

## HOW THE BIOECONOMY COULD CHANGE LAND OWNERSHIP AND VALUES

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Agriculture is undergoing a fundamental change based on the move toward a bioeconomy. Currently the bioeconomy consists primarily of fuels produced from renewable sources, especially corn and soybeans. Other crops and applications are in various stages of development. The bioeconomy has been described as “nothing less than a revolution in the way society will obtain vital sources of carbon and energy . . . . Agriculture will make this transformation possible.” (Robert Brown, Director Iowa State Biorenewable Program)

The change has touched all aspects of agriculture: the crops that are grown, the way they are grown, the amount of crops available for exports, animal feeds, farmers' input usage, and the list could go on. Suffice it to say that everything has changed. We are moving from producing food and fiber to producing food, fiber, and energy and in different proportions.

A major impact of the changes is a rapid increase in land values and rents. These levels have not been seen for more than 25 years. The rapid rise in land values and rents has many ramifications. One of the major changes could be in land ownership and who has access to the land resource.

The move toward the bioeconomy comes at a time when the population of landowners is aging. Almost one-fourth (24 percent) of the farm land in Iowa is owned by people over the age of 75. And, the same percentage is owned by people between the ages of 65 and 74. The changing demographics would produce a dramatic change in land ownership over the coming years, even in the absence of the bioeconomy revolution.

This chapter discusses land ownership; where we are, where we have been, and where we might be heading. We are in a period that has been described as the new golden era for agriculture. That description has been used before throughout the past century. What does it imply for land ownership?

Before examining the issues surrounding land ownership, it is interesting to step back and consider what has happened to land values. Values and ownership are closely related. Higher land values hamper the

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ability of young people to acquire the land asset and decrease the ability of existing farmers to expand their operations. Higher land values can make land a more attractive investment and increase the competition for land.

There have been several booms in land values. One of the first documented instances was the speculator boom that ended with the financial panic in 1837.

The second land boom was during what was referred to as the golden age of agriculture from 1914 to 1920. It was said at the time, "There never was a more glorious opportunity in the history of the world for the Corn Belt farmer than there is today... to buy at present prices. In my opinion he cannot lose." (Traer Star-Clipper, Tama County Weekly, August 1919)

In the early 1970s, the third major land boom occurred. This period has been referred to as the second golden age of American agriculture.

We have entered another boom which is again being referred to as the golden age of agriculture. The bioeconomy boom comes on the heels of an investor-driven increase in land values for the past few years. For example, land values in Iowa have reached record levels for four years in a row and the bioeconomy boom is just starting.

Who drives these booms? What causes them and why do they end? Some people blame the speculators. "It may be well to point out that the farmers were not the cause but the victims of land speculation . . . . The land boom was nourished mainly by business men and bankers in country towns." (Yearbook of Agriculture, 1924) The boom in the 1970s also was blamed on speculators, but now farmers also were seen as contributing to the increasing land values. "Farmers and nonfarm investors bid up the price of land 23 percent during 1973." (Henneberry and Barnard, 1987) In Iowa, the current ethanol-fueled boom in land values also appears to be driven by farmers as well as by investors.

The 1920 boom prompted an Iowa State economist to write, "Every boom has a stampede of buyers just at its climax, before recession begins . . ." In further discussing the 1920 boom he said, ". . . the papers are full of it today; half the people you meet are talking of it . . . . It is nice for the real estate agents, but as for the farmers, a look at the future is not reassuring . . ." (Nourse, 1919)

The current boom is fueled by the upsurge in demand for biofuels, especially corn-based ethanol. Work is under way to move us toward alternative sources for ethanol; biomass, animal manures, and so forth. Additionally, there is a growing demand for soy or biodiesel.

Ethanol is not new. The first ethanol was used in an engine in 1826, and Henry Ford is known to have pushed for ethanol as a fuel source. The interest in ethanol surged again in the 1970s with the disruption in oil supplies. Today the upsurge in interest is due to: 1) federal legislation that calls for a certain percentage of the fuel consumed in this country to come from renewable sources, 2) a change in gasoline additives, and 3) an overall concern with the stability of oil supplies.

The purpose here is not to digress into the current situation with respect to ethanol and the demand for biofuel. The literature is replete with articles discussing the current biofuel debate. For our purposes, we simply note that the current boom in land prices is due to the upsurge in commodity prices, and the upsurge in prices is due to the demand for ethanol production. The upsurge in prices will have an impact on land ownership and ownership patterns.

Many books and articles document the changes that have occurred in farmland ownership in the United States. These offer a good background for considering where we are today with respect to farmland ownership issues and what the future might hold.

Farmland ownership by the individual farmer has been a U.S. goal since its founding. John Timmons, a noted land economist, wrote in 1945, "Rights in land and the ownership thereof have always been of fundamental importance to the development of American agriculture and the welfare of farm people." These ideals can be traced back to one of the founding fathers, Thomas Jefferson. It has been noted that ". . . land-owning farmers had enough autonomy and strength of character to ensure the preservation of the democracy. Thus, to Jeffersonians, farm communities . . . were to be the bulwarks of the new republic." (John Timmons)

The land policies enacted by the U.S. government reflect this early attitude of encouraging individual farm ownership. Some of the very first legislation in the country was passed to curb feudal land practices in the Northwest Territory. Another Act sold land in 640-acre tracts for as little as \$2 an acre. Finally, there was the Homestead Act of 1862 which gave land away, providing you improved it and lived on it for five years.

Many concerns have been put forward surrounding land ownership and some have been expressed for more than a century. Among the dominant concerns:

## Tenancy

Tenant or landless farmers have been a concern for a long time. There is a general feeling that owning a farm is a goal in and of itself. William Murray, an Iowa State economist, noted, "The typical Iowa farmer and his family have a strong, continuing desire to own a farm that belongs to them alone." With such a setting and feeling of land ownership, "It is not strange, therefore, that the nation was shocked in 1880 when the first agricultural census reporting farm tenure revealed that one farmer out of every four was a tenant." (Timmons, 1945)

Given the concern over tenancy, it is interesting to note that the percent of farmland rented has not changed too dramatically since early in the last century. The amount of U.S. farmland leased has ebbed and flowed over the last 100 years, ranging from a low of 32 percent in 1900 to a high of 45 percent in 1935. The percent of land rented was 43 percent in 1992, but it has since dropped, and in 2002 the amount of farmland rented was approximately 38 percent. So over 100 years, the percent of farmland rented has only changed by six percent. It should be noted that the 2002 Census changed the sampling frame so that the results are not directly comparable with earlier years. But, even if we use the earlier numbers, there does not appear to have been a substantial change in the percent of the acres rented.

The tenure of the operator is where we have seen the biggest change over the past several decades. In 1910, just over half (53 percent) of the farms were held by full owners. Slightly more than a third of the farms (37 percent) were tenant farms, and only nine percent were a combination of owner and renter. Over time the percentage of full and part owners increased, and the percent of tenant farmers decreased. By the 1959 Census, the percent of part owners and tenant farmers was almost identical, 22 and 21 percent, respectively. By the 2004 Census, the part owner and tenant farm percentages had almost completely reversed. In 2004, 62 percent of the farms were full owners; 32 percent were part owners, and just six percent were tenant farmers. (USDA, 2006 Agricultural Statistics)

The biggest change that has occurred has not been in the percent of land rented but rather in the tenure of the farmers. People have shifted their belief that only through total land ownership could we achieve the desirable land ownership mix. Timmons in his 1945 article said that the move to full or part ownership was a move to "achieving sound ownership conditions." By then it was becoming apparent that emerging technology was going to require more acres than the typical farmer could afford. Therefore, to achieve optimum operational efficiency, farmers were going to need a mix of owned and rented acres.

## **Age**

Another concern often expressed with respect to land ownership and potential changes is the age of the landowners. This question has been asked at different times throughout the past century. Unfortunately, the phrasing of the question has changed with different surveys so it is not possible to achieve a direct comparison with the changes over time.

The land ownership study conducted in conjunction with the 1920 Census of Agriculture reported that almost a third of the U.S. landlords (31 percent) were over the age of 65. (1924 report) The 1999 study examining land ownership reported that slightly more than half (51 percent) of the landlords were over the age of 65.

The 1988 and 1999 national surveys reported the age of owners based on the percentage of acres they owned. In 1988, 14 percent of the land was owned by people between 65 and 69 years old. Another 26 percent of the land was owned by people over the age of 70. By 1999, the percentage of land owned by people between 65 and 69 years old had dropped to 11 percent, but the percent of land owned by people over the age of 70 increased to 26 percent. In other words, the percentage of land owned by people over the age of 65 remained fairly constant from 1988 to 1999.

The situation in Iowa is different. In 1970 it was reported that 35 percent of the farmland was owned by people over the age of 65. A later study showed that the percentage had not changed much by 1982, but since 1982 the situation has changed dramatically. In 1982, 29 percent of Iowa farmland was owned by people over 65. In 1992 this percentage had increased to 42 percent, and by 2002 the percentage of Iowa farmland owned by people over the age of 65 had increased to 48 percent.

Even though it is not possible to obtain a direct comparison over a long period of time, it appears the age of landowners remained relatively steady for the first half of the century but has been increasing during the past several years. Aging owners means that there will be a turnover in land ownership. This is simply a fact of human existence; we all die sometime. So, as we look to the future, the issue of dispersed ownership identified by Raup, Timmons, and others will become more of a factor in land ownership and use.

## **Residence**

One of the major concerns expressed throughout our history has been the amount of land ownership by absentee landowners. This is

related to the tenancy issue, but the concern here is the location of the owner. The more distant the owner, the more potential problems there are that could arise. This is viewed as a problem for many reasons. Impacts on conservation, lack of opportunities for young people, money leaving the local community, and other social ills have been attributed to an increase in absentee ownership of farmland. Over 80 years ago it was observed that "Landlords who can visit their farms readily are more likely to be acquainted with and interested in the problems of managing, conserving and improving their property than owners less conveniently located." (Turner, 1926)

In Iowa, earlier studies in 1900 and 1920 showed that the residency of the owners had not altered dramatically compared to the 1982 survey results. The changing demographics and farming situation appear to be altering that situation.

As noted, the age of farmland owners is increasing. As the current farmland owners die, the land is most frequently passed to the family, with equal division of the acres among the siblings being the most common approach. This phenomenon is illustrated by the significant decrease in Iowa farmland held by sole proprietors and the significant increase in the amount of land held as tenants in common and in trust.

Equal division of the land among siblings has significant impacts on farmland ownership, particularly residence of owners. Other implications of equal division of farmland will be discussed shortly.

The division of the land among the siblings has manifested itself in Iowa by a significant change in the residency of the owners. In 1982, only six percent of Iowa farmland was owned by non-Iowa residents. By 2002, the percent of Iowa farmland owned by non-Iowa residents had increased significantly to 19 percent. This means that almost one in every five acres of Iowa farmland is owned by someone who is not a resident of the state.

A recent study of landowners found that 17 percent of those who owned land but did not farm it themselves listed sentimental reasons as their primary reason for owning the land. Sentimentality is an ambiguous reason for land ownership. Will the sentimentality transfer to the generation who was not raised on the farm? As land values increase, a question becomes, what is the price for sentimentality? What will be the tipping point? The answer to these questions will determine the supply of land for sale, and this will impact the ownership.

## **Future**

The future is always uncertain. The situation for farmland ownership

and the implications for who will farm the land are no exceptions. In fact, the future may be even cloudier with respect to farmland ownership.

One chronic problem facing agriculture with respect to land ownership and the future is the tendency for current landowners to divide the land equally among their heirs. This creates many problems, but it is especially difficult when one of the heirs wants to continue farming and the other heirs do not. Land is the major component of a farmer's estate. If they want to treat everyone equally, careful planning is necessary if they wish to avoid breaking up the land base to such an extent that it becomes impossible for one heir to have enough land to continue farming.

Unfortunately, farmers do not seem to be considering this as they look to the future. Recent surveys have shown that most farmers do not have a successor identified for their farming operation. More disturbing is that most farmers do not have an estate plan. The majority have wills, but a will is not a plan.

Another problem for farmers is the chronic weakness in land identified by Timmons in 1945. Timmons noted that there is tendency to capitalize all benefits accruing from farming into land values. This means that within a few years farmers are back to the position they were in before the boom started: handling more money but making the same profits.

This was illustrated during the last golden age of agriculture in the 1970s. Based on data from the Iowa Farm Business Association over the past 40 years, the average profit for the low-third profit group has been positive in only one year, 1973. The average profit for the high-third profit group has only been negative in one year; 1981, the year the widespread farm financial crises started.

Another dilemma in land ownership is illustrated by the situation of a young person who would like to return to the farm. There are the usual problems of intergenerational transfers that have to be dealt with, but now there is one big additional problem. The parents more than likely are part owners and part renters. With this arrangement there may be enough income, but if the rented land is lost there will be serious financial difficulties. The higher the rented base, the greater is the risk of a sudden change. For example, consider the case where the landlords are in their 80s, and they have five children. The current farmer has worked with the landlords for years, but what will happen when the current landlords die is anybody's guess. This is a situation being played out all over the Midwest, and it will only become more commonplace.

All of this makes the outlook for beginning farmers cloudy at best. This is evidenced by the increased concerns being expressed over the

future for beginning farmers. While the current boom does not help with the ability to access land or with land-intensive methods of earning an income, there are opportunities opening that will require more management skills rather than more land. Organic production, local foods, animal welfare issues, and environmental concerns offer farmers some revenue opportunities not considered just a few years ago.

A final consideration with respect to the changing land ownership is the issue of conservation and preservation of the land. Will an absentee owner treat the land differently? One study suggests that with respect to short-term conservation practices, there really is not much difference in how rented and owned land is farmed. For long-term practices such as terraces, tiling, etc., there does appear to be a reluctance to implement or install them on rented land.

These are some of the chronic farmland ownership problems that have been identified. The current boom is coming at a time when the chronic problems facing land ownership have not abated. It also comes at a time when changing demographics portend many significant changes that would have occurred even without the bioeconomy boom.

We have entered yet another golden age for agriculture. This raises some fundamental questions. How long will it last and what will be the aftermath when it ends? How it will impact land ownership and farmers in general remains to be seen. No one knows if we will pursue paths that help to alleviate ownership problems or exacerbate them? Regardless of the direction taken, these are exciting times offering tremendous opportunities.