Abstract: Quinoa is a pseudo-grain that is mainly produced in the Andean region of South America. The countries of Peru, Bolivia, and Chile produce the largest quantities for export and a downside has been that they are unable to produce enough quinoa to meet global demand. While quinoa has grown in popularity, the market price has grown because South America is the only major producer and exporter of quinoa. However, it can be grown in other countries, including the United States. The question remains, how viable is it to produce quinoa in the United States? The purpose of this thesis is to determine where in the United States quinoa can be grown and whether it is economically viable to grow it. The results show that quinoa production is a viable option for specific parts of the country like the Pacific Northwest because it can meet the crops growing requirements. In addition, agricultural practices such as crop rotation and crop integration or mechanical uses for cultivation and harvesting are viable options. The United States can viable produce quinoa, but is limited to certain parts of the country.

Methods: The methods to this project are diverse. First, I conducted a literature review of quinoa, including its biological properties, its uses, its geographic location where it can be grown, and the benefits and problems with growing it. In addition, I conducted interviews with some of the top quinoa researchers and producers in the United States, which include Kevin Murphy of Washington State University, Frank Morton of Wild Garden Seed in Oregon, and Ernest New of White Mountain Farm in Colorado. Furthermore, to illustrate the viability of producing quinoa, I used a cost/benefit analysis to compare the economic viability of growing quinoa versus growing other crops such as wheat. Plus, I used GIS maps to illustrate areas in the United States based on the requirements quinoa needs in order to effectively thrive.