A 1982 report entitled “Alaskans Feeding Alaskans,” published by the Alaska Agricultural Action Council (AAAC), begins with the reprint of a letter dated June 15, 1982, to former Alaska Governor Jay Hammond, from W.I. Palmer, AAAC chairman. Palmer wrote,

Alaska’s agricultural land base provides the opportunity to produce dependable supplies of wholesome foods for Alaskan families and a more stable lifestyle for thousands of Alaskans. … Currently Alaskans are dependent on the “outside” for more than 90% of their food. This results in only a four-day supply of many food staples in the cities as well as higher prices and lower quality. (p. 3).

Thirty years later we are still talking about how to improve Alaskan food production, and still worrying about why so much of our food comes from outside the state. To this day only a mere three to five percent of the agricultural products consumed in Alaska are produced in Alaska (Caster, 2012), and progress toward the “field of golden grain at the end of the rainbow,” that Palmer optimistically envisioned in the closing words of his letter is slow (1982, p. 3). Despite renewed interests in local food production, we may well be losing rather than gaining ground.

Indeed, communities in rural and urban Alaska are more dependent on imported food and fuel than ever before, and as a result Alaskans are increasingly vulnerable to the instabilities of the global food and energy system (Figure 1) (Gerlach et al., 2011). An estimated 13.5% of Alaskans are food insecure (Feeding America, 2011), a figure that is still lower than the national average of 16%, but it is growing. Food insecurity rates across the more rural parts of the state are upwards of 20 to 30% (Feeding America, 2011). Likewise, the impacts of a changing climate, and a rapidly changing socioeconomic and ecological landscape further challenge the ability of Alaskans to put locally grown or caught foods on the table (Loring & Gerlach, 2009).

These details show the downside of the Alaskan food system and supply chain, but there is an upside too, a new breed of agricultural and food system entrepreneurs who are working hard to rebuild Alaska foodsheds (Kloppenburg et al., 1996)—trying to recover local culinary traditions and to regain a measure of food security and sovereignty through solutions that break the back of the industrial agricultural paradigm. In the Delta Junction region, for example, there is a growing tradition of working with food crops and cereal grains such as barley, canola, wheat and flax, and with livestock systems based on bison, elk, yak, and other alternatives to the cattle/swine/corn complex. This new breed of entrepreneurs also includes processors, local distributors, restaurant owners and chefs, and others trying at every stop on the food chain to shift to a model of local production for local consumption. Even in the most remote areas of the state, including some communities north of the Arctic Circle, people are trying to revitalize a tradition of “outpost-style” gardening with hoop houses and greenhouses and regional community-shared and community-supported agriculture programs (Loring & Gerlach, 2010).

However, despite these good ideas and motivated individuals there remain significant and persistent barriers that challenge innovation and change. The most immediate challenges include a lack of physical/built infrastructure for production, processing, and storage; others include human resource issues regarding the number of qualified and trained individuals, a lack of social

Figure 1. Weekly food costs for a family of four (orange) and gasoline prices (blue) for Fairbanks, AK, Bethel, AK, (a rural hub community) and Portland, OR. The relationship between food and fuel costs is well understood, but amplified in places like remote Alaska. Note that food costs in Portland and Fairbanks do not appear to have been affected by the spike in fuel costs that occurred in 2007 and 2008, but food cost in Bethel jumped more than $50 over this period and did not recover afterward. Data from UAF Cooperative Extension Service.
services for these professionals, and state and federal policies regarding food safety, quality, and marketing that are designed for industrial food production and are overly cumbersome and too expensive for the small-scale producer: The food system is effectively split in Alaska—among those with the time, skill, financial resources and opportunities to fish, farm, or harvest local foods for themselves and their families—and those who, whether out of preference, expediency or both, patronize conventional “box store” markets and the unavoidable “lock-in” trap of the global food production and distribution system (Meadow, 2012).

For example, there are many opportunities to develop an in-state marketing system for red meat and other protein products, but these are largely stalled. Alaskans eat a variety of animal products, including from locally raised domestic livestock and as well as wild game and fish. But these are only minor components of the total animal protein consumed statewide, and between 2001 and 2006, 85% of red meat consumed in Alaska was imported from outside sources (Paragi et al., 2010). Some are trying to increase red meat production in the state, experimenting with elk, reindeer, plains bison, and other smaller livestock such as goats and sheep on a variety of scales (Figure 2). What appears to be holding up the coalescence of these activities into a viable sector is a striking lack of infrastructure for butchering, processing, and marketing the end products. Up-front costs for the purchase of breeding stock, feed, and expensive hay needed for overwintering continue to pose problems for growers, as do the challenges of developing infrastructure in the many remote communities that are not accessible by road. Processing facilities for slaughtering are likewise limited, but new ideas include on-barge processing facilities that can move live animals through from kill to USDA inspected packaged meat products. Finally, food safety inspection policy at the state and federal level are also proving too costly and too cumbersome, especially for the smaller producers with only a few animals at a time.

Many of the same challenges can be seen in the local seafood sector. Alaska’s commercial fishing industry creates over $5.8 billion in direct and indirect economic outputs, but very little of the fish caught is marketed in state (Loring & Harrison, 2012). Even grocery stores in such iconic fishing communities as Homer do not have fresh seafood counters. Some individuals are experimenting with innovative new ways to market locally caught seafood, with schemes for direct marketing and programs such as Community Supported Fishing (CS-Fish). But here too, these initiatives repeatedly come up against challenges that relate to policy, infrastructure, and human resources. Commercial fishing involves long and hard days; many fishermen simply do not have the time to spend marketing part of their daily catch locally, as opposed to selling everything at once to a major fish processor. Likewise, in lieu of any sort of cooperative buying group, the demand for fish is often considered too minimal or inconsistent by many fishermen to make a serious business commitment to developing the local market. Some local fishermen and processors also lament cumbersome and expensive food safety policies and protocols that limit their ability to innovate on a small-scale.

**Food Hubs as Social Infrastructure**

This Rural Connections issue focuses on the role of food hubs in building local and regional food systems to grow rural self-reliance and sustainability. Our intent with providing the details above is to show how greater regional coordination of processing, marketing, and purchasing activities could allow for significant growth in Alaska.

However, when we think about food hubs, we also think of them as a kind of social infrastructure that is comprised of people working together for collective growth, built on and/or around the policy context in which these collectives and collaborations develop. Not often is policy discussed or recognized as food system infrastructure; but, just as poorly designed policies can hinder food system activities at the local scale, well-designed social policies can boost people’s abilities to innovate and rebuild foodsheds. To make this point, we close this article with one especially noteworthy example of an essential, yet often-understated aspect of social infrastructure that can be as or more important than built facilities or food safety policies, and one that we actively see hindering the development of strong foodsheds in Alaska: social welfare services such as healthcare. There are people in Alaska’s communities who are trying, and by many measures succeeding, to build Alaska foodsheds with markets and cooperatives, but these people are extremely vulnerable for lack of healthcare insurance. In several cases that we know of first hand, growers, processors, and distributors face the real likelihood that they will not be able to continue their businesses because of an expensive medical problem and the lack of no health insurance.

Health care is one example of a kind of invisible food system infrastructure that no one can build on their own, and the lesson is that we need to begin thinking more systematically about how we support food systems within the core of our communities and societies. Otherwise, we argue, thriving local solutions in Alaska or anywhere else in rural America will remain a vision at the far end of the rainbow.

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**Figure 2.** Craig Gerlach during a visit to Faith Farms in Kodiak, Alaska. Photo by Phillip Loring.