

CHAPTER 4

The clock is ticking for rural America¹

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INTRODUCTION

The United States is a large and diverse country. U.S. agriculture and rural America are equally diverse. As such, it is hard to make general statements about the country and what is happening. But, there are some observations that can be made regarding the changing face of rural America. The United States has become a largely an urban nation. Approximately three-fourths of the population lives on just 3 per cent of the land base. In spite of, or perhaps because of, the urban population concentration, there is a growing concern over the loss of farmland and rural open spaces. Social and economic changes are never neutral in their impact. These changes produce gains for some and losses for others. When evaluating changes it is important to consider more than the net impact of the changes. In other words, the impact of change is not just the total of the benefits and costs but also the distribution of those benefits and costs. The impact of a change is also determined by who are the winners and losers.

All rural communities in the U.S. are undergoing changes. The rural, non-farm, communities in the U.S. are undergoing changes in the population mix and the industrial base used for the economic activity. In addition there are occupational

shifts and changes in the life style choices made by the residents of these non-farm communities. The changes in the agricultural communities are primarily associated with the changes occurring in production agriculture. In addition there are changes with the introduction of more agricultural processing industries closer to the sources of production.

The interface between the non-farm rural and the agricultural communities is where we are seeing considerable friction. The emergence of a dual production agriculture sector is a major contributor to this friction. Using Iowa as an example the State's population mix has changed to such an extent that there are now more people living in the country not on a farm than there are on farms. This change, coupled with the changes in production agriculture, has created a dynamic situation with considerable tension between the agricultural and the rural non-farm communities.

This tension between the two communities arises for two fundamental reasons that are discussed in more detail later in the chapter.

- The first reason for the tension is the encroachment of urban areas towards farming areas. This encroachment and the increasing non-farm rural populations means that as farmers go about their normal business there is more chance for interference with the non-farming population. Moving equipment, spraying land, and other farming activities stand more chance of interfering with other people the higher the non-farm population (Nickerson, 2001).
- Another reason for the tension is the changing nature of agricultural production in the United States. The United States is moving towards a more large scale production system. This is especially true with livestock. As the concentration of

animals increases so too do the problems with odour, potential environmental problems, flies, and other problems. There are many studies and papers on this aspect of the tension between farming and the non-farming community, especially as the non-farming community moves closer to the farms (Duffy, 1994; Swine Odor Task Force, 1995; Tyndall, 2006).

This chapter examines the issues of marginalisation as they relate to circumstances in the United States. Marginalisation as used in this chapter refers to situations where farming is no longer a viable activity given the existing patterns of land use and the changes in socio-economic structure. Before discussing the changes in rural America and the programs that are being used to protect rural America it is necessary to examine the changes that are occurring within U.S. agriculture and that have an impact on rural America. The results of these changes are more pronounced in agricultural regions.

CURRENT SITUATION

Changes in agriculture

U.S. agriculture is characterized by increasing concentration in production, processing and retailing. In addition, there are increases in vertical integration of the production agriculture sector with more value-added processing occurring.

A farm in the United States is defined as any place that sold or could have sold \$1,000 in agricultural products annually. It is important to note that the

definition says farms that 'sold or could have sold \$1,000' in agricultural products. Based on the 2002 Census of Agriculture, there were approximately two million farms in the United States.

Figure 4.1 shows the distribution of farms, sales and land based on sales class. The majority of farms are very small in terms of sales. Notice that the very smallest farms, those farms that could have but did not sell \$1,000 worth of agricultural products, represented 27 per cent of all U.S. farms but had only 0.5 per cent of the sales. These farms controlled approximately nine per cent of the land in farms in the U.S.

Figure 4.1 illustrates the bimodal nature of U.S. farms. The very small farms represent the majority of farms but have a very small percentage of the sales. The largest farms, the 15 per cent of the farms with sales greater than \$100,000, reported 88 per cent of the total U.S. sales. The distribution of land is somewhat different than the distribution of sales. Figure 4.1 shows that land is distributed more equally among the farms. The top 15 per cent of the farms that reported 88 per cent of the sales had only 55 per cent of the land.

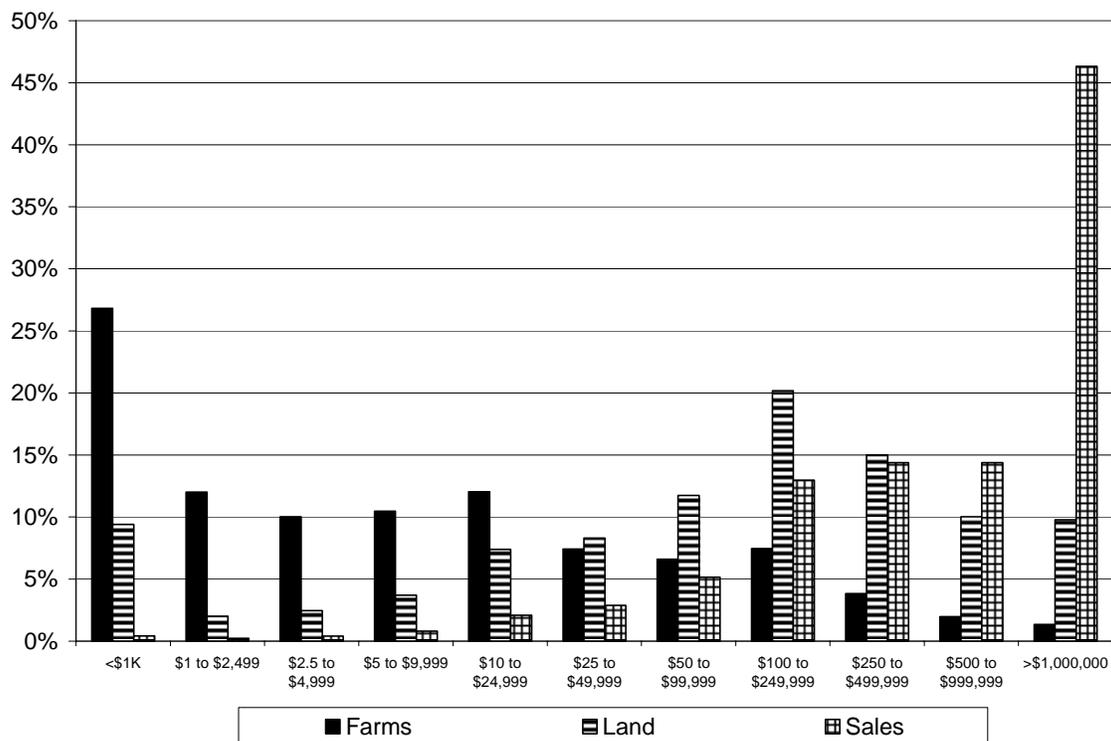


Figure 4.1 Per cent of U.S. farms, sales and land by sales group, 2002 (Source: (USDA/NASS))

The trend towards a dual agriculture in the U.S. appears to be accelerating. Figure 4.2 presents the changes in farms, sales and land by sales class between the 1997 and 2002. The smallest category farms, those who could have sold \$1,000 worth of agricultural products but did not, increased by 37 per cent and the very largest farms, with sales over \$1,000,000, increased by 8 per cent. The numbers in all other farm size categories decreased. The increase in the very largest and the very smallest farms represents what has been termed ‘the disappearing middle’ of U.S. farms. In other words, we are seeing the middle-sized farms change in size or go out of business entirely.

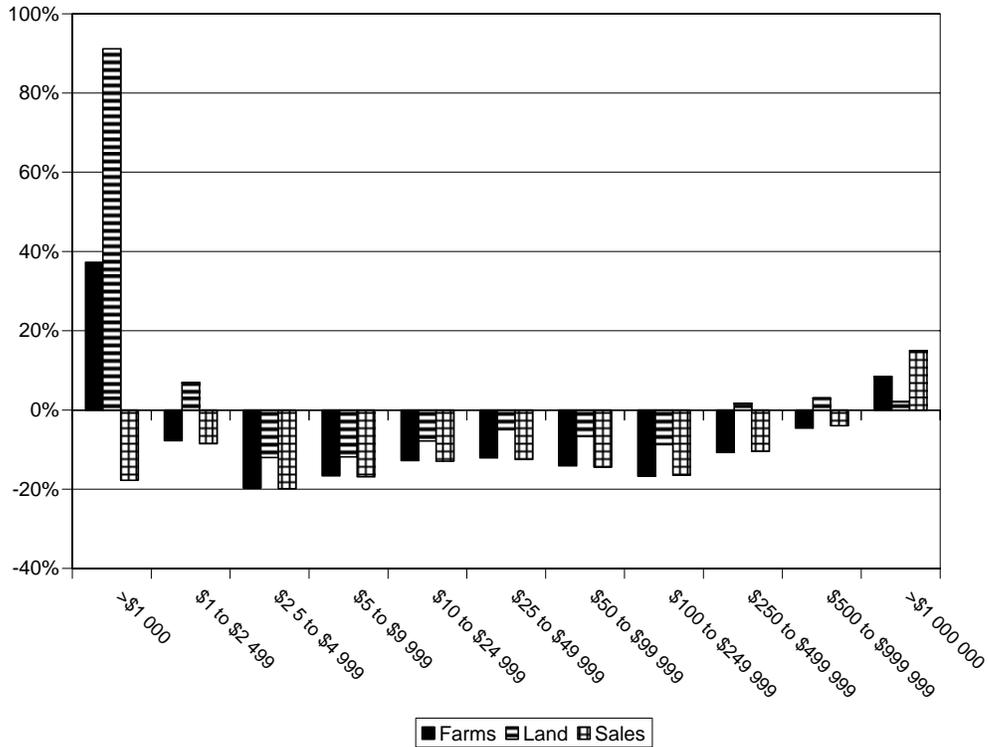


Figure 4.2 Per cent change in U.S. farms, sales and land by sales group, 1997 – 2002 (Source: USDA/NASS)

The U.S. Department of Agriculture’s Economic Research Service (ERS) has devised a typology to help illustrate the nature of production agriculture in the United States (Hoppe et al., 2000). In this typology, farms are divided based on the amount of sales, the stated principal occupation of the operator and the financial characteristics of the farm.

The USDA typology breaks farms into eight categories. Five of the categories are for small, family farms. The USDA definition of a small farm is a farm with sales less than \$250,000 annually. The small farms include limited resource farms (small farms with a limited asset base and income), retirement farms, residential/lifestyle farms, lower sales farms (farms with sales less than \$100,000 but

still farming is listed as the principal occupation), and higher sales farms (farms with sales between \$100,000 and \$250,000 and farming is the principal occupation). Two of the remaining categories are large family farms. The large family farms have sales between \$250, 000 and \$500,000 and the very large farms have sales greater than \$500,000. The remaining category is for non-family farms of any size. These farms are generally owned by corporations or cooperatives.

The residential/lifestyle category farms represented 40 per cent of U.S. farms in 2004. These are small farms (farms with sales less than \$250,000) where the operator reported something other than farming as the principal occupation. Another category, retirement farms, represents 16 per cent of the farms. These are small farms where the operator reported being retired. These two categories account for over half the farms in the United States.

The Census numbers and the USDA typology show a large majority of U.S. farms are small farms. These farms control a relatively small percentage of the value of land and buildings in the United States. For example, the 56 per cent of the farms that are lifestyle or retirement farms control just 11 per cent of the total value of lands and buildings in U.S. farms (Hoppe et al., 2000).

The structure of production agriculture has changed considerably in the U.S. Today, U.S. agriculture can be classified as a system where the majority of the farms are small farms. These small farms produce a small fraction of the value of U.S. agricultural production. The small farms do not, generally, produce enough income or provide full time employment for a family.

The changing structure of production agriculture is important to remember when considering the marginalisation of agriculture in the U.S. This changing

structure has a substantial impact on the efficacy of the programs. If a program is to reach the most people then it must be designed to appeal to the small farms. But, if a program is intended to impact the most production then it will be necessary to attract the large farms. The situation is not so clear if a program is intended to influence land and land use. The majority of land is held by farmers in between the two size groups. And, as shown in Figure 4.2, these are the farmers that are undergoing the most change. This makes designing programs for them problematic.

Coupled with the dramatic change in the characteristics of production agriculture has been a dramatic change in the input supply industry. Seed, chemical and fertilizer manufacturers and retailers have undergone substantial consolidation over the past several years. These industries, as well as processors, are characterized by fewer firms and a much higher concentration ratio of the sales by the top four firms (Fernandez-Carnejo, 2004; King, 2001; Heffernan and Hendrickson, 2001).

Another recent phenomena that influences farming is the tremendous increase in the value of farmland. The average value of an acre of U.S. farmland was \$1,360 in 2004 (Barnard, 2006). This was over double the value in 1987 and 25 per cent higher than the value in 2000.

There are many reasons for the increase in land values. The relatively sluggish performance of the U.S. economy has caused many investors to look for alternative forms of investment, such as land. The lower interest rates have also increased investor interest in land. The current U.S. farm programs continue to support land prices. And, the final factor influencing land values has been the demand from non-farm uses:

Recent research indicates that nonfarm influence accounts for 25 per cent of the market value of U.S. farmland (Barnard, 2006, p. 13)

The non-farm uses include urban expansion and the demand for land for recreational purposes. Urban expansion continues in the U.S.:

... urban area increased about 7.8 million acres (13 per cent) from 1990 to 2000 (Lubowski et al., 2006, p. 28).

Changes in rural America

Against this backdrop of the changing structure of U.S. agriculture, we also are seeing changes in the rural communities. The United States is divided into 3,141 local government units called counties. Almost two-thirds, 65 per cent, of the counties are classified as non-metropolitan. There are 21 per cent of the counties in the United States that are classified as completely rural with populations of less than 2,500. The metropolitan counties, 35 per cent of the total, have 83 per cent of the U.S. population.

Only 14 per cent of all U.S. counties, or 21 per cent of the non-metropolitan counties, are classified as farm dependent. A farm dependent county is one where 15 per cent or more of the earnings in the county is from farming. The number of farming dependant counties has been dropping significantly over the past several years. From 1989 to 2004 the number of counties designated as farming dependent dropped by 28 per cent.

The population of rural America is also changing. The total U.S. population grew by 13 per cent from 1990 to 2000. Not all counties showed an increase in population. The non-metropolitan and especially the farming dependant counties showed a loss. This was especially true for the farming dependent counties that rated low on a natural amenities scale (McGranahan and Beale, 2002).

Another significant change occurring in both agriculture and non-farming communities is the aging population. Data for Iowa best illustrates this issue. Figure 4.3 shows the percentage of Iowa farmers under 35 and over 65. In the early 1990s Iowa shifted to having more farmers over 65 than under 35 years of age. At the last Census, in 2002, only 7 per cent of the farmers were under 35 and almost 25 per cent were over 65. The aging population is also revealed by the age of the land owners. In Iowa almost half of the land is owned by people over the age of 65. As shown in Figure 4.4 the percentage of land owned by people over 75 has doubled in the past 20 years (Duffy et al., 2004). The increases in age are greater in the rural counties. In 1991 16 per cent of the people in metropolitan counties in the U.S. were over the age of 60. That same year 19 per cent of the non-metropolitan, rural, county population was over 60. Just 10 years later the per cent of people over 60 had dropped in the metropolitan counties while the share of people over 60 increased in the non-metropolitan counties. By 2001 almost 1 in 5 persons in a rural county was over the age of 60.

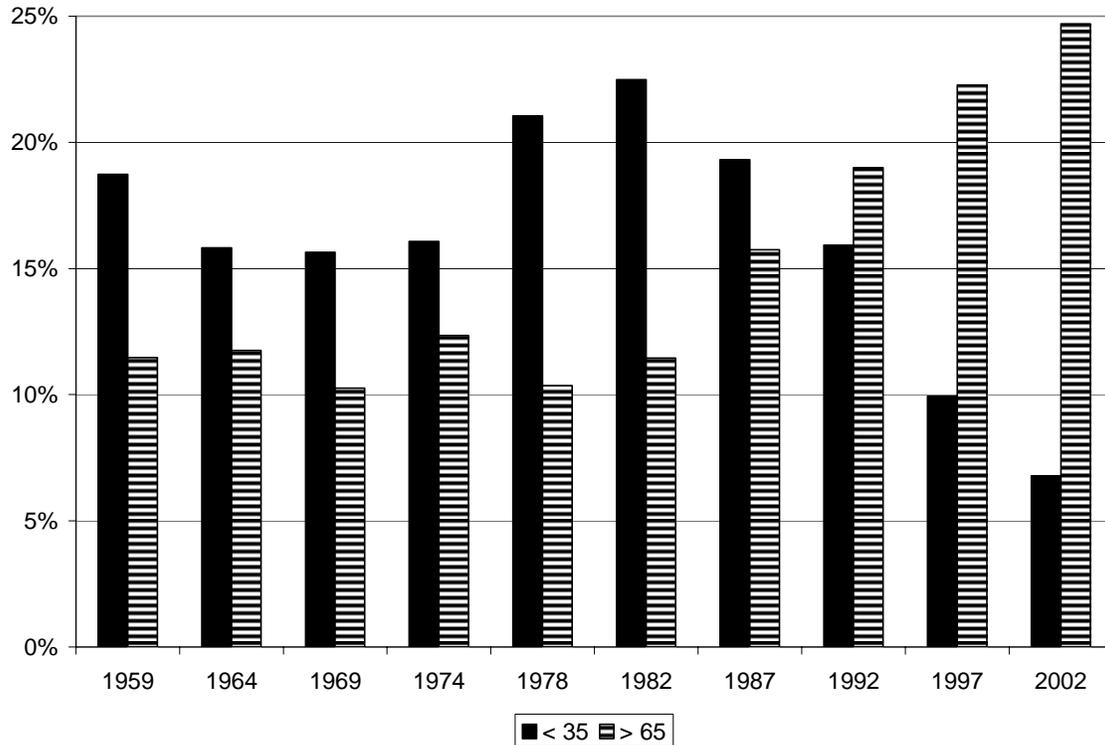


Figure 4.3 Per cent of Iowa farmers over 65 and under 35 years old (Source: USDA, Census of Agriculture, various years)

The overall situation in the United States reflects a decreasing number of farms.

There is an increase in a dual agricultural production system and an increase in the part-time or retirement farms. There is a considerable decrease in the counties dependent upon agriculture for their income. And, coupled with this has been a decrease in the economic viability of many rural counties.

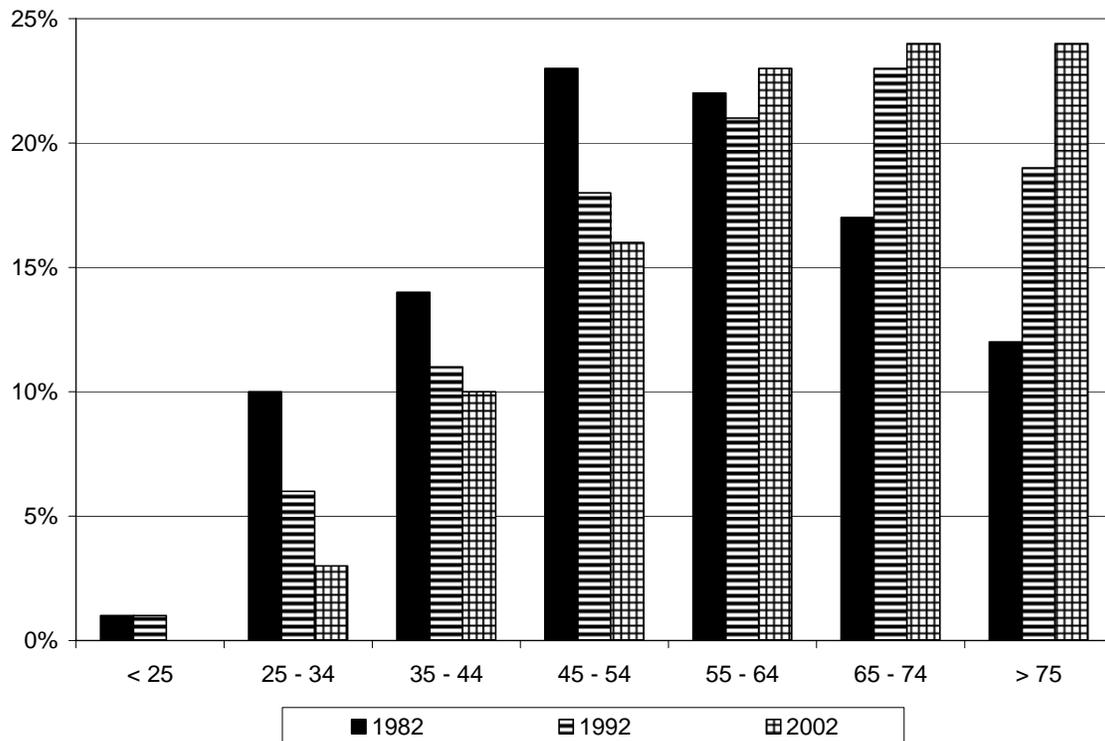


Figure 4.4 Per cent of Iowa farmland by the age of owner (Source: Duffy et al., 2004)

The economic vitality of the rural community is critical when evaluating the marginalisation of agriculture. Communities that are aging, with stagnant or declining populations, and are heavily dependent on agriculture are less likely to attract new businesses or residents. They will be more likely to succumb to the marginalization of agriculture. This is not necessarily true for all communities but it certainly is the case for those communities without the ability to attract new businesses. For example, in Iowa two-thirds of the counties lost population between 1990 and 2000. Several of the surrounding states are also experiencing infinitesimal to no population growth.

Marginalisation

So what do these changes imply for marginalisation of U.S. agriculture? The USDA's Economic Research Service has done a number of studies examining conditions in rural America. They produced numerous reports examining many aspects of these issues (Reeder and Brown, 2005; McGranahan and Sullivan, 2005; Stenberg, 2002).

One of the issues associated with the marginalization of agriculture is the loss of farmland. In the United States, the severity of this problem depends to a large extent on the region of the country being examined. The entire United States experienced a 5 per cent decrease in the amount of land in farms from 1990 to 2004. Over the same time period, three areas experienced more than a 10 per cent decrease in the land in farms. These areas were the Northeast, the Southeast, and the Delta states. Although these areas experienced a substantial decline in the land in farms, it is interesting to note these states only comprised 10 per cent of the total land in farms in the United States during 2004.

Urbanisation is the biggest cause of marginalisation of U.S. agriculture. Land values for both urban and farm-land are at record high levels. As the communities grow there is pressure to convert land from agriculture to urban land uses. The major metropolitan areas within the U.S. are the areas with the greatest impact of urbanization on agriculture.

Land abandonment is not a major problem in the United States. However, it is important to keep in mind that the United States is a very diverse country and that some areas are facing different issues with respect to land use and land use policies.

In addition, there also is a strong demand for recreational land. This land is used primarily for hunting, sight-seeing or, in some cases, for a country home.

The changes in the nature of production agriculture contribute to one aspect of marginalization of agriculture in the U.S. Changes in production can be characterized as substituting capital for labor. A result of this substitution has been increasingly tight margins for farmers. The tightening margins have led to larger farm sizes to generate income. The larger farm sizes have in turn led to loss of rural populations and a decline in economic activities in rural areas, especially those areas dependent on farming.

Figures 4.5 and 4.6 illustrate the nature of these changes. Figure 4.5 shows the increase in the value of the output for the U.S. The figure also shows the increase in the total expenses to produce the output. The difference is the net farm income, which is also shown in the figure. Figure 4.5 illustrates the changing nature of agriculture in the U.S. The value of the output has increased reflecting, for the most part, the increases in productivity. But, notice that the increase in yields comes with a price. Costs have been increasing at almost the exact same rate as output. Notice that the slope of the lines are almost identical. As the value of the output increases and as the cost of production increases the farmer is left with essentially the same net income. The net income line in Figure 4.5 has a slight upward slope but not near the rate of the output or cost.

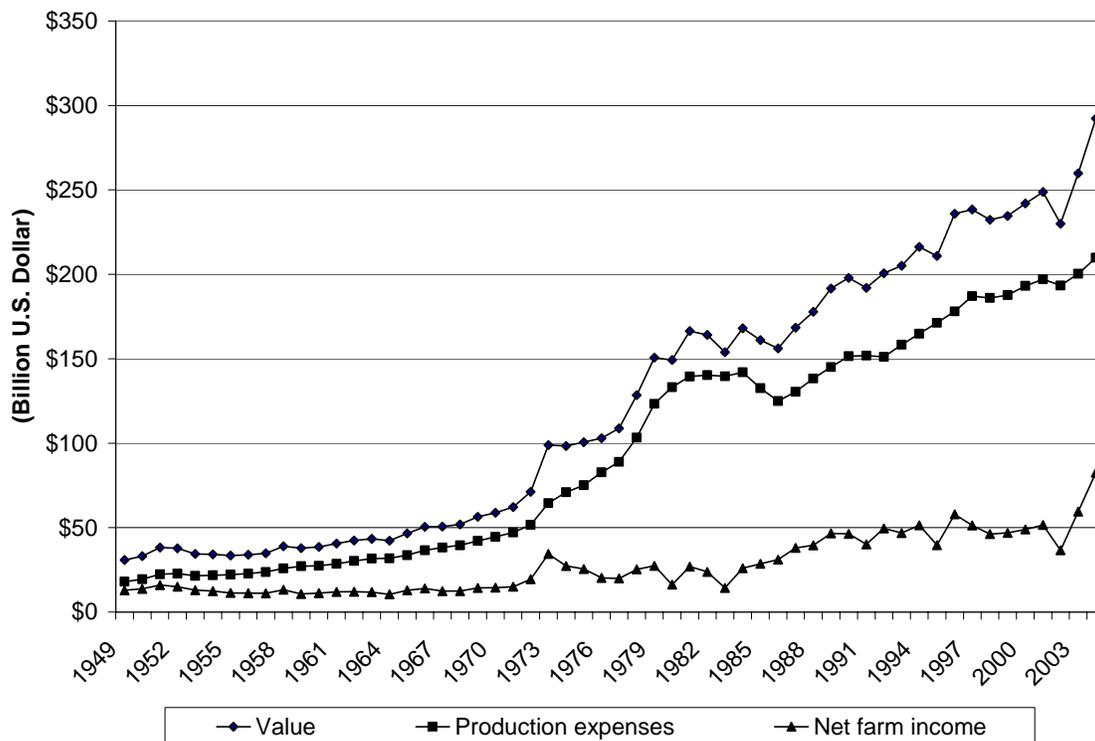


Figure 4.5 U.S. value of agricultural production, total expenses, and net farm income (Source: USDA/ERS)

Figure 4.6 shows the net income as a per cent of the gross value of the output. This shows the steadily decreasing margins associated with production agriculture in the U.S. In the 1950s net income averaged approximately 36 per cent of the gross income. For the past decade this average dropped to 21 per cent. This means that in the 1950s for every \$100 of gross the farm kept approximately \$36, today it is only \$21. The farms have to be bigger to make the same income. In addition, as will be discussed shortly, the government payments have become a larger part of the gross output. Without these payments the margins would be even tighter. A natural result of the increasing farm size is a decreasing number of farms and farmers, especially in areas dominated by land intensive commodities.

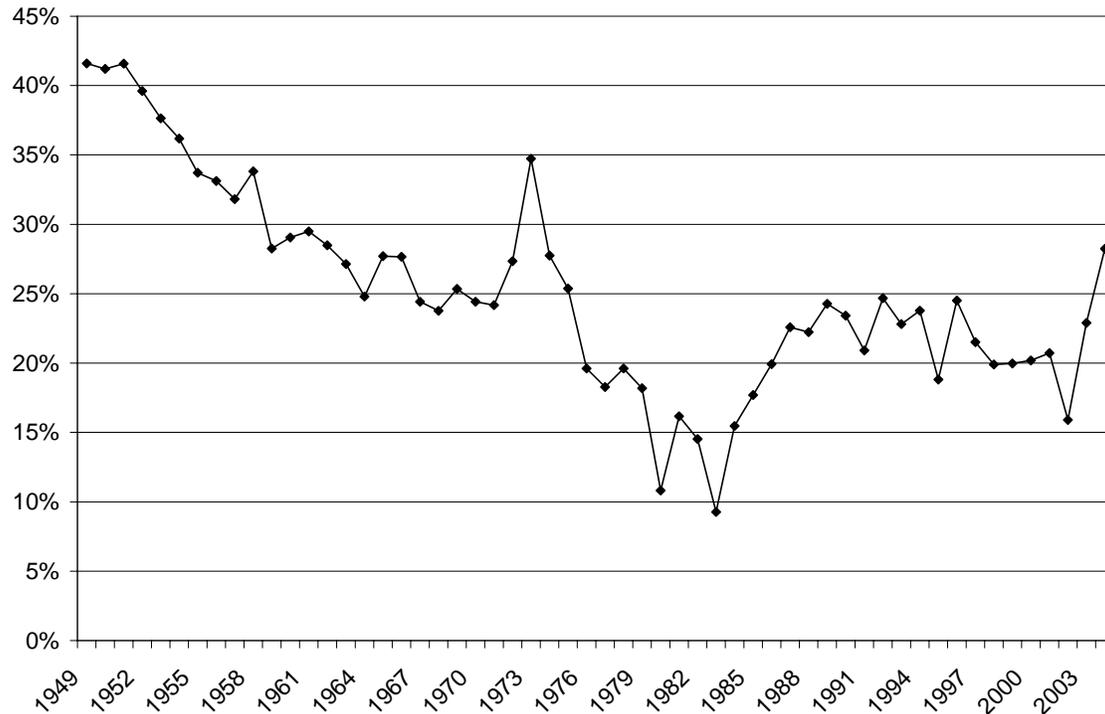


Figure 4.6 U.S. net farm income as a per cent of gross farm income (Source: USDA/ERS)

Recently in the U.S. there have been movements away from the intensive, tight-margin production. Consumers have been seeking food and fiber attributes beyond the cost of production. These attributes, such as organic, non-GMO, natural, animal friendly, locally grown, and so forth, are increasing opportunities for smaller farms. This production is rapidly growing. However, whether or not it will become a significant portion of U.S. production remains to be determined.

There have been numerous studies done to examine the changes in population, loss of farmland and the related issues surrounding marginalisation of farmland in the United States. One study found that natural amenities are highly

correlated with the change in rural population (McGranahan, 1999). The climate, water area and topography were used to construct a local index in this study. This index was used to examine the changes in rural populations. The impact of the different measures varies by area, but overall the natural amenities are a significant factor in whether or not a county increased in population and economic activity.

Another study examined the effects of several socio-economic characteristics on whether or not a county experienced population increases from 1990 to 2000 (McGranahan and Beale, 2002). Non-metropolitan counties classified as retirement or recreation counties, or ones with a predominance of Federal land experienced the most growth. These counties would all be counties that ranked high on the natural amenities scale. The counties classified as dependent on mining or farming showed the least growth. In fact, less than half the farming counties showed population growth during the 1990 to 2000 period. This is due to a variety of reasons, including the fact that the farming counties would tend to be low on the amenities scale and the changing nature of agricultural production has resulted in a loss in the number of farmers and supporting activities.

GOVERNMENT PROGRAMS

There are a myriad of government programs that affect the marginalisation of agriculture in the U.S. These programs take many different forms and are provided by almost all levels of government in the U.S.

Farmland protection

The largest category, in terms of number of programs impacting marginalisation of agriculture, is farmland protection. The Federal government, all 50 states and even some local jurisdictions have some form of farmland protection programs. These programs follow three basic approaches; zoning, regulatory, or voluntary. Examples of the programs include preferential tax treatment, easements, purchase or transfer of development rights and the establishment of agricultural zones or other zoning regulations.

Nickerson and Barnard (2006) provide a detailed summary of the extent and nature of the current farmland protection policies and tools in the U.S. They note that preferential tax treatment, where agricultural land is taxed at a different rate, started in Maryland in 1956 and today all 50 states have some form of preferential tax treatment.

There are other forms of farmland protection used by many of the states. The use of the programs varies considerably by region of the country. For example, 19 states and 41 local jurisdictions in 11 states have some form of a farmland protection program involving the purchase of development rights to the property. However, just 4 states in the Northeast U.S. account for 76 per cent of the state level spending for purchasing development rights (Nickerson and Barnard, 2006).

The Federal government also has some farmland protection programs. The Federal effort in this area started in 1981. The Agriculture and Food Act of required that the Federal government evaluate farmland impact of the various programs that converted farmland to non-agricultural uses. The Federal government became directly involved with farmland protection with the 1996 Farmland Protection

Program. This involvement was expanded with the 2002 Farm Security and Rural Investment Act.

Hellerstein et al. (2002) published a study examining farmland protection laws and programs in the United States. The purpose of their study was to determine how public preferences for rural amenities influenced the laws and programs being enacted. Not surprisingly, they found that the influence of rural amenities varied considerably by region of the United States. Their study ‘... suggests that farmland preservation program emphases appear to depend on State-specific circumstances, including the amount of land already in parks, forests, and other conservation programs.’ (pg iv). This study developed an extensive list of rural amenities or other outputs from farmland that served as a basis for the legislation they found. They condensed an expanded list of factors into major categories.

- A major impetus for farmland preservation was local and national food security. This affects various aspects of the marginalization of agriculture and rural America. Many areas have started promoting local foods as a means of providing extra income for area farms and processors. There also is the appeal to people to be more environmentally conscientious and not consume foods that require so much fossil fuel to transport. Finally, there is the appeal to maintaining a diverse food supply for national and local security. Today 30 of the 52 States in the U.S. have programs for farmland protection focusing on food security (Nickerson and Barnard, 2006).
- Another frequently cited factor for farmland protection was the protection of the environmental amenities. The Hellerstein study found a number of laws designed

to protect the rural amenities themselves. Open space, the rural or agrarian character of the area, wildlife areas, natural areas and the overall aesthetics were important considerations in passing state and local laws and regulations. There are 29 states that have some form of farmland protection programs designed to protect or enhance the environmental amenities of an area (Nickerson and Barnard, 2006).

- A third factor identified in the Hellerstein report was the overall protection of environmental services amenities. Citizens were concerned with pollution reduction, groundwater recharge, flood control, and water and air quality. Over 40 per cent, 23, of all states have farmland protection programs that are designed for the protection of the environment.
- Finally, a fourth, general, category for farmland protection was orderly development. People were concerned about the orderly development of rural land to prevent sprawl. They favor the low density, physical space provided by farmland. Nickerson and Barnard (2006) report that 18 states have designed farmland protection programs to encourage orderly growth and development of the area.

Other programs

Other programs in addition to farmland preservation can aid rural communities. Some states and local areas have established rural development funds that provide grants or low interest loans to businesses that locate in rural areas. Some communities provide tax and infrastructure support for businesses. There also are

efforts to develop tourism, value-added industries and other activities to help rural communities cope with the changes. Many local and state governments, as well as the federal government, are helping with programs aimed at improving farmers' income and opportunities. Farmer's markets, community supported agriculture programs and the 'buy local' campaigns are examples of such activities.

Federal programs

The federal government has undertaken many programs aimed at rural development. These programs are carried out through many different federal agencies including the U.S. Department of Agriculture. In many of the poorest rural communities, government transfer payments provide the majority of the income. Overall, government transfer payments made up 20 per cent of the income in the non-metropolitan counties.

With respect to the Federal farm programs, there are three major programs designed to protect the natural environment. Each program takes a different approach to preserving the environment.

- The first of these is the Conservation Reserve Program (CRP) which was started 20 years ago under the 1985 Food Security Act. The CRP is a land retirement program where the farmer is given a yearly payment to remove the land from production. Today there are more than 30 million acres enrolled in this program. The CRP has been criticized for causing a decline in rural communities. The argument is that removing land from production leads to a decrease in the

supporting activities, and this has led to the decline of communities in areas where there is a large percentage of acres in the CRP. However, recent U.S. Department of Agriculture research "...indicates that, in aggregate, impacts have been limited. High CRP enrollment did not have a statistically significant adverse effect on population trends in farm counties across the United States (Sullivan et al., 2004). This is an important finding because the use of land retirement programs can be an important strategy to help improve environmental amenities. The CRP has been documented to improve water quality and wildlife habitat.

- The Environmental Quality Improvement Program (EQIP) is another federal government program. It provides cost share monies for improvements in the farming operation that enhance environmental quality. For example, the EQIP funds can be used to offset the costs of new manure storage facilities or to put in terraces. This has been a successful program, but lack of funding has limited its usefulness.
- Another major environmental program is the Conservation Security Program (CSP), a new program designed for working lands. Under the CSP, the farmer is paid for implementing practices that improve the environment. This is a voluntary program and the farmer can choose to participate at three different levels. Each level requires more activities, but also offers a larger payment. The CSP was begun with the 2002 farm bill and has been available only on a limited basis to date.

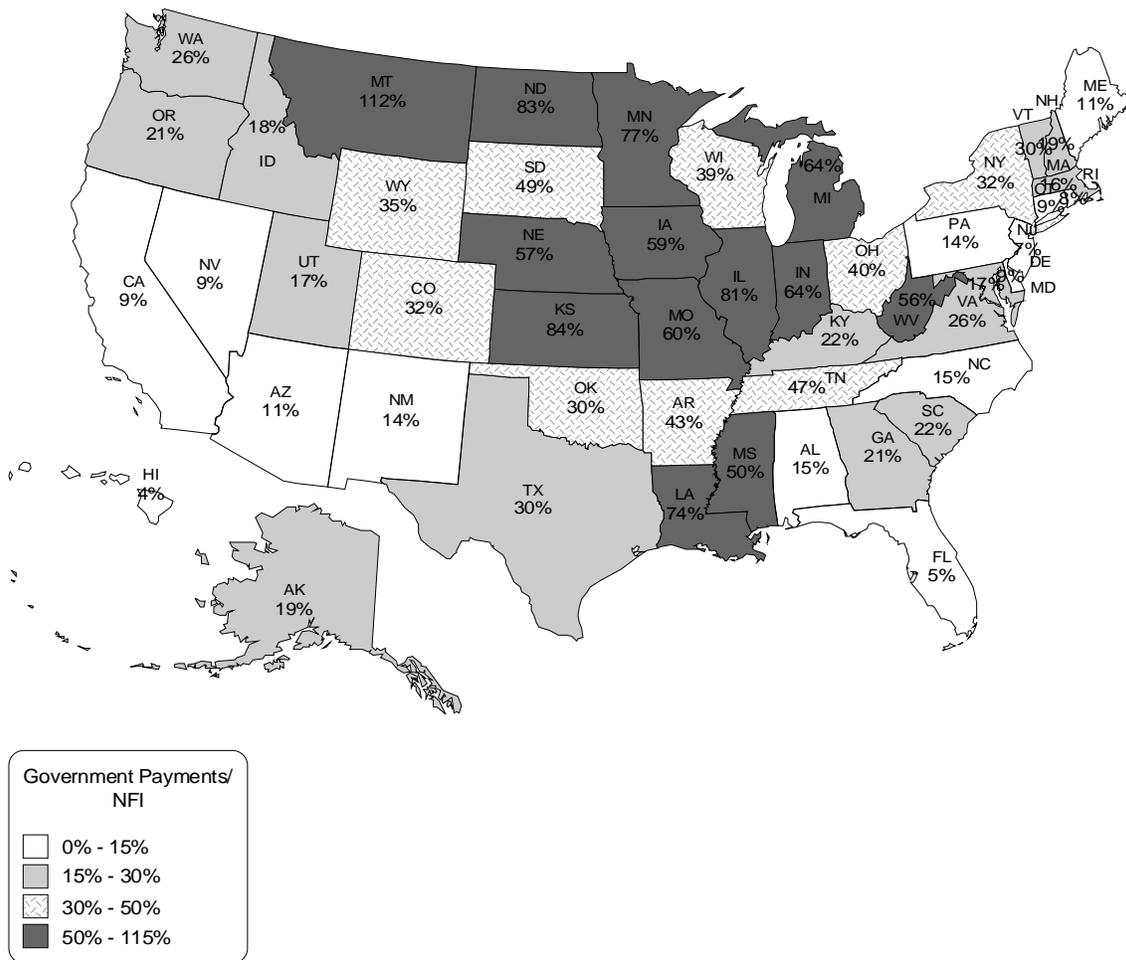
These programs show three alternative approaches that can be used to protect environmental amenities from possible damage from farming. Conservation programs are a form of farmland protection programs. The programs are designed primarily to protect the environment. Studies in the U.S. have shown that protecting the environment, especially environmental amenities, is one of the best ways to ensure the orderly development of an area to prevent the marginalization of agriculture. (Hellerstein et al., 2002; Nickerson and Hellerstein, 2003; McGranahan, 1999).

A discussion on the Federal government's programs impact on the marginalization of agriculture would not be complete without mentioning the commodity programs. The basic Federal programs affecting agriculture are contained in the farm bill. The U.S. has a new farm bill every five years or so and this bill guides U.S. agriculture policy. See Dimitri et al. (2005) for a discussion of the U.S. farm bills and changes in U.S. policy over time.

The reason to mention the commodity programs is because, in spite of the fact there are many programs at the Federal level, the dominant program is the commodity program. The commodity programs represented 63 per cent of the estimated non-nutritional expenditures for the 2002 farm bill. By comparison the conservation programs were 17 per cent and programs for rural development were just 0.45 per cent of the estimated expenditures.

The current U.S. commodity programs are production based, especially for the commodities with program support. The Economic Report of the President noted that "...domestic support programs distort the price signals that farmers receive..." (Economic Report of the President, p. 186). As such, these programs create an

environment where farmers' decisions are not based entirely on market signals but government programs. In 2005 the federal government spent approximately \$20 billion on agricultural support payments. This would represent approximately 7 per cent of the total value of the U.S. agricultural sector (Economic Report of the President).



The commodity programs encourage farmers to keep land in production. In addition the programs contribute to a loss of biodiversity and contribute to other environmental problems that have been associated with production agriculture. The commodity programs have a significant influence on land values (Ryan et al., 2001). These programs have been estimated to comprise 25 per cent of the land values nation wide and 45 per cent of land values in Iowa, a state receiving substantial government payments (Holste and Duffy, 2005; Ryan et al., 2001). Increased land values limit the ability of young people to enter farming and limit the access to land. Because of the size and magnitude of the government commodity programs they are the dominant policy influencing the marginalisation of agriculture in the U.S.

It is debatable whether or not the commodity programs contribute to or help stop the marginalization of U.S. agriculture. On the one hand the programs help many farmers stay in business and require conservation measures if the farmer is to remain eligible for commodity payments. But, on the other hand, they distort market signals and encourage intensive production of just a few commercial crops. This adds to the potential environmental damage from agriculture.

Regardless of the point of view regarding the direction of the impacts of the commodity programs on the marginalization of agriculture, it is indisputable they do have an impact. The commodity programs represent the bulk of the non-nutritional spending on agriculture in the U.S. With a fixed amount of tax revenue, if the government is spending money on the commodity programs, then the funds aren't available for the other programs that certainly address marginalization of agriculture in the U.S.

CONCLUSIONS

One in five U.S. counties depends on farming for a significant share of its income. But, the face of U.S. agriculture has been altered and what will happen to these communities is not clear. The federal government has spent billions of dollars on farm programs but these programs have not helped maintain the farm dependent counties.

Is marginalisation a problem for U.S. agriculture? In terms of land abandonment, the answer is clearly no. There is very little, if any, farmland in the United States that is abandoned without another use. Farmland values in almost every region are at record high levels. There is, however, a considerable amount of farmland that is under pressure to change use for a variety of reasons. The amount of pressure depends to a large extent on the area and the natural amenities that are present.

Two major reasons exist for the marginalisation of U.S. agriculture.

- First is urbanization. This is not necessarily just the growth of a city into the surrounding countryside. This is the movement of the people away from the cities into the countryside. In the state of Iowa for example, the number of people who live in the country but not on a farm now exceeds the number of people who live on a farm. People move to the countryside for a variety of reasons. Regardless of the reason, the shift does change the rural countryside. Land values increase as the demand increases. In addition, the demand for natural amenities increases. One of the major reasons people move to the country is for natural

amenities and they do not want to see these amenities destroyed or altered significantly.

- The second major reason for the marginalisation of U.S. agriculture is the changing nature of farms. On one hand, as farm size increases there are fewer, full-time farmers. As the number of farmers decreases, so does the number of businesses that the farmers support. On the other hand, there is a tremendous increase in the small, hobby- type farms. These farmers do not contribute as much to support the local economies, primarily because they purchase fewer agricultural inputs.

In the United States, the majority of farmers are small farmers who do not rely on farming for the bulk of their income. Over half of what are called farms in the United States either have retired operators or are lifestyle farms. These farms contribute to the rural countryside in a variety of ways, many of which are positive with respect to the preserving amenities. However, in some cases, there is a natural tension between the part-time, lifestyle farmers and the full-time farmers. The lifestyle farmers are more concerned with the natural amenities, whereas the full-time farmers must also make a living from the farm.

U.S. citizens enjoy a relatively cheap food supply. As such, for the most part, we only think about agriculture when something bad happens. Water pollution, worker problems, environmental problems and food safety scares are the only times when some people think about agriculture or the rural communities. The United States has a cheap food supply relative to the level of overall income, but there are hidden issues to be resolved. Current agricultural production techniques generate

external costs that are not trivial. They have been conservatively estimated at between \$5.7 billion to \$16.9 billion annually (Tegtmeier and Duffy, 2004).

There is a movement to try and change people's attitudes toward agriculture and think of agriculture in a broader context. We are recognizing that agriculture provides a vast array of goods and services beyond simply producing food and fibre.

Some would argue that it is only the developed countries that can afford to worry about marginalisation of agriculture. They point out that the less developed countries must rely on agriculture for food and fiber production first, and that other attributes or natural amenities come only after adequate production. However, this is a narrow point of view with respect to agriculture and its great potential. Agriculture can help with development or it can hinder it. Developing countries must advance with a healthy agriculture as a base.

The alternative ways to view agriculture can have significant impacts. Multi-functional agriculture can help forge the bond between agriculture and the surrounding rural communities as a desirable place to live. Only time will tell if this new approach helps alleviate the problems we are seeing in agriculture and rural communities.

NOTES

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