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**Ecological Encouragement:
The Role of Agricultural Knowledge in Southern Illinois**

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Abstract

Many scholarly works have discussed the significance of preserving indigenous culture and local knowledge. However, few have encompassed the specific relationship of agricultural knowledge and agricultural system implementation. Local agricultural knowledge is important to the decision-making involved in attempts at sustainable agricultural subsistence. The sparse documentation on the efforts provided to the recovery of evaporated agricultural knowledge has resulted in the misguided direction of agricultural practice in the United States and the desertion of local knowledge important to regional sustainability. However, the concepts behind past actions may lend to encouraging the use of knowledge and reinventing agricultural systems. It is more than the historical differences that illuminate a path for agricultural knowledge to emerge on. This has become evident in the stories of local agricultural knowledge imbedded in the soils Southern Illinois. In order to progress the sustainable efforts of agricultural practices in Southern Illinois, the value of local agricultural knowledge needs to be assessed. This paper examines what steps are being taken in the direction of exploration involving the ethnobotanical knowledge specific to Southern Illinois; how, the recovered agricultural knowledge is immersed into present day agricultural practice in the region. The immersion involves education through the outlet of numerous facilitators, specifically those who support sustainable practice in Southern Illinois.

Keywords

Agricultural knowledge, sustainability, knowledge retention, conservation and ethnoecology

Introduction

But just stop for a minute and think about what it means to live in a land where 95 percent of the people can be freed from the drudgery of preparing their own food.

James E. Bostic Jr., Former Deputy
Assistant Secretary of Agriculture
For Rural Development

Dreams of the far future destiny of man were dragging up from its shallow and unquiet grave the old dream of Man as God. The very experience of the dissecting room and the pathological laboratory were breeding a conviction that the stifling of all deep-set repugnances was the first essential for progress.

C.S. Lewis, *The Hideous Strength*

The past decade has encouraged, observed, and at times dictated the progression of X, the thoughts of the generation and Y, the actions associated with thoughts. Each is considered a variable in the creation of an equation that attempts to understand why people behave in a manner that considers their bodies separate from the earth. The behaviors in question are those that hold little or no regard for the environment. These behaviors encompass an anthology of thought; understanding this thinking is the main passion behind this research. The investigation at hand questions what motivates the decision of, for example, an expert team that surveys the soil that will soon cover up 30 tons of hazardous waste? This paper strives to examine how these decisions are being processed and why. Here, an effort is made at uncovering past knowledge that may help to further provide support for improved decision making. This is specifically observed through a revival of local agricultural knowledge in promoting the possibility for a sustainable future.

The agricultural knowledge gained through understanding ethnoecological interactions is organized and stored through different modes and models. In order to implement the knowledge, this paper attempts to merge two specific models to create one familiar approach. These models help to organize the historical analysis and explain the connection to the economic incentives of agricultural control. By fitting local agricultural knowledge into the models of knowledge conservation and understanding the process of knowledge retention, a resolution for redirection and re-education may transpire and progress towards a sustainable living model.

In the region specific to Southern Illinois these knowledge processes and decision schemas are very much evident in the daily lives of producers and consumers. The recovery of agricultural knowledge in the area has been accomplished through oral interactions. By incorporating folk knowledge and historical interviews a clearer understanding of what was lost transpires into what can be gained from counting the losses. An understanding of the farmer as a creative manager of knowledge is an effort involved with implementation and education and lends to an understanding of how agricultural knowledge may disperse through outlets in the region. Specific interviews from several local Southern Illinois inhabitants serve as windows into a difficult and unpredictable, cornucopian relationship. In order to progress the sustainable efforts of agricultural practices in Southern Illinois, the value of local agricultural knowledge needs to be assessed.

The question remains, of the steps that are being taken in the direction of exploration involving the local ethnoecological knowledge specific to Southern Illinois, how, when recovered, are of these folkways going to be integrated into present day

agricultural practices. The hands of the people who support sustainable principles may hold the answer. There has been sparse documentation on the efforts provided to the recovery of evaporated agricultural knowledge. This has resulted in the misguided direction of agricultural practice in the United States and the desertion of local knowledge important to sustaining local agricultural systems. In spite of this, concepts behind past actions may lend to encouraging the use of local knowledge in reeducating and progressing the process of reinstating local knowledge that may reinvent local agricultural systems in Southern Illinois.

By opening the windows of local interaction and incorporating cross-cultural examples the necessity of education in knowledge retention and recovery may be evident. This discovery is applicable to global agricultural systems. The economic surplus afforded to the market system at work will not be the only driving factor of agriculture. Through advancing a multitude of factors, the reality of the destructiveness of the capitalist monopoly is recognized (Baran & Sweezy, 1966). Exposing the irrationality of the corporate system allows new knowledge to then be rediscovered and organized on local levels, by local people, working together at efforts for change.

Local Knowledge Organization in Attempting Knowledge Conservation

Local agricultural knowledge can be expressed as any piece of ethnoecological information pertinent to the preservation of agricultural systems in a specific region. A local understanding of the immediate environment is important to the decision-making involved in attempts at sustaining agricultural subsistence. Gragson and Blount (1999) introduce a concept that discusses cognitive processes, such as decision-making, as a link

between the thoughts and behaviors of a local group. In Southern Illinois, the local groups, the communities situated in the hills of the region, are connected to the fragile ecosystem through the farms scattered across the countryside. The decisions made by individuals within the groups are driven by the relationships that unite the people and the farms that feed them. The processes of decision-making are also driven by emotions that elicit the behavior of an act (Anderson, 1996.) Emotions and decisions are intrinsically woven into the fabric of understanding local agricultural knowledge. The pair is decisive in determining the vantage point for which organization is constructed.

The first model in consideration, constructed by Borchgrevink (2002), presents a Cultural Models Approach that offers an explanation for implicit forms of knowledge. The environment is established as a major factor in the causal relationship between thought and action. The second explanation, an in-situ Conservation Approach (Zent, 1999), draws from the concepts of the Cultural Models Approach but elaborates on the interdependence of cultural and biological resources. Zent (1999) introduces a hierarchal Model of Knowledge Conservation that present a framework to understand the importance of knowledge conservation. Zent (1999) suggests looking at the process of demise first, before beginning efforts to understand the conservation of knowledge. This process yields the direction that guides each piece of knowledge when placed into a Model of Conservation.

The first model involves the economic benefit of knowledge. The focus is on knowledge as a commodity. The effect is an extractive mentality to the preservation of knowledge (Zent, 1999). A second model involves the process of salvage and promotes rapidly grabbing as much knowledge as possible. This is currently seen on one side of

the situation concerning the progression of the World Wide Web. Although the Internet brings the opportunities of sharing knowledge to villages in every corner of the Earth, it still is an attempt at globalization in which Western domination runs the speed of cultural homogenization.

Zent (1999) discusses the problem with the approaches. They omit any attempt first to understand the local pattern and process of knowledge loss itself. In fact, it is a unique set of interesting factors that reflects the mediation of global, cultural, penetration by local cultural histories and ecologies. Local knowledge extracts from history and tradition in attempts to bridge the past with the present. If the summary of past knowledge is only a vanishing notion to the present transmitters of knowledge how can the present understanding of knowledge properly incorporate local patterns and processes? Knowledge is a cultural product. Legitimization occurs through connections between networks of knowledge transmitters and mediators.

A Framework for Thought

A concept that strives to incorporate this claim is Agricultural Knowledge and Information Systems (AKIS). Roling (1991) defines AKIS as a:

Set of organizations and/or persons, and the links and interactions between them. They are engaged in such knowledge processes as the anticipation, generation, transformation, transmission, storage, retrieval, integration, diffusion and utilization of agricultural knowledge information and technology. And which potentially work together to improve the merge of knowledge and the environment. (Dissanayake, 1992.)

AKIS is one of the most significant productive attempts at theorizing the complex process of knowledge revival, retention and reutilization (Dissanayake, 1992.)

Other works note the use of the AKIS. "Recently, the development of a systems approach is being brought into use to demonstrate how elements of knowledge fit together." (Brodt, 2001.) The AKIS system carries implications for future development from person to person and generation to generation. Farm practice, through the years, has experience the cost of commodities in capitalism and the lack of personal connections. The small-scale systems are ever increasing production and in turn the scale of the operation in order to stay in business within the entire working unit of society. Those who cannot keep up on the treadmill are forced out of farming, and so are the subsequent generations of their family.

AKIS displays the interconnectedness of multiple factors that causes the suppression and erosion of valuable local knowledge. There are a multitude of factors, socioeconomic and political. Both socioeconomic changes and political adjustments are brought about because of generality, adaptability, hierarchical organization, the connectedness of subsystems, and scale (Brodt, 2001.) Socioeconomic changes are said to occur to accommodate the changing technology, especially as related to the modes of production (Mahmoudi and Sanchez, 2001.) Each factor affects the loss or conservation of knowledge and delineates the use of the Agricultural Knowledge Information Systems approach.

The elements of the AKIS seem persist longer if dispersed among many systems. If a knowledge system as a whole is to survive better in the face of change, they are to be organized into relatively individual subsections (Brodt, 2001.) This idea constitutes culture as an emergent property. Here it is important to understand scale in considering erosion and the conservation of knowledge. Scale, is also displayed by the Small

Amount Theory, explains that carrying cow manure for fertilizer is time consuming and thus costly. The introduction of chemical fertilizers into the market economy has aided in solving the problems with scale. It is easier and less time consuming to use synthetic fertilizers on natural food production processes. The economy of a capitalist society dictates the actions, such as the use of fertilizers, of the society and provides no implications for the future.

The lessons for development (Brodt, 2001) explain that the more applicable the pieces of knowledge, the better they will survive and suggests that extension workers of knowledge and should take a broader approach to knowledge conservation. With an increase of interdisciplinary approaches, such as ethnohistory and ethnoecology, that delicately weaves together systems of knowledge. Collecting and archiving is not enough to preserve a knowledge system (Brodt, 2001). The use of improved communication in a reconstructed data system may help to organize local agricultural knowledge into a framework that can be taught to others.

The Process of Learning Retention Through Historical Difference

To begin an attempt at the conservation of knowledge and progress towards change, an understanding of the knowledge lost must first be grasped. How is local, historical knowledge filtered through the years and how does that filter allow some knowledge to slip through the screening process? Once the process of loss has been established, it is critical to place these processes on a continuum of conservation.

When local knowledge is recovered and redistributed into the frameworks of conservation thought, efforts can be forged into the space of learning how to retain the

revived knowledge. The interviews conducted with local agriculturists and historians of Southern Illinois yielded numerous notes and pieces of lost information. At the least the bits of agricultural knowledge being shared had never before entered these ears. For the purpose of this study, the efforts made towards the retention of local agricultural knowledge are organized according to two major categories that depict how the environment is viewed (Mahmoudi and Sanchez, 2001):

- (1) The environment is seen in the context of human interests, or human control over the environment, and
- (2) Sensitivity for the environment, or humans and nature as part of the larger ecosystem.

Each category is grounded in a sense of place. Both are part of a concept that has vanished as quickly as the knowledge of how to sustain both oneself and the land simultaneously. The position that encourages power over the environment essentially reconstructs the notion of nature. This domination has destroyed the balance and creates an unequal plane to present thought that urges sustainable behavior. Where does this dominance originate? Delind (2000) describes the phenomena as a failed link in the connection between producer and consumer. This view assists in distancing thought from behavior. Here the reality of trusting a system of certified falsification is obvious. Consumers place trust in the regurgitation of knowledge rather than in interpersonal relationships and daily interactions that produce knowledge.

Study Site

Southern Illinois was chosen for this study because of its relevance and accessibility as an immediate human-environment relationship. The communities of the region have undergone substantial changes in land use practices over the past one hundred and fifty years. The area is located at the confluence of the Ohio and the Mississippi Rivers, at the southern tip of the state of Illinois, from which the region takes its' name. A 1949 report by the Executive Committee on Southern Illinois concluded that the 16 southern most counties comprise about 11 percent of the state. The scattered towns are connected by an array of paved and unpaved roads that intersect one another to insure transport through out the 6,160 square miles that shape the region. A striking ridge, formed along the Ozark Range, dominates the geography of the region and separates the northern soil and the southern soil.¹

In the region, the major urban center, Carbondale, is centrally located and economically vital. The city, and the region for that matter, revolve around and evolve with the stability of revenue attributed to the University of Southern Illinois at Carbondale.² The college was first chartered to train teachers in 1869. The region has since sustained industries that include: mining, fruit and vegetable production, timber harvest, recreation and tourism.³ Small communities surrounding Carbondale have been able to grow due to involvement in such industries.

The settlement of the region did not begin until the first half of the nineteenth century. Many of the American settlers of Illinois immigrated in the decades immediately following the Revolutionary War (Reynolds, 1887; Wagner and McCorvie, 1992). The shift in demography can be directly related to the creation of agricultural

knowledge during the time period. There existed little to no agricultural knowledge of Southern Illinois during this time period (Faris, 2003). An increase in agricultural knowledge was initiated by the increase of people to the region.

A brief regional history, based on interviews with present-day residents, gives an idea of the depth and direction of knowledge loss in the area. The first American settlers to settle in the region did so because one, they traveled by way of the rivers; two, they came from the northern regions of the state. Steel point plows were needed to farm the soils in the northern region of Illinois (Faris, 2003). The first farmers lacked this technological advancement and settled for the softer soils of the south. An area of land that was of great interest, Johnson County, was defined by the Big Muddy and Mississippi Rivers on the west, Lusk Creek and the Ohio River on the east, the Ohio River on the south, and by Gallatin County (as it once existed) on the north. A considerable portion of Southern Illinois was assigned to the original Johnson County. In 1816, however, the area was cut in half by the formation of Jackson and Pope Counties, and it was reduced even further by the creation of Union County in 1818; it would assume its present borders in 1843, when Pulaski and Massac Counties were organized. Despite the numerous changes that the region experienced during its history, agriculture has remained the primary industry in all the counties mentioned.

The first settlers that came from the North, were equipped with only wood plows (Faris, 2003). The soil in the region was unlike the rich, thick soil of the north. Thus, the settlers were able to till the thin soil of Southern Illinois without the use of a steel point plow (Faris, 2003). The impacts of the wood plow in Southern Illinois are best expressed by a local historian, "the first people that settled here, even in the beginning,

didn't use very good farming practices because most of the soil here shouldn't have been tilled to begin with. But they had to in order to sustain their lives," (Faris, 2003).

Informants noted that the local community of, Vienna, had developed into a regional transportation hub because of the increase of farms. A map published in 1846 indicates that the community had six major roads radiating out from it, leading to the river towns of Shawneetown, Golconda, Metropolis, and Cairo, and the inland towns of Jonesboro and Banbridge (Mitchell, 1846).

The area was determined to remain an agricultural influence in the state. Throughout much of the nineteenth century, farming in Southern Illinois was primarily confined to ridge crests and other high grounds. Many of the swamplands in the area remained unsold until the 1850's. The government began to buy up acres for extremely inexpensive prices. One informant mentioned that his family had purchased their plot for twenty-five cents and acre. Informants articulated their knowledge of agricultural learning progresses during the Civil War. During this particular time, the area experienced an increase in harvest of tobacco and cotton, both primarily southern crops, due to the restrictions placed on the southern states. After the south reopened at the conclusion of the war, cotton production largely died off, the growth of tobacco however, persisted for decades. One informant stated that around 1875, three million pounds of the leaf were produced. Farm operations in Southern Illinois had grown to be extremely valuable. However, after one hundred years of change, in 1950, the population of Vienna was only 142 individuals (Illinois State Census, 1950.)

The turn of the century was witness to many agricultural changes in Southern Illinois. The mention of "truck farming" came up in an interview with a local historian.

Produce was grown and shipped by truck and rail, beginning in 1872 when the railroad was completed. Prior to the completion of the railroads, the number of established Southern Illinois towns had been relatively small. Communities soon sprung up adjacent to railways. Roads could then contact the small towns for better transport and an increase in contact from outside influences. But by the time the Great Depression hit the region, the soil had been greatly devastated and there were families trying to live on land that could not support them (Faris, 2003). The relationship between the people and environment had been upset. The next step came in the form of governmental aide. The National Forest Service began to buy land and with the help of the Civilian Conservation Corps, replanted many of the eroded hillsides and areas that had washed away during the erosion process. Despite these efforts, poor farming practice still occurred. It became obvious that the economic value took precedent to the importance of ecological encouragement.

Methods

The data collection occurred within two months, September through November 2003. The first steps of the research were to make contact with oral historians and farmers in the area. This was established through weekly ritual attendance at the Carbondale Farmer's Market. This market was chosen for use because of its' neutral meeting ground and wealth of individuals who maintain an authority over agricultural knowledge in the area. The primary focus was to observe the connection that the producers had with consumers. It became obvious which individuals were concerned

with informing the people about the food being purchased. These were the individuals chosen for future inquiry.

Specific individuals, the farmers, were of great interest being that they are transmitters of knowledge. This concept allows for the introduction of the farmer as a "creative manager" of knowledge. Engel (1990) suggests "the effective Agricultural Knowledge Information System exhibits high levels of integration with strong links among core actors". The interviewing of farmers opened an outlet to understand individual knowledge management. "Farmers are not only recipients and reproducers, but also creative managers and integrators of knowledge and information from a large number of sources, including their own practical experiences and that of their friends and colleagues." (Engel, 1990.) This creates what is known as a knowledge network.

Essentially, a knowledge network is a web of individuals who collaborate knowledge and exchange information concerning a specific body of knowledge. In the case of Southern Illinois, agricultural information networks are derived from a similar web of farmers. Several of the informants share friendship and common interests. A general respect for the Earth is also prevalent. The efforts made by each individual to make assist one another reveals the connection that encompasses their relationships and encourages ecological practice. The practices that are constructed by each farmer are done so partly through conversations had with other farmers and historians alike. Common interests conjure up common actions and help to work cooperatively towards common goals.

The first time the interaction between the farmers was observed was at the Carbondale Farmer's Market. There was rarely a Saturday in which the entire cohort of

farming friends was not in attendance. The group was there to share in the exchange with the community. The exchange of goods and knowledge regarding where the goods came from helped to explain to the public how purchasing and consuming ecologically grown fruits and vegetables are efforts towards sustainable practice in Southern Illinois. Growing vegetables and fruits through an ecologically conscious system has important economic value.

Cultural Context

It is more than the historical differences and present conditions that illuminate the path for agricultural knowledge to emerge on. If the role of agricultural knowledge is to be understood, it will be from a universalistic not a particularistic perspective (Gragson and Blount, 1999.) This may demonstrate that the study of any human group is relevant to understanding all human groups. Situating agricultural knowledge within a wider cultural context brings the complex nature of the interaction to the surface. "This places the value of traditional peoples as a living model of sustainable resource management and repositories of ecological information." (Gragson and Blount, 1999.) The knowledge of past peoples is a vital lifeline to the roots of agricultural knowledge. These roots sink deep into the soil and may appropriately entangle current thoughts related to the retention and subsequent education of such knowledge.

The market economy that operates within American society cuts the roots before they have grown by basing the system on the trade of goods and services and not the connection between the people of the exchange. The exchanges that have occurred through out the recorded history of Southern Illinois took place for many different

reasons and for many different purposes. "But the market in capitalism has a distinctive and unprecedented functions. Virtually everything in capitalist society is a commodity produced for the market." (Wood, 2000). This creates a market-dependence, a regulator of social reproduction.

The work of Appadurai (1986) suggests that commodities are things with a particular type of social potential. Improved agricultural knowledge has the potential to change the present system of agriculture in America through the exchange of the knowledge. What is the definition of a commodity exchange? Be separating the familiar idea of commodity as a gift and the abstract notion of commodity as a direct exchange, the importance of the market is situated into the equation of understanding. The social life of any "thing" is defined "as the situation in which its exchangeability (past, present, or future) for some other thing is its socially relevant feature." (Appadurai, 1986). Here the transitory nature of agricultural knowledge can be acknowledged. The value placed on agricultural knowledge is at times highly regarded and at other times not even considered.

The value of agricultural knowledge in this research is seen in economic terms. Appadurai argues that the act is what creates the value of the commodity along with the thing itself. He associated this thought with the nature of an act as an initiator of distinctive policies rather than merely the administrator.

Economic exchange creates value. Value is embodied in commodities that are exchanged. Focusing on the things that are exchanged, rather than simply on the forms or functions of exchange, makes it possible to argue that what creates the link between exchange and value is politics, constructed broadly.

Appadurai synthesizes the ideas of turn of the century philosopher, Georg Simmel, in determining the value of a commodity. He uses the idea of reciprocal sacrifice to explain the thoughts of Simmel. Reciprocal sacrifice includes, but is not limited to an exchange of agricultural knowledge. This is not for another commodity, but merely for the act of exchanging in order to encourage the movement of the knowledge. "The economic value, for Simmel, is generated by this sort of exchange of sacrifices." (Appadurai, 1986). By understanding the notion of economic exchange, the value of the "thing" can be assessed. Appadurai (1986) argued that the economic thing is not valued for its demand, as in the case with agricultural knowledge, but when the demand is sited as the foundation for the exchange, the thing then gains value. "Exchange is not a by product of the mutual valuation of objects, but its' source." (Appadurai, 1986).

The movement of agricultural knowledge as a commodity is difficult to track through history. Zent (1999) supports the recognition of how knowledge came about as an outlet for understanding how knowledge exists today. He states that it is nearly impossible to observe directly, at the exact moment of happening, the "death of the last living representative of a bit of cultural information." The ideas presented by Zent are results from the understanding he has gained in the field of intra-cultural cognition studies. He has developed a hypothesis that calls for the gathering of lost ethnoecological knowledge in an attempt to explain the loss and identify some of the causes that result from an acculturated environment. Each diverse environment in the world has its own history and own position in the world. Each situation yields a different process of retention and different modes of communication. Zent concludes that specific local

education pertaining to specific information is important to keeping alive the information, such as ethnoecological knowledge, for future generations.

Ethnoecological knowledge is equitable to the agricultural knowledge of Southern Illinois. The history of the region is representative of the changes that have formed the frameworks of agricultural knowledge. The demise of agricultural knowledge in Southern Illinois and the nation can be noted specifically at the turn of the century. "In 1900, perhaps two in five Americans still drew their livings directly from the soil, and more people followed farming than any other single occupation," (Danbom, 1979). In that same year according to the U.S. Bureau of the Census, 10,381,765 of the 29,073,233 gainfully employed were employed in agriculture. The acculturation of this segment of society occurred when the economic incentives took precedent to the condition of life being represented.

Danbom (1979) suggests that "through out the nation farmers noted that big crops usually lost money." No wonder of the farmers questioned why the federal government was so intent upon increasing production. The market of the city populations demanded cheap food. Thus, the value evolved from the food to the want for cheap food. This polarization explores the position that the city market held the farmers in. The value still exists in the act of the exchange, however the exchange has changed as a result of the changing society.

The current American agricultural system perpetuates the problem of trying to change a ridiculously, stubborn society. It seems that any change implemented into this problem would cease to progress the situation for the simple reason that it would take too much effort to carry out the change. Wendell Berry (1977) distinguishes between the

levels of consciousness involved in decisions concerning the destruction or the preservation of the environment.

Some people are less destructive than others, and some, their involvement in pollution, soil depletion, strip-mining, deforestation, industrial and commercial waste is simply a "practical" compromise, a necessary "reality", the price of modern comfort and confidence.

The individuals that set their life in opposition to the destruction have confronted themselves with the absurdity that they have recognized in their society. The public absurdities seem to be no more than the result of private absurdities inflicted upon the public. A corrupt hole within the society exists and the community suffers at its expense.

Berry (1979) discusses this to be the moral crisis of our time. It is a choice whether to adhere to the absurdities or to break the instinctive connections in order to begin efforts at changing the way we think and live. There are a multiple systems within the system that are put into effect. One such fixture is specialization. The social system attributes the problems in food production to the problems of agribusiness and agriculturists. This mentality extracts the individual from the responsibility needed to understand the progression of the system. But that seems to be the goal. For in a capitalist market economy a happy individual is one who fulfills all the wants and desires and concerns of the self. All other vital concerns are in the hands of a verified expert.

Conclusions that Distance the Perpetuation of Persuasion

What qualifies as a "certified expert"? The United States Department of Agriculture is considered certified. The standards approved by the USDA are considered certified. The food that is sold on the market is certified and at times certified organic. The organic farmers at the Farmer's Market in Carbondale, IL are not certified. Why are

the direct producers not considered certified? The cost of certifying the farms in Southern Illinois would create too great an overhead for the farmers to successfully encourage the ecological development of knowledge. Their local efforts do not stop because of this roadblock.

On a national level, the efforts towards educating the public consumer group are in progress; the USDA Organic Label is an example of this. However the label does nothing for the majority of the public. This unknowing group in society now simply does not have to think about where the food is coming from. The label secures the satisfaction of the product and societies trust in the certifier. This evidence points to the lingering problem, the industrial paradigm is alive and well (Delind, 2000) and the social spirit of homogenization runs deep through the soil of American agriculture. Social standards need to change in order to make way for the retention and persistence of knowledge. These standards “need, in other words, to put floors under the social and ethical dimensions of the vision, to deliberately incorporate them into the equation and to facilitate the local work that will frame their decentralized expression” (Delind, 2000.)

Building the framework is half the battle. The system introduced in this search can be used as a step in direction of change the system and saving missing knowledge. Efforts towards reaching the sustainable goal are right under our feet. If each person in the equation would just stop for a minute and feel the soil that sustains life, perhaps they would consider what life is grown from the soil. The missing link in the progression of improved thought is accessible, only if for a moment the thoughts were considered recoverable.

Notes

¹ The soil south of the Ozark Range ridge is said to be more fertile. However, the water runs off the hills into the low-lying valley. There is so much water on the soil nothing can be done with it. This information emerged from personal communication with G. Hacker. For further sources concerning the geography of Southern Illinois see Hall, 1940, MacClintock, 1929.

² For further impacts of Southern Illinois University on the region see Goldman, 1986.

³ See Belmfuhr, 1952, Demko, 1959, Johnson, 1966, and Christensen 1985 for more information on the industries of Southern Illinois.

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