**Title : Investigating the Impact of Climate Change on Agriculture**

Introduction Climate change is one of the most pressing issues of our time, and its impact on agriculture is of particular concern. As temperatures rise and weather patterns become more unpredictable, farmers around the world are facing new challenges in growing crops and feeding the world's population. The purpose of this capstone project is to investigate the impact of climate change on agriculture, with a focus on the challenges facing farmers in the United States.

Literature Review The existing literature on the topic suggests that climate change is already having a significant impact on agriculture in many parts of the world. Rising temperatures and changes in rainfall patterns are affecting crop yields and increasing the risk of droughts and other weather-related disasters. In addition, climate change is leading to the spread of new pests and diseases, which can threaten crops and lead to significant economic losses for farmers.

Methodology To investigate the impact of climate change on agriculture in the United States, a mixed-methods research design will be used. Data will be collected from a combination of surveys and in-depth interviews with farmers and agricultural experts in different regions of the country. The survey will collect quantitative data on crop yields, climate patterns, and other factors related to agriculture, while the interviews will provide qualitative data on the experiences and perspectives of farmers and experts.

Results Preliminary results suggest that climate change is already having a significant impact on agriculture in the United States. Many farmers report that they are facing new challenges in growing crops, including increased water stress, soil erosion, and pests and diseases. In addition, many farmers are adopting new strategies to adapt to the changing climate, such as using new crop varieties, changing planting dates, and implementing new irrigation systems.

Discussion The findings of this study have significant implications for the agricultural sector in the United States and around the world. As climate change continues to pose new challenges for farmers, it will be important for agricultural researchers and policymakers to work together to develop new strategies and technologies that can help farmers adapt to the changing climate. In addition, it will be important to address the root causes of climate change and reduce greenhouse gas emissions, in order to prevent further damage to the agricultural sector and other ecosystems.

Conclusion This capstone project has provided a detailed investigation of the impact of climate change on agriculture in the United States, and has highlighted the urgent need for action to address this pressing issue. By developing new strategies and technologies to help farmers adapt to the changing climate, and by addressing the root causes of climate change, we can help ensure a sustainable and secure food supply for generations to come.