THE CRANBERRY INDUSTRY AT A CROSSROADS

The State of the Cranberry Industry in 2022

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Public Executive Summary

Executive Summary

Abstract

This study summarizes the North American cranberry industry from the perspective of economic cluster theory and business strategy. The study includes an overview of the industry, statistical analysis, and stakeholder analysis based on a series of interviews across North America from 2019-20. It closes with a set of recommendations designed for industry stakeholders and policymakers. This report summarizes a full length book that examines the cranberry industry from the perspective of cluster and cooperative theory.

Analytical Framework of the Report- Cluster Theory as Applied to Agriculture

Clusters are geographically concentrated areas of activity around a certain industry. The central question for modern cluster theory from the perspective of industry dynamics is why firms co-locate in the same space. The classic example is Silicon Valley, where multiple IT companies compete side by side, amidst some of the highest costs in the world. The truth is that we have only partial answers. Some suggest that clusters are a result of historical accident, such as the automobile industry being centered in Detroit because some pioneers such as Henry Ford, were from there. Others say that industries are set up close to transportation hubs or large markets, such as Napa Valley's proximity to San Francisco. Meanwhile, some suggest that having flexible labor pools, specialized training institutes and universities, and a set of anchor firms with startups and subcontracts, help to explain the "stickiness" of industries in certain locations. Still others suggest, and many places are betting, that policy can make a difference, for example by improving infrastructure, setting up R&D facilities, training local personnel, and providing startup funds, among other things. The truth is we don't have any consensus around why clusters arise, and what gives them staying power.

One of the most obvious explanations is to look at natural conditions and use them to explain location. Steel mills are close to Pittsburgh because that's where the coal is, according to this thinking. The same is generally assumed in agriculture. We grow food where the conditions are optimal, which leads to lower cost and better quality food. But what if some of the other factors, such as proximity to large markets or infrastructure, or availability of agricultural extension agents, also figure in? Then growing conditions would only be part of the story. This

is the purpose of our research project, to examine why agricultural crops locate in certain places, whether they cluster, and, if so, why they do.

While we can not provide a definitive answer, we can say after 3 years of study that the answer is far more complicated than growing conditions. There are a mix of complex factors that determine agricultural growing location. Let's consider the wine industry. Wine grapes can be grown in a wide variety of places around the world from the country of Moldova to Australia to North Africa. So, why, when we think of the great wines of the world, do we think of Bordeaux and Napa? The answer at first glance would seem to be product differentiation. The winemakers in those areas have developed techniques and knowledge as well as a reputation for quality that helps them to sell at a higher price, allowing them to stick around in much higher cost regions. Most of the academic studies on agricultural clusters have focused on wine, for this reason, it's a product with some clear clusters, even though there is also a lot of bulk wine production.

Why We Chose to Study Cranberries and How We Did the Study

Our approach in this study was to do something completely different, to study an undifferentiated commodity-type agricultural product that was geographically-concentrated. The Gottlieb-Goetz-Dobis team were able, over the course of 2017-2018, to obtain anonymized farm level production data from USDA that allowed them for the first time to map out agricultural production by crop and location across the U.S. In a series of forthcoming publications, they map out patterns and theories about why some crops cluster and others do not. There were certain crops, such as coffee and papayas that clearly clustered for geographic reasons; they can only be grown in Hawaii. However, there were other crops, such as almonds, ginseng, and cranberries, where the reasons for clustering were not obvious. We chose cranberries because they are grown in 7 different clusters, concentrated growing regions within North America. Even in the states and provinces where they are grown, they tend to be concentrated. When we started the study, we thought this might just be because of growing conditions, but we found out quickly that they can be grown in a much wider swath of area, both within North America, and around the world. So, why does the industry cluster and why just in certain parts of North America?

Through Gottlieb's connections at Rutgers, we were able to make contacts with key industry stakeholders, including Ocean Spray. We made our pitch in 2019 and were able to get the industry to buy in to our premise, with the promise of delivering a strategic bird's eye view of the industry, the result of which is this report. We started with a deep dive in the history of the industry, which we omit here for the sake of brevity. There are few sources, but they do provide a rich portrait of the development of the cranberry industry over the course of the 20th century. This brought out the very unusual feature of the industry around the dominance of one large cooperative organization. Thus, we started to modify our approach to consider industry organization which we argue helps explain clustering. Then we did a statistical analysis of production and yields across the different regions. This analysis showed a long-term trend of supply growing faster than demand, which helped us to frame the study in terms of commodity cycles, or the boom-bust aspects common to agriculture. We thus started to consider whether industry organization helped to smooth out price cycles, and that helped to explain the longevity of a cooperative that covers all 7 regions, even while its dominance is slipping. As we noticed the arrival of Québec from nowhere to becoming the 2nd largest producer, that became another important line of inquiry.

The next part of the study was to set up as many stakeholder interviews as possible in each of the clusters. Using growers' associations, website, and "snowballing" contacts for new contacts, we were able to set up dozens of 1 hour in person interviews across the 7 clusters. We mostly talked to growers, but we also talked to handlers, researchers, and anyone else involved who was open to a visit. Visiting in person also gave us a sense for the way each cluster operated in terms of governance, how different stakeholders reached agreement both within their state or province and across them. We were able to start to gain some trust through attending the NACREW research conference and growers' association meetings in some cases. Finally, we set up and asked the CMC, BCCMC and the APCQ to send out a link for an on-line survey to their grower members.

What We Found

Even though there is a temporary spike in prices, we believe that there are reasons to think the cranberry industry is at a crossroads. The introduction of new, much higher-yielding varietals and from Québec's entry will continue to shake things up. While in previous decades,

Ocean Spray was the dominant actor, providing much of the value chain for its members, and collective industry R&D, product innovation, marketing and branding to spur new demand, its position will have to change in line with these industry shifts. As we detail below, there are many important adjustments that loom on the horizon for the industry. These range from an ageing population of growers and likely consolidation to the lack of "killer apps" or new products such as juice or SDCs that spurred growth to match supply increases in the past. Moreover, the inability to coordinate the marketing order with Québec raises significant doubts about whether the supply management system in place from the 1960s can continue. In line with the significant expansion of non-Ocean Spray supply, industry institutions such as the Cranberry Institute and Cranberry Marketing Committee are due for an evolution as well. The potential for increasing demand to match new supply lies most prominently in the potential to link cranberries to health benefits, responsible already for the present COVID-19 related spike in demand, and in developing overseas markets.

In terms of cluster theory, we believe the cranberry industry, even with all its idiosyncrasies, offers important lessons for the potential reorganization of some types of agricultural production. The concentration of production despite wider growing conditions *refutes* the dictum that agriculture takes place wherever crops are grown best. Growing conditions are a precondition, but only the starting point for understanding agricultural organization. Studying the growing regions of cranberries demonstrate the utility of cluster theory to explain where and how agricultural production takes place. Proximity to markets, processing facilities, infrastructure, knowledge, and path dependency (historical experience) all play roles, alongside governance issues. In that regard, the largest cooperative organization has not only provided collective industry goods and leadership, but also helped family farmers to capture some of the downstream value-added and smoothed out some of the commodity cycle through developing new demand. While it's impossible to think of cranberry industry organization as either stagnant or easily replicated, there are many lessons that could have tangible payoffs for farmers of a wide variety of crops as part of a longer-term research agenda.

Table of Contents for Book, forthcoming in 2023, contact ahira@sfu.ca for details