

# Miles Matter:

## Food Farms and Their Markets

A MAP TO A STRONGER ECONOMY AND A HEALTHIER PEOPLE



SUSTAINABLE IOWA LAND TRUST

**SILT**

PROTECTING LAND TO GROW HEALTHY FOOD



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# Executive Summary

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Table food farms located close to their urban markets can have a powerful impact on Iowa's public health and rural wealth. Fresh, healthy food reduces the risk of chronic illnesses, driving down healthcare costs. Local farms recirculate wealth in local communities, driving up the quality of life for residents. Unfortunately, land closest to these markets is often valued for development, putting it out of reach for our next generation of farmers. And land farther out adds to transportation costs and is seldom available at the size a food farmer needs.

COVID-19 exposed the fragility of a food system that relies on centralization and scale to feed the world. At the production level, deadly illness swept through meatpacking plants. At the agricultural level, farmers slaughtered hogs they couldn't process. At the retail level, many grocery stores were empty. And at the community level, more people went hungry than ever.

We have an opportunity to prepare for the next challenge now. America is in the middle of an historic transfer of land ownership. We know Iowa's soils can feed nearly 200 people per acre per growing season their minimum daily requirement of fruits and vegetables. We know managed livestock builds soil and sequesters carbon. And local and organic foods have become more profitable than ever for producers. These factors allow us to diversify our agriculture in a way we haven't seen in 70 years, building a more resilient economy while feeding our people.

By identifying potential markets and cost of transportation for Iowa's food farmers, this report gives farmers a way to consider the reduced risk of growing new food crops. If current or beginning farmers decide to grow table food, we can expect their decision to increase the supply of fresh food and decrease obesity and related disease indices while keeping the wealth generated circulating in local communities. It also illustrates to policymakers the potential for and necessity of supporting the reconstruction of local food systems.

Dedicating land closest to our urban areas to food farming is an important first step toward rebuilding the infrastructure Iowa's food farmers need to be competitive. To know the numbers, we need an updated study of the economic and environmental impact of local food production in Iowa. To see it in action, we need policies that support landowners who want to preserve their land as permanent table food farms close to metro areas.

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**[Interactive maps available at silt.org](https://silt.org)**



*The Sustainable Iowa Land Trust (SILT) is Iowa's only land trust dedicated solely to preserving land for nature-friendly food farms. SILT has embarked on a Circle Our Cities campaign to surround 10 major metro areas with 10 permanent sustainable food farms in 10 years.*

*This report is based upon research completed in May 2020 by University of Iowa Urban and Regional Planning Master's Degree student Flavia Hauss under the direction of Prof. Stephen Spears. Contact Flavia Hauss at [flavia-hauss@uiowa.edu](mailto:flavia-hauss@uiowa.edu) for the original report. SILT thanks Ms. Hauss and Dr. Spears for their work on this project.*



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## Introduction

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Iowa is the nation's second most productive agricultural state<sup>1</sup>, following only California and Texas in the value of its yearly farm output. Iowa produces 1/10 of the nation's food supply and is the number one producer of corn and soybeans, yet the state imports nearly 90 percent of its food from out of state.

Iowa has approximately 87,500 farms taking up about 92 percent of Iowa's total land. Roughly one-third of the best farmland in the United States is in Iowa, yet we lose an estimated 25 acres per day of it to development, according to the American Farmland Trust. The state ranks first in the production of corn, soybeans, hogs, eggs, ethanol and Dry Distillers Grain Solubles (DDGS) which serve as a premium source of protein for livestock. Yet less than 1 percent of Iowa's land is dedicated to specialty crops, which are defined as "fruits and tree nuts, vegetables, culinary herbs and spices, medicinal plants, as well as nursery, floriculture, and horticulture crops." As a result, most Iowans have almost no access to farm-fresh food. Studies have shown that access to fresh, healthy food combined with education can decrease rates of obesity and some diseases.

Iowa land has quintupled in value in just 25 years — just one generation. Only the wealthiest Iowans can afford to purchase farmland, often by leveraging land they own, leaving most of the next generation without a future in farming, unless it's as a tenant or operating an animal confinement facility.

Currently, 35% of Iowa land is owned by people over 75 and nearly 60% by people over 65. Right now they face a once in a lifetime opportunity to decide what legacy they want to leave to Iowa. For those who can envision a landscape of diverse food farms feeding their neighbors, the signs couldn't be better.

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# Background

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## **Consumer interest in local fresh food was increasing steadily before the COVID-19 pandemic and exploded in 2020.**

Studies show that fresh produce retains more vitamins than frozen or canned, but steadily loses nutrients the longer it sits.

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## **Local markets can grow community-based, profitable farms, increase the supply of fresh, nutrient-dense food to Iowans and rebuild the connection between consumers and their food.**

Community-based farms respond directly to the needs of their retail and small-scale wholesale customers who are often neighbors, friends and children attending local schools.

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## **We can feed Iowa and the world.**

We can produce seasonal fruits and vegetables for every in-state and nearby metro area on fewer than 10,500 acres, or 0.043% of all harvested acres in Iowa. Encouraging food farms does not harm production farms. We can do both.<sup>2</sup>

## **Farmers markets across the state are increasingly popular.**

In addition to selling fresh farm products, farmers' markets have become a leisure destination or an event, an event like those held in downtown West Branch, Jefferson or Des Moines that draw families and young people to explore downtown and run errands while snacking on locally-grown food.

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## **Several universities have adopted healthy eating programs for their students.**

These institutions and students are increasingly aware of the health and environmental benefits of consuming sustainable products.

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## **Even for healthcare professionals working long shifts, the availability of healthy food is very limited.**

By offering local farm produce on their menus, hospitals could contribute to increasing the supply of fresh food for employees and patients while supporting local farmers. Introducing healthy options could also reduce chronic metabolic diseases, such as diabetes and cardiovascular problems, which are increasingly widespread and costly to treat. Evidence shows that increasing consumption of healthy foods such as, fruits and vegetables, can help prevent these diseases.

Maps on the following pages illustrate how these three key markets — farmers markets, colleges and hospitals — are spread across Iowa, allowing farmers in almost every part of the state to diversify their crops to feed their neighbors and support local economies.

*Note: To limit the scope of this study, we have not included Iowa's 1,164 schools or hundreds of nursing homes that are both current and potential markets for local food.*

<sup>1</sup> USDA ERS - "Cash receipts by commodity, state ranking" - <https://data.ers.usda.gov/reports.aspx?ID=17844-2019>

<sup>2</sup> Iowa State University Leopold Center for Sustainable Agriculture - "Measuring the Economic Impacts of Increased Fresh Fruit and Vegetable Production in Iowa Considering Metropolitan Demand" - [https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1092&context=leopold\\_pubspapers](https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1092&context=leopold_pubspapers) - April 2011.

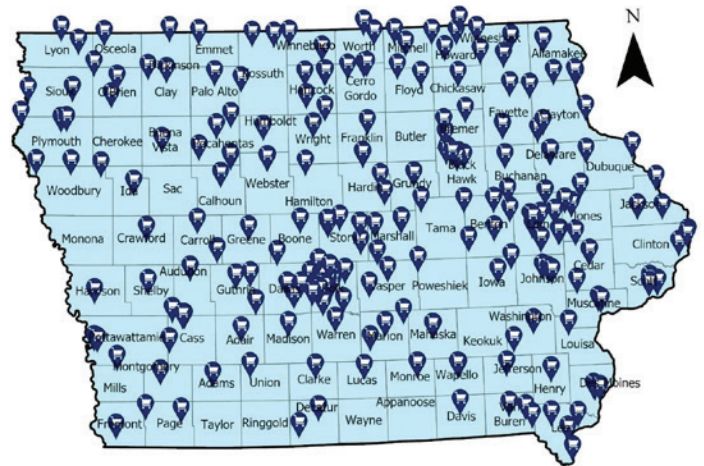
# ANALYSIS: Farmers Markets

## Location of Farmers Markets in Iowa

According to the U.S. Department of Agriculture (USDA) and National Geographic Information (NHGIS) database, there are **227 farmers markets in Iowa**.

Legend:

 Farmers Markets in Iowa



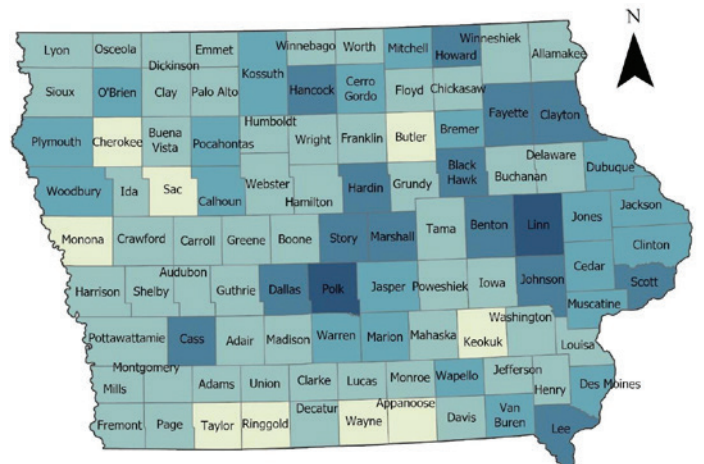
Prepared By: Flavia Hauss, May 2020  
University of Iowa - School of Urban and Regional Planning  
Data Sources: National Geographic Information (NHGIS) and U.S. Department of Agriculture (USDA)

## Number of Farmers Markets in Iowa by County

The four counties with the highest number of farmers markets are **Polk (15)**, followed by **Linn (10)**, **Black Hawk (6)**, and **Clayton (6)**. Counties with no farmers' markets - Appanoose, Butler, Cherokee, Keokuk, Monona, Ringgold, Sac, Taylor and Wayne.

Legend:

Number of Farmers Market in Iowa:



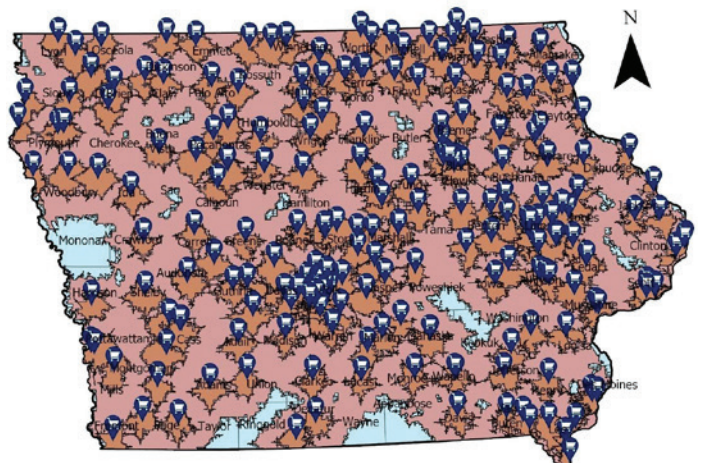
Prepared By: Flavia Hauss, May 2020  
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Data Sources: National Geographic Information (NHGIS) and U.S. Department of Agriculture (USDA)

## 15-Minute and 30-Minute Drive from Farmers Markets in Iowa

Monona County and a few small areas in a few counties take more than 30 minutes to get to farmers markets.

Legend:

 Farmers Markets in Iowa  
 15-minute drive from Farmers Market  
 30-minute drive from Farmers Market

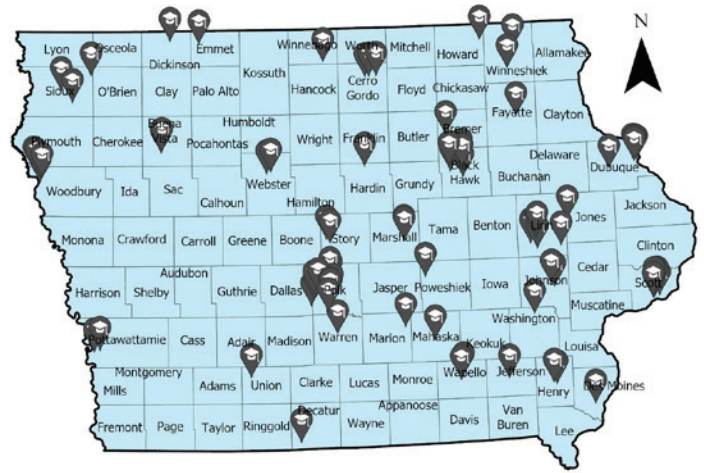


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# ANALYSIS: Colleges and Universities

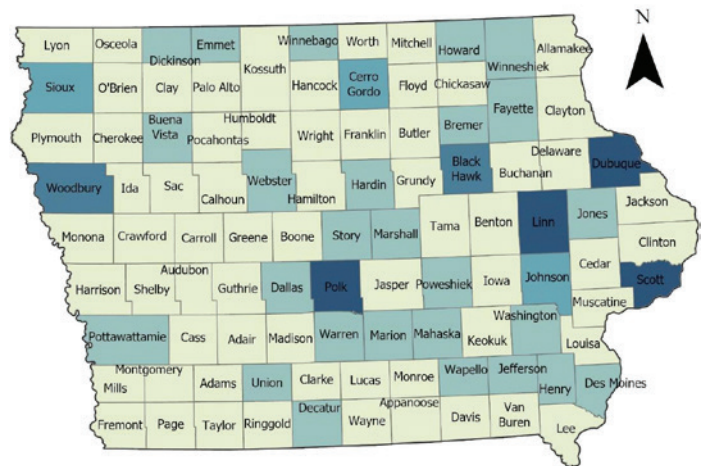
## Location of Colleges and Universities in Iowa

There are **91 colleges and universities in Iowa**. While some are concentrated in cities, a number of rural counties benefit from these micro-economies.



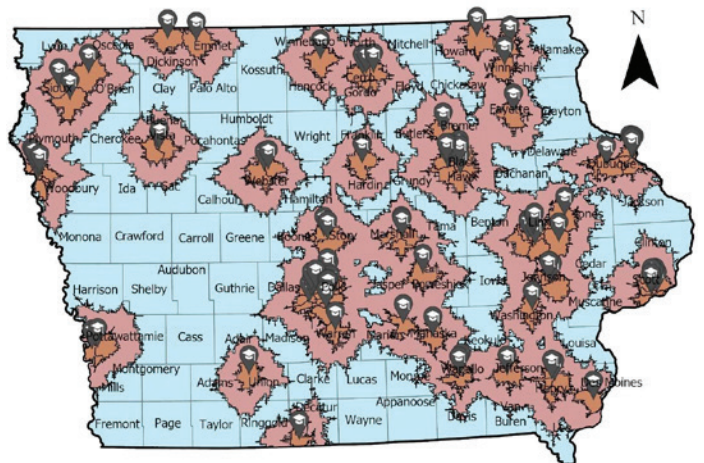
## Number of Colleges and Universities in Iowa by County

Thirty-five percent of Iowa's counties have at least one college or university. The five counties with the greatest number of colleges and universities are: **Polk (15), Scott (8), Linn (7), Dubuque (7)** and **Black Hawk (6)**.



## 15-Minute and 30-Minute Drive to Colleges and Universities in Iowa


Due to the fact that not every county has a university or college, the **driving time from several of them is more than 30 minutes**.

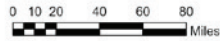


# ANALYSIS: Hospitals

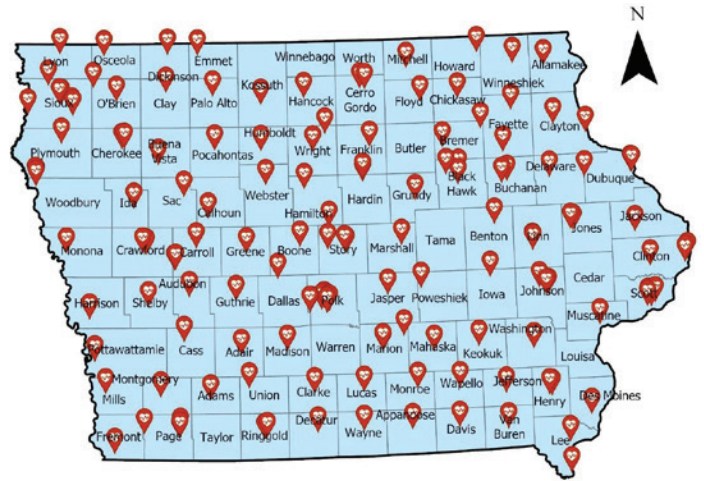
## Location of Hospitals in Iowa

There are **145 hospitals in Iowa**. There are no hospitals in the Butler, Cedar, Louisa, Tama, Taylor, Warren, Winnebago, and Worth counties. This number excludes other healthcare facilities.

Legend:  
 Hospitals in Iowa








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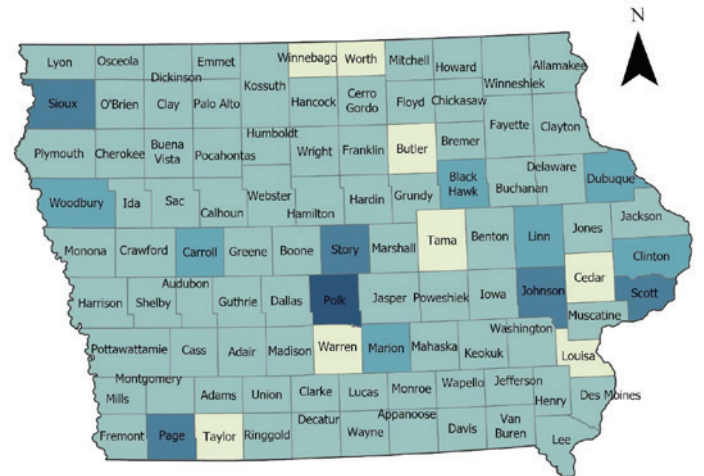
## Number of Hospitals in Iowa by County

Ninety-one percent of Iowa's counties have at least one hospital. The six counties with the greatest number of hospitals: **Polk (8), Sioux (6), Story (4), Scott (4), Page (4), and Johnson (4)**.

Legend:  
 Number of hospitals in Iowa by County:  
 ≤0  
 ≤2  
 ≤3  
 ≤6  
 ≤15






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 Data Sources: National Geographic Information (NHGIS) and ArcGIS Hub



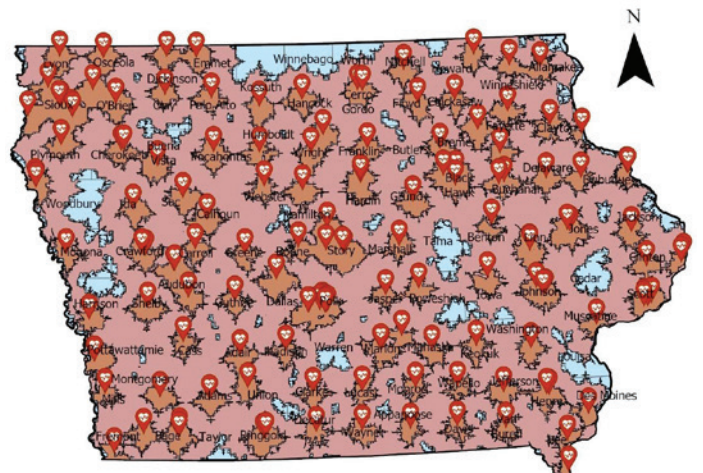
## 15-Minute and 30-Minute Drive from Hospitals in Iowa

The state has **scattered areas that take more than a 30-minute drive to access a hospital**. For example: north of Winnebago, part of Woodbury, Tama, Cedar, and Louisa counties.

Legend:  
 Hospitals in Iowa  
 15-minute drive from Hospital  
 30-minute drive from Hospital



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# ANALYSIS: Driving to Urban Areas Costs

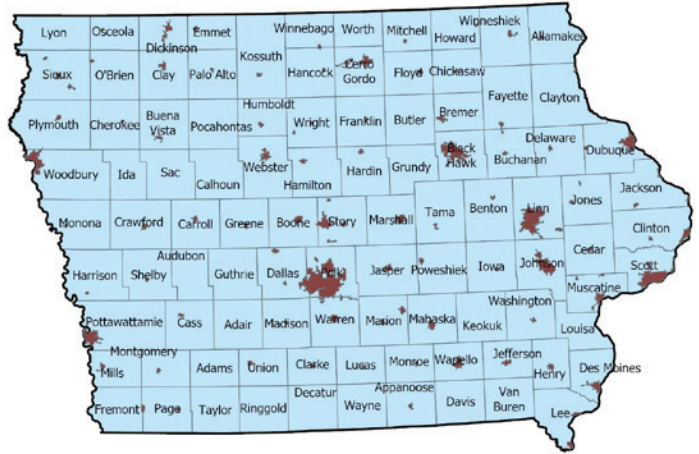
## Urban Areas in Iowa

While Iowa's county seats were originally placed based on a maximum of 4 hours a person could travel by horse, they are also roughly a maximum of a **30-minute drive by car**.

Legend:  
 Urban Areas in Iowa



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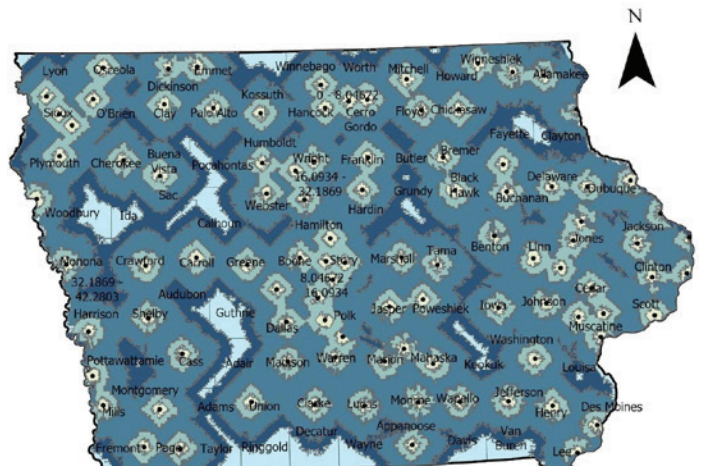
## Driving Distance from Urban Areas in Iowa

The state has only **a few scattered areas that take more than a 30-mile drive** to access urban areas, such as Ringgold, Van Buren, and Ida.

Legend:  
 Driving Distance from Urban Areas in Iowa:  
 ≤5 miles  
 ≤10 miles  
 ≤20 miles  
 ≤30 miles



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## Driving Costs to Urban Areas per Mile Driving by Vehicle Type

Farmers can use this table to get an estimate of how much they would spend driving to urban areas, where the majority of potential markets are located. These costs have been adjusted to 2020 inflation using the U.S. Inflation Calculator website.<sup>4</sup>

<sup>3</sup> Victoria Transport Policy Institute - "Transportation Cost and Benefit Analysis II" - [www.vtpi.org](http://www.vtpi.org) - January 2, 2017.

<sup>4</sup> U.S. Inflation Calculator website - <https://www.usinflationcalculator.com/>

Estimate US Fixed Vehicle Ownership Costs		Driving Distance			
Vehicle Class	Urban Peak and Rural Areas	5 Miles	10 Miles	20 Miles	30 Miles
Average car	\$0.35	\$1.74	\$3.48	\$6.96	\$10.44
Compact car	\$0.31	\$1.53	\$3.06	\$6.12	\$9.18
Electric car	\$0.44	\$2.18	\$4.36	\$8.73	\$13.09
Van light truck	\$0.45	\$2.27	\$4.53	\$9.06	\$13.59

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## Findings

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- 1. There are 463 potential local foods markets across Iowa's 99 counties not including K-12 schools and nursing homes.**
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- 2. Transportation expenses drop dramatically when farms are located 5 miles from their markets compared to 30 miles or more.<sup>5</sup>**
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- 3. There are farmers markets within a 30-minute drive for most retail farms.**

Such markets help new farm branding. The high labor and time of managing a market stall causes many to transition to a subscription (Community Supported Agriculture) or local wholesale model once a farm matures.

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- 4. Hospitals and other healthcare facilities are the most likely potential wholesale markets for Iowa's food farmers based on distance.**

These may require higher safety standards or more processing prior to delivery.

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- 5. Colleges and universities provide strong markets for local foods, providing a lower risk, higher return for farmers operating within a 30-mile radius.**

These markets requires more value-added processing so locally-grown fruits and vegetables can be available throughout the school year.

<sup>5</sup> Iowa State University Leopold Center for Sustainable Agriculture - "Measuring the Economic Impacts of Increased Fresh Fruit and Vegetable Production in Iowa Considering Metropolitan Demand" - [https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1092&context=leopold\\_pubspapers](https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1092&context=leopold_pubspapers) - April 2011.





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## Recommendations

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### 1. Support policies that reward landowners, developers and municipalities for preserving farmland under housing pressure.

This will provide a wider variety of career opportunities to beginning farmers who want to stay and raise their families in Iowa.

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### 2. Include land trust agri-communities in planning.

Protected farms located in new residential developments provide a 35% to 40% premium to the developer and affordable land ownership to the farmer. City and county planners can offer incentives for such projects.

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### 3. Invest in current research on the economic, environmental and social impacts of local food production in Iowa.

How much wealthier would our small towns be if more of our food dollars stayed in Iowa? Could they support local butchers, small-town “green grocers,” farm-to-market distribution, value-added processing and more? Could they supplement and diversify the commodity agriculture we have now, making our agricultural economy more resilient to the ups and downs of policy and the market? How much would they increase property values and revenue streams for local schools and parks, increasing the quality of life and attracting more skilled workers to Iowa? Updated research asking these questions could tell us more.

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### 4. Level the playing field.

Local farmers find themselves competing with national distributors for wholesale markets in Iowa — hospitals, schools, grocery chains, government offices. International monopolies can offer deep discounts that undercut local producers. These low prices don’t account for the true costs of production and do nothing to contribute to the economic, social or environmental health of the community that is purchasing the food. Local producers can compete in price and quality when the true cost of food and nutrition are calculated, and local food hubs make it easier for farmers to get their product to market.

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<sup>6</sup> Iowa Demographics – “Iowa Counties by Population” – [https://www.iowa-demographics.com/counties\\_by\\_population](https://www.iowa-demographics.com/counties_by_population) - (Accessed, May 12th, 2020)

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