

The purpose and scope of this research is to find out what people's thoughts are on sustainable agriculture and identify different perspectives on the issue and on its past, present, and future, and how these perspectives differ when it comes to food affordability and security. “How do the financial risks of transitioning to sustainable practices for farmers align with or contradict the food affordability and security concerns of non-farming consumers?”

**Author’s Note:**

The research question I chose is very important to me because it combines both agricultural issues and environmental issues. Writing this was somewhat difficult for me because at first I couldn't find much information on sustainable agriculture in the way that I wanted, so I ended up searching for more general information and using the results I found to narrow down my research question. The only thing that was easy in this essay was getting the formatting correct. The steps I took were finding my original question and narrowing that down during the in class activity with AI, looking for sources through the NDSU library, changing my question when I couldn't find anything based on what information was available, and then writing the annotations. Overall, I feel like my annotated bibliography is pretty effective and accurate. I do have some doubts about some of the sources relating to their usefulness directly to my research question, but I feel like I have a very strong start for the synthesis. I feel my strength in writing so far is being able to sit down and just write stuff and being able to pick out the parts I need from my sources pretty quickly, unless the source is really interesting. I spent a lot of time for this essay writing the annotations and a lot less time compared to actually reading the sources, despite some of them being really long, which I believe some of my previous writing experience helped with. I think I could draw on this in the future by using good sources, regardless of how

long the source is for my writing. The feedback that I was given by my peers and teacher was very positive and did not give me anything to add, remove, or change, so there was no feedback to implement.

**Annotated Bibliography for how financial risks of transitioning to sustainable practices for farmers align with or contradict the food affordability and security concerns of non-farming consumers**

Beasley, D. (2025). The real reason we fail to feed those in need. *Time Magazine*, 206(19/20), 26-27.

<https://research.ebsco.com/linkprocessor/plink?id=0f6224b6-19bd-363d-a37a-93df108b5de6>

In this magazine article, Beasley argues that global hunger is not primarily caused by low food production, but by systemic issues such as conflict, political instability, climate change, etc. The central claim is that the world can produce enough food to feed everyone, but can't necessarily get that food to everyone. The key points include conflict zones being the main driver of food insecurity, climate change causing lower agricultural output, wealth inequality and infrastructure preventing food access, and the need for international cooperation to end world hunger. The purpose of this article is to raise awareness on what Beasley believes to be the true cause of world hunger and advocate for action and policy reform. This purpose makes it somewhat less credible, as it aims to persuade rather than provide neutral facts. The time of the article is very current, from 2025, making it very relevant. The author himself is very credible, being the former executive director of the UN World Food Programme. The article seems to be

accurate on true causes of global hunger, aligning with peer-reviewed research, simplified to fit into a magazine page. The intended audience is very wide, being published in Time Magazine. It has a very limited depth, lacking many details and data. These things make it pretty credible for surface level information. This source is useful to my research because it provides a good frame for food security in a global context, and highlights that food security isn't just about production. It does not directly address financial risks to farmers, but does provide a perspective on how sustainable agriculture alone isn't enough to ensure or jeopardize food security globally. My reaction to the source is that it is a very good surface level perspective on global hunger and its causes. Since it's only surface level, there isn't much analytical usefulness, but it does provide a good background in conjunction with another detailed source with more depth and data.

Bhagat, P. R., & Magda, R. (2021). Food Security in the Era of Sustainable Organic Farming: A Comparison Between the Visegrad Group and India. *Visegrad Journal on Bioeconomy and Sustainable Development*, 10(1), 14-18. <https://doi.org/10.2478/vjbsd-2021-0004>

In this journal article, Bhagat and Magda look into how sustainable organic farming impacts food security by comparing Visegrad countries to India. The main argument is that while sustainable farming promotes environmental sustainability, it could have an impact on food security based economic condition, yield, and policies. Key points are sustainable farming often having lower yields developed regions being able to transition more easily by absorbing transition costs, lower yields and higher labor costs can jeopardize food security, and policy support and technology play a key role in the impact of sustainable farming on food security. The

purpose of the study is to provide research-based analysis of how sustainable agriculture affects food security across different economic contexts. It was concluded that sustainable agriculture must be adapted to regional conditions to not impact food security. The article is a bit old, so it isn't up to date on current policies, but the conclusion is still relevant. Both authors are academic researchers and the article is peer-reviewed. Being research-based, the accuracy of the article is likely very high. The audience of the article is other researchers and policy-makers who have a higher level of understanding of the topic than the normal person. The article goes in depth in a very specific region in the world, limiting its scope, but it is very relevant to the topic of food security and sustainable farming. This source is very useful for my research question because it directly pertains to the tradeoff between sustainability and food security, and helps explain possible financial risk to farmers and potential increase in prices. My reaction to this source is that it is almost exactly the kind of source I am looking for, objectively comparing both farmers' concerns and consumers' concerns when adopting sustainable agriculture. The only thing that could make it better would be a bigger scope, since this scope is in two small regions and not global. However, it can still be used as a key source for my research.

Chrisendo, D., Heikonen, S., Piipponen, J. et al. (2026). A systematic review of sustainable food systems identifies socio-economic pathways driving food systems transformations.

*Nature Food*, 7(3). <https://doi.org/10.1038/s43016-026-01317-0>

In this journal article, the researchers do a meta-analysis of 349 articles to investigate “the role of socio-economic drivers in sustainable food systems transformations across different

world contexts.” The main argument of the article is that there are 6 main socio-economic drivers when transforming food systems and that the feasibility/willingness to adopt sustainable agriculture relies heavily on these drivers, and that sustainable farming practices are necessary to adopt to promote a good environment. Key points are network and values, gender, age, and family, education and information, income and prices, politics, policy, and institution, and infrastructure being the main socio-economic drivers along with precision agriculture, land resources and soil health, diet change and novel foods, nutrition and health, climate change and biodiversity, food loss and waste, and freshwater and marine resources being the main food system transformations happening as a result, finances and regulations being the main barrier for farms to switch to sustainable agriculture with education being the main driver, food price and sentiments about certain food being the main barrier for consumers with education, information, and eating healthy being the main drivers, with low-income countries having the most barriers to adoption.

The article is very credible. It is very recent, only being published a few days ago, and is very accurate, being peer reviewed and using peer reviewed sources, making it very accurate. It is also very authoritative, being published in a well respected journal and has many previously published researchers, many of whom having extensive education. The audience for the article is mainly other researchers and policy makers, with the purpose of bringing together many different sources into one conclusion to inform people on socio-economic drivers when switching to sustainable food systems, and goes into great depth on the matter on a global scale.

This source will be very useful for my research. It goes over exactly what I need to answer my research question, going over the barriers to adoption for both producers and consumers. This source would be great to use as a main piece of evidence and authority, given its

recency, accuracy, and depth. My first reaction to the source was that it was exactly the answer to my question. It discussed what I was looking for in an easy to understand way. The only reason I might have to limit my use of this source is because it is a summary from multiple different sources on a world issue, meaning it's taking a bunch of different, smaller instances of what they're researching, and generalizing it to a global scale.

Gibson, K. E., Lamm, A. J., & Lamm, K. W. (2020). Identifying Audience Needs to Effectively Communicate about the Cost of Implementing Sustainable Farming Practices. *Journal of Applied Communications*, 104(3). <https://doi.org/10.4148/1051-0834.2334>

In this article, the researchers looked at the difference between different areas in the U.S. and their willingness to pay for sustainable agriculture practices as a way to save their freshwater supply, so that a message about such practices can be better tailored to those groups. The main argument is that the willingness to pay is very high and that there are statistically significant differences between the willingness to pay in urban areas and rural areas, meaning that the messages should be tailored to the different groups. Key points are the importance of tailoring the message, addressing misconceptions, and presenting the benefits and challenges of adopting sustainable practices.

The source is pretty credible. It was published in 2020, making it pretty recent. It is peer reviewed and all of the authors are affiliated with universities and have experience in agricultural communication. The journal is also well respected and peer reviewed. The audience is primarily other researchers interested in agricultural communication. The purpose of the source is to

inform about communication strategies and take on an academic perspective, making it pretty reliable. The article also has pretty good depth, encompassing the entire U.S. and doing a deep analysis.

This source will be pretty useful as a supporting source to be used to help understand how communication affects willingness to adopt, especially when it comes to cost. My reaction to this source is that it is very informative. One limitation is that it focuses more on communication rather than economics, though it still deals with finances, making it a good supporting source.

Khaerah, M., & Nara, N. (2025). SUSTAINABLE HOME GARDENS FOR FOOD SECURITY: AN EVALUATION OF THE PEKARANGAN PANGAN LESTARI (P2L) PROGRAM IMPLEMENTATION IN KOLAKA DISTRICT, INDONESIA. *TPM: Testing, Psychometrics, Methodology in Applied Psychology*, 32, 691-699.

<https://www.tpmmap.org/article-view/?id=2705>

In this article, the authors examine the implementation of the P2L program in the Koloka District in Indonesia, which promotes sustainable home gardening as a strategy for improving food security. The main argument is that localized food production, especially in a household, can strengthen food security and lower dependence on external sources. Key points include evidence that home gardens increase food security and reduce spending, and empower communities. They conclude that sustainable practices can mitigate food insecurity, though success depends on community, education, and policy support.

The timeliness is very recent, being published in 2025, making it accurate on recent issues. The article is published in a peer reviewed journal and the authors have ties to research

facilities and universities. It is also very accurate, using good research and evaluation methods. The audience is mainly people who are interested in sustainable food systems. The purpose of the study is to be analytical and not persuasive. It isn't very in depth, focusing on a pretty specific case. Overall, it is very credible.

The source is useful because it highlights how sustainable practices can raise food security and reduce costs at a local level. It also supports the argument that sustainability can align with consumer needs and not just environmental, though it does nothing to address farmers' concerns. My reaction is that it is a strong source for showing the consumer side of my research question however, it is only on a very small area and scale.

Pettit, E. (2023). Who Should Shape What Colleges Teach? Not the Government, Most Americans Say. *The Chronicle of Higher Education*, 70(3), 1-8.

<https://www.chronicle.com/article/who-should-shape-what-colleges-teach>

The article discusses public opinion on who should influence college curriculum, and argues that most Americans believe that the institution, not the government, should determine what they teach. The article gives survey data and brings up debates about academic freedom, political influence, and public trust in education. The purpose is to inform readers about public attitude towards education and government and concludes that there is a strong preference for autonomy in higher education.

It was published in 2023, so it is still relevant. It also is published in a reputable chronicle focused on issues of education. Although it is based on surveys, those could be biased. The

audience is everyone that will listen and aims to be informative. It isn't the most credible source, but it is likely accurate.

The source is not directly useful to my research question, but does address a component identified in many other sources, that education is needed to grow public interest and support in sustainable farming, especially since it is in the government's best interest to subsidize high yielding farms rather than low yielding farms, it would be crucial to not allow government to dictate what is taught in schools. My reaction to the source is that while it's credible, it's not directly relevant to my topic. I will likely only briefly mention it in addition to a better source.

Popkova, E. G., Sergi, B. S., Bogoviz, A. V., & I. Semenova, E. (Eds.). (2023). *Digital*

*Agriculture for Food Security and Sustainable Development of the Agro-Industrial Complex*. Springer International Publishing.

<https://ebookcentral.proquest.com/lib/ndsu-ebooks/detail.action?docID=7240875>

This book explores how digital agriculture technologies, such as precision farming, data analytics, automation, etc. can support food security and sustainability in the industrial sector. The main argument is that innovation is essential for sustainable agriculture to be productive and viable. Key points include the potential for new digital tools to reduce waste, improve yields, and lower financial risk. The book concludes that even though it requires substantial investment, adopting digital agriculture can help bring sustainability closer to normal industrial farming in terms of viability. The purpose of the book is to provide a comprehensive analysis of the intersection between technology and sustainable agriculture.

The timeliness is very recent, being published in 2023, though ag-tech is evolving rapidly, so it may not be 100% accurate anymore, though its research is still very accurate. It is also published in a respected academic journal and both written and edited by respected scholars. The audience is mainly researchers, politicians, and agriculturists, with the purpose of being informative and analytical. It is very deep on the topic and very comprehensive.

This source is very useful for analyzing how financial risks of transitioning might be eliminated by technology and innovation. It connects farmers' economic risks with consumers' concerns for affordability by weighing efficiency gains and long term costs. My reaction is that this is probably my most useful source when it comes to my research.