

SOCIETAL PERCEPTIONS
OF THE ROLE OF THE U.S. GOVERNMENT
IN SUPPORT FOR AGRICULTURE

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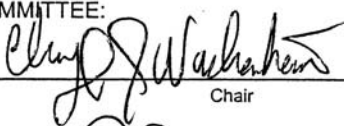
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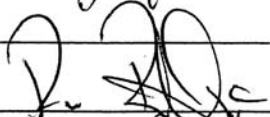
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ABSTRACT

Svangstu, Brooke Andrea; M.S.; Department of Agribusiness and Applied Economics; College of Agriculture, Food Systems, and Natural Resources; North Dakota State University; October 2005. Societal Perceptions of the Role of the U.S. Government in Support for Agriculture. Major Professor: Dr. Cheryl J. Wachenheim.

Societal perceptions of agriculture are very important to the U.S. government's role in allocating funds to the agricultural industry. Through their influence on the political process, perceptions, in particular, shape the development and implementation of farm programs for agriculture. Information about the interests and policy positions of the general public regarding the government's role in agriculture is of value. The primary objective of this study is to identify perceptions among residents in the North Central Region of the United States regarding government support for agriculture and what influences the degree of support residents believe the government should provide. This study focuses on respondents' level of agreement with the statement "The government should do more to help farmers in this area stay in business." The majority of respondents strongly agreed. Overall, respondents with greater social and physical distance from agriculture were the most likely to agree the government should do more to help farmers.

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CHAPTER I. INTRODUCTION

Agriculture and rural America have been and continue to be important components of the U.S. economy. Today, rural America contains 75 percent of the nation's land and is home to 17 percent of the nation's population (Economic Research Service [ERS], 2004c). Rural people and communities are engaged in and depend upon a wide range of economic activities, including agriculture (ERS, 1995). The agriculture industry is, in turn, dependent upon government funding to maintain viability of farms and rural communities in the United States. Societal perceptions of agriculture influence the allocation of government funding. Societal perceptions have greatly influenced development and implementation of government farm programs for agriculture, and the associated monetary requirements and restraints resulting from the budget allocation process.

Agricultural Policy

The Constitution of the United States stipulates that government exists to ensure domestic tranquility, provide for common defense, establish justice, protect individual liberties, and promote the general welfare. Historically, one of the major policy issues has been the expanding size and role of government, particularly as it relates to the function of promoting the general welfare of the people. A wide philosophical gap separates public opinion regarding the extent to which the powers of government should be utilized in solving economic and social problems. This is particularly true of agriculture, where the extent of government involvement continues to be a major controversial issue (Knutson, Penn, & Boehm, 1995).

Lawmakers have the responsibility to ensure that public policy is formulated in the

public interest, or to benefit society as a whole as opposed to a particular segment of society. It is, therefore, important to determine what the interests and policy positions of the general public are regarding the role the U.S. government should play in the agricultural industry. A policy position indicates a conclusion as to what the role of government ought to be with respect to a particular problem or a set of circumstances. Policy positions are derived from the interaction of facts, beliefs, values, or goals that are held by individuals. However, it is important to continually monitor policy positions as the public's goals, values, and beliefs may change over time. These changes may result from improved communication, exposure to new ideas, improved education, or a change in the nature of the problem. Agriculture's ability to secure public support and legislation favorable to it is influenced by the beliefs and values of the urban and suburban majority towards farm people (Knutson, Penn, & Boehm, 1995).

Importance of Agriculture to the U.S. Economy and Rural Economies

The agriculture industry plays a vital role in our economy and our lives. Agriculture is one of the world's largest industries. On a world-wide basis, more people are in some way involved with agriculture than in all other occupations combined. The United States produces more food than any other nation in the world and is the world's largest exporter of national products (International Food Information Council, 2004).

While farming accounts for less than one percent of U.S. gross domestic product (GDP) annually, the associated business of agriculture, from producer to processor to retailer to the food service sector, generates 16 percent of U.S. GDP, and employs 17 percent of the American workforce (Office of Management and Budget [OMB], 2004).

Employment in the agricultural industry plays an important role in the U.S.

economy. Farmers, ranchers, and agricultural managers held nearly 1.4 million jobs in 2002. About 84 percent were self employed (Bureau of Labor Statistics [BLS], 2004b). As the long-term trend towards consolidation of farms into fewer and larger farms is expected to continue, this will also result in the continued decline in employment in the agricultural industry and of self-employed farmers and ranchers. For the period of 2002-2012, a 14.9 percent decline is expected for employment in the agriculture industry and more specifically a 22.4 percent decline is expected for individuals with an occupation of farmer or rancher (BLS, 2004c).

U.S. Government Spending on Agriculture

The Federal Government helps to increase U.S. agricultural income by boosting productivity, ensuring that markets function fairly, and providing a safety net for farmers and ranchers who face financial risk and natural disasters. Federal programs are designed to accomplish two key economic goals: provide an economic safety net for farmers and ranchers and open, expand, and maintain global market opportunities for agricultural producers (OMB, 2002).

Farming has been, and continues to be, one of the most heavily subsidized industries in the United States. Government payments nationally averaged \$19 billion per year from 1999 to 2003, representing about 40 percent of the net farm income over that period (Wasler & Anderlik, 2004).

In fiscal year 2003, over 22 billion dollars was allocated under the U.S. Budget for agricultural spending (OMB, 2005). This consists of approximately one percent of the nation's total budget (Figure 1).

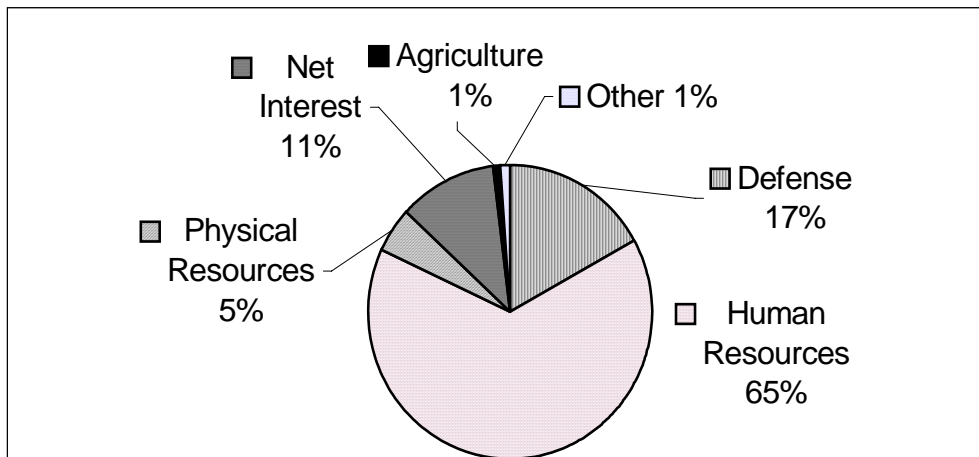


Figure 1. Allocation of U.S. Budget Outlays by Function for Fiscal Year 2003.

For the five-year period of 1994-1998, agriculture spending accounted for 55 billion dollars, or .70 percent of the total U.S. Government budget. Agricultural spending increased during the five-year period of 1999-2003 and accounted for 130 billion dollars, or 1.37 percent of the total U.S. Government budget (Figure 2). For future years, the U.S. Government is projecting a decrease in agricultural spending. Estimates for the six-year period of 2004-2009 include agricultural spending at 124.5 billion dollars, or 0.81 percent of the total budget. This decrease will likely have a negative impact on farmers and rural communities that rely on agricultural government payments as a major source of income. Government support for the farm sector is frequently linked by advocates of farm program payments to survival of rural communities. In the past decade, about 8 of every 10 dollars in Federal direct farm payments went to farms in nonmetropolitan counties (Gale, 2000). However, over the seven decades since the first price support legislation was passed, most rural communities have reduced their reliance on agriculture as additional non-farm jobs and businesses supplemented their economics. While government payments have been important to farms and related rural businesses, the rural nonfarm economy has grown to

such an extent that a strong downturn in the farm sector is barely noticeable in the statistics for the rural economy as a whole. In addition, other government programs have grown over the years and other Federal income security payments and other types of programs play a much larger role in the rural economy than do farm program payments (ERS, 2000).

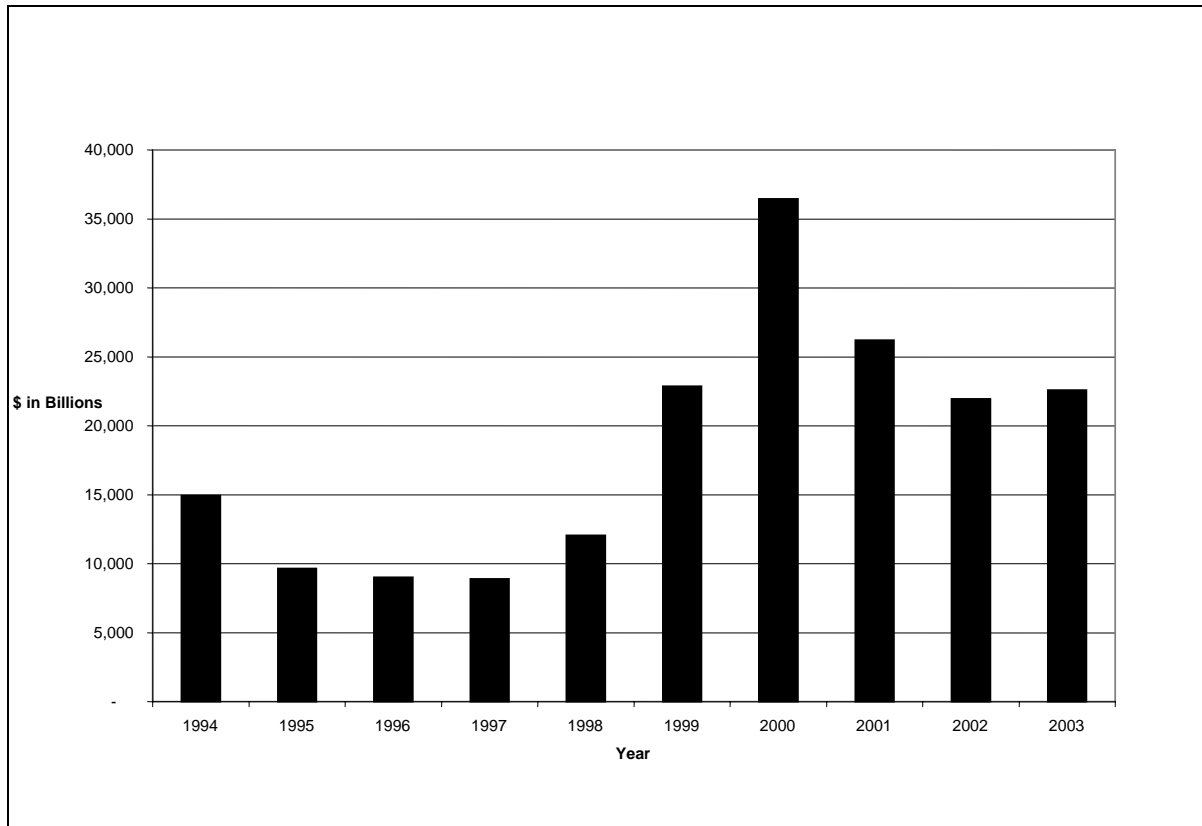


Figure 2. U.S. Government Budget Agricultural Spending, 1994-2003.

Variyam and Jordan (1991) found the dominant perception among U.S. households with telephone and automobile ownership to be that farmers get too much money and a larger than their desired share from government programs. In reality, in 2001 nonmetro areas received slightly less funding per capita (\$6,020) than metropolitan areas (\$6,131), but the amount of funding varied greatly by type or function of the program. Nonmetro

areas benefited from agriculture and natural resource program payments, income security payments, and human resource programs. In contrast, metro areas benefited more from community resource programs, defense and space programs, and national function programs such as criminal justice and law enforcement, energy, and higher education and research (Reeder & Calhoun, 2004).

Transformation of the U.S. Population

Farming has changed dramatically since the early 20th Century, when the government's involvement in agriculture began. Today, there is approximately one-third of the number of farms than a century ago, two million compared to almost six million (OMB, 2004). This trend will likely continue. The Bureau of Labor Statistics (2004a) projects that market pressures and low prices for many agricultural goods will cause more farms to go out of business over the period of 2002-2012.

Today's farms are larger and increasingly utilize sophisticated production and information technologies. America's agricultural sector is the most productive in the world and commodity production levels have increased dramatically over the last century (OMB, 2004). Increases in farm productivity through advances in production technology, management, and crop science have enabled the population to be provided with food and fiber by a continually shrinking number of farms while the nation's growth in population has continued to increase (Wasler & Anderlik, 2004).

Over the past two centuries, the United States has evolved from a rural society, with most of the population engaged in farming, to a predominately urban society. The first official U.S. Census of 1790 found that almost 95 percent of the U.S. population lived in

rural areas (U.S. Census Bureau, 2000a). The U.S. Census of 2000 reported that the urban share of the U.S. population had increased to 79 percent (U.S. Census Bureau, 2000b). In addition, at the beginning of the 20th century, nearly 40 percent of the population lived and worked on farms; by the close of the 20th century, that proportion had declined to just over 1 percent (Wasler & Anderlik, 2004).

Although farming activities play a major role in the sustainability of many rural communities, rural communities have become less reliant on farming activities and income. However, farming does remain a primary source of income and employment to many rural communities in some areas of the United States, especially in the sparsely populated areas of the nation's heartland.

Need for the Study

These statistics and observations lead to a number of important questions. How imperative is farming and farm income to rural communities? What are the economic impacts of farming and government subsidies to rural communities in the United States, particularly in the Midwest? What are the policy positions of the general public with regards to government agricultural spending? Should the government spend more or less to keep farmers in business?

This paper will examine perceptions of agriculture among the residents in the North Central Region about the role the government plays in helping farmers stay in business. The primary objective is to identify perceptions among residents of the North Central Region regarding government support for agriculture and what influences the degree of support residents believe the government should provide. The factors influencing

perceptions that will be reviewed include place of residence, farm experience, primary occupation, size (population) of nearest town, net farm income, source of net farm income, income (general), and education.

This study used social distance as the basis for measuring detachment from agriculture to predict respondents' perceptions of the government's role in agriculture. Literature supports the idea that social distance can affect perceptions. George Herbert Mead (1934) emphasized that the mind is a social product and that one of the most important achievements of socialization is the development of cognitive abilities, including intellectual capabilities such as perceiving. Our society and interactions with others form the perceptions of an individual (Henslin, 2004). In what has become known as the definition of the situation, or the Thomas theorem, sociologists W. I. and Dorothy S. Thomas said, "If people define situations as real, they are real in their consequences" (Henslin, 2004, p. 102). What individuals learn about the sense of time, of place, of cause and effect, and society through social interaction depends on the society in which they live and their place in it. A person's location within a particular society may also influence his/her perception of reality (Robertson, 1977).

The most common technique used in measuring social distance was designed by Bogardus (1925). There are three key elements underlying interpersonal attraction to form the foundation for social distance: a) proximity, b) similarity, and c) familiarity. Proximity is the physical distance between individuals. The second key element is similarity. We tend to like people who are similar to us in attitudes, interests, values, background, and personality. Familiarity increases attraction and is an underlying component of social distance. Repeated exposure improves recognition of someone which, in turn, increases the

likelihood that we will like that person (Rathge & Wachenheim, 2000).

It is hypothesized that respondents who have the nearest social distance from agriculture will more strongly agree the government should do more to help farmers in the area stay in business. It is hypothesized that respondents who are farmers, live on a farm, or have farm experience will more strongly agree that the government should do more to help farmers in their area stay in business. Size (population) of nearest town will also be reviewed to predict respondents' agricultural perceptions towards the government's role in agriculture. It is hypothesized that respondents with the nearest social distance to agriculture and rural areas will more strongly agree that the government should do more than respondents in urban areas.

It is further hypothesized that respondents with higher levels of education will more strongly agree that the government should do more. Income, percentage of net income from farming, and income sources will also be reviewed. It is anticipated that the higher the level of a respondent's income, regardless of source, the lower his or her level of agreement will be that the government should do more.

The remainder of this paper is organized as follows: Chapter II is a review of relevant literature, Chapter III details the methods used to collect and analyze data, Chapter IV presents the results, and Chapter V presents the conclusions.

CHAPTER II. LITERATURE REVIEW

Agricultural Literacy

Men and women of all ages and ethnic groups have a vested interest in agriculture (Law & Peeple, 1990). Consumers, as well as policy makers, need to be “agriculturally literate” in order to respond appropriately as issues related to government support for and regulation of agriculture arise. Most Americans, whether young or old, have limited knowledge about agriculture and food production (Frick, Birkenholz, Gardner, & Machtmes, 1995). Private foundations and government agencies have financially supported the idea that there is a need for the general public to have a basic understanding of agriculture, the agricultural industry, and its importance to our country and citizens (Frick, 1990). Therefore, it is important to identify specific agricultural misperceptions the general public has in order to provide appropriate training opportunities. Appropriate training will help to ensure a more agriculturally literate society.

Research has shown that agricultural literacy means different things to different people. Leising and Zilbert (1994) describe agricultural literacy as possessing the knowledge and understanding of our food and fiber system. A basic knowledge of agriculture is especially important when it is the major industry in a state and the lack of agricultural knowledge and experience impedes economic development (Williams & White, 1991).

Agricultural literacy lies at the root of public actions and attitudes toward agriculture, affecting national and global economic development (Barton, 1990). General concern about food production, however, is increasing and special interest groups are influencing the public’s impression (Lichte & Birkenholz, 1993).

Agricultural literacy is being promoted by many organizations and special interest groups to educate the public on the agriculture industry. These organizations and groups include AgEducation, Ag in the Classroom, FFA, 4-H programs, Agricultural Extension Services and Experiment Stations, and State Departments of Agriculture, to name a few. The mission of these groups is to educate individuals on the social and economic importance of the agricultural industry.

The many changes occurring in agriculture during the past decade have made the need for agricultural literacy increasingly evident. It is vital that the general public has accurate perceptions about agriculture. Terry, Dunsford, Lacewell, and Gray (1996) stated that the impact agriculture has on society, economics, the environment, and public policy decisions in our democratic society makes understanding agriculture imperative to making good policy decisions. Achieving the goal of agricultural literacy produces informed citizens able to participate in establishing the policies that support a competitive agricultural industry in the United States and abroad (National Academy of Science, 1988).

Importance of Public Perceptions to Government Farm Programs and Payments

Existing U.S. farm programs have their origins in the 1930s, a period when the well-being of U.S. households and rural communities were tightly linked. Although farms, farm households, and rural communities at the beginning of the 21st century are vastly different, commodity based support programs continue to play a central role in U.S. agricultural policy (ERS, 2004b).

Government payments provide an important source of income to the farm sector, but U.S. farm policy has undergone significant changes within the last 15 to 20 years.

Beginning with the 1985 Farm Act and continuing with farm legislation in 1990 and 1996, a series of fundamental changes in commodity and other agricultural policies moved the sector towards market-oriented decisions (ERS, 2004a.)

The current farm program, the Farm Security and Rural Investment Act of 2002 (FSRIA), governs Federal farm programs until 2007. The FSRIA includes commodity, conservation, trade, nutrition, credit, rural development, research and related matters, forestry, and energy programs (USDA, 2003).

The public's perceptions of agriculture and agricultural policy have played an important role in the development of farm programs. Efforts to gather data regarding consumer perceptions of agricultural policy will be increasingly necessary to determine policy positions for creation of future farm policy.

Mark, Daniel, and Parcell (2002) determined that information about the needs and perceptions of agricultural producers and nonproducers and their ability to adapt to changes in policy was useful to policymakers in the development of the FSRIA. The FSRIA was preceded by the 1996 Federal Agricultural Improvement and Reform Act (FAIRA). As a result of producer and agribusiness perceptions and reaction to FAIRA, as well as expert opinions, FSRIA contains several elements of FAIRA, including direct (fixed) payments and marketing assistance loans. New conservation programs and additional program commodities were included in FSRIA, partially at the request of producers. Producer information regarding farm policy can be useful to policy makers evaluating differences in policy impacts for farming operations of various sizes or geographic locations.

Additionally, Mark, Daniel, and Parcell also state that tracking producer and nonproducer perceptions and observed effects of the FSRIA will be useful to policy makers

and agricultural interests groups as they monitor FSRIA and propose new policy to replace FSFIA when it expires in 2007.

Variyam and Jordan (1991) stated that research has indicated that perceptions and attitudes have an important influence on individual preferences for various government policies. Since farm programs represent significant costs to consumers and taxpayers, it is of interest to examine public support of these programs. Variyam and Jordan's study indicated that there was an overall support for government involvement, but there is a decline in preference for support policies when costs increase. Dobson (1985) and Rausser and Irwin (1987) also determined that while surveys indicated public support for policies to protect agriculture, opposition may increase when costs of protection are revealed.

Validity of Public Perceptions

Public perceptions may not be valid. Where as public perceptions are not always based on accurate facts, they can be a very powerful force in the development of public policy. However, it is important that perceptions are as correct as possible. In the U.S. economy, people influence the type, structure, and practices of industries through their voice in public policy. Legislative and other policies result in rules designed to reflect values, goals, and beliefs of citizens. If citizens, legislators, or interest groups misjudge the value or impact of an industry, they may work against the competitive forces otherwise defining its role in our economy, society, and environment. Fortunately, misperceptions about industries whose impacts are not widely understood by the general public can be corrected. However, those perceptions must first be recognized and, whenever possible, understood. Public perceptions are an important input into the policy making process and

understanding them can help an industry select strategies to articulate its value to the public (Wachenheim & Rathge, 2000).

The media has a large impact on the accuracy of the public's perceptions of agriculture. The public is increasingly reliant on television as a primary source of news and information. However, broadcast media is a commercial enterprise and is subject to economic competition, which is the driving force behind headlines. The media makes certain assumptions about the public's preferences and there is a natural tendency to overestimate the significance of events (Roll-Hanson, 1994). Time limitations also make it difficult for journalists to pursue issues in-depth or acquire extensive technical knowledge (Nordstrom, Richards, Wilson, Kelsey, & Pitts, 2000). Literature on journalism suggests that journalists are inclined to seek the most available news source rather than the most knowledgeable sources. This can in turn affect public policy. If agencies are influenced by media-induced public pressure instead of objective scientific information, the effects on public policy can be negative (Smith, 1998).

Perceptions of agriculture-related issues are often biased. Special interest groups have formed around issues regarding farm policy, environmental concerns, and animal welfare, just to name a few. These groups are often well-funded, have celebrity spokespeople, and receive a great deal of attention from the media (Terry & Lawver, 1995).

As discussed previously, agricultural literacy groups have been formed to counter biased information presented by the media and otherwise available to the public. Although the perceptions the general public has about farming may be somewhat skewed, knowing what the public views can be useful to educators as they develop

and provide learning opportunities to students and adults through agricultural extension and outreach programs.

Ikerd (2000, p. 3) stated:

The general perception is that needs of small farmers are being met by existing government policies and services for agriculture. If anything, small farmers get more than their share of government services. After all, there are some programs designed specifically to meet the needs of smaller, family farms, and there are limits on total government payments for some commodity based programs. Studies have shown that small farmers tend to get a larger proportion of government payments than their proportionate contribution to total agricultural production. After all, program benefits have to be focused on those who produce the bulk of agricultural commodities if they are to have the most impact on production and prices. The general perception is that existing public programs of United States Department of Agriculture, Land Grant Universities, and other public institutions are adequately meeting legitimate public service needs of small farmers.

Ikerd further stated that the realities of small farms are very different from the perceptions; the reality is that existing government policy and services are not meeting the needs of small farmers.

Unfortunately, there is little unbiased information on general public opinion regarding issues important to forming, implementing, and interpreting legislation that may have future implications on agricultural production. This information is important as the work of state legislatures and even local governments continues to influence the agriculture industry. This effort is a step in responding to the challenge of accumulating information

relevant to policy makers who are charged both with understanding public opinion and developing responsive legislation (Wachenheim & Rathge, 2000).

Factors Influencing Perceptions

Literature has indicated that there are several factors that influence perceptions of agriculture. Farm background, education, if family or household members work on a farm, if agribusiness or agricultural courses have been taken, and the population of nearest town are some of these factors.

Social distance from production agriculture is important to perception. The experience, knowledge, socioeconomic characteristics, attitudes, and temporal attributes of an individual are likely to influence perception (Wachenheim & Rathge, 2000).

Frick, Birkenholz, and Machtmes (1995) concluded from their study of knowledge and perceptions of agriculture that both urban and rural people had relatively positive perceptions of agriculture. They also determined that respondents living on farms were more knowledgeable about agriculture than their rural non-farm neighbors, who were more knowledgeable than their urban counterparts. The authors state that this is because persons from smaller communities and rural areas are more likely to interact with farmers and other individuals working in agricultural businesses and that persons who reside in larger cities and metropolitan areas would be expected to have fewer opportunities to interact with farms and individuals employed in agricultural business. Respondents with higher levels of education were more knowledgeable about agriculture than those with less education. Therefore, it was concluded that educational institutions have contributed to the knowledge base of students by providing instruction about the industry of agriculture.

Frick, Birkenholz, and Machtmes (1995) completed a similar study on the knowledge and perception of agriculture among rural and urban inner-city high school students. Overall, both groups had relatively positive perceptions of agriculture. This study concluded that rural high school respondents had significantly higher knowledge concept scores than urban inner-city high school respondents.

Williams and Wise (1997) completed a study of the perceptions of Iowa secondary school agricultural education teachers and their agricultural education students regarding sustainable agriculture. They concluded that both teachers and students had relatively high perceptions of sustainable agriculture. The findings of this study justify continued support for integrating sustainable agriculture into the secondary school agricultural education curriculum to achieve a goal of an agriculturally literate society.

Nordstrom, et al. (2000) tested whether perceptions varied between respondents who had agricultural experience and those who did not. Agricultural experience was defined as those individuals who had either lived or worked on a farm at some point in their life. Although some differences were observed between the two groups of respondents, the differences were generally small.

Available evidence suggests that the general population has had a very favorable image of farmers. A survey of a random sample of U.S. adults concerning their attitudes toward agriculture, farming, and farmers indicates a strong support for farming as a way of life, for family farms, and for maintaining an agriculture where farmers can make economic decisions independently (Jordan & Tweeten, 1987). This survey also determined that 67.3 percent of U.S. adults thought that the government should have a special policy to ensure that family farms survive.

This favorable image of farmers leads to widespread public support for government programs that support farm prices and incomes. A public opinion poll conducted early in 1985 revealed that only 24 percent of the voting population favored cutting government farm subsidies and crop controls as a means of reducing the federal deficit. In June 1987, when the government was spending over \$25 billion on farm subsidies, 40 percent said the government should be spending more on programs to help farmers. Urban people also appeared to be more willing to support farm subsidies than rural people. While 51 percent of the people polled in cities of over 500,000 population said spending on farm programs should rise, only 41 percent of those in rural areas supported higher subsidies (Knutson, Penn, & Boehm, 1995).

Wachenheim and Lesch (2002) used a mail questionnaire to elicit the perceptions of Illinois residents regarding agriculture. Overall, residents ranked agriculture as that with the most important economic impact (total dollars). However, their perception varied by proximity to a population center and their social distance from production agriculture. Respondents close to production agriculture, those who lived on a farm, worked on a farm, or had a family or household member working on a farm considered agriculture to be more important than did other respondents.

These studies all support the need for and importance of having an agriculturally literate society with accurate public perceptions of the agricultural industry. Methods are presented in Chapter III.

CHAPTER III. METHODS

Data were derived from a telephone survey of households in the twelve-state North Central Region using a two-stage disproportional random sample (Figure 3). The survey was completed in 1999 by Dr. Richard Rathge and Dr. Cheryl Wachenheim. The specific questions can be referenced in Wachenheim and Rathge (2000). Wachenheim and Rathge focused on respondents' perceptions in construct areas related to farm size, environmental concerns, and the impact of agriculture on the local economy. The current study focuses on perceptions of government support for agriculture.



Figure 3. North Central Region.

Counties in the region were first dichotomized based on their metropolitan status. Metropolitan and adjacent counties were grouped together and non-metropolitan and nonadjacent counties were grouped together. Second, counties were stratified into six

groupings based on population change that occurred in the county between 1990 and 1998. Three groupings were for population growth (less than 10 percent, 11 to 30 percent, and greater than 30 percent) and three groupings were for decline (less than 5 percent, 6 to 10 percent, and greater than 10 percent). Five counties in each of the 12 groups were randomly selected. Next, approximately 50 households were randomly surveyed in each county. An equivalent number of households were selected for survey regardless of the population within the county or the state. Responses, as reported, were not weighted; that is, they represent only the respondent group and not the general population of the region.

Farm perceptions were measured by respondents' level of agreement with statements modified from those originally designed by Buttel and Jackson-Smith (1997), used for a study exploring Wisconsin farmers' views on livestock expansion, and Wachenheim and Lesch (2002), used to explore rural residents' perceptions of corporate and family farms in Illinois. A 13-item index was used which asked respondents to indicate their level of agreement using a five point *Likert* scale with a series of statements regarding farming (where "1" is do not agree at all and "5" is strongly agree). The index was designed to represent five specific themes: a) the impact of agriculture on the local economy; b) farmers' interaction with the environment; c) the role of farm structure on the environment, economy, and society; d) responsibilities of non-farm residents; and e) the role of government in assisting farmers, protecting the environment, and restricting the size of livestock farms. This paper focuses on the last of the five themes and specifically on the role of the government in assisting farmers.

The total useable sample was 584 with a refusal rate of 55 percent. The relatively large non-response rate is becoming more common as a result of increased use of

telemarketing and screening devices.

A single factor analysis of variance (ANOVA) with an F-test was used to test the effect of each independent variable and level of agreement regarding government intervention. An F-test statistic indicated statistical significance. Parametric pair-wise comparisons were also used. Least Significant Difference (LSD) using t-tests tested significance of differences between means by respondent category. A probability level of 0.10 was used to measure statistical significance. The results of the study are presented in Chapter IV.

CHAPTER IV. RESULTS AND DISCUSSION

Information about survey respondents in the North Central Region of the United States is provided first. This is followed by a discussion of what influences perceptions of these respondents about government involvement in agriculture.

Respondent Population

The respondent population was largely rural and comprised of long-term residents. Nearly 42 percent of respondents lived in a city or town; 25 percent lived on a farm; and 33 percent lived in a rural area but not on a farm. Twenty-eight percent of respondents reported owning or operating a farm. Slightly over half of those respondents not living on a farm stated that they had previously lived on a farm (52.5 percent). Of those, over 67 percent lived there more than 15 years and 86 percent more than 5 years. Sixty-seven percent of respondents said they had lived in their current community for more than 15 years. Nearly all had lived there more than one year.

Farms Owned and Operated by Respondents

The average farm size of those owning or operating a farm was 1,080 acres, with 395 tillable. Average farm size of those with 2,000 acres or less was 440 acres. Three-fourths of the farms were less than 1,000 acres; 12 percent reported a farm size of between 1,000 and 2,000 acres; and only 12 percent reported a farm size of more than 2,000 acres (Figure 4). Twenty-eight percent of farm owners had no tillable acres. Over three-fourths of these farmers receive no income from crops (77.5 percent).

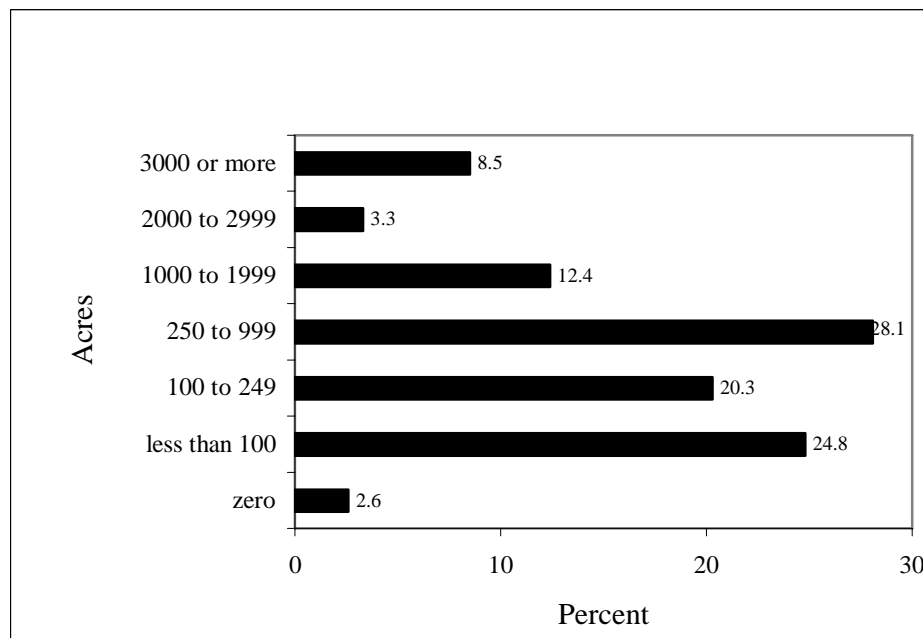


Figure 4. Acres Owned or Operated.

Most farms were classified as individual or family farms (94 percent). Other types of farm classification included partnership (3.8 percent) and corporation (1.9 percent). All of the corporate farms were organized as family corporations. Over half of respondents who owned or operated a farm said none or less than one-fourth of their net household income came from their farming operation during the past five years; 17 percent received no net farm income from their farming operation (Figure 5). Twenty-one percent of respondents received over three-fourths of their net household income from their farming operation. Farms were generally specialized in livestock or crops. Among respondents owning or operating a farm, the percentage that received none of their net farm income from crops (37.3 percent) or from livestock (39 percent) was similar. Thus, between 35 and 40 percent of farms of the respondent population specialized in either livestock or crops.

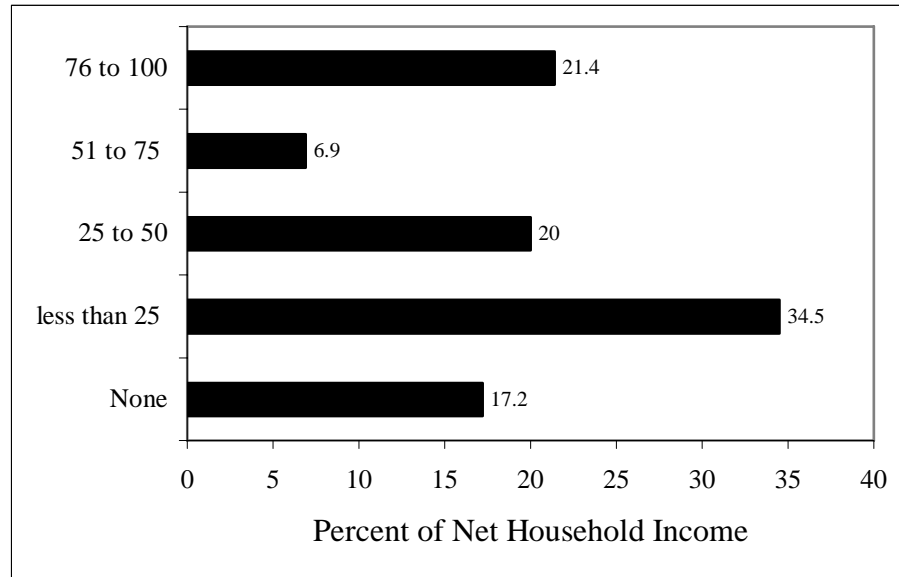


Figure 5. Percentage of Net Farm Income from Farming Operation.

Respondent Locale

Respondents lived an average of 108 miles from a city with at least 100,000 inhabitants (Figure 6). Fourteen respondents (2.5 percent) lived within such a city and just over 10 percent lived in or within 20 miles. One-third lived in or within 50 miles (34.7 percent). As another one-third of respondents lived between 51 and 100 miles of a large city, a total of two-thirds of respondents lived within 100 miles of a city with at least 100,000 inhabitants. Eighty-nine percent lived within 200 miles of a city with at least 100,000 inhabitants.

More than half of respondents said the city or town closest to them had fewer than 2,500 inhabitants (53.2 percent) and nearly eighty percent said there were fewer than 10,000 (79.4 percent) (Figure 7). Only five percent of respondents lived in or near a city with a population of 50,000 or greater.

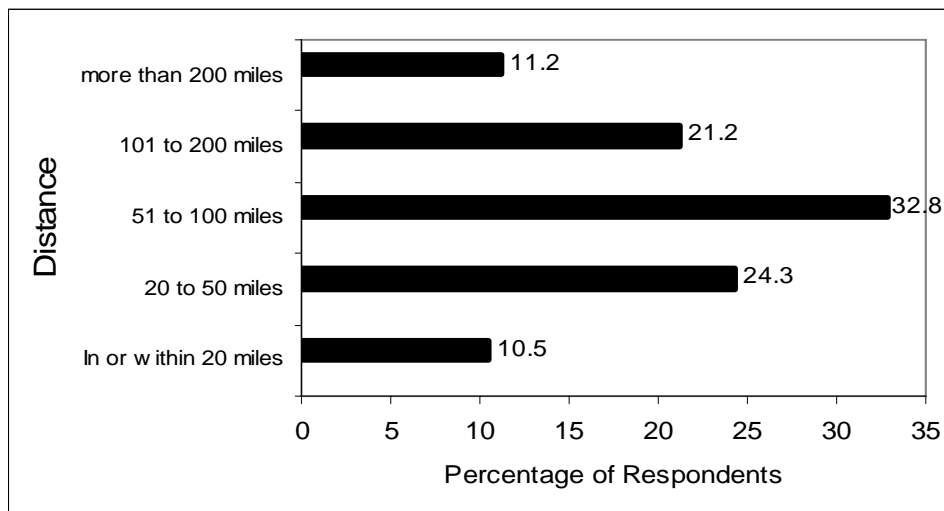


Figure 6. Distance to City of at Least 100,000 Inhabitants.

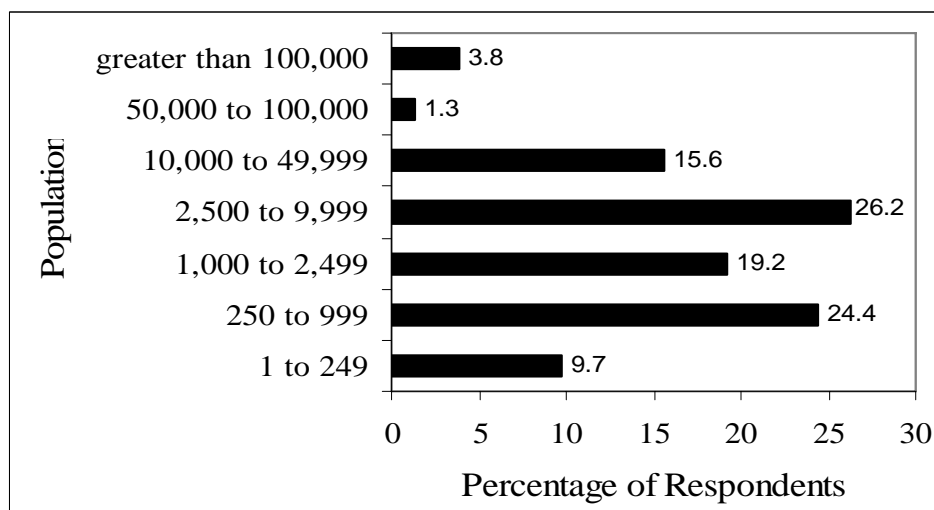


Figure 7. Population of Nearest City or Town.

The respondent population generally had experience with or, because of close proximity, exposure to both crop and livestock farming. Ninety percent of respondents lived within five miles of a farm (89.3 percent); 55.6 percent said they lived within one mile (Figure 8). Of the respondents who lived more than five miles from a farm, 47.8

percent said they had at one time lived within five miles of a farm. Of all respondents who do or have lived within five miles of a farm, over three-fourths said the nearest farm raised both livestock and crops. More than half of respondents had either lived on or within five miles of a farm for more than fifteen years; nearly eighty percent for more than five years.

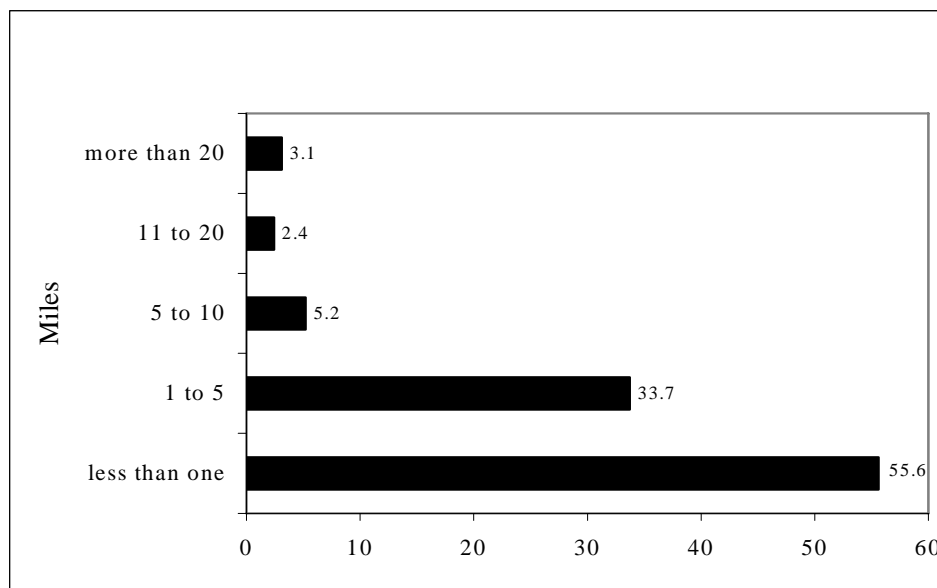


Figure 8. Distance to Nearest Farm.

Association to Farming

A majority of respondents reported some association with farming through a family member, relative, friend, or acquaintance. Approximately 27 percent had worked on a farm during the past five years. Forty-two percent had a member of the immediate family or household who worked on a farm; 52 percent said a relative had worked on a farm; 64 percent said a close friend or associate had worked on a farm; and 60 percent said an acquaintance had worked on a farm.

Demographics

Nine percent of respondents did not finish high school or obtain their GED and 46 percent did not attend college (Figure 9). A lower percentage of those owning or operating a farm (18.6 percent) have a bachelor's degree than of those who do not own or operate a farm (27.9 percent). Nearly 60 percent of respondents reported earning a net income of \$30,000 or more.

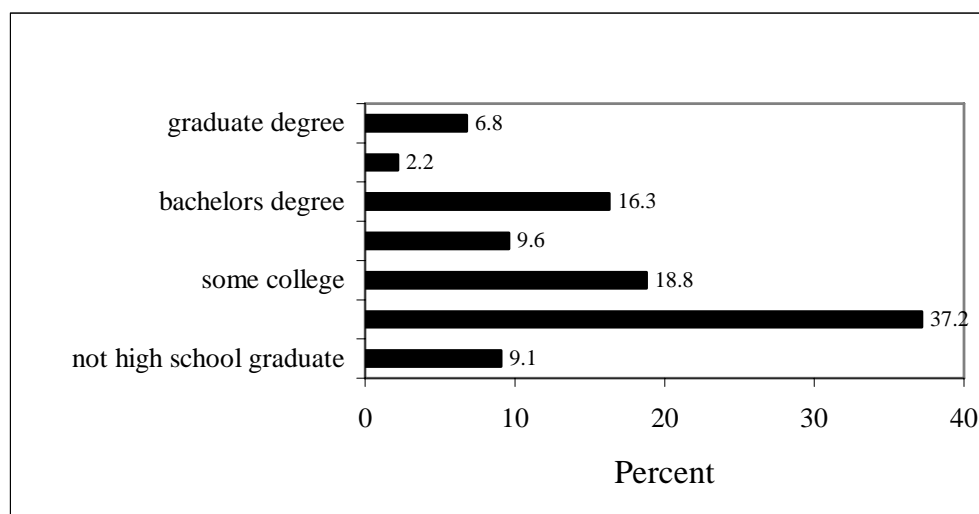


Figure 9. Respondent Level of Education.

Perceptions About Government Intervention

This study specifically will review the survey results to determine the level of agreement respondents had to the statement “The government should do more to help farmers in their area stay in business” and how that level of agreement differs between social demographic categories.

The overall level of agreement that the government should do more to help farmers in their area stay in business was strong. The average level of agreement was 3.99 (Likert scale where 1=Strongly Disagree and 5=Strongly Agree) (Table 1).

Table 1. Respondent level of agreement with statements regarding farming and government intervention.

Statement	Average Level of Agreement ^a	Percentage of Valid Responses	
		Respondents who strongly disagreed	Respondents who strongly agreed
The government should do more to help farmers in this area stay in business	3.99	8.6	51.5

a. Average level of agreement is based on a Likert scale with 1 being “strongly disagree” and 5 being “strongly agree.”

Just over half of respondents strongly agreed and 68.5 percent agreed or strongly agreed that the government should do more to help farmers. A minority of the respondents either strongly disagreed or disagreed that the government should do more (12.6 percent). Nineteen percent of respondents were neutral (Figure 10).

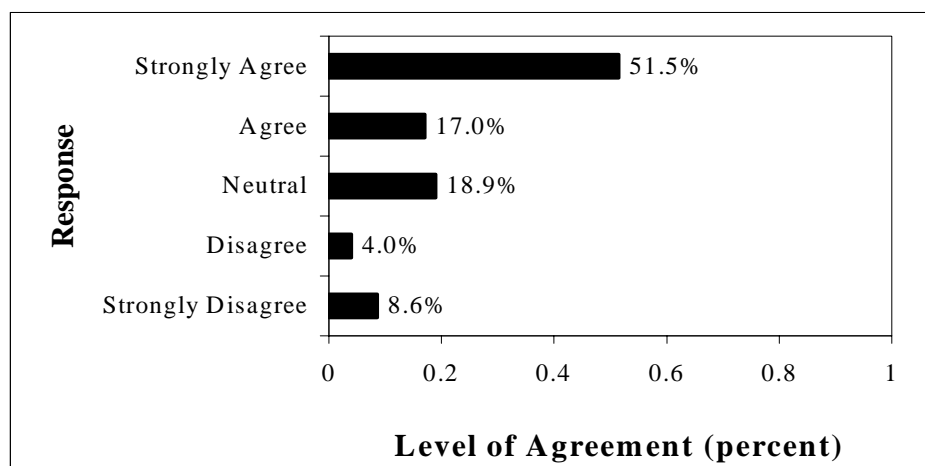


Figure 10. Level of Agreement that “The government should do more to help farmers stay in business.”

Factors Influencing Perception

Influence of specific factors on perceptions of respondents regarding the statement of “The government should do more to help farmers in their area stay in business” was

considered. The specific factors reviewed include place of residence, farm experience, primary occupation, size (population) of nearest town, net farm income, source of net farm income, income (general), and education.

Place of Residence

The data were evaluated to determine if place of residence has an influence on the level of agreement the government should do more. The mean response to government intervention by place of residence is shown in Table 2. Responses did not differ substantially based on place of residence ($F=1.543$, $p=.215$). Those who live in a city or a town more strongly agreed than respondents who lived on a farm ($p = .098$).

Table 2. Average level of agreement by place of residence.

Place of Residence	Average Level of Agreement ^a
Respondents who currently live on a farm	3.83
Respondents who live in a rural area, but not on a farm	4.03
Respondents who live in a city or large town	4.05

a. Average level of agreement is based on a Likert scale with 1 being “strongly disagree” and 5 being “strongly agree.”

Farm Experience

Those respondents who have ever lived on a farm less strongly agreed the government should do more (3.95) than their counterparts (4.15). The difference is statistically significant ($F=1.543$, $p=.091$).

Primary Occupation

Responses based on primary occupation as farmer vs. non-farmer were then

compared. Farmers less strongly agreed (3.81) that the government should do more than non-farmers (4.06). The difference is statistically significant ($F=4.205$, $p=.041$).

Size (Population) of Nearest Town

Effect of population of the nearest town on level of agreement that “The government should do more to help farmers stay in business” was considered. As the population of the nearest town increased, the respondents more strongly agreed that the government should do more to help farmers stay in business (Table 3). However, the difference was not statically significant ($F=1.930$, $p=.146$).

Table 3. Average level of agreement by population of nearest town (three categories).

Population	Average Level of Agreement ^a
Less than 10,000	3.91
10,000-49,999	4.15
Greater than 50,000	4.27

a. Average level of agreement is based on a Likert scale with 1 being “strongly disagree” and 5 being “strongly agree.”

These population categories were then further subdivided to determine if there were in any differences in level of agreement by population in smaller categories. The responses based on population of the nearest town in seven size categories are shown in Table 4.

As the population of the nearest town increased, respondents more strongly agreed the government should do more, however, the differences were not statistically significant ($F=1.355$, $p=.231$). There were statistical differences between the subdivided response groups by population. Respondents living in or nearby very small towns (up to 249

persons) less strongly agreed more government intervention was necessary than those living near larger towns of 10,000-49,999 inhabitants ($p=.096$). Respondents living in towns of 1,000-2,499 people less strongly agreed than the respondents living in towns of 2,500-9,999 people ($p=.091$). This trend also was true for respondents living in towns of 1,000-2,499 people compared to towns of 10,000-49,999 people ($p=.071$).

These findings are contrary to the primary hypothesis and the literature. It was hypothesized that respondents that live in or nearby small towns would respond more favorably to government intervention.

Table 4. Average level of agreement by population of nearest town (seven categories).

Population	Average Level of Agreement ^a
1-249	3.77
250-999	3.86
1,000-2,499	3.81
2,500-9,999	4.09
10,000-49,999	4.15
50,000-100,000	4.14
Greater than 100,000	4.32

a. Average level of agreement is based on a Likert scale with 1 being “strongly disagree” and 5 being “strongly agree.”

Net Farm Income

Respondents’ level of agreement by the approximate average percentage of their household net income that came from their farming operation was considered (Table 5). Farmers reporting receiving no net income from farming and, unexpectedly, full-time farmers (defined as those receiving at least three-fourths of their net income from farming),

less strongly agreed the government should do more to help farmers stay in business than those receiving between 0 and 25 percent and between 25 and 50 percent. There was a relatively large level of variability in the responses of all categories. It was expected that full-time farmers would be the most favorable to government intervention.

Table 5. Average level of agreement by category of net income received from farming.

Category of Net Income received from farming	Average Level of Agreement ^a
None	3.40
Less than 25 percent	3.94
25-50 percent	4.03
51-75 percent	3.60
76-100 percent	3.40

a. Average level of agreement is based on a Likert scale with 1 being “strongly disagree” and 5 being “strongly agree.”

Non-farmers tended to agree the government should do more when compared to farmers ($F=1.469$, $p=.215$) but the difference was not statistically significant. Very few non-farmers disagreed that the government should do more. A closer analysis considered the specific level of agreement of full-time farmers and non-farmers (Figure 11).

Contrary to the primary hypotheses, non-farmers agreed more strongly the government should do more than farmers, regardless of net income, but the difference was not significant ($F=1.440$, $P=.238$). Both farmers and non-farmers reporting a net income of \$30,000 to \$50,000 agreed less strongly with government intervention than those in the lower or higher income categories (Table 6). This was particularly true for those with a net income of less than \$30,000 annually (3.93 for farmers, 4.21 for non-farmers).

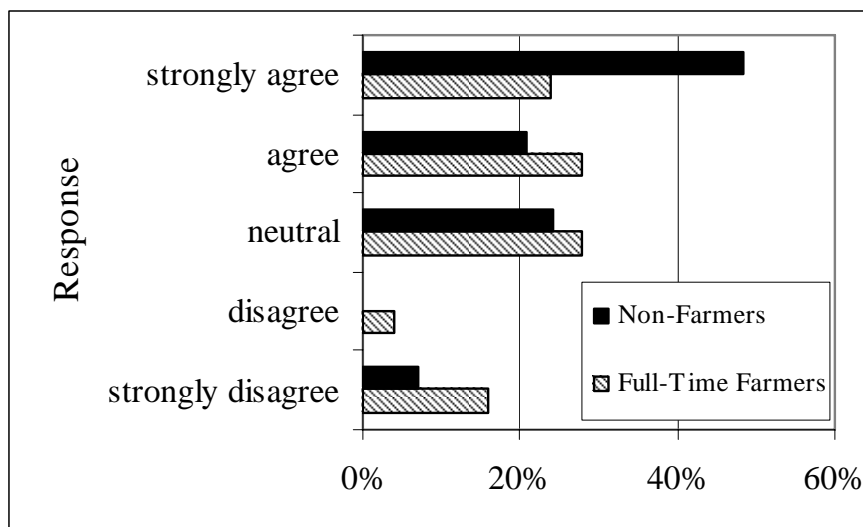


Figure 11. Level of Agreement, Farmers vs. Non-farmers.

Table 6. Average level of agreement by net income and occupation (three categories).

Net Income Category	Average Level of Agreement ^a , All Respondents n=427	Average Level of Agreement ^a , Farmers n=115	Average Level of Agreement ^a , Non-Farmers n=312
Less than \$30,000	4.14	3.93	4.21
\$30,000-\$50,000	3.87	3.29	4.04
Greater than \$50,000	3.98	3.70	4.11

a. Average level of agreement is based on a Likert scale with 1 being “strongly disagree” and 5 being “strongly agree.”

Source of Net Farm Income

The influence of the source of net farm income on level of agreement for additional government support was considered. This aspect was reviewed to determine if farmers with income primarily from crops perspectives differed from those farmers with income primarily from livestock. These results indicated primary source of income did not influence their perceptions of government intervention.

Income, General

The income categories were then further subdivided to determine if there are differences in level of agreement by level of income in smaller categories. Respondents with net income greater than \$100,000 less strongly agreed with government intervention than any other income category but particularly less than those respondents earning \$30,000 or less annually (Table 7). The differences of mean level of agreement based on income level were statistically significant ($F=1.997$, $p=.054$) (Table 8).

Table 7. Average level of agreement by net income (eight categories).

Income	Average Level of Agreement ^a
Less than \$10,000	4.42
\$10,000-\$20,000	4.02
\$20,001-\$30,000	4.28
\$30,001-\$40,000	3.90
\$40,001-\$50,000	3.87
\$50,001-\$75,000	4.02
\$75,001-\$100,000	3.93
Greater than \$100,000	3.45

a. Average level of agreement is based on a Likert scale with 1 being “strongly disagree” and 5 being “strongly agree.”

Table 8. Statistical significance of differences in mean level of agreement between income categories.

Income Level	Less than \$10,000	\$10,000-\$20,000	\$20,001-\$30,000	\$30,001-\$40,000	\$40,001-\$50,000	\$50,001-\$75,000	\$75,001-\$100,000	Greater than \$100,000
Less than \$10,000	-----							
\$10,000-\$20,000	.133 ^a	-----						
\$20,001-\$30,000	.585 ^a	.208 ^a	-----					
\$30,001-\$40,000	.044 ^a	.607 ^a	.053 ^a	-----				
\$40,001-\$50,000	.037 ^a	.522 ^a	.045 ^a	.878 ^a	-----			
\$50,001-\$75,000	.123 ^a	.993 ^a	.189 ^a	.602 ^a	.515 ^a	-----		
\$75,001-\$100,000	.085 ^a	.729 ^a	.127 ^a	.913 ^a	.811 ^a	.728 ^a	-----	
Greater than \$100,000	.005 ^a	.073 ^a	.005 ^a	.139 ^a	.179 ^a	.069 ^a	.146 ^a	-----

a. Pair-wise comparisons by LSD. Statistical significance is of 2-tailed t-test.

Education

Respondents were asked to group their education level into one of the following seven categories: less than high school, high school diploma or GED, some college with no degree, two year college degree or vocational/technical school, four year college degree, post college, or graduate degree. There were no differences between education level categories regarding government intervention ($F=.266$, $p=.953$).

The education levels were then further subdivided to determine if there are differences in level of agreement by level of education in smaller categories. The four categories used were: no high school, high school to some college, two-year college degree or vocational/technical school, and four year degree or higher. There were no differences in level of agreement between the further subdivided education levels ($F=.405$, $p=.749$).

Summary of Factors Influencing Perception

In summary, it was determined that social distance did have an effect on the mean level of agreement with the statement “the government should do more to help farmers in this area stay in business” for some factors. A summary of the results is presented in Table 9.

Table 9. Summary of results, factors influencing perception.

Factor	Did the factor influence perception regarding government intervention in agriculture?
Place of Residence	No
Farm Experience	Yes
Primary Occupation	Yes
Size (Population) of Nearest Town	Yes
Level of Net Farm Income	No
Income by Level and Occupation	No
Source of Net Farm Income	No
Income, General	Yes
Education	No

CHAPTER V. CONCLUSIONS

The primary objective of this study was to identify perceptions among residents in the North Central Region of the United States regarding government support for agriculture and what influences the degree of support residents believe the government should provide. The majority of respondents strongly agreed that the government should do more to help farmers in the area stay in business. This study supports a favorable perception of the role of the U.S. government in support for agriculture among respondents. It can be argued that, to maintain the viability of farms and rural communities, it is important that the agriculture industry receive continued support of government funding. The interests and public policy positions of the general public provide input into the policy development and implementation process from which this support is derived.

Overall, those respondents who had a greater social distance from agriculture had a higher level of agreement that the government should do more to help farmers in their area stay in business. This is contrary to the primary hypothesis and, to some extent, does not support educating the populace about agriculture. One explanation may be that a not insignificant number of farmers believe that less government intervention would allow commodity prices to be based on true supply and demand rather than be skewed by government intervention and that this may, over some period of time, improve net farm income. Another may be that some consider the costs of government intervention, including those associated with the rules and regulations of program implementation and administration, to be greater than the benefits. Finally, perhaps those responding believed government support of area farms is supporting marginal competing farms and otherwise affecting land and cash rent prices.

There were some limitations to the study. The survey was completed in 1999. At this time, the 1996 Federal Agricultural Improvement and Reform Act (FAIRA) administered government farm programs. FAIRA allowed agricultural producers freedom regarding planting choices with the exception of fruits and vegetables, which was not the case with farm programs previous to FAIRA. Respondents with social distance closest to agriculture may have responded to the survey with freedom of planting choices in mind. Since the survey was completed, the Farm Security and Rural Investment Act of 2002 (FSRIA) was implemented. FSRIA allowed producers the same planting freedoms as FAIRA but included counter-cyclical payments which decreased the commodity price risk for program commodities. Agricultural producers may be more favorable to government intervention since the implementation of FSRIA due to this decreased risk of commodity prices while maintaining planting choice freedoms. It may be beneficial to complete the survey again, while government programs are administered by FSRIA.

Another limitation of the study includes the survey statement “the government should do more to help farmers in this area stay in business”. The statement is quite broad, and therefore perception of the question may have varied greatly among respondents. Respondents could have perceived “more” in many different ways. In addition, the question was a normative question and therefore responses were based on respondents’ subjective value judgments of what is good or bad and depend on ethical considerations, such as fairness, rather than a strict economic rationale. The study was also limited by the assumptions that all survey respondents were equally literate about agriculture and that government payments to farmers are equally distributed.

The implications of this study could be used by agricultural policy makers and

community development leaders to develop agricultural policies according to the wishes of the U.S. democratic society. This study indicates there appears to be widespread support for continuation of government programs for agriculture. Respondents with a greater social distance from agriculture more strongly agreed the government should do more than those nearest to production agriculture. Although this study determined the level of support is high, it did not identify what areas of the agricultural industry respondents' support or why they support agriculture. These areas could be identified through further research to help agricultural industry leaders better explain the benefits of the industry and to help maintain support for the industry. Policy makers and community development leaders could use this study to help justify rural development monies because there is some evidence in the literature that the viability of farms may depend on their local communities and the associated opportunities. For example, viable communities have jobs available to supplement farm incomes.

Further research regarding perceptions about government intervention in agriculture is warranted. Areas of interest may include whether public support depends on the specific enterprise or the type of agriculture receiving funds (e.g., family versus corporate farms; crops versus livestock) and what sort of obligations on behalf of the farmer ought to be included with the support.

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