Rural Realities

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Starved for Access: Life in Rural America's Food Deserts

By Lois Wright Morton and Troy C. Blanchard

In Brief...

The Situation:

- Rural areas risk becoming "food deserts" as young families move away and market pressures continue to squeeze small grocers and retailers. Food deserts are defined as counties in which all residents must drive more than 10 miles to the nearest supermarket chain or supercenter.
- The Great Plains are especially lacking in easy-access grocers.
- The residents of food deserts tend to be older, poorer, and less educated.
- Health can be compromised by lack of food access. Many do not consume adequate amounts of fresh fruits or vegetables, and they often lack adequate dairy and protein in their diet.
- Wal-Mart and other superstores are not always cheaper on all food items, leaving room for a competitive advantage for smaller grocers.

Policy and Community Options:

- Focus on economic development to stem population loss, which is a central reason for the exodus of local grocers.
- Target federal food and nutrition programs to areas designated as food deserts in rural America.
- Advocate for advantageous wholesale prices and distribution networks.
- Shop locally. Creating campaigns to buy locally can revitalize rural downtowns and increase the community tax base.
- Connect local food production to local markets. Fresh, high-quality foods are needed to hold rural food dollars locally. Farmer's markets and niche food markets have potential for increasing local food resources.
- Strengthen the safety net. Encourage existing and create new voluntary organizations that support school lunch programs, meals-on-wheels, meal sites, food pantries, community gardens, and other safety net programs.
- Improve the transportation infrastructure to facilitate access to food retailers by elder and limited income residents.

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What's for dinner? For many individuals, stopping by a well-stocked grocery store on the way home to buy fresh fish or meat and some fresh vegetables is a pretty painless task. It's fast, convenient, and a cost-effective way to purchase nutritious foods, unless, that is, you live in certain parts of rural America.

Although high-growth rural areas of the country are challenged to manage population expansion and the influx of regional and national firms, other rural places find it difficult to keep or attract decent jobs, conditions that are accelerating the exodus of well-educated adults, young families, and talented youth. Generally undetected amid these economic shifts is the uneven distribution of food stores across the rural landscape.

Some rural areas, in fact, are considered "food deserts"—areas with limited, if any, grocery stores.[1] These food deserts are the collective result of several forces, including the growth in more populated areas of superstores (with a large variety of food products), an insufficient population base to support a wide array of local supermarkets (resulting in the loss or consolidation of these stores), and changes in food distribution channels, shifts that tend to favor larger food retailers at the expense of smaller food stores in rural areas. Filling the void in some parts of rural America are convenience stores and gas stations, which charge a premium for a limited range of food choices, often with low nutritional value.

This issue of Rural Realities examines the distribution of food deserts across the United States and describes the major socioeconomic attributes associated with these places. To gain a clearer sense of the economic and health consequences for rural people who live in food deserts, we highlight findings from a case study in Iowa. The brief concludes with insights on what local communities and policymakers might do to expand access to quality foods for rural people living in food desert areas of the country.

Food Deserts: Where Are They Located? What Are Their Characteristics?

Although there is no universally accepted definition of "food deserts," one way to approach the concept is to begin with access, or the degree to which individuals live within close proximity to a large supermarket or supercenter. Many perceive such food establishments as offering consumers a wider array of food choices at relatively lower costs.

Map 1 identifies those counties in which at least one-half of the population lives more than 10 miles from these large food stores, counties that we define as "low-access" places. The largest concentrations of low-access counties are in the Great Plains and Rocky Mountain regions of the country. Low access is also prevalent in select areas of the Deep South and in the Appalachian region of Kentucky and West Virginia. All told, 803 counties are low access areas in the United States.

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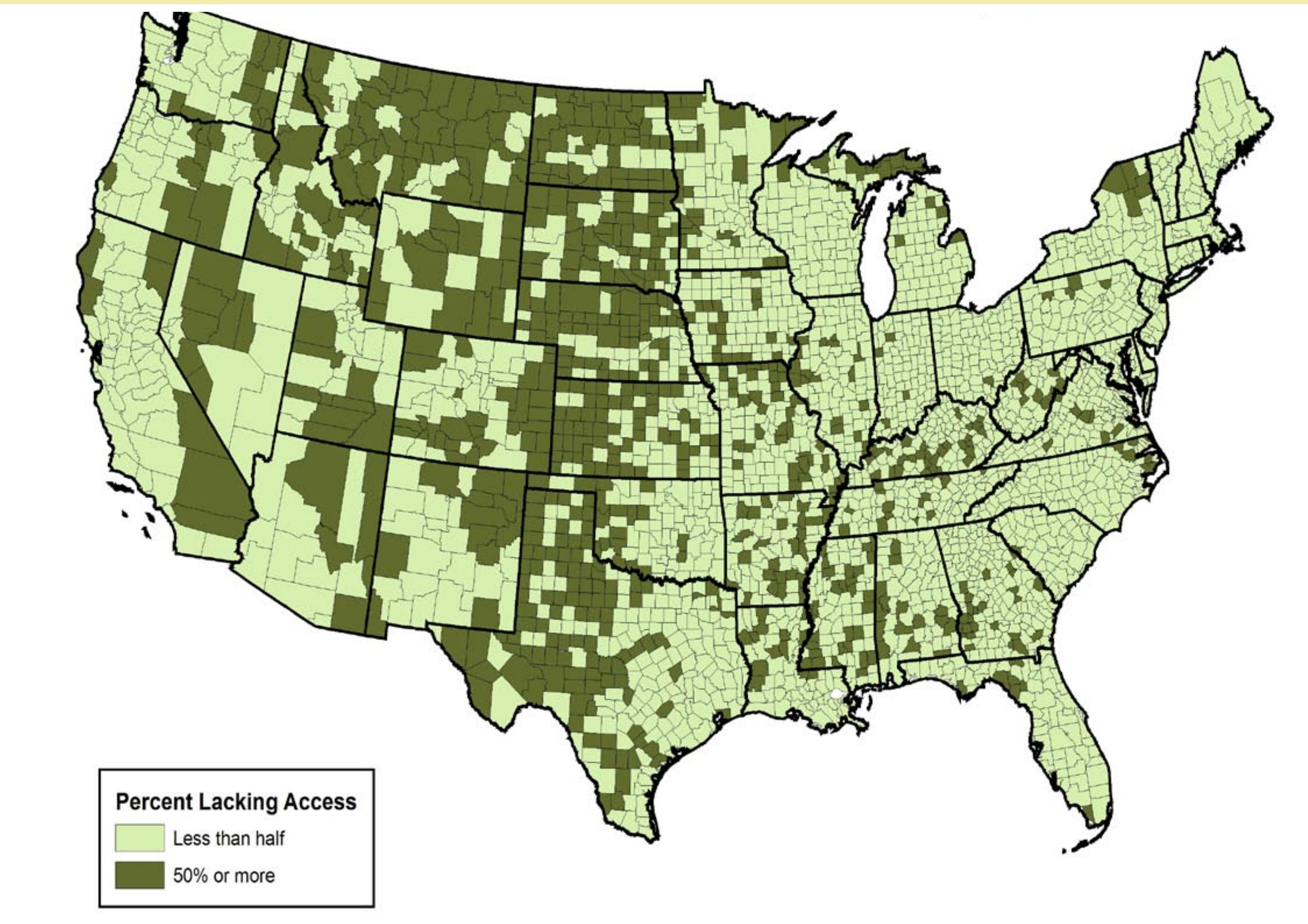
As Map 2 makes clear, food desert counties are commonplace in the border states of North Dakota and Montana, and continue along a continuous band to the western half of Texas. Of all U.S. counties, 418 are food deserts, with nearly 98% located in nonmetropolitan areas, most in areas with towns or cities of fewer than 10,000 people.

In general, food desert counties share a common set of characteristics. In contrast to non-food desert areas, food desert counties tend to have:

- Larger percentages of individuals without a high school degree or GED;
- Higher individual and family poverty rates;
- Lower median family incomes;
- Greater percentages of residents living in sparsely populated areas outside cities;
- Larger shares of people who are older (owing to the exodus of younger adults, especially those aged 20–29); and
- Higher numbers of small grocers and convenience stores per capita.

Map 1: Percent Lacking Convenient Access to a Supermarket or Supercenter in U.S. Counties, 2000



Beyond this surface snapshot of these counties is the more salient issue of what it means to live in a food desert. Are food desert residents able to purchase healthy, nutritious foods? Are there adequately stocked food stores available locally? Is it more expensive to shop in local food stores than in large supermarkets or supercenters? To explore these important questions, we conducted in-depth studies in rural Iowa.

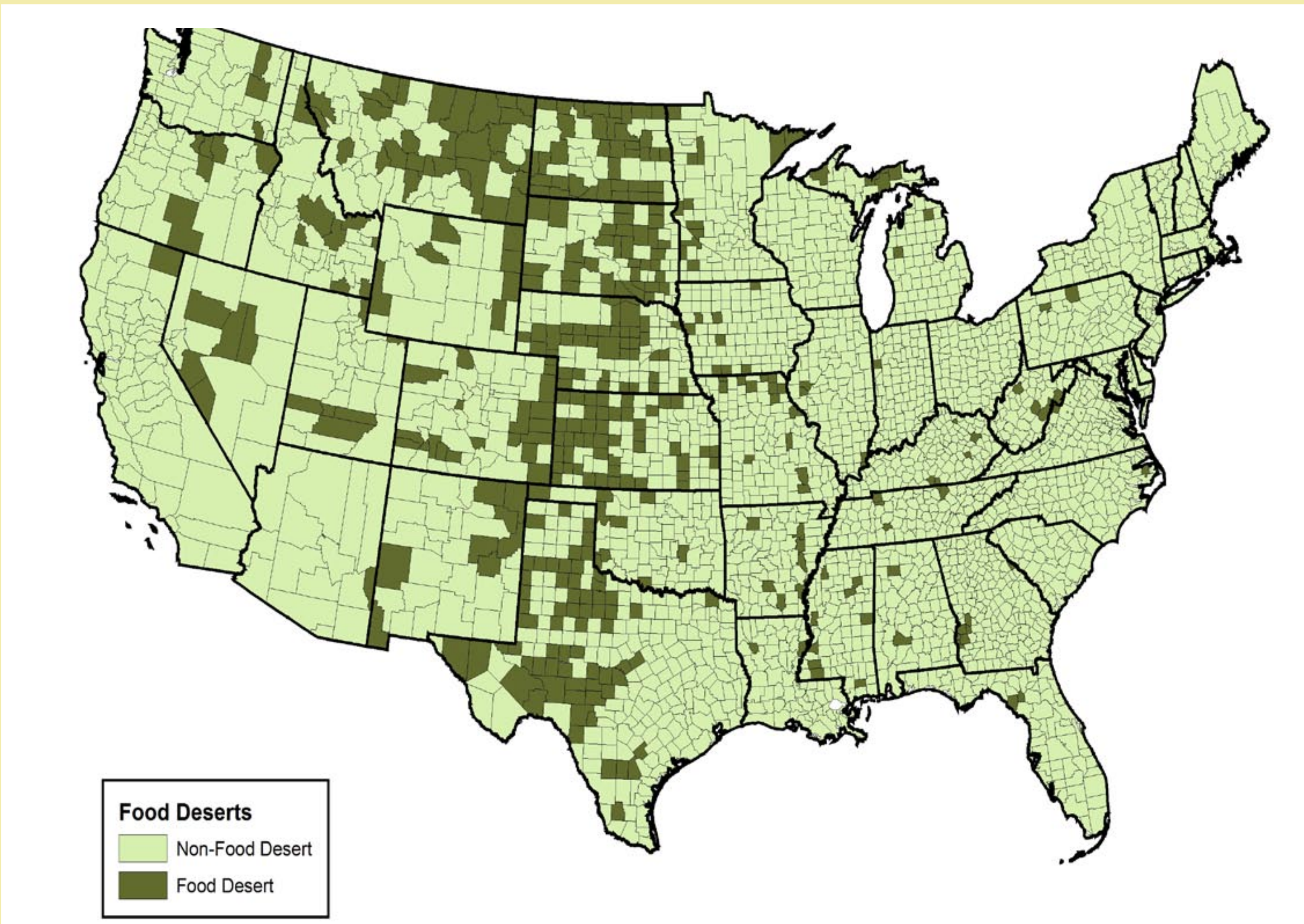
Living in a Food Desert: The Case of Rural Iowa

We randomly surveyed more than 1,500 individuals in four nonmetro counties in Iowa. All four counties had four or fewer small grocery stores and no large food retailer or supercenter. Thus, residents were clearly embedded in counties meeting the criteria of "food desert" areas. In a nutshell, the information we gathered reaffirmed findings from past research about the challenges of living in food desert counties. On the other hand, some results made it very clear that viable strategies to improve local access to healthy foods do in fact exist in these places.

The surveys uncovered three distinct challenges for residents (see Figure 1):

(1) A large share (more than 45%) did not consume adequate amounts of fresh fruits;

Map 2: Food Desert Counties in the U.S., 2000



Methodology

Mapping

To identify populations in U.S. counties that have limited access to large supermarkets or supercenters, we used ARCVIEW Geographic Information System (GIS) mapping software to identify populations that reside within a given distance from supermarkets and supercenters. We selected zip codes that contained at least one supermarket with 50 or more employees or supercenter/wholesale club in 1999. We matched zip code data from ZBP to the 1999 U.S. Bureau of the Census Zip Code File to obtain longitude and latitude coordinates. We selected all census block groups whose boundaries intersect a 10-mile radius of the zip codes that contained supermarkets or supercenters. Block groups falling outside the 10-mile radius were classified as low food access areas. After obtaining the population housed in low food access areas for each county, we divided by the county's total population to obtain the percentage of the population residing in a low food access area. A detailed explanation of this method is provided by Blanchard and Lyson.[4]

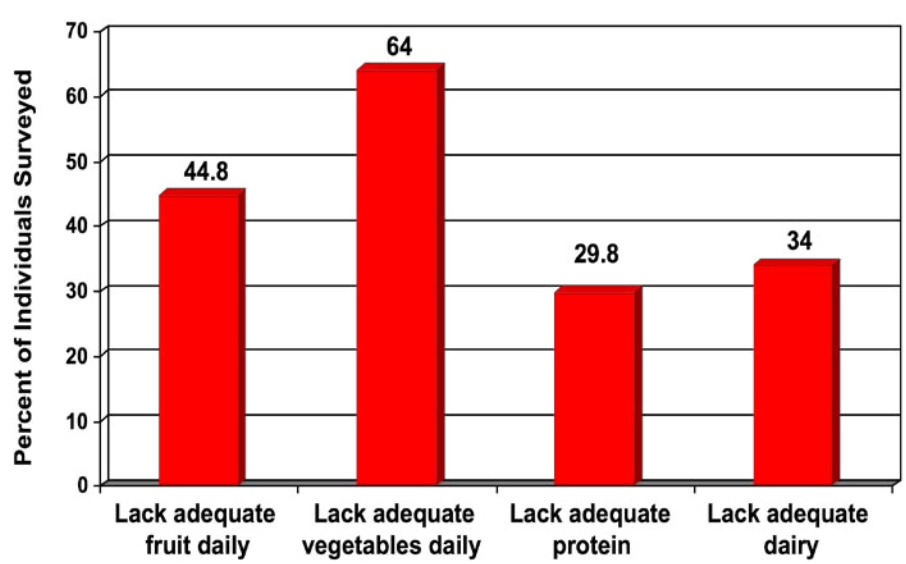
(2) Nearly two-thirds did not consume adequate amounts of vegetables;

(3) More than one-third (34%) lacked adequate dairy in their diet;

(4) More than one-fourth lacked the recommended levels of protein in their diet.

As a whole, these results suggest that a sizable number of people in these four food desert counties are lacking healthy, nutritious diets. Left unanswered, however, is whether their poor diets are the result of limited access to healthy food or an issue of cost. Past research suggests that small grocery stores have a limited variety of quality foods and tend to

Figure 1: Average Proportion of Residents Across Four Food Deserts in Iowa who...



These findings provide a hopeful sign that small grocery stores may be a more viable outlet for healthy foods than most people perceive.

charge higher prices for these products.[2] Was this true for the Iowa counties we studied?

We found the following with regard to the twin issues of access and cost:

ACCESS:

- At least three of four persons in the identified food deserts shopped at grocery stores in their respective counties;
- Most had low access to a major supercenter such as Wal-Mart (in fact, most lived at least 20 miles from this type of major food retailer);
- A majority of residents in three of the four counties sampled believed there were enough accessible grocery stores.

COSTS:

When comparing the average cost on 149 items sold at the small grocery stores located in the four food desert counties with the average prices found at the three superstores located outside these counties, we discovered that:

- The supercenters had lower prices for frozen juices, breads, cereals, meats and meat alternatives, and canned vegetables;
- The large retailers were higher priced on 8 of 13 fresh vegetables (cabbage, carrots, celery, leaf lettuce, onions, potatoes, spinach, and squash)
- Three high-volume dairy products—cottage cheese, 2% milk, and whole milk—were higher priced at the supercenters.

Although these results run counter to expectation, they do indicate that major food retailers may be more expensive than small grocery stores on key foods that are important to a balanced, nutritionally sound diet (such as fresh vegetables and low-fat dairy). It is important to point out, however, that our study profiled food costs in four rural Iowa food desert counties and as such, may not accurately reflect conditions in other areas. Nonetheless, these findings provide a hopeful sign that small grocery stores may be a more viable outlet for less costly healthy foods than most people perceive.

Implications of Food Deserts in Shaping Policy Activities

Population density affects the economy of scale and the number and type of grocery stores available to rural residents. Beyond economic development policies that are designed to attract new residents and retain younger residents in the area, rural food desert counties can address the challenges they face on a number of fronts. However, federal and state agencies must be active partners with these local counties in helping tackle these important issues.

- **Encourage independence and innovation among grocers:** Outlets such as Wal-Mart and Sam's Club, as well as dollar stores and other nontraditional food retailers, increased their share of consumers' grocery

Methodology

Iowa Case Studies

Rural counties in the United States have on average 3.8 grocery stores.[5] This study defines a rural Iowa food desert as a county with four or fewer grocery stores. Thirteen counties fit this definition in 2000. We selected four rural Iowa counties on the basis of three criteria: 1) four or fewer grocery stores; 2) counties with places with fewer than 10,000 people and not adjacent to metro counties, using the 1993 ERS urban influence codes[6] ; and 3) above the state poverty level (which was 9.9% in 1997). We conducted a stratified random sample of the general population in each county in 2002 and 2003 using the Dillman "Total Design Method" mail survey approach. Response rates ranged from 60% to 64% for a total of 1,513 completed surveys. The survey asked respondents questions about access to food in their community, community efforts to solve food infrastructure problems, food insecurity, food and diet patterns, and health status.

In addition, we surveyed prices in the 11 grocery stores in these four counties in the summer of 2002 (four stores) and Fall 2003 (seven stores) using the USDA Thrift Plan food list of items (see www.extension.iastate.edu/hunger/foodprice.htm for a complete list of the 149 food items in the survey). The USDA thrifty food plan (TFP) is the national standard for a nutritious diet at low cost. It represents a set of market basket food items people could consume at home and maintain a diet that meets dietary standards. The average U.S. cost of the TFP is used to set the food stamp benefit level. U.S. weekly costs of food plans (thrifty, low-cost, moderate-cost, and liberal) are reported monthly by USDA on the basis of a national food price survey adjusted for inflation of urban areas (see http://www.cnpp.usda.gov/USDAFoodPlansCostofFood.htm). We surveyed the three Wal-Mart superstores that were closest to these counties but not located within them in fall 2003. We derived average rural grocery store prices from individual item average of all 11 stores. Average Wal-Mart superstore prices were derived from the average of three stores.

expenditures from 17.7% in 1998 to 32.9% in 2004.[3] The Independent Grocers Association and other organizations can play a larger role in both innovating and advocating for reasonable wholesale prices and distribution networks and other essentials for viable local grocers located in low-income areas.

- **Shop locally:** Encouraging families to shop locally should be on the agenda. Rural residents frequently commute to work and many do their grocery shopping near work rather than in their hometowns. This exacerbates the challenges that remaining rural grocers have in staying financially profitable and providing the expected variety and prices of foods.

- **Enhance the safety net:** Civic community efforts can serve as an important safety net for disadvantaged residents. Bolstering civic activities, such as meals on wheels, community kitchens, and food pantries, can play an important role in providing local residents with a quality diet. These efforts are especially important for elderly residents and others with financial or physical constraints. In the policy

In all, it will take individual and community actions, as well as public policy improvements, to maintain and increase the capacity of rural grocery stores to provide nutritious, high quality, affordable foods while being profitable enough to stay in business.

arena, funds should be set aside within the USDA Community Food Projects Competitive Grants Program (CFPCGP) for special targeting to rural food desert areas, areas having high numbers of low-income people experiencing episodes of food insecurity.

- **Transportation:** An aging-in-place elder population needs transportation to access food resources. Rural communities should assess their transportation infrastructure and develop a mix of private and public sources to provide transportation services to residents with low access to food retailers. Special efforts should be made by the Federal Transportation Administration (U.S Department of Transportation) to ensure that state-based Rural Transit Assistance Programs (RTAP) are devoting attention and resources to the unique transportation challenges of residents who may be living in rural food desert counties.

- **The 2007 Farm Bill Legislation:** The 2007 Farm Bill offers important opportunities -- and potentially new revenues -- for local grocery stores, farmer's markets, and roadside produce stands through expanded funding for additional fruit and vegetable purchases associated with our nation's food assistance programs. Title IV, formerly the Food Stamp Program, is proposed to be the Food and Nutrition Program. If this program provides increased dollars for senior's farmers' market vouchers, and targets expanded resources to increase fruit and vegetable consumption by the working poor and the elderly, local grocery stores could be an important beneficiary of this type of program shift. Special efforts should be made to target these food and nutrition-related Farm Bill programs to food desert counties in rural America.

In all, it will take individual and community actions, as well as public policy improvements, to maintain and increase the capacity of rural grocery stores to provide nutritious, high quality, affordable foods while being profitable enough to stay in business.

Additional Resources:

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Endnotes

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Seeking Authors

The Rural Realities Board of Editors has identified the following as high priority issues for possible inclusion in future issues:

- ***Socioeconomic Impacts of Military Base Closings, Expansions and/or Re-alignments Located in Rural Places***
- ***The Consolidation Game (i.e., Schools, Hospitals): The Pluses and Minuses for Rural Areas***
- ***Ten Years After TANF (Welfare Reform): How Have Low-Wealth Rural Americans Fared?***

Interested in addressing one of the high priority topics, or suggesting other possible topics? Please prepare a one-page abstract of your proposed article and submit it to the series editor, or contact him to discuss your ideas.

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Potential *Rural Realities* Authors

We encourage potential authors to submit a brief abstract (approximately 250 words) via email to Bo Beaulieu, the Series Editor, at ljb@srdc.msstate.edu.

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Rural Realities is a quarterly publication of the **Rural Sociological Society (RSS)**. Its purpose is to: (1) Provide valuable insights on the current and emerging issues impacting people and places in rural America and beyond; and (2) Offer policy and program options that might prove effective in addressing these important rural challenges and opportunities. Articles showcased in the series draw upon high quality social sciences-based studies conducted by researchers and practitioners located within universities/colleges, government, philanthropic, and nonprofit organizations.

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