local consumer will strengthen ties of exchange with the local and non-local service sector, while the first component of the triadic model—the farmer—will see their links to the other two weaken.

As long as the farmer is able to establish and strengthen ties to the other two “actors” in the exchange model, then there is reason to believe that through economic exchange communities and local businesses will look to secure the livelihoods of local farmers. Hence, suburbanization may be altered to incorporate local farms, mainly through local consumer and business input, and possibly through directed land/tax valuation policies.

Exchange Network

The majority of the farmers in this study actively seek out consumers and local markets to sell their products, however the farmers are limited by the short growing season Nebraska provides for them. Each supports the other “actors” in one form or another; the farmer supports the healthful, local food choices of the consumer, and by marketing to both consumer and service sector, the farmer is able to maintain their operation. Consumer demand, upon understanding the benefits of local food, will develop the interest of the service sector in the farmer’s operation.

According to the ISU study there is a disconnect between consumer demand for local food and that of the service sector. There is a larger percentage of consumers willing to pay higher prices for local food; consumers were willing to pay 1 to 5 percent more than food businesses (ISU Business Analysis Laboratory 2003). This indicates businesses are still more concerned with keeping wholesale prices low in order to maximize profits at the end of the quarter. However, through increased consumer support and demand for locally grown food, there is evidence that conventional markets are being pressured to supply their local consumers with local food products. To support this claim, the ISU research team administered the following questions: “Which of the choices are you receiving the most request for from your customers?” ‘Grown locally’ received 53 percent of the responses for produce and 40 percent for meat. The choice receiving the second highest response due to consumer requests was ‘grown in your state’” (p. 61).

It appears that consumers are gaining an appreciation for locally produced foods. To strengthen this appreciation, local food producers must recognize that Nebraska has a diverse population; there are students, as well as immigrant and refugee populations from various parts of the world. This may be another avenue for farmers to sell to farmers’ markets and specialty food markets, adding a wider variety of foods. At the minimum, local producers should begin to introduce products that are used by a number of cultures present in Eastern Nebraska.

This offers some much needed optimism for producers looking to continue in their current operation, as well as for those interested in transitioning into a more sustainable farming operation. With a visible demand for local food, there will be more support for both farmer and the service sectors supplying the food for local consumers.

Technology

To maintain the exchange network, the farmers are in need of added technological inputs. Technology should be sought that will make the operation more sustainable, securing viability for the future generations and the well being of the environment. Greenhouses and other farm structures that are solar/wind powered, as well as water conservation systems: such as cisterns, drip irrigation, rain catch, and waste water filtration systems will ensure further autonomy and may buttress farm viability through any sort of unforeseen environmental issues such as drought, and heat that was experienced in the summer of 2006. Through added water conservation technology there is a promise for these farmers to keep their costs lower as well as become more autonomous as they are able to utilize the water when needed. This is most important for those living closer to municipalities where water is shared by other farm and non-farm residents.

A little under half of the farmers in the study already have green houses available to them to extend their growing seasons, but this does not necessarily mean they are growing year round. The need to grow year round is not directly affecting them at the present moment for they have other forms of income that support them through the winter months.

In addition, Nebraska, as well as the rest of the nation, witnessed increasingly expensive fuel prices as fossil based fuels reached up to \$3 dollars a gallon during the summer of 2006; propane was around a dollar a gallon. Through the implementation of wind and solar technologies, the farmer may decrease their dependence upon outside sources of fuel, while increasing autonomy, and farm sustainability. However, without

adequate financial resources, as well as willingness, the realization of implementing technology is problematic.

CHAPTER 7: CONCLUSION

The 20th century marked the inception of the current industrial agriculture structure; government intervention and technology, initially intended to aid the farmer in difficult times, gave way to a co-dependent farm structure. The Second World War increased farm production, expanding acreages and production for domestic and global consumption. Subsidation increased as commodity markets globalized further, consequently more farmers were knocked off of the “treadmill,” forced to abandon their culture and search out for other means of income to provide for their families. The increased industrialization of farms enabled a service economy to take off, offering inexpensive food varieties for U.S. consumers under one roof.

Industrial agriculture is not going unnoticed, however; farm numbers continue to decline, and there is a growing concern for the environmental degradation accompanying the utilization of harmful petro-chemicals and unchecked tillage. In addition, the expansion of metropolitan areas in Eastern Nebraska has added to the difficulty of farms to stay viable in and around the peripheries of the expanding cities. Rising land valuations and tax bases, accompanied with non-farm population pressures have directly affected Nebraska farmers.

As a result of the above factors affecting farm displacement, there are a number of farmers in the state who have altered their farming practice in hopes of remaining viable for the future of their operations. The farmers in this study are mainly market farmers

who offer direct sales of specialty items, such as vegetables, fruits, dairy, meat and a variety of other mix-use items. The farmers' market seems to be the most utilized market outlet for farmers, with direct market sales to the service sector coming in second. CSA operations were limited in this study with only a few farms partaking in this type of system.

Increasing awareness is a priority amongst the farmers in the study; however, they are not readily advertising for financial reasons, as well as the fear of not being able to provide enough of their products in the case of an influx of consumer interest. Ideally, the farmers would like their operation to completely support the household income; all of the respondents had some sort of supplemental income to provide capital when the farm was unable to, primarily in the off-season. However, many of the farmers expressed a feeling of burnout. The demanding nature of farm life anchors the farmer to their operation throughout the growing and harvest seasons and the winter months offer a physical and mental break from the drudgery of their labors.

Some of the farmers mentioned the need for additional inputs to make their operation more viable, such as farm structures for storage of their goods, as well as incorporating renewable energies to make their farm more sustainable and autonomous. In the past, U.S. farmers have been able to take advantage of the government tax breaks and subsidations to allow for technological innovations. The intervention of government is not favored by some of the farmers in this study, as they have had negative experiences in the past or they are wary of "strings" being attached to government programs. Many of

the farmers have not taken advantage of any government sponsored programs due to a lack of understanding or they were unaware of available programs.

Knowing there is a lack of trust in government intervention, as well as a general lack of awareness of available programs, it is advisable for farmers to exchange knowledge and human capital (skills) with each other. With an increase in farm cooperation, there is the possibility of creating a system that is viable year round, thus increasing the local food consumption to the local community and service sector.

As more awareness is built through community education, such as the local food campaign, “Buy Fresh, Buy Local”, community and service sector support for local farm operations may ensue. As this awareness and support grows, there may be more interest in guarding against the displacement of farming operations in the peripheries of urbanizing cities, such as Omaha and Lincoln.

Finally, it is pertinent for farmers to include family labor, especially children, so they can acquire the human capital, or skills, to maintain the farming operation for future generations. By including them in every aspect of the operation, including the marketing and educational outreach of the operation, they may continue the bridged relationship established with the local community and service sector.

There is not a “magic pill” for farming that will promise the viability of its future. The only advantage farmers have is the universal necessity for food production in which all members of society partake; without farmers there is no life. The sustainable farming operations in this study offers a glimpse of what the future of agriculture may entail, as the current industrial model is not sustainable, for it is damaging to both consumer and

the environment. Therefore, these farmers and their families are participants of quite possibly the most important social movement of our time.

Recommendations

Ironically enough, this section runs counter to previously mentioned advice for local knowledge exchange. The top-down, academic analysis of an intricate topic such as sustainable agriculture should always be taken with a grain of salt. As a member of a farming family and a background in sociology, I have some insight into what may offer viable solutions for the participants in this study. However, I am not an expert in sustainable agriculture, nor am I actively participating in the day-to-day labors of a sustainable agriculturalist; the interaction between farmers and the land they work, planting and harvesting, balancing their time with family, off-farm work and marketing their products, can only be understood *by* the farmer. Therefore, the direct knowledge exchange among sustainable farmers, those sharing the same culture and pool of knowledge (human capital), is pertinent and should be established. The following list is simply my way of urging the farmers in this study to consider the value of relationships and networks that may help their operations' future viability.

- The viability of farmers must be maintained through farmers learning to cooperate, help out their neighboring farmers, share costs, and divide labor. By doing so, technology may be shared among farmers, allowing for the increased availability of local farm goods throughout the year.³¹

³¹ See: The Nebraska Cooperative Development Center (<http://ncdc.unl.edu/>). The site provides information and financial support for farmers looking to enter into a co-op business venture.

- Involve children in the farming process. The more skills (human capital) obtained by children, the better chance they can offer sustainable family labor. Likewise, they will grow with and understand the importance of the communal relations created between farmer, community, and service sector, which may offer an easier transition if they are to succeed their parents.
- Continue participation in the farmers' markets, direct marketing to the service sector, and the education of the community via organizations such as churches, schools, FFA, 4H, and the numerous other clubs and organizations. This may benefit the promotion of sustainable, local farm operations.
- Community and service sector *education* is the key to furthering knowledge on all levels of the triadic-exchange network. Reaching the individual consumer, as well as parents and youth (potential customers), sets up the socialization for understanding the benefits of local food consumption. With more education, social capital may increase as the children are exposed to local food. If educated early enough, they will grow to have a better appreciation for high quality food, and the benefits of supporting the local farmer and eco-system. This may increase the strength of the exchange model for future farms. Brochures, farm tours, festivals, and personal interaction with customers offer an advantage for the growing need of a more sustainable community and support for local farm operations. As consumers are better educated about healthy, local food, they may change their consumption patterns.

- For a community to thrive and maintain its cohesion, all members must be considered in the development process; young, old, rich and poor. The urbanizing cities in Eastern Nebraska are not exempt from the rest of the nation's social inequities, which include socially stratified neighborhoods that often create difficulties of access for all its members. The Nebraska Department of Agriculture's promotion of a low-income senior benefits program (Nebraska Senior Farmers' Market Nutrition Program) creates access to a cohort that is unable to afford quality local food.³² This offers another opportunity for local farmers to provide for their community with the possibility of eventual reciprocation that can only benefit their farm viability.
- Expand the market further; acquire permits for street vending, as well as pushing for the opening of additional markets on days other than the usual Saturday morning and mid-week market days. Branch out into untapped neighborhoods as well as differing cultures, which may demand alternative food products.
- Many of the farmers in this study have or continue to seek out self-educational materials to help them improve their understanding of sustainable agriculture and possible marketing techniques. There are a number of on-line and other sources of educational materials promoting the advancement of sustainable/local farms.

Those mentioned most frequently by the farmers in this study are:

- Nebraska Sustainable Agricultural Society (NSAS): www.nebsusag.org;

³² The Nebraska Senior Farmers' Market Nutrition Program offers low-income seniors to trade in stamps for fresh, local produce. The farmer must be registered with the Nebraska Department of Agriculture, and may treat the stamps as currency, depositing it into their bank account as they would a check. For more information about this program, visit: www.agr.ne.gov

- Weston A. Price Foundation: westonaprice.org;
- Sustainable Agriculture and Research Education (SARE): www.sare.org;
- United States Department of Agriculture (USDA): www.usda.gov
- Organic Consumers Association (OCA): www.organicconsumers.org

REFERENCES

- Albrecht, Don E and Steve H. Murdock. 1986. "Understanding Farm Structure and Demographic Change: An Ecological Analysis of the Impacts of Irrigation." *Sociological Perspectives* 29: 484-505.
- Andersson, AM and NE Skakkebaek. 1999. "Exposure to Exogenous Estrogens in Food: Possible Impact on Human Development and Health." *European Journal of Endocrinology* 140: 477-485.
- Anderson, David G. 1994. *The Savannah River Chiefdoms: Political Change in the Late Prehistoric Southeast*. Tuscaloosa, AL: University of Alabama Press.
- Auerbach, Jerald, S. 1969. "New Deal, Old Deal, or Raw Deal: Some Thoughts on New Left Historiography." *The Journal of Southern History* 35: 18-30.
- Barlett, Peggy F. 2006. "Three Visions of Masculine Success on American Farms." Pp. 47-65 in *Country Boys: Masculinity and Rural Life*, edited by Hugh Campbell, Michael M. Bell and Margaret Finney. University Park, PA: The Pennsylvania State University.
- Bell, Daniel. 1978. *The Cultural Contradictions of Capitalism*. New York: Basic Books.
- . 1976. *The Coming of Post-Industrial Society: A Venture in Social Forecasting*. New York: Basic Books.
- Bell, Michael M. 2004. *Farming for Us All: Practical Agriculture and the Cultivation of Sustainability*. University Park, PA: The Pennsylvania State University Press.
- Berardi, G.M. 1981. "Socio-Economic Consequences of Agricultural Mechanization in the United States: Needed Redirections for Mechanization Research." *Rural Sociology* 46: 483-504.
- Bertrand, A. 1951. *Agricultural Mechanization and Social Change in Rural Louisiana*. Baton Rouge, Louisiana: Louisiana Agricultural Experiment Station, Bulletin No. 458.
- Bird, G.W. and John Ikerd. 1993. "Sustainable Agriculture: Twenty-First-Century System." *Annals of the American Academy of Political and Social Science* 529:92-102.
- Blake, Bill. 1994. *Farmers' Market Produce Prices: A Multivariate Analysis*. U.C. Cooperative Extension. Retrieved January 2, 2007 (<http://www.openair.org/cyjour/fprice.html>).

- Burt, Ronald S. 2001. "Structural Holes Versus Network Closure as Social Capital." Pp. 31-57 in *Social Capital*, edited by Nan Lin, Karen Cook and Ronald S. Burt. New York: Aldine De Gruyter.
- Buttel, Frederick, H., Olaf F. Larson and Gilbert W. Gillespie, Jr. 1990. *The Sociology of Agriculture*. New York: Greenwood Press.
- Buttel, Frederick H. 1983. "Beyond the Family Farm." Pp. 87-107 in *Technology and Social Change in Rural Areas*, edited by Gene F. Summers. Boulder: Westview Press.
- Castlecoalition.org. 2006. *Vermont, Maine, and Nebraska Enact Eminent Domain Reform, But More Reform is Needed in All Three States*. Retrieved February 7, 2007 (http://www.castlecoalition.org/media/releases/4_19_06pr.html).
- Castells, Manuel. 2000. *The Rise of the Network Society*. 2d ed. Malden, MA: Blackwell Publishers.
- Center for Rural Affairs. 2003. *Center for Rural Affairs Issue Briefs: Credit, Crop Insurance and Sustainable Agriculture*. Retrieved February 7, 2007 (http://www.cfra.org/resources/issue_brief_credit_cropinsurance.htm).
- Chase-Dunn, Christopher and Thomas D. Hall. 2002. "Paradigms Bridged: Institutional Materialism and World-Systemic Evolution." Pp. 197-216 in *Structure, Culture, and History: Recent Issues in Social Theory*, edited by Sing C. Chew and J. David Knottnerus. Lanham, MD: Rowman & Littlefield Publishers, Inc.
- Chase-Dunn, Christopher. 1996. "Agency, Structure and the World-System: Systemic Transformation." *Humboldt Journal of Social Relations* 22: 85-96.
- Chase-Dunn, Christopher and Thomas D. Hall. 1992. "World-Systems and Modes of Production: Toward the Comparative Study of Transformation." *Humboldt Journal of Social Relations* 18: 81-117.
- Chew, Sing. 2001. *World Ecological Degradation: Accumulation, Urbanization, and Deforestation 3000 B.C.–A.D. 2000*. New York: Rowman & Littlefield Publishers, Inc.
- Christenson, James A. 1984. "Gemeinschaft and Gessellschaft: Testing the Spatial and Communal Hypotheses." *Social Forces* 63: 160-68.
- Cochrane, Willard W. 1979. *The Development of America Agriculture: A Historical Analysis*. Minneapolis: University of Minnesota Press.

- Coleman, James S. 2002. "Social Capital in the Creation of Human Capital." Pp. 110-16 in *Contemporary Sociological Theory*, edited by Craig Calhoun, Joseph Gerteis, James Moody, Stephen Pfaf, and Indermohan Virk. Oxford, UK: Blackwell Publishing.
- Committee to Review the Role of Publicly Funded Agricultural Research on the Structure of U.S. Agriculture. 2006. *Publicly Funded Agricultural Research on the Structure of U.S. Agriculture*. Washington, D.C.: National Academy Press.
- Constance, Douglas H., Anna M. Kleiner and J. Sanford Rikoon. 2003. "The Contested Terrain of Swine Production: Deregulation and Reregulation of Corporate Farming Laws in Missouri." Pp. 75-95 in *Fighting for the Farm*, edited by Jane Adams. Philadelphia, PA: University of Pennsylvania Press.
- Courtenay, Will H. 2006. "Rural Men's Health: Situation Risk in the Negotiation of Masculinity." Pp. 139-158 in *Country Boys: Masculinity and Rural Life*, edited by Hugh Campbell, Michael M. Bell and Margaret Finney. University Park, PA: The Pennsylvania State University.
- Cross, P. and G. Edward-Jones. 2006. "Variation in Pesticide Hazard from Arable Crop Production in Great Britain from 1992 to 2002: Pesticide Risk Indices and Policy Analysis." *Crop Protection* (25): 1101-1108.
- DeLind, Laura B. 2003. "Considerably More Than Vegetables a Lot Less Than Community." Pp. 192-206 in *Fighting for the Farm*, edited by Jane Adams. Philadelphia, PA: University of Pennsylvania Press.
- Dillman, Don A. 2000. *Mail and Internet Surveys: The Tailored Design Method*. New York, NY: John Wiley and Sons, Inc.
- Farmfoundation.org. N.d. *Right-to-Farm Laws: History and Future*. Retrieved February 20, 2007 (<http://www.farmfoundation.org/1998NPPEC/hipp.pdf>).
- Farmland.org. N.d. *Farming on the Edge: Listing of Loss by State*. Retrieved November 6, 2007 (<http://www.farmland.org/resources/fote/states/allStates.asp>).
- Finlay, Mark R. 2004. "Old Efforts at New Uses: A Brief History of Chemurgy and the American Search for Biobased Materials." *Journal of Industrial Ecology* 7: 33-46.
- Flora, Cornelia B. and Jan L. Flora. 2003. "Social Capital," pp. 214-227 in *Challenges for Rural America in the Twenty-First Century*, edited by David L. Brown and Louis E. Swanson. University Park, PA: The Pennsylvania State University Press.
- Flora, Cornelia, B., Jan L. Flora, Jacqueline D. Spears, Louis E. Swanson, with Mark B. Lapping and Mark L. Weinberg. 1992. *Rural Communities: Legacy and Change*. Boulder: Westview Press.

- Gaarder, Nancy. 2006. "Two Sides Begin Talks on Washington County Dam Proposal." *Omaha World-Herald*, July 17, 2006, pp. 1B, 2B.
- Glauben, Steven, Hendrik Tietje and Christoph R. Weiss. 2002. "Intergenerational Succession on Family Farms: Evidence from Survey Data." Working Paper No. 0202, Department of Food Economics and Consumption Studies, University of Kiel, Olshausenstr, Germany.
- Graham, Katherine Helga. 1986. *A Description of the Transition Experiences of 28 New York State Farm Families Forced From Their Farms: 1982-1985*. Unpublished M.S. thesis, Cornell University.
- Grant, Michael J. 2002. *Down and Out on the Family Farm: Rural Rehabilitation in the Great Plains, 1929-1945*. Lincoln, NE: University of Nebraska Press.
- Gregory, James N. 1991. *American Exodus: The Dust Bowl Migration and Okie Culture in California*. Oxford, UK: Oxford University Press.
- Groh, Trauger and Steven McFadden. 1997. *Farms of Tomorrow Revisited: Community Supported Farms—Farm Supported Communities*. Kimberton, PA: Bio-Dynamic and Gardening Association.
- Guthman, Julie, Amy W. Morris and Patricia Allen. 2006. "Squaring Farm Security and Food Security in Two Types of Alternative Food Institutions." *Rural Sociology* 71: 662-684.
- Guillette, Elizabeth A., Craig Conard, Fernando Lares, Maria Guadalupe Aguilar, John McLachlan, and Louis J. Guillette, Jr. 2006. "Altered Breast Development in Young Girls from an Agricultural Environment." *Environmental Health Perspectives* 114: 471-475.
- Hall, Alan. 2003. "Canadian Agricultural Policy: Liberal, Global, and Sustainable," Pp. 210-228 in *Fighting for the Farm*, edited by Jane Adams. Philadelphia, PA: University of Pennsylvania Press.
- Harris, Marvin. 1977. *Cannibals and Kings: The Origins of Cultures*. New York: Random House.
- Hassanein, Neva and Jack Kloppenburg, Jr. 1995. "Where the Green Grass Grows Again: Knowledge Exchange in the Sustainable Agriculture Movement." *Rural Sociology* 60 (4): 721-740.
- Heffernan, William D. and Judith Bortner Heffernan. 1986. "Impact of the Farm Crisis on Rural Families and Communities." *The Rural Sociologist* 6: 160-170.
- Henderson, Elizabeth with Robyn Van En. 1999. *Sharing the Harvest: A Guide to Community Supported Agriculture*. White River Junction, VT: Chelsea Green Publishing Co.

- Institute of Agriculture and Natural Resources. 2001. *Attracting Customers with Locally Grown Products*. Lincoln, NE: Food Processing Center: Institute of Agriculture and Natural Resources, University of Nebraska.
- ISU Business Analysis Laboratory. 2003. *Ecolabel Value Assessment: Consumer and Food Business Perceptions of Local Food*. Ames, IA: Leopold Center for Sustainable Agriculture, Iowa State University.
- Kimmel, Michael and Abby L. Ferber. 2006. "White Men Are This Nation': Right-Wing Militias and the Restoration of Rural American Masculinity." Pp. 122-137 in *Country Boys: Masculinity and Rural Life*, edited by Hugh Campbell, Michael Mayerfeld Bell, and Margaret Finney. University Park, PA: The Pennsylvania State University Press.
- Lee, Jo, Amar Arnason, Andrea Nightingale and Mark Shucksmith. 2005. "Networking: Social Capital and Identities in European Rural Development." *Sociologia Ruralis* 45: 1-15.
- Lewis, Arthur, L. 1956. *Theory of Economic Growth*. London, U.K.: Allen & Unwin.
- Lighthall, David R. 1995. "Farm Structure and Chemical Use in the Corn Belt." *Rural Sociology* 60: 505-520.
- Lin, Nan. 2001. "Building a Network Theory of Social Capital." Pp. 3-30 in *Social Capital*. New York: Aldine De Gruyter.
- Lobao, Linda. 2006. "Gendered Places and Place-Based Gender Identities: Reflections and Refractions." Pp. 267-275 in *Country Boys: Masculinity and Rural Life*, edited by Hugh Campbell, Michael Mayerfeld Bell, and Margaret Finney. University Park, PA: The Pennsylvania State University Press.
- Lobao, Linda and Katherine Meyer. 2001. "The Great Agricultural Transition: Crisis, Change, and Social Consequences of Twentieth Century U.S. Farming." *Annual Sociology Review* 27: 103-24.
- . 1995. "Economic Decline, Gender, and Labor Flexibility in Family-Based Enterprises: Midwestern Farming in the 1980's." *Social Forces* 74: 575-608.
- Marshall, Gordon. 1998. *Oxford Dictionary of Sociology*. 2d ed. Oxford, UK: Oxford University Press.
- McMichael, Philip. 1996. "Globalization: Myths and Realities." *Rural Sociology* 61: 25-55.

- Modelski, George and William R. Thompson. 2002. "Evolutionary Pulsations in the World-System." Pp. 177-196 in *Structure, Culture, and History: Recent Issues in Social Theory*, edited by Sing C. Chew and J. David Knottnerus. Lanham, MD: Rowman & Littlefield Publishers, Inc.
- Molnar, Joseph J. and Litchi S. Wu. 1989. "Agrarianism, Family Farming, and Support for State Intervention in Agriculture." *Rural Sociology* 54: 227-245.
- Murdock, Steve, H., Don E. Albrecht, Rita R. Hamm, F. Larry Leistritz, and Arlen G. Leholm. 1986. "The Farm Crisis in the Great Plains: Implications for Theory and Policy Development." *Rural Sociology* 51: 406-435.
- Nebraska Farm Bureau. 2007. *About Nebraska Agriculture*. Retrieved February 6, 2007 (<http://www.nefb.org/ne-ag/default.aspx>).
- Nuckton, Carole F., Refugio I. Rochin and Douglas Gwynn. 1982. "Farm Size and Rural Community Welfare: An Interdisciplinary Approach." *Rural Sociology* 47: 32-46.
- Paxton, Pamela. 1999. "Is Social Capital Declining in the United States? A Multiple Indicator Assessment." *The American Journal of Sociology* 105: 88-127.
- Peter, Gregory, Michael Mayerfeld Bell, Susan Jarnagin, and Donna Bauer. 2006. "Cultivating Dialogue: Sustainable Agriculture and Masculinities." Pp. 27-45 in *Country Boys: Masculinity and Rural Life*, edited by Hugh Campbell, Michael Mayerfeld Bell, and Margaret Finney. University Park, PA: The Pennsylvania State University Press.
- Pfeffer, Max. 1992. "Labor and Production Barriers to the Reduction of Chemical Inputs." *Rural Sociology* 57: 347-362.
- Putnam, Robert D and Lewis M. Felstein. 2003. *Better Together: Restoring the American Community*. New York: Simon & Schuster.
- Putnam, Robert D. 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster.
- Ray C. 1998. "Culture, Intellectual Property and Territorial Rural Development." *Sociologia Ruralis* 38: 3-19.
- Reganold, J.P., R.I. Papendick, and J.F. Parr. 1990. "Sustainable Agriculture: The Living Soil." *Journal of Chiropractic* 27:61-67.
- Rodale, Robert. 1984. *Our Next Frontier*. Emmaus, PA: Rodale Press.
- Rogers, Everett. 2003. *Diffusion of Innovations*. 5th ed. New York: Free Press.

- Saltiel, John, James W. Bauder and Sandy Palakovich. 1994. "Adoption of Sustainable Agricultural Practices: Diffusion, Farm Structure, and Profitability." *Rural Sociology* 59: 333-349.
- Schwartz, Barry. 2004. *The Paradox of Choice*. New York: HarperCollins Publishers.
- Shulman, Stuart W. 2003. "Origin of the Federal Farm Loan Act." Pp. 113-128 in *Fighting for the Farm*, edited by Jane Adams. Philadelphia, PA: University of Pennsylvania Press.
- Sommer R., M. Stumpf and H. Bennett. 1984. "Quality of Farmers' Market Produce: Flavor and Pesticide Residues." *The Journal of Consumer Affairs* 16:130-136.
- Stabile, Donald R. 1993. "Accountants and the Price Systems: The Problem of Social Costs." *Journal of Economic Issues* 27: 171-189.
- Tolley, G.S. and B.M. Farmer. 1967. "Farm Labor Adjustment to Changing Technology." Pp. 41-52 in *Farm Labor in the United States*, edited by C.E. Bishop. New York: Columbia University.
- Tönnies, Ferdinand. [1887] 1963. *Community and Society*. Translated and edited by C.P. Loomis. New York: Harper & Row.
- Vago, Steven. 2004. *Social Change*. 5th ed. Upper Saddle River, NJ: Pearson Prentice Hall.
- United States Department of Agriculture. 2006. "USDA Releases New Farmers' Market Statistics." *Program Announcement: Agricultural Marketing Services*. Retrieved January 6, 2007 (<http://www.ams.usda.gov/tmd/MSB/PRFarmersMarketStatistics.pdf>).
- United States Department of Commerce, Bureau of the Census. 1940. *Statistical Abstract of the United States*. Washington, D.C.: U.S. Government Printing Office.
- . 1986. *Statistical Abstract of the United States*. 106d. Washington, D.C.: U.S. Government Printing Office.
- Wajcman, Judy. 1991. *Feminism Confronts Technology*. University Park, PA: The Pennsylvania State University Press.
- Wallerstein, I. 1974. *The Modern World-System, V. 1: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*. New York, NY: Academic Press.

Whitmeyer, Joseph and Karen S. Cook. 2002. "Social Structure and Social Exchange," pp. 271-302 in *Structure, Culture, and History: Recent Issues in Social Theory*, edited by Sing C. Chew and J. David Knottnerus. Oxford, UK: Rowman and Littlefield Publishers, Inc.

APPENDIX A: SURVEY INSTRUMENT

Farm History

- How did you get started in your current operation? *Follow-up:* What are the crops produced on your farm? How did you acquire the knowledge to grow these crops? Tell me who or what influenced you most to get into this operation. If someone you know influenced you, how were they a model for you?

Marketing

- How do you market the crops? *Is it through a wholesaler, or is there some direct marketing? If the latter, through what kind of direct marketing? CSA, farmers' market, an on-farm stand. U-pick? What's the approximate total share of wholesaling? Look for farmer-to-store, restaurant, or to institution marketing (e.g., a school or prison). The farmer doesn't sell directly to consumers, but neither is he/she limited to wholesale prices.*
- In your opinion, what marketing technique has benefited you or your farming neighbors? *You may have to define what you mean by "technique."* Which do you see as holding greatest economic benefits?

Land

- How much land is being used for your current farm operation (*perhaps broken down into acres and, also, square feet, if a greenhouse is being used*)? How did you get the land on which the farm operation is located? *Follow-up:* Does the farm have a family history? *If purchased:* Did they obtain land through a government sponsored program? *Another possibility is a purchase from family members at a lower-than-market price.*

Rent/Lease

- Do you rent/lease land? *If renting/leasing:* What kind of lease do you have? Cash, crop-share, other? *If a share lease, in what expenses does the landowner share? Is the lease oral, written? For how long?*
- What is your relationship with the landlord? Who makes the decisions as to what is produced on the rented/leased land?

- Are there geological/environmental factors—*such as your use of floodplain land* that affect your operations?

Community relations

- How is your relationship with your non-farming neighbors? Have you ever had any complaints about noise, “farm smells”, dust, etc.? *Have you ever had to change your farm operation because of such complaints? Because you anticipated such complaints?*
- How has the local community benefited your operation? *Such as through supporting direct farm sales, providing hiring local persons to work on the farm?* What would be most helpful to increase community/farm relations? What is the biggest challenge?

Present Costs (Inputs) and Future of Operation

- Do you currently have any difficulties obtaining needed inputs for your operation, like credit, fertilizers, equipment, labor? What about marketing outlets? How adequate have they been? *Over the next five years, do you expect any significant changes in the supply of these inputs? If any changes, why?*
- Has some modification for that purpose taken place in the past?
- As you look 5 years into the future, what will likely be the nature of your farm operation? *Do you see any significant changes in crops produced, acres per crop? If any significant changes, ask why?*
- *In the future, to what extent, if any, will you have to modify your farm operation to stay viable?*

Selling Out (Operation Disinvestment)

- What would influence you most to disinvest (sell out) in your operation? If faced with selling out, would you be more prone to rent land to other farmers, invest in niche market agriculture, etc?
- Have developers ever made an offer to buy the land on which you farm?

Opinion

- How has farming in *this part of* Nebraska benefited you? What are some of the drawbacks?
- Why have you chosen to go into this type of farming? *Follow up with-* Knowing the risks involved (niche market, the return may not be as great, etc.). *Counter with other possible benefits:* autonomy (working for oneself), working with family, being closer to the land, doing something positive for the community/society, etc.
- *If in a farmers' market/CSA system:* What draws customers to farmers' markets vs. conventional grocery outlets? What doesn't draw them to these markets (F.M./CSA)? How can farmers build community support for F.M./CSA's? How can the small farmer increase their share in the local markets (F.M./CSA/direct marketing, etc.)?

Opinion about *Farm Policies*

- Have you been able to take advantage of farm policies in the past? Why or why not? In your opinion what kinds of public policies do you need for your farming operation to remain viable? How would you rank those needed policies? Which is the single most important, second most important, third?

--*property tax policies*

--*sales tax policies (e.g., some farm inputs may have no or reduced sales tax rates)*

--*regarding agricultural labor*

--*right to farm laws*

--*zoning regulations*

--*support of farmers' markets or other forms of marketing your goods*

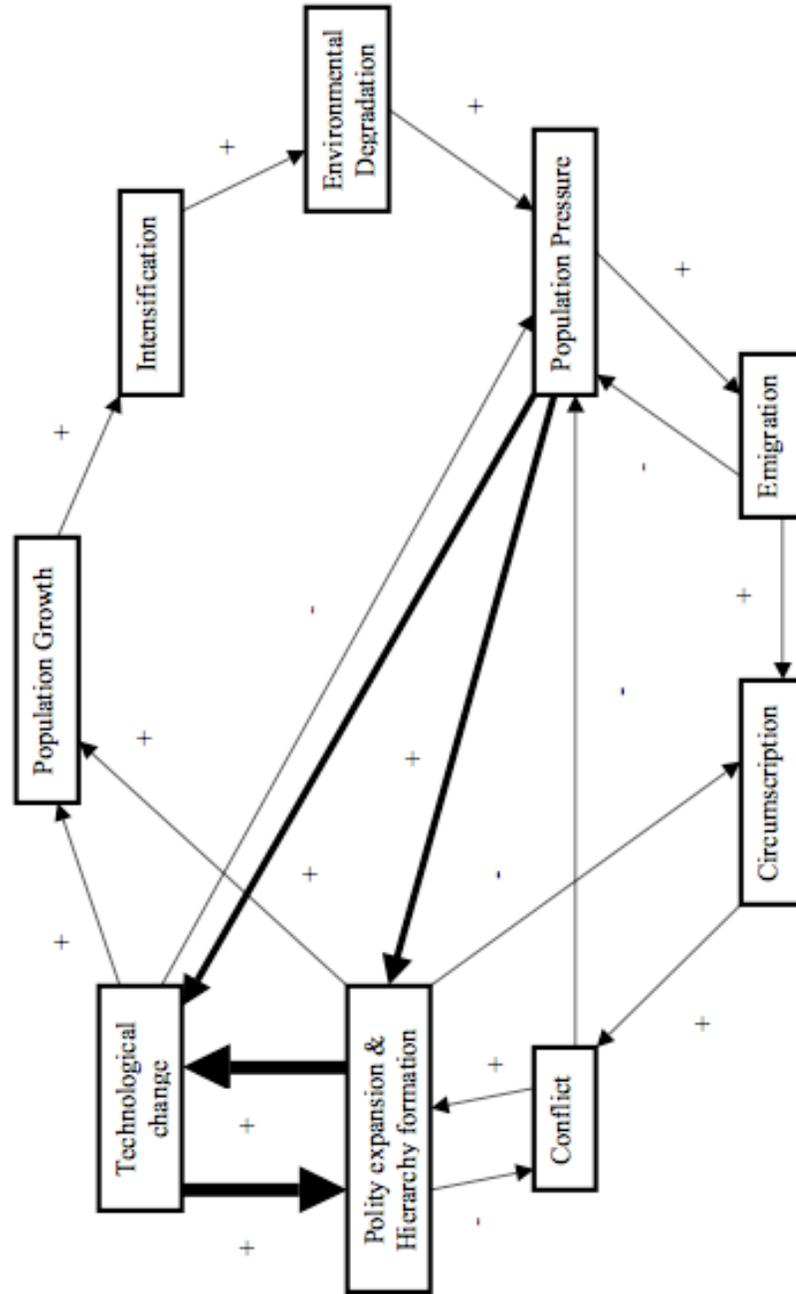
--*policies affecting credit*

--*policies affecting other production inputs*

In closing: Farm Income

- In the past year or two, about how much money have you grossed from this farming operation? [You could give ranges, like less than \$1000, from \$1000 to less than \$5000, from \$5000 to less than \$10,000, etc.). About how much of your total household income comes from this farming operation? Less than 10%, etc.

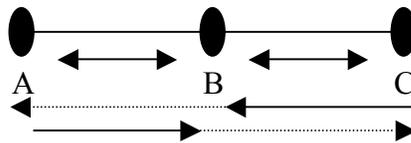
APPENDIX B: ITERATION MODEL



Iteration Model
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APPENDIX C: NETWORK EXCHANGE MODELS

3-Line Exchange Network³³

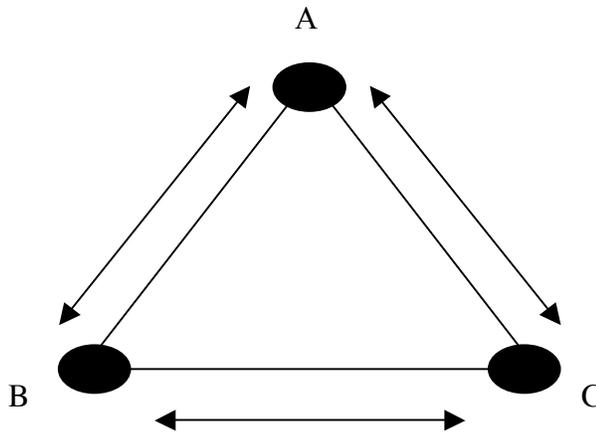


A= Local Producer (Industrial Ag Farmer)

B= Commodity Market (international markets, livestock feeders, Ag corporations)

C= Local Community (end use producers/consumers, wholesalers)

Triadic Exchange Network



A= Farmer (CSA, direct vendor/marketer): reinventing farm identification as a viable and healthful food source for community and service sector; responsible environmental stewards of land

B= Service Sector (local grocery, restaurants): Economic gain from community-loyalty, legacy shoppers; network security benefit-establish ongoing relations with farm and consumer for future viability of business

C= Consumer (local communities): faith in product, healthful choices, local access (know your producer/market/restaurant)

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