RURAL IOWA
ITS PAST,
AND SOME
PROPOSALS
FOR ITS
FUTURE

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Rural Iowa: Its Past and
Some Proposals for Its Future

- an Independent Study
prepared by
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They claim this Mother Earth of ours for their own and fence their neighbors away from them. They degrade the landscape with their buildings and their waste. They compel the natural earth to produce excessively and when it fails, they force it to take medicine to produce more. This is evil.

- Sitting Bull, 1877
Introduction: Part One

Today rural Iowa—including both farms and small towns—is in a state of crisis. For the first time in many years, Iowa's out-migration exceeds its in-migration. Across the state, farmers are leaving their land in large numbers, and a number of hardware stores and implement dealerships and small churches in almost every town are permanently closing their doors. Primarily due to the farm crisis and rural depopulation, the state's tax base continues to erode. So does its topsoil as rural Iowans try frantically any measure they think might earn them more profit and thus enable them to "hang on" for at least another season. Chronic unemployment and property loss affects thousands of Iowans, and thousands more see only darkness and turmoil in their near future. This present crisis, then, threatens the very survival of life in Iowa as we have known it.

What factors have caused the present farm crisis and continued rural depopulation? How long has the storm now upon us been brewing? What are its sources, and what does it mean to rural Iowa today? Countless studies have been conducted in order to find possible answers to these questions, yet the conditions prompting these questions persist. Most of the studies originate from the university sociology departments, state agricultural services, corporate research bureaux, and private institutions such as the National Catholic Rural Life Conference.¹

It is the purpose of this paper to document the historical roots of rural Iowa's present crisis, and then out of those findings to recommend
appropriate actions for the immediate future. Part One shall concentrate on two historical developments: 1) the migration of rural Iowans since World War I to Iowa's cities or other states due to various economic, social, or personal reasons; and 2) the increasing industrialization of agriculture since World War I, and the ever-growing dependence on petroleum and an unsustainable national technosstructure. These two developments are closely related, and greatly influence current demographic and agricultural trends. Only by understanding the past can we hope to understand the present, and ultimately the future.

Critics may question the validity of an historical review of Iowa's rural crisis, yet Richard S. Kirkendall offers an excellent response to such criticism. He writes, "Agriculture and rural life need to be examined historically. Technology, politics, and other forces have changed them dramatically since the establishment of the United States and of the state of Iowa, and change in human affairs gives historical study its focus. Once a rural, agrarian country, the United States has become predominantly urban and industrial, and, although Iowa remains more rural and agricultural than the nation as a whole, this transformation from farm and village to factory and city, which has been called 'the major process of American history,' has affected the state in major ways."  

NOTE: Because the subject deserves a separate paper unto itself, farm mechanization and population shifts during the two world wars is not included in this work. Thus, Part One divides into two parts: "Between the Wars," and "Since 1945."
Part One: Between the Wars

The Roaring Twenties—an age of swallowing goldfish by the dozens, wearing hip flasks, playing "Chinese" table games, and making whoopee—witnessed a very different life for those living in rural Iowa. While Wall Street bullied round the bears, and Lonely Lindy flew alone to Paris, Wall Lake and Parnell reeled under the effects of low farm prices and even lower farm morale. Spencer, Keosauqua, Hazelton and Hamburg, State Center and Albia all suffered to some extent because their people came under hard luck, hard times, and hard finances.

Why the glaring discrepancies between urban and rural life in the '20s? The wife of Warren Johnson, a Hardin County farm woman, poignantly explained the situation from her perspective in a 1932 article published by the Des Moines Sunday Register:

...life for most of us Iowa farmers was a joy until one day the great war came. Not many of us were forced to send our husbands, because the great army needed food. We toiled early and late. Women went into the fields with the old men and children. We learned to raise two blades of grass where one had grown.

During the war, the farmers were urged and forced to buy bonds not in proportion to the equity they had in their farms but according to the wartime valuation of their farms. Five, 10 or 15 thousand dollars worth of bonds. If you didn't have the money, the bank would be glad to lend it to you—at 8 percent.

Farmers borrowed and bought. In 1920 the banks wanted their money back when everything went smash-bang and new corn brought 25 cents a bushel. We all sold our bonds for 80 to 85 cents on the dollar, paid our 8 percent interest and said goodbye. We were glad to help win the war, and we
have been paying for that war ever since.4

During World War I, American farmers were encouraged to produce as much food and fiber as they could, and to expand their farms in both acreage and capital investment. As the testimony above illustrates, the costs of this major increase in production and farm size were severe and often fatal. In mad scrambles to finance their expenses and reschedule their debts, many farmers borrowed money against their life insurance policies. Some sold land, and still others liquidated their farms completely. For rural Iowa, the Roaring Twenties were an austere period involving loan repayments, farm auctions, and some bankruptcies.

At the same time, a condition just as trying as monetary hardship and just as unsettling as farm dislocation was the realization by farm and small town people that farm life simply wasn't keeping pace with urban life in terms of physical comforts and luxuries. Before World War I, many farm families boasted telephones, automobiles, and ice boxes, but after the war urbanites commonly began to own vacuum cleaners, kitchen ranges, radios, lights, and other amenities available only with the arrival of electricity. Also, indoor plumbing, running water, and central heating existed in many urban homes, while most farmhouses did not have those features.5

Social inadequacies existed, too. According to historian Dorothy Schwieder:

"Farm families were often isolated, and as a result, farm living was often portrayed as dreary and monotonous. Moreover, farm families had few social and cultural opportunities. Farm children sometimes received inferior educations in rural schools and many did not have the opportunity to attend high school . . . another source of rural discontent was that the 1920s seemingly brought prosperity to every sector of society except agriculture."
In the perception of farm people, town and city residents enjoyed a higher level of material well-being than ever while prosperity for farm people faded quickly after World War I.6

Real and perceived inadequacies of rural life motivated the first large wave of post-war migrants to go to cities or other states. For the sake of opportunity elsewhere, thousands of Iowans moved from the farm. Between 1920 and 1930, rural Iowa lost 2.4% of its total population, while urban Iowa gained 11.9%. The percentage of rural Iowans was 63.6% in 1920, and that number decreased to 60.4% in 1930.7 This substantial population shift only hinted at future trends.

Innovations in agricultural technology—led by institutions such as Iowa State College in Ames, and the growing farm machinery manufacturers—helped accelerate the exodus of young and displaced people from rural Iowa. With a greater number of machines and labor-saving devices came less demand for human labor. The epitome of increased farm mechanization during the 1920s was the traction engine, or the "tractor." While there were 27 million horses being used on farms in the United States in 1917, only 3 million remained in 1960. In the same period, the number of tractors increased from 51,000 to 5 million.8

Another technological innovation which decreased the need for farm laborers included bigger farm machinery, while research into more productive grains and livestock breeds enabled Iowa farmers to grow more food per acre and thus make it possible for fewer rural people to feed increasing numbers of urban dwellers.

While the 1920s saw social and economic conditions in rural Iowa deteriorate, the national depression of the 1930s (witnessing greatly increased numbers of farm foreclosures, bank failures, and small business...
bankruptcies) facilitated an improvement in the social situation in rural Iowa. Because they could rely upon no immediate improvement in their lives, many rural Iowans became increasingly dependent upon their neighbors for assistance and personal strength during the Great Depression. According to one rural North Iowan, "The conditions drew the neighborhood together. Instead of paying a dime to go to a movie, area farmers would congregate to play cards or visit while making homemade ice cream. Many tasks became exchanged for goods, and machinery and tools were borrowed to eliminate the need to buy."9 Tangible contributions to an improved life for rural Iowans included the coming of electricity. "The modernizing of the farm was greatly speeded by the Rural Electrification Administration, set up in May, 1935. Refusal of commercial distributors to build lines to the farm had denied central-station light and power to about nine of ten agriculturalists."10 The REA made available low-interest loans to states, municipalities and cooperatives (along with Work Projects Administration labor) for the purpose of extending power lines to rural homes. This action made possible for the first time on the farm previously unimaginined comforts: lighting, refrigeration, milking and separation machines, electric incubators, feed mixers, water pumps, and household appliances.

In contrast to the 1920s, the 1930s saw the discrepancies of urban and rural life decrease, not increase. Because farmers and small townspeople began to enjoy the use of paved roads, greater automobile ownership and use, electricity, increased distribution of household appliances and luxuries, the panacea of urban migration took a firm beating. Also, the rural population exodus slowed a bit in the 1930s because "... the early depression years
saw a reversal of the traditional flow of population from farm to city, which in the previous decade alone netted an urban increase of six million persons . . . Idle youth left the sidewalks of the metropolis to try their hand at raising food."\textsuperscript{11}

Despite the efforts of some individuals like Milo Reno (President of the Iowa Farmers' Union, and general agricultural radical), and farm organizations such as the Congressional Farm Bloc, the McNary-Haugen Bill, and the Farmers' Holiday Association, the economic plight of rural Iowa worsened during most of the 1930s. Thousands of farmers lost their land in the course of the decade. With them went small town businesses, rural institutions such as some Granges, social organizations, and a number of country schools and churches. The pre-War appearance of a prosperous, decent life collapsed. Overall farm acreage increased during the Great Depression, as those farmers able to survive the economic crisis assumed the land of those forced to quit agriculture. The proportion of Iowa's rural population fell by 3.1%.\textsuperscript{12}

Farm mechanization increased between 1930 and 1940, although at a slower rate than during the previous decade. The number of tractors continued to increase on Iowa farms, and Iowa State College concentrated much effort on plant breeding and on developing more efficient farming methods and equipment. The lessened need for and inability to pay farm labor contributed to the rural-to-urban migration of the '30s.

As Iowa's farm population decreased, and its agriculture became increasingly commercialized, small towns began to change drastically. Those communities which could provide complete services or "multifunctions" grew at the expense of the single-function hamlets and villages. What determined the
survival or failure of small towns was the automobile, and the existence of
or lack of paved roads. The construction of new and improved roads
connecting towns had a profound effect on them in the Upper Midwest. As
transportation evolved, and became more widespread and complex, trade centers
were better able to exert their influence over a larger area. This
phenomenon, known as "rural trade center dominance," continued from the 1930s
until the present time.\(^\text{13}\)

As one community became dominant, other rural towns in the surrounding
area lost their main functions and declined. When improved roads were
constructed in rural neighborhoods, farmers often traded in a number of
centers, depending upon the desired goods and the variety of goods available.
The towns initially affected by paved roads and wider automobile ownership
were those which were not located on main road systems, (mostly towns
which had fewer than 500 persons). Where physical and social isolation had
preserved many small towns and hamlets well into the twentieth century,
improved roads reduced the need for their existence.\(^\text{14}\)

Not everyone failed to notice the demise of the small rural community.
Henry A. Wallace, a native Iowan, was deeply concerned that the depopulation
of rural areas would adversely affect American society. To remedy what he
saw as a very threatening situation, Wallace proposed reviving small towns in
a number of ways and for various reasons. He wrote:

Many of the most lively, intimate expressions of spirit
spring from the joyous, continuous contact of human beings
with a particular locality. They feel the age-long spirit
of this valley or that hill each with its trees and rocks
and special tricks of weather, as the seasons unfold in
their endless charm. If life can be made secure in each
community and if the rewards of the different communities
are distributed justly, there will flower in every
community not only those who attain joy in daily,
productive work well done; but also those who paint and
sing and tell stories with the flavor peculiar to their own
valley, well-loved hill, or broad prairie. . . . Every
community can become something distinctively precious in its
own right. Children will not try to escape as they grow
up. They will look ahead to the possibility of enriching
the traditions of their ancestors.15

In contrast to the Jeffersonian view held by Henry Wallace, there are
those who take an "objective," distanced view of developments in rural
America. While social and cultural failings inhibited the development of
rural life, for example, Donald R. Field and Robert M. Dimit write that
improved transportation encouraged farm commercialization.16

Prior to the development of an adequate transportation
system, farms were primarily small, were based upon
subsistence, and were self-supporting. The movement of
products was limited to the local market and was directed
toward providing a relatively few items which could not be
produced on the farm.

Farm mechanization and commercialization represents not
only a change from animal power to various forms of
mechanical or electric power, but also a change in
attitudes toward farming by the individual operator.
Mechanization began slowly during the 1920s and advanced
tremendously prior to and during World War II.17
Part One: Since 1945

In the mid-forties Walter Goldschmidt conducted research in Dinuba and Arvin, two separate communities approximately 120 miles apart in the Central Valley of California. The Goldschmidt's report indicated much about the character and quality of rural community life as a consequence of size. Simply put, "small is more beautiful than large." At the same time, post-war, boom-time rural Iowa seemed to pay almost no attention to the findings of Goldschmidt, for during the decade of the 1940s, 5% of those people living outside of Iowa's urban areas moved to Iowa cities or other states. Little concern, it now seems, was expressed at the time about rural Iowa's dramatic loss of population.

Despite most people's silence, however, a radical change crept over rural Iowa. A joint sociology-economics department paper published by Iowa State College in 1954 reported, "Urban birth rates increased more rapidly and were higher than rural rates for six of the ten years. Rural rates showed sharp increases in the predominately urban areas and in those with high farm family levels of living." Between 1940 and 1950, Iowa had a net migration loss to other states of 197,945 persons. This figure included 26,000 men who were serving in the armed services in 1950. Nine counties gained in population through migration while 90 showed losses.

Rural Iowa lost through migration 223,453 persons (mostly from farms), or fifteen percent of the 1940 rural population. Rural-to-urban migration during the decade resulted in a nearly five percent reduction in the number
of farms, a 33% decrease in volume of hired labor used on farms, an 88% increase in tractor ownership, and a 20% increase in total adjusted value of farm products sold. The number of farms in 1945 was 208,934, but by 1954 the number had decreased to 192,933.

Farm mechanization directly influenced the rural-to-urban migration during the 1940s. Tractor use in specific, but machine use in general made many farm laborers redundant. An Iowa State College research bulletin reported in 1954:

An index often used to measure degrees of farm mechanization is the percentage increase in the number of tractors. Even though Iowa farmers began the decade with their farms relatively well mechanized, an 88 percent increase in the number of tractors was observed for the 10-year period. This represented an increase of from 0.6 to 1.2 tractors per farm.

... No areas with more than a 100 percent increase in tractors on farms had rural population loss through migration of less than 8 percent.

Another factor acting to reduce the rural population base in Iowa was the decrease in amount of hired labor used on farms. Although an increasing number of farmers hired some labor, the length of employment was decreasing.

The above-cited report continues:

Between 1944 and 1949, the number of Iowa farmers using hired labor increased to 131,000. The proportion of farmers who employed some kind of hired labor was 65 percent, which was above 1944, and substantially above 1939. For the state as a whole the actual reduction in use of hired labor during the 10-year period was 33 percent. Part of the increase can be attributed to the return of service [people] to farms, which eased the wartime labor shortages.

More farmers using some hired labor to accomplish work formerly done by sons or other family members who left the farm. Some farmers who did not feel they could afford
hired help in 1939 were able to hire workers for rush periods in the late 1940s. More farmers [were] using hired labor only during critical periods of farm work. Hired workers therefore [could] depend only upon short-period employment which [had to be] supplemented by other employment.  

While the 1940s saw substantial farm-depopulation and mechanization, the 1950s and early 1960s saw similar trends. By 1964 the number of Iowa's farms had diminished to 154,162, and the average age of its farmers had risen to 48.5. The 1960s witnessed an intensive push towards "agribusiness" and a mass industrialization of agriculture. Iowa's farms continued to grow larger in total acreage, and the role of agribusinesses and companies expanded. The use of fertilizers and petroleum greatly expanded, with the expenditure for fertilizers and lime nearly doubling between 1955 and 1964.  

Barry Commoner, Director of the Center for the Biology of Natural Systems at Washington University, St. Louis, Missouri, and his associates produced a study in the 1970s in which they reported that between 1949 and 1968, nitrogen fertilizer and pesticide use in agriculture increased 534 percent and 217 percent, respectively. (According to Commoner, in 1949 about 11,000 tons of nitrogen fertilizer were required to produce the equivalent crop yield per acre in Illinois that 57,000 tons produced in 1968.) After World War II, U.S. production of DDT soared from 9.5 million pounds in 1944 to 179 million pounds in 1953.  

Many household names closely allied with farming became megacorporations in the 1960s and 1970s: Felco/Land O Lakes, Iowa Beef Processors, Asgrow, Cargill, and others. At the same time they experienced phenomenal growth, these companies received suspicious criticism concerning their increased power and influence. Calls for federal investigation into agricorps'
dealings and impact were not unfounded. According to reports filed with the Securities and Exchange Commission, for example, Tenneco (one of the largest agri-giants) had in 1969 gross oil income of $464 million and taxable oil income of $88.7 million. Yet due to federal tax breaks, Tenneco not only paid no taxes on that income, but had a tax credit of $13.3 million.27

One of the reasons for the incredible growth of food processors and handlers is that greater consumption of processed food requires additional corporate involvement in the American food system: the more food processed, the more agri-profits generated. Between 1929 and 1958, per capita consumption of fresh fruits and vegetables declined 30 percent while processed food consumption increased 152 percent; the value added to raw produce by food processing increased 325 percent between 1939 and 1957.28

According to Darryl McLeod, a graduate of agricultural economics at the University of California, Berkeley, and former affiliate with the Berkeley Food Project, "The same modern industry that strives to make potentially durable appliances and automobiles quickly obsolete has tried to transform perishable, healthy food into a durable, lifeless commodity."29

The rapid industrialization and commercialization of agriculture in the 1960s continued into the 1970s. The number of Iowa farms continued to decline, until by 1974 there were only 126,104. At the same time that Iowa farmers left agriculture in large numbers, small towns in Iowa suffered from the effects of rural depopulation. Farms continued to grow in size, but in order to grow, farmers incurred more and more debt. Small-town banks, farmers, and retailers found themselves by the end of the decade of the 1970s in a no-win situation. Farmers, who could not earn enough profit to repay outstanding bills and loans, not only purchased fewer goods from the local
hardware store and grocery, but also strained community banks. In turn many small businesses curtailed their operations or quit business completely. Numerous banks were forced to reevaluate their lending policies, and in some cases repossess farms or farm machinery.

As rural Iowa entered the 1980's its future looked bleak. Farm depopulation continued largely unfettered, and, farm debt and the "farm crisis" make the survival of many Iowa farmers and their dependent rural communities doubtful. In an eight-year period, from 1974 to 1982, 10,690 Iowa farms folded, with 5,925 of those farms failing since 1978.  

Problems of major proportion face rural Iowa today, but the importance of the farm crisis affects not only those living in the countryside, but the entire society. Richard Merrill explains:

"During the last century the United States has experienced one of the largest internal migrations in human history, from the farm to the city. But during our flight from freedom to convenience there has been increasing signs that the changing relationship between people and the land, plus the concentration of people into urban centers are at the heart of our most basic social problems."
Footnotes, Part One

1 National Catholic Rural Life Conference; 4625 Northwest Beaver Drive, Des Moines, Iowa 50322 - (515) 270-2634.

2 Peter H. Argersinger, "The People's Past: Teaching American Rural History," _The History Teacher_ 10 (May 1977), 420. See also, Josh Shover, "On the state of Agricultural History," _American Quarterly_ 28 (Fall 1976), 504-511.


4 Mrs. Warren Johnson, "Iowa Farmers Fighting for Life; Asserts War Brought Ruin; Want Only Living Wage, She Says," _The Des Moines Sunday Register_ (1932).

5 Dorothy Schwieder, "Rural Iowa in the 1920s; Conflict and Continuity," _The Annals of Iowa_ 47 (Fall 1983), 105.

6 Ibid.


9 Michael Luick (from interview), _Work and Leisure on Ashlawn Farm_ (Mason City, Iowa, Northern Trails Area Education Agency, 1980).


11 Ibid.


13 Carle C. Zimmerman, _Farm Trade Centers in Minnesota, 1905-29_ (Minnesota Agricultural Experiment Station Bulletin 269, St. Paul, 1930).

14 Ibid.

16 Donald R. Field is a Professor in the Management and Social Science Division, College of Forest Resources, University of Washington, Seattle, Wash., and Robert M. Dimit is Professor of Rural Sociology, South Dakota State University, Brookings, South Dakota.


22 Ibid.


28 Darryl McLeod, *Agricultural Economics* (University of California, Berkeley).

29 Ibid.


... the great cities rest upon our broad and fertile prairies. Burn down your cities and leave our farms, and your cities will spring up again if by magic; but destroy our farms and grass will grow in the streets of every city in the country.

- William Jennings Bryant
Chicago, 8 July, 1896
Introduction: Part Two

As illustrated in Part One, the present farm crisis represents past trends allowed to develop to an extreme. For years the industrialization of agriculture and other related factors have displaced thousands of Iowa farm and small town people. Today the "shake down" is entering its most severe and most devastating stages. Farm ownership is falling into fewer and fewer hands, and small towns continue to wither into near destitution. With the passing of the family farm and integral rural communities passes a considerable degree of social and economic democracy—the very tenets upon which our society and our government have traditionally been built. As Karl A. Wittfogel has suggested, political and social institutions in a civilized society are closely related to the type of agriculture from which it draws its food supply; in particular, an agriculture which required extensive public works and concentrated control is much more likely to develop an hierarchical and authoritarian structure than is an agriculture based on smallholdings and middle-class land ownership.¹

Concurrently, almost unwittingly, the United States is placing itself in a precarious and vulnerable position by allowing its people to become utterly dependent upon centralized, specialized agribusiness. In times both of peace and of war, this country's food supply could be easily disrupted or halted. It is so dependent upon fossil fuels, for example, that if a Middle Eastern country were to block the shipment of oil from the Persian Gulf, farmers could neither plant or harvest crops, nor could transport companies carry
food from the farms to the cities. Millions of Americans would be without basic food supplies and other necessary goods. The Stanford Research Institute conducted a study on the dimensions of agriculture's energy dependence for the Office of Civil Defense and later reported, "We can state immediately, that without petroleum, field crop production is virtually impossible in the United States [agricultural] system." Other threats exist, too. Barring adverse international developments, domestic civil unrest, social collapse, drought, continued soil erosion, or other intranational crises could spell the end—either temporarily or permanently—of American agriculture as we have known it.

The other major factor which promises to render our present system of producing food and fiber practically useless is the lack of sustainability of American agriculture. There are several sustainability considerations: economics, natural resources (soil productivity and—again—petroleum), social values, and demography. As much as any state, Iowa has not only pillaged its natural resources, but grossly violated the very balance of nature which we expect to sustain us and give us life. Barry Commoner, Director of the Center for the biology of Natural Systems at Washington University, St. Louis, Missouri, explains clearly the connection between human survival and the maintenance of the biosphere:

The environment makes up a huge, enormously complex living machine—an ecosystem—and every human activity depends on the integrity and proper functioning of that machine. Without the ecosystem's green plants, there would be no oxygen for smelters and furnaces, let alone to support human and animal life. Without the action of plants and animals in aquatic systems, there would be no pure water to supply agriculture, industry, and the cities. Without the biological processes that have gone on for thousands of years, there would be neither food crops, oil, nor coal. This machine is our biological capital, the basic apparatus
on which our total productivity depends. If it is destroyed, agriculture and industry will come to naught; yet the greatest threats to the environmental system are due to agricultural and industrial activities. If the ecosystem is destroyed, [human] will go down with it; yet it is [human] who is destroying it. For in the eager search for the benefits of modern science and technology, we have become enticed into a nearly fatal illusion: that we have at last escaped from the dependence of [human] on the rest of nature. The truth is tragically different. We have become not less dependent on the balance of nature, but more dependent on it. Modern technology has so stressed the web of processes in the living environment at its most vulnerable points that there is little leeway left in the system. We are approaching the point of no return; our survival is at stake.3

Similarly, the survival of Iowa's most important natural resource--its soil--is at stake. When the first pioneers began settling Iowa in the 1830s, its rich prairie topsoil measured on an average between fourteen and sixteen inches deep. Today, on the average Iowa's topsoil is only five to seven inches deep. The remaining topsoil could be gone in less than 100 years, but at the present rate of soil loss through erosion, the topsoil's ability to retain moisture (crucial during times of drought or rainless summer weather) and to provide adequate nutrients to grow productive crops is already in jeopardy. Wind and water erosion continue to steal tons of soil from Iowa's fields (which provide much of the nation's food and fiber) at a rate of two bushels of soil for every bushel of corn produced.4

Even if our society should so choose, we simply cannot continue to farm in the present manner in which we are. Petroleum, upon which the entire present food production and distribution system in this country is based, remains finite, and even now the high cost of fuel and petrochemicals used prohibits the making of enough profit to fund agriculture. Soil erosion promises to turn the farmbelt from Indiana to Colorado, North Dakota to Texas
into one vast dustbowl; current farming practices do not adequately address soil stewardship needs. Most importantly (as we are witnessing with the massive failure of the farm system as we have known it to survive fluctuations in market prices, land and production costs, and lack of new recruits into farming), traditional agriculture is not sustainable—it is irreparably collapsing. Thus, we in this society are left with two options:

1) allow corporations to usurp the role of food and fiber production and distribution (more honestly, to allow them to completely control agriculture, as opposed merely to manipulating it as they do today); or
2) act as a people decisively and immediately to create a regenerative, sustainable rural environment.

Part Two of this paper shall propose actions which encourage the revitalization of rural life, the use of appropriate technology instead of energy-intensive specialized technology, popular land ownership, the restoration of a natural balance in Iowa's ecosystem, and general sustainability. These recommendations are made with the past's lessons and the future's needs and well-being in mind.
Part Two

The two primary concerns for Iowa's future are its land and its people. Without the health of the land, the people cannot survive in Iowa. Without the people and their capacity to replenish nature's bounty, the land would further erode and become inhospitable to humans and much wildlife. Because the well-being of the land determines whether or not human settlement continues in Iowa, Part Two will begin with a consideration of the land.

As noted in the Introduction to Part Two, soil erosion by wind and water threaten to deplete Iowa's topsoil. In the western four-fifths of Iowa, winds blowing over unprotected fields in late fall, winter, and early spring carry a surprising amount of topsoil dust and particles with them. According to a Kansas Agricultural Experiment station booklet, "windspeed and soil moisture both affect wind erosion. For example, the rate of erosion for a 30-mile-per-hour wind is more than three times that for a 20-mile-per-hour wind. Wind erosion decreases, however, as soil moisture increases. For example, air-dried soil erodes about one and a third times faster than soil with moisture at the approximate wilting point for plants."5

In areas where wind erosion is most prevalent, windbreaks are a natural solution to damaging winds. The above-mentioned source continues, "Wind barriers and shelterbelts affect wind erosion in two ways. First, they lower windspeed in their lee enough to keep the soil from moving. Second, they reduce field length, and consequently, soil avalanching."6 Windbreaks also help to retain moisture, which aids retention of soil and prevention of soil
dryness.

Too much moisture—rain runoff—comprises the major soil erosion problem in the eastern fifth and southern third of Iowa. In those areas, windbreaks play a lesser role. More importantly, contour farming, terraces, no-till, grassed waterways, and complete ceasement of cropping apply to sloping regions of the state. Contour and strip farming inhibit water erosion, while terraces can cut erosion by 60-80%7 Decreased tillage practices leave more "trash" on the surface of the soil, and this type of tillage discourages wind and water erosion in all topographies.

PROPOSAL - Because the very livelihood of Iowa depends upon the fertility and abundance of topsoil, the state government should fully fund the planting of windbreaks and the construction of terraces throughout the state. Monies for such a project (a goal of which would be the eventual protection of the north and west sides of EVERY field) could come from a luxury tax applied to all tobacco, liquor and beer, fur coats, recreational vehicles and craft, full-sized cars, and other selected items. For most uses, the moldboard plow should be banned. Also, a large share of the anti-erosion measures would be built with labor from a social services pool. Any teens, criminal offenders, welfare or social-aid recipients, or others would be eligible for such jobs in place of simple stipends. Not only would Iowa's topsoil be saved, but the persons receiving social aid would have the option of slightly increased rates of assistance plus a job and an enhanced sense of self-worth.

Even if Iowa's soil erosion rate were reduced to permissible levels, the problem of soil quality would persist. Currently, the soil's fertility is maintained with petrochemicals, and natural pests and weeds are attacked with pesticides and herbicides. Not only are such chemicals dangerous (pesticide poisoning and accidents are well documented8) and expensive, but their continued availability is in doubt. In the scenario presented earlier, a cut in or total depletion of petroleum would halt petrochemical production.
Insects and weeds would grow and multiply totally out of control; crop yields would be far below sufficient to feed the American public, let alone produce enough grain for export to other countries.

In the same vein, without the present application of chemical fertilizers, plants would be unable to find adequate nutrients in the soil to produce good grass for grazing or crops for food. The use of petrochemicals in agriculture (organophosphates belong to a class of chemicals developed as by-products of nerve gas research during World War II; "chemical farming" began after the war, when manufacturers needed a ready market where they could dump surplus stores of lethal chemicals since the 1940s has left much of America's topsoil organically bankrupt. Humus and beneficial worms and insects are rare in many fields. Without those elements present to regenerate topsoil, it becomes "dead pan"—hard, dry, leached, and difficult to farm.

From an economic perspective, petrochemicals' spiraling costs help to make them more cost prohibitive. Says Ralph Engelken, an organic farmer near Greely, Iowa, "The only way that anyone can make a decent living at farming today is by finding ways to keep fixed costs down. And the best way to keep fixed costs low is to avoid putting yourself at the mercy of those petrochemical giants." Crop rotation, under-plowing green manures, organic fertilizers (including animal and human manure), and other non-chemical soil enrichments are less expensive and are much more conducive to improving overall soil quality.

One of the obstacles preventing a large-scale transition from petrochemical to organic farming rests in the fact that immediately after discontinuing use of pesticides, herbicides, and artificial fertilizers, crop yields drop, sometimes up to 40%. Ralph Engelken testifies, "It was about
five years before our yields began to compare favorably with those of our neighbors who were farming conventionally. Other organic farmers experienced three years of lowered crop yields, while some avoided crop losses all together by applying large amounts of chicken and other livestock manures. It should be stated that humans farmed organically for ten thousand years (most European regions of the world still do). When petroleum becomes too limited to use as bug killer and weed poisioner, we shall return to organic farming. The question remains, when? In addition, a return to organic farming will require that our national food system be overhauled, with an accompanying decentralization of food production and a diversification of crops produced.

PROPOSAL - The Iowa Department of Agriculture should declare an eventual phase-out of the general use of pesticides, herbicides, and artificial fertilizers over a ten-year period. At the same time, realizing that a regulated, planned withdrawal from petrochemical addiction is preferable to a forced, unpredictable one, the state of Iowa should compensate farmers for the first three years they discontinue use of such chemicals. (Limited use of various chemicals would be allowed during times of plague, contagious disease, etc.)

Also, Iowa State University should accelerate research into organic farming methods, and organic plant protection such as teemed plantings, beneficial insects, non-toxic chemicals or compounds, and crop rotation.

Also, the quality of Iowa's topsoil should be improved by the use of green manures, crop rotation, etc. In particular, human wastes from sewage treatment plants in Iowa's larger towns and cities, and biodegradable wastes (such as that from school cafeterias, hospitals, elderly communities, and restaurants) should be collected, composted, and returned to land which will not grow food intended for direct human consumption.

Except for during times of war, probably the most pressing problem
directly plaguing Iowa farmers consists of low prices for the grain and livestock for which prairie agriculture is famous. Even sustainable agriculture must be profitable enough to: 1) pay production costs; and 2) motivate farmers and smallholders to produce food and fiber for sale. In order to strengthen the economy of rural Iowa, ways must be found to boost farm prices and stabilize current erratic markets. Among others, four considerations about how to improve markets and raise prices come to the fore for discussion.

According to a paper presented by Cornell University insect ecology professor David Pimentel, and Cornell graduate and undergraduate students, if all farmers quit using pesticides, crop losses would increase 9 percent, but commodity prices would jump 36 percent. The study reveals:

If farm prices did rise 36 percent, farmers undoubtedly would respond with efforts to increase output of the affected crops, which would eventually result in the establishment of a new quantity and equilibrium price. Thus, through attractive farm prices, increased production would tend to offset this price rise, and the 9 percent loss in production would gradually decline.12

Besides switching to organic farming methods in order to ultimately force commodity prices to increase, crop and livestock diversification would stimulate higher farm incomes, too. In an editorial advocating crop diversification, the Des Moines Sunday Register quoted an Iowa farm woman who said that her acre of strawberries generated more income than did her husband's corn crop per acre, with less overhead and more reliable markets. In addition to new or revived varieties of animals and plants, building sunken greenhouses to lengthen the growing season would stagger production. Conducive to finding alternatives to the petroleum-intensive system of
shipping food from other regions into Iowa (specifically during the winter months, but generally throughout the year), a burgeoning of sunken greenhouses scattered over the whole of Iowa would insure a local source of such staple fruits and vegetables as tomatoes, peas, and beans at times when plants could not be grown outdoors. In the tradition of local militias, decentralized greenhouses would provide adequate food supplies during times of war, drought, winter, or other challenging, unforeseen circumstances.

Related to diversified agriculture and greenhouse technology, the move towards direct farmers' markets omits many stages of moving food from the country to urban consumers. Farmers' markets organized for every Saturday (or Sunday, too) of the year would enable agriculturalists to command retail rates for their produce, and discriminating shoppers could purchase fresh, organic fruits, vegetables, eggs, and grain. Or, individuals or families could build roadside markets from which they could daily sell farm products they either grew or bought wholesale. Similarly, locally-controlled purchasing and marketing cooperatives would lower farm costs and improve farm markets.

Lastly, rather than building a centralized, capital- and energy-intensive world trade center in Des Moines, the state would be better put to implement the practice of distributing food to social welfare recipients along with cash grants as aid. Powdered milk, cheese, honey, and other foodstuffs could be purchased from the USDA for redistribution among Iowa's disadvantaged. Also, the Iowa Department of Agriculture could grind corn, wheat, and soybeans into flour for distribution. These foods would not take the place of all welfare food monies and pensions, but they would replace a portion of the money already designated for the elderly, the handicapped, the
monetarily poor, and others. If the state of Iowa took such a bold and
creative initiative, the regional grain and livestock prices would
undoubtedly increase, as well as become relatively stable.

PROPOSAL — In order to increase farm commodity prices, Iowa
farmers should accept the repercussion of crop losses due
to the discontinuance of pesticides and other petro-
chemicals. They should plan appropriate responses to a
state-ordered, phased ban of such chemicals. In turn, the
state government and Iowa State University should do
whatever possible to make such a transition as smooth and
painless as possible. The government might subsidize
initial farm losses, and ISU should research mechanical and
biological pest control technology.

Iowa farmers and smallholders should diversify their
operations, exploring new and revived varieties of animals
and plants. Appropriate lending institutions (possibly
Farmer's Home Administration the Small Business
Administration, and others) should offer low-interest loans
to those persons who construct energy-efficient solar
greenhouses; in those greenhouses, Iowans should raise food
and possibly fish as alternative food sources. The
outdoor, intended raising of fish should also be explored
by private individuals and public institutions in order to
procure a reliable, steady supply of protein.

Every county board of supervisors should allocate funds
to build a permanent, all-weather building to house a weekly
farmers' market. During the week the buildings could be
used for flea markets, social events, conventions, youth
and craft fairs—in essence, a truly community building.
Most counties should build those farmers' market buildings
in their respective county seats. In a move to remove
restrictions barring private roadside markets, county
planners should allow zoning to include rural roadside
stalls. Farmers, rural churches, organizations, etc,
should establish locally-controlled purchasing and selling
cooparatives.

The appropriate state offices of social services and the
state Department of Agriculture should act in concert to
distribute (monthly) supplies of dairy, grain, and other
products to those who qualify for such relief. Extension
Service offices should distribute hints on how to most
efficiently use such foods.

Thomas Jefferson's vision of a nation of smallholders and artisans,
shopkeepers and yeomen does not apply to today's technological, New Age society. For rural Iowa, however, the question of land ownership could proverbially "make or break" the state's future social structure. If farms continue to disappear, and corporations come to control most Iowa land, a modern-day "Harvest of Shame" could develop in this state. Many people would be reduced to hired labor, without any means of control over their own lives or their family's future. In such a scenario, Des Moines, Cedar Rapids, and other large cities would continue to grow and prosper (just as Memphis, Mobile, Baton Rouge, Natchez, Frankfort, and Richmond did under a plantation system), while the rest of Iowa would become increasingly poor, culturally barren, and devoid of many hopes and aspirations.

If the people of Iowa want to preserve some semblance of democracy and self-determination, they must act now to insure the popular ownership of land and a fairly-even population distribution in rural areas. In the interests of soil improvement, competitive foodstuff prices, and the regeneration of our people, Iowa must find ways to discriminate in favor of family-owned and operated farms, and to pump new life into some of the faltering small towns and rural communities.

Concerning the ownership of farmland, Wes Jackson, advocate of regenerative agriculture and director of the Land Institute, explains why such a condition must exist:

To be close to the ecological problems of agriculture, the people who live and work on the farms should either own the land or be participants in a land trust system in which everyone's first interest is the conservation of healthy land and water. The bottom line cannot be profit. The land should not be owned by large corporation or wealthy absentee owners but if it is, policy measures should ensure that there is compliance to promote and achieve the best soil and water conservation possible.13
According to a study conducted by Paul Lasley and Willis Goudy of Iowa State University's Sociology Department, two farm-size categories are growing. The two are those over 500 acres and those 50 acres or less. For reasons implicit in this paper, the large farms are vulnerable to petroleum depletion and other flaws in our present agricultural system. The small farms, while not only being the most efficient units in regard to energy use in comparison to production, encourage family ownership and operation. Families, too, generate taxes, religious and social institutions, school enrollment, and retailers' business.

PROPOSAL - The Iowa State Legislature should pass laws requiring that all farmland owners live no more than fifty miles from their land, and that no corporation may own more than 250 acres. To help young and new farmers purchase land made available and less costly by the subsequent glut on the market, the state should offer low-interest loans to qualified applicants. Such loans should be made available in any event, so as to encourage replacement generations of farming people. In addition, land passed to individuals or families actively engaged in farming should not be assigned inheritance taxes.

The University of Northern Iowa should create a College of Agrarian Living, in which those enrolled could learn skills needed to begin life on a farm or in a small town. Included would be training on how to: build a farmstead (house, barn, fences), plant a garden and preserve produce, care for livestock, make household goods, process wool, and keep bees. The courses should stress personal reliance and creativity, and participants would help pay for their room, board, and part of their tuition by working in experimental gardens, dairies, and other areas. Innovation would be the key.

Just as access to land ownership is a prerequisite to economic and political democracy, so is access to technology and power. Our present agricultural system uses technology which is too expensive for the average person to purchase and maintain, too complex to easily understand, and too
energy-intensive to sustain. Simply stated, we must create an appropriate
technology to be used by those who would do so.

Probably the most widely held myth in American agriculture is that it is
the most efficient, advanced farming system in the world. In terms of human
labor that statement is correct, but in terms of energy usage—which
increasingly will play an important role in determining how our society
should be operated—it is not. In regards to farm energy inefficiency, we
need to understand that "the average American consumes about 12,000 BTU
daily, or an annual rate of consumption of about 4,380,000 BTU... the
equivalent of about 30 gallons of gasoline. Since our population is about
200 million we consume as food about 876 trillion BTU; the energy value of
the food crops we consume in the U.S. is therefore about equal to the energy
we burn in our tractors alone."16 In fact, agriculture uses more petroleum
than any other single industry.17

Iowa has few energy resources. Its coal is apparently unclean to burn.
Petroleum must come to Iowa via the Mississippi River or by massive trucks.
The state, then, becomes utterly dependent in terms of supplying its energy
needs. In order to continue agriculture, industry, and other pursuits,
however, energy must be available at all times. Iowa's most logical and
ecologically sound source of energy comes from the sun in the form of wind,
direct solar, biomass, some wood, and hydroelectricity. These energy sources
are virtually regenerative, and with organized planning and conservation
would last indefinitely. An alternative, new state land-use policy should
include forestry projects and replacement windbreaks for the burning of wood,
and the remodeling of dams on the Mississippi River and the construction of
numerous reservoirs in order to generate electricity. Such a land-use policy
should also include the establishment of biomass farms where urban sewage
would provide methane before being spread on fields, and construction-license
preference for those homesites which would be built either underground or
with passive solar equipment. Wind generators, solar collectors, wood
furnaces, and small hydro-electric devices should be grounds for granting tax
credits.

Municipalities, counties, or public utility companies should cooperate
to build, supply, operate, and maintain generators powered partly by the
burning of garbage (like the Ames utility plant does now). Under such
conditions, Iowa's garbage would not be buried in some remote corner of each
county, but rather would be used as fuel to generate energy. (The bottles,
cans, metal, etc. gleaned from such a system would also generate limited
revenues for the plant operators.)

Iowa's dependence upon extrastate sources of energy (a mostly unquestioned
dependence) parallels the historic development of complex technology used to
operate our farms, communities, transportation system, and factories. Just
as there are alternatives to basing our social machine only upon the burning
of petroleum, alternatives to surrendering to overwhelming technology exist,
too. Though healthy debate about what appropriate technology exactly is and
what it is not continues, every sort of group (from the Public Interest
Research Groups to major American corporations) and individuals (from Alvin
Toffler to Great Britain's Prince Charles) seem to be either advocating its
implementation or studying its possible results. Most agree that our
technology has grown too large, too expensive and exploitative, and too
uncontrollable. What then, are the major criteria for alternative,
appropriate technology? Appropriate technology should: employ local labor
and mostly local skills, use renewable and easily accessible materials, be
easily maintained and repaired, add to the human situation and not degrade or
cheapen it, and affirm life instead of stressing or destroying it.19

In Iowa, appropriate technology would developed into consideration the
heritage of the prairie culture we have built over a century and a half, and
the historical lessons we have learned out of mass migration from farm to
city and the subsequent collapse of sustainable agriculture. Instead of
using petroleum for almost every job which needs doing on the farm or in
towns, rural Iowans could utilize more animal and human power. Pedal power,
for example, can handle such tasks as juicing, driving a lathe, grinding
grain, generating electricity, threshing grain, transporting goods or people,
turning saws, or pumping water and air. Septic tanks and composting toilets
would provide excellent fertilizer for fields and pastures; adequate cisterns
would provide suitable water for livestock and gardens, hillside or buried
cellars would eliminate the need for large scale refrigeration, and solar
devices could heat living spaces and water supplies.20

While tractors are invaluable for tilling the earth and pulling heavy
loads, the use of work horses for medium-sized tasks would save much energy.
Manure spreading, hayloading and hauling, log-pulling, wagon carting, and
numerous other jobs could easily be accomplished by work horses. Critics
might immediately claim that horses would require oats and other feeds, but
units of work done per dollar in relation to the use of petroleum makes oats
a competitive source of energy. Oats also yield valuable straw, and once
consumed, oats join other roughage to produce valuable manure. Horse power
is less pollutive, less noisy, and more sustainable than power from
combustionable engines ever could be.21
Alternative/appropriate technology also includes aquaculture, which produces more protein with less food waste than most systems of meat production. Solar technology can be used to dry grain, heat farrowing houses or dairies, warm water, or heat houses. Organic farming, crop rotation, deep bed gardening, crop diversification, and permaculture are all alternative technologies. Composting massive quantities of animal and human wastes (of all sorts) would lessen rural Iowa's dependence upon fossil fuel and petroleum products to enrich the soil; that supply of fertilizer would be cheap, constant, and natural.

PROPOSAL - In general, the state government, public service groups and organizations, institutions of higher learning, farm organizations, individuals, and other parties should research, develop, and implement alternative/appropriate technology. In particular, Iowa State University should create a Center for Appropriate Technology, where it could use its decades of research and experimentation to solve some of our present crises. Especially, the university should explore local, sustainable energy sources such as direct solar, biomass, wood, wind, and hydroelectricity. Petroleum should be assessed a fifty-cents-per-gallon tax earmarked specifically for research into alternative energy sources. The profits realized by utility companies should be quite heavily taxed for the same purpose.

The Iowa Department of Agriculture, the three state universities, and a special commission created by the governor's office should develop and distribute various uses of appropriate technology. They should keep in mind that changes in technology also mean changes in our styles of living; in such areas, the University of Iowa and the University of Northern Iowa would be extremely helpful in applying appropriate technology to rural Iowan's daily lives.

Rural Iowans should embrace the promise of a better, more sustainable life that appropriate technology offers. Instead of tenaciously clinging to tradition and familiarity, they should find the courage to explore new ways of living. Wherever possible, they should experiment with appropriate technology, and find uses for it in every aspect of their lives.
As seen in Part One, since at least World War I, small towns in rural Iowa have lost to the lure of the city, and to other regions of the country. Iowa will never be able to offer mountains, vast forests, oceanside shores, or tropical jungles, but it can alter the cultural inadequacies which may have prompted so many to leave the state. For the social and political health of the state, it is imperative to restore the life of small towns in Iowa, and to practice officially the policy of decentralization. Barbara Ward, former President of the International Institute for Environment and Development, writes the following about decentralization:

People tend to leave remoter regions simply because they are, in modern transport terms, "remote." If more conserving patterns of farming were to bring back to the countryside skilled men and their families—one can estimate perhaps four extra people for every returning worker—a number of regional centers would revive or grow up, and "remoteness" being a relative concept the result could be that mixed farms, market gardens, orchards, hill farms, and even intensive restocking of fish in local lakes and streams might be combined to produce an environment at once more productive, more desirable, more attractive, and above all, more populated, than results from the present imbalance between concentrated urban and suburban areas and declining land and emptying villages everywhere.23

Every year, small towns lose population to Iowa cities like Des Moines and Cedar Rapids, and just as importantly, every year Iowa farmers lose additional farmland to suburban sprawl and the infrastructures related to urban areas. The population of small towns would be maintained or increased if those communities had more cultural and physical amenities to offer current and potential residents. Not every rural community can nor should be revitalized; only those which would serve adequate purpose warrant energy expended on their behalf. The safest plan of action would be to actively improve the quality of life for Iowa's county seats. By injecting new life
into them, they would once again become the economic, social, and political centers of their respective counties. Instead of allowing regional towns, such as Mason City, Des Moines, Sioux City, Dubuque, and Burlington to dominate their respective areas, the focus of life for rural Iowans would be decentralized back to their county seats, and hopefully even further to their own local communities.

Revitalizing county seats could be done in a number of ways. For one thing, proper land reform would enable large numbers of Iowans and non-natives to buy property throughout the state. Each county's population would grow considerably, thus granting more power and opportunities to corresponding county seats. For another, finding local, sustainable means of employment would create or retain jobs in rural Iowa. For various reasons, industrial development does not appear as likely or as promising as does other forms of employment. In recent years, for example, new jobs haven't come from the traditional sources—agriculture and manufacturing—but from the service/information economy of the New Age. Self-employment would guarantee more successful economic and political democracy, and enable individuals to have direct control over their own lives. The establishment of county-seat farmers' markets, as already mentioned previously in Part Two, would provide an outlet for farmers', smallholders', and others' produce—in other words, welcomed income.

Probably just as important as a lack of economic opportunities, lack of cultural opportunities also motivates many to leave rural Iowa. In order to provide an enriching and beneficial social/cultural fabric, rural Iowans need to develop institutions and projects so diverse as to serve a kaleidoscope of interests, for example: an energy-conservation collective; an inter-service-
club project which gathers old tools, repairs them, and sends them to Bolivia or Botswana for distribution among farming peasants; an Amnesty International chapter. Other possibilities include organizing a hunting and fishing cooperative; a speakers circuit in which professors and authors, social critics and government leaders examine local, national, and world social and political issues; a young persons' alliance which would offer trips to New York, information on correspondence courses, pop concerts, a continuing program on alcohol and drug-use education (neither pro nor con—"these are the facts, the consequences, etc."); discussion groups concerning personal problems and social dilemmas.\textsuperscript{25}

Conventional social institutions should be strengthened, too. When individuals or families consider various communities for possible settlement, they heavily weigh the quality of the schools and churches, the women's and 4-H and weight-watchers' clubs; they investigate the crisis centers, health clinics, counseling services, farmers' markets, food coops, libraries, and parks. All of the aforementioned reflect the strength and vitality of the community; none singly reflect that particular institution.\textsuperscript{26}

Rural Iowa's greatest export does not consist of corn and hogs, but rather its young people. Every year thousands of bright, promising young rural Iowans leave their communities in hopes of finding something better. Most of those who seek their fortune elsewhere sojourn in Ames, Iowa City, or Cedar Falls for four or six years, and then move on to Des Moines, Chicago, Houston, or Denver. Meanwhile, the farms and small towns in rural Iowa which they chose not to perpetuate become a bit grayer, a bit emptier, and a bit more stultifying.\textsuperscript{27}

Only by offering their young people adequate incentives and hopes for a
better life will rural Iowans be able to lure their offspring to stay. Three possible suggestions may apply to this problem. One, a state- and privately-funded, traveling modern-day Chautauqua series would provide weekly entertainment for leisure-seeking rural Iowans. Concerts, lectures, films of all sorts, craft fairs, art exhibitions, dramatic performances, readings, plays, skits, comedy acts, and how-to presentations would all appeal to various rural community members. A Chautauqua series would enable young and older rural Iowans to find stimulating entertainment in their own localities, rather than forcing them to rely upon television for mostly-poor-quality programs or simply to move elsewhere for mental sustenance.

Two, enlarged community college programs would allow many rural Iowans of all ages to learn new trades or skills, or just better educate themselves, without having to move to the three university towns or other cities for such training. Rather than expanding the curricula at the state universities, more emphasis on local, area education would give more individuals the opportunity to enrich their lives with the wealth that formal education has to offer. Besides technical, vocational training, the arts and humanities should find a major place among those subjects taught at an expanded community college system.

A major problem with life in rural Iowa in the 1920s was a perceived lack of cultural amenities; in order to attract and retain people to live in rural Iowa, the state should take every action possible to avoid repeating the lack of mental and social stimulation of earlier decades. A primary means of combating personal intellectual and spiritual starvation would be to establish two state-sponsored television stations, one at the University of Northern Iowa and the other at the University of Iowa. A
prairie equivalent of BBC-1 and BBC-2, the two stations would be funded by taxes on luxury goods, electronic games, and/or other taxable items. The University of Iowa station would feature educational and cultural programming, utilizing extension service tapes, public television serials, various documentaries, and international programs. Its major emphasis would include education in the arts, the sciences, and political and social issues. The UNI station would concern itself primarily with entertainment: films, comedy acts, concerts, dance, travelogs, non-abusive sit-coms, challenging and non-insultive game shows, children's television, and other various programs. Ideally, the two state-sponsored, non-commercial television stations would provide rural and urban Iowans with additional opportunities to find--at all hours, in all types of weather or economic conditions--education and entertaining programming, subsequently lessening the social and cultural isolation documented in Part One of this paper.

PROPOSAL - The growth of Des Moines, Cedar Rapids, Waterloo, Sioux City, and Davenport should be checked, as should that of their burgeoning suburbs. Other large towns (i.e., Fort Dodge, Ottumwa, Dubuque, Mason City, etc.) should be encouraged to grow, but to a manageable size and within limits. Other towns, like the size of Spencer and Oskaloosa, would largely benefit from community growth. Most importantly, however, the state government should pass legislation that would encourage the growth of smaller county seats, and county boards of supervisors should allow ex-urbanites to buy abandoned farmsteads for the purpose of making them homesteads; this would greatly increase the rural population, size and expand small town retail and commercial growth.

State- and privately-funded cultural events should travel around the state of Iowa, providing weekly entertainment for rural Iowans. Similarly, an enhanced and expanded community college program should offer educational and social opportunities to rural Iowans otherwise largely unavailable at the local level.

Utilizing revenues from a tax on luxury goods,
electronic games, and/or other taxable items, the state government should sponsor two non-commercial television stations (one at the University of Northern Iowa, the other at the University of Iowa). The U of I station should stress educational and cultural programming, while the main concern of the UNI station should be productive, non-abusive entertainment. The two stations should work closely with high-tech, video, and foreign television institutions.
Paper Summary

In Part One, we have seen how historical developments led to the migration of thousands of rural Iowans from the farms and small towns of the state to Iowa's cities and other states. We have seen the increased industrialization of agriculture, and the subsequent displacement of individuals. In Part Two, we have reviewed proposals for rural Iowa's future made with the lessons of Part One in mind. In the course of the paper, we have moved from the problems of agriculture during the post-war 1920s to the "farm crisis" of the early 1980s.

To some people the proposals included in Part Two will be too radical for consideration, while to others they will not address enough problems associated with agriculture. To both groups, it would be advisable to remember that we live in an uncommon time. We live in an era between eras. We have left the industrial era we knew so well in favor of a post-industrial (or "New Age," "Solar," "Communications," "Information," "New Wave," "Third Wave") era which promises to transform our society and ultimately the world. To seek solutions for today's problems out of yesterday's or yesteryear's "answers" would be not only to remake the mistakes of the past, but to endanger the survival of the society.

The agricultural system, as we have known it since World War I, is swiftly collapsing. That does not mean that life on the prairies, nor life in rural America in general, has to end. It does mean that unless we create a new prairie, rural culture, we shall be forced to suffer drastically
the consequences of our inaction. We hold the future in our hands at this very moment. Because the effects of our possible action may be complete, decisive, and far-reaching, we must explore a new way with caution, and with unmatched foresight and contemplation. Also, at the same time we must not refuse a new way because of fear of the unknown. Unlike any other point in history, the common woman and man on the street and in the field has the opportunity to coalesce with others either to nurture a new existence, or to accelerate social or species extinction.

If they serve no other purpose, the proposals put forth in this paper will stimulate discussion, debate, and thoughtful consideration. If it does nothing else, the historical outline of social demise and technological/natural resource bottleneck in rural Iowa from World War I to the present will cast a warning to those of us alive today: expand our consciousnesses and our perspectives, or damn our descendents to a miserable, lowly existence on a ruined prairie. The choice is ours. The time is short.
Footnotes, Part Two


2 Wilson Clark, "U.S. Agriculture is Growing Trouble as Well as Crops," **Smithsonian Magazine** (Jan. 1975)).


5 Kansas Agricultural Experiment Station, **How to Control Wind Erosion** (Washington, D.C., U.S.D.A., 1972).

6 Ibid.


9 Ibid.


12 David Pimental, "Get a 36% Raise," **The New Farm**, (Jan 1983).

13 Wes Jackson, **New Roots for Agriculture** (San Francisco, Friends of the Earth, 1980).

The Land Institute's address is: Route 3, Salina, Kansas 67401

14 Paul Lasley and Willis Goudy, **Changes in Iowa's Agriculture, 1969-1982** (revised) (Iowa State University, Ames, 1982).

15 Richard D. Rodefeld, **Change in Rural America: clauses, consequences, and alternatives** (Saint Louis, C.V. Mosby Company, 1978).


18 Increasingly the public, too, sees our technology as too large, too expensive and exploitative, and too uncontrollable. Public opinion poll after public opinion poll confirms this.

19 For more information, contact: National Center for Appropriate Technology
P.O. Box 3838
3040 Continental Drive
Butte, Montana 59701

Volunteers in Asia
Box 4543
Stanford, California 94305


21 For more information, contact: *Draft Horse Journal*
P.O. Box 670
Waverly, Iowa 50677
(319) 352-5342

22 For more information, contact: *North American Permaculture*
Box 1100
Winters, California 95794

23 *Progress as if Survival Matters*, San Francisco, Friends of the Earth, 1981.


25 Ibid.

26 Ibid.

27 Ibid.