

Executive Summary

More than 150 years of farming history laid the foundation for Skagit Valley's current role as the most important agricultural valley remaining in the Puget Sound. Successful farmers in the Skagit Valley have a long history of innovation; it has been integral to their survival. This successful adaptation is illustrated in the ECONorthwest 2010 report¹, which states that the aggregate net income for the county's farmers, adjusted for inflation, has increased from about \$20 million in 1969 to about \$80-\$100 million today. This longstanding culture of ingenuity has been growing and attracting like-minded individuals to the area. Located within 100 miles of 6.5 million people, Skagit Valley is the heart of a corridor between Vancouver, B.C., to Portland, Ore., that has been dubbed the "innovation corridor" due to the concentration of individuals with innovative ideas and goals.

In addition to the human capital, Skagit Valley boasts some of the best 2 percent of soils in the world, making it an ideal location for producing a variety of value-added agriculture products. The alluvial delta formed by the Skagit River provides the source for these fertile soils. Among the top crops in this region are specialty potatoes, blueberries, raspberries, strawberries, tulips, daffodils, and spinach, cabbage and Brussels sprouts seed. More flower bulbs are grown here than in any other U.S. county. Wheat and barley serve as valuable rotation crops. Local livestock, poultry and dairy producers boast award-winning homestead cheeses and pasture-raised meat. According to the 2007 U.S. Agriculture Census, Skagit County was home to 1,215 farms covering 108,541 acres. In 2011, Skagit Valley farmers sold \$281 million worth of product.

To successfully produce each of these products and minimize the amount of fallow acreage during the year, farmers in the Skagit Valley partner on a unique level to seasonally lease, swap, exchange and barter for the cultivation of a variety of crops. This communal sharing of lands allows the necessary rotation for the major cultivated crops. This intricate and specialized crop rotation and isolation practice improves soil condition. It also lessens the need for multiple fertilizer and pesticide applications on crops, providing both secondary economic and environmental benefits.

The research efforts of the Washington State University (WSU) Research Center, located in Mount Vernon, are directed toward these small and mid-sized farms of Skagit County. The graduate research focus of the plant breeding program includes breeding for traditional and organic farming systems, farmer participatory breeding, converting wheat to a perennial crop, increasing water and nitrogen-use efficiencies, the evolution of the wheat species, marker-based selection and non-GMO use of wild species for wheat improvement. Researchers work to breed improved varieties of wheat and other crops for both traditional and organic systems, incorporating diverse rotations and systems. With an emphasis on crops grown for local markets, the WSU program reaches out to area farmers to leverage their expertise in the research, planning and decision making process. Breeders work closely with farmers to set research priorities. On occasion, the collaborative efforts result in farmers developing their own varieties to be uniquely adapted to their farming system.

The Research Center also houses The Bread Lab, a research bakery focused on helping regional bakers, millers, maltsters and farmers identify the best varieties and uses for locally grown and sourced grains. It is the only such lab in the nation. The main goal of The Bread Lab is research, but some services can be performed for small-scale millers and bakers. Samples for testing this year came from Washington, Oregon, California, Arizona, Maine and North

¹ "Economic Indicators of Agriculture's Future in Skagit County" by ECONorthwest, November 2010.

Carolina. The Bread Lab is an integral part of the Kneading Conference West, which is held each September at the Research Center. Last year's attendance included 250 bakers, millers, farmers and regional food enthusiasts from 12 states, 3 provinces and Europe.

The innovative and commercially valuable research occurring at WSU supports the formation of the Skagit Valley Value-Added Agriculture IPZ. It also ensures the long-term environmental and economic health of farming in Washington State while producing safe, high quality food crops.

Mission

The Skagit Valley Value-Added Agriculture IPZ supports and promotes innovative approaches within the agricultural industry that combine research and technology resulting in new jobs, industries and an overall robust economy centered around the Valley's rich agricultural resources.

Goals

- Facilitate the start-up of successful new enterprises in the Skagit Valley, capitalizing on research conducted at the Washington State University Research Center
- Encourage the development of new high-margin, value-added agribusiness products stemming from the research focus at the Washington State University Research Center
- Create new private sector jobs based on the production, processing, packaging, marketing and distribution of regional agricultural products
- Recruit new innovative partners from research institutions and start-up companies utilizing emerging technology
- Increase the net profit per acre as a result of partnerships between the research sector and agribusiness
- Support succession planning to sustain generational farms and ensure agriculture survives and thrives in Skagit County
- Promote continued collaboration and networking opportunities among research and private sector partners
- Collaborate with Skagit Valley College to ensure well trained, qualified workforce
- Enhance the potential of the IPZ through federal and/or state grant funding opportunities

Leadership/Governance

Management Team and Roles

The management team for the Skagit Valley Value-Added Agriculture IPZ includes a representative from each of the founding partners. The Skagit Valley IPZ effort is a natural fit with the missions of each of these organizations. This highly collaborative group shares a common goal for the survival and advancement of region's agricultural community and the ongoing economic growth and development of Skagit County.

Economic Development Association of Skagit County (EDASC)

Don Wick, Executive Director, serves as the zone administrator and enhances the networking capabilities of the IPZ with his decades of service at EDASC.

Washington State University Mount Vernon Research Center

Dr. Stephen Jones, Director, provides the link to the commercially valuable research for innovative farming practices and uses for agricultural products.

Knutzen Farms

Kraig Knutzen, owner/partner, assists with the links between agribusiness and commercially viable research.

Skagit Valley College

Dr. Thomas Keegan, President, represents the workforce training sector and contributes to the team's ability to match skilled workers with companies as they grow.

Port of Skagit

Patsy Martin, Executive Director, provides access to Bayview Business Park and potential startup space for new ventures, which aligns with the Port's mission of generating jobs at, or above, living wage.

Sakuma Brothers Farms

Steven Sakuma, Chairman of the Board, contributes his expertise in managing a vertically integrated, multi-generational company of farmers, processors, wholesale marketers and retail marketers.

City of Mount Vernon

Jana Hanson, Community and Economic Development Director, provides the continued focus of county-wide collaboration to strengthen the region's economy through the City's strategic economic development plan.

Skagit Valley Malting

Wayne Carpenter, company co-founder, provides the team with experience in partnering with WSU to create a value-added product as a commercially viable startup company currently negotiating local, regional, national and international contracts for malted barley and other grains.

Skagit County

Tim Holloran, County Administrator, assists the team with his leadership skills, background in county policies and vision for the economic potential of the region.

Northwest Agriculture Business Center (NABC)

David Bauermeister, Executive Director, contributes to the team with his entrepreneurial background and relationship capital among area farmers and agricultural agencies.

Anticipated partner involvement and investment

The Skagit Valley Value-Added Agriculture IPZ focuses on merging agricultural and high tech sectors in the region. The vision is to find, develop, match and support value-added agricultural products stemming from researchers at the WSU Research Center with innovators in the private sector. Partners intend to accomplish this vision through ongoing cultivation of productive working relationships and the connection of regional assets.

Partners shall participate in monthly meetings to ensure a successful foundation for the IPZ. The following partners have committed to serving in the provisional leadership roles for the team until an election in January of 2014:

Chair - Dr. Stephen Jones, WSU Research Center
Set agendas and run meetings

Vice-chair - Steve Sakuma, Sakuma Brothers Farms
Fill-in for Chair as needed

Secretary - Don Wick, EDASC
Keep meeting notes, send out agendas, etc.

Treasurer - Patsy Martin, Port of Skagit
Manage any monies obtained by the IPZ

Community Outreach/Marketing Chair - Jana Hanson, City of Mount Vernon
Track media coverage, produce press releases and coordinate marketing for the IPZ

Monthly meetings will adhere to the following general format:

- Review previous meeting notes
- Report on any media coverage for the zone
- Research update from WSU Research Center
- Discuss potential for Ag/technology projects/businesses/jobs
- Identify action steps to implement selected ideas
- Compile data collection needs and methods based on action items
- Other

Sustainability Plan (over the next four years)

To initiate the IPZ endeavor, partners committed cash (\$14,000) and in-kind hours to complete the application process for IPZ designation. As a future financing plan, the partners intend to utilize in-kind contributions of time for IPZ activities, including reporting. The goal of the IPZ is not to create an administrative position; the desired job creation is in the private sector, not government. If the need arises for paid staffing, the partners are open to an additional cash contribution or seeking alternative funding sources. Each of the partners is committed to collaborating and leveraging their individual strengths to advance the efforts of the IPZ over the next four years.

To achieve sustainability, the management team created a phased plan for increasing the collaboration, networking and researching linkages among the partners to create the emphasis necessary to carry the innovation partnership zone into the future. In the event of market/technology changes, the management team will continue to let the research guide the innovative opportunities for the zone.

The management team plans to implement the following phased plan over the first four years:

Phase I – Identify WSU research needs and opportunities for commercialization potential

Phase II – Inventory innovators/farmers willing to partner on commercialized products

Phase III – Connect WSU researchers with identified innovators/farmers to facilitate the development of business plans for commercialized products

Phase IV – Develop/adapt workforce training to meet the needs of the industry

Phase V – Market the innovative value-added agriculture products and technologies coming from the Skagit Valley

Phase VI – Evaluate the successes/failures of the first four years and develop the next steps

Strengths of the IPZ

The Skagit Valley Value-Added Agriculture IPZ possesses numerous strengths. Within its borders lies the Washington State University Research Center at Mount Vernon, a high-concentration of innovators, Skagit Valley College, and an agricultural-based infrastructure that has supported regional farming for more than 150 years.

Technology

The research agenda of the WSU Research Center is directed toward the small and mid-sized farms of Skagit County and western Washington. The Center is committed to the exploration and creation of new agricultural products and systems that will be economically viable in the changing world of agriculture. The Center houses several, well established research programs that include: Entomology, Plant Breeding and Grains, Vegetable Horticulture, Vegetable Pathology, Vegetable Seed Pathology and Weed Science. Current Entomology research projects include insect and mite pest management in small fruits, nurseries and greenhouses. The Plant Breeding program concentrates on crops fitting into diverse annual and perennial rotations, and it utilizes farmer participatory approaches and other innovative methods to improve crops. The Vegetable Horticulture program focuses on developing, testing and promoting high value, organic and sustainable vegetable production systems. WSU's Vegetable Pathology program investigates the biology and management of fungal and oomycete diseases of fresh and processing vegetables, as well as vegetable disease diagnosis and control recommendations. The Vegetable Seed Pathology program focuses on diseases affecting small-seeded vegetable seed crops grown in the Pacific Northwest. Approximately 90 countries import vegetable seed from this region. The program's research and outreach contributes to a sustainable and secure food supply worldwide. The Weed Science program focuses on providing management solutions for problem weeds in western Washington. Additionally, special projects are underway to better understand crop tunnels and plastic mulch, the Spotted Wing Drosophila. There is also a project focused on coordinating a Pacific Northwest Vegetable Extension Group.

One pressing challenge for Skagit County will be helping the agribusiness community meet the new requirements imposed by the Food Safety Modernization Act (FSMA). The FSMA is the first major update of federal food safety laws since 1938, giving the Food and Drug Administration (FDA) broad new powers to prevent food safety problems and to detect and respond to food safety issues. FSMA includes new regulations of practices on produce farms and in facilities that process food. The food traceability requirements of FSMA, tracking food products from the producer to consumer, will require innovation, collaboration and information sharing in order to maintain a competitive role in food markets.

Human capital

The Skagit Valley Value-Added Agriculture IPZ is located in the “innovation corridor” between Vancouver, B.C., and Portland, Ore. The result of this concentration of innovators has been a series of new companies producing value-added products. Three of the most recent value-added agricultural products developed in Skagit County include:

- Provitro Biosciences, a Pendrell Company (Boo Shoot), developed a rapid growing bamboo system used to produce a fiber which is easy to reproduce compared to traditional timber supplies;
- Farm Power Northwest developed a dairy digester to produce electricity from dairy waste;
- Skagit Valley Malting developed specialty equipment to malt barley for the craft beer and spirits industry.

The IPZ also has the human capital necessary to supply a talented workforce for these newly created businesses. Skagit Valley College provides hands-on training in 25 professional and technical programs, offering two-year Associate in Technical Arts (ATA) degrees, as well as one-year and two-year certificates. These training areas include: business management, workforce training, environmental conservation and environmental sustainable agriculture. Each of these fields relate closely to the human capital needs of the IPZ. Skagit Valley College partners with local businesses and industry leaders to ensure the relevance and applicability of each program relative to state and industry standards. Through these working relationships the college identifies and strives to provide the skills that employers in the surrounding communities seek in potential employees.

As the workforce training entity, Skagit Valley College’s Environmental Sustainable Agriculture Program will be responsible for providing a large portion of the human capital needed by the zone. The program focuses on foundational skills in sustainable agriculture, food systems, natural resource management and conservation through the following program options:

- Sustainable Agriculture and Food Systems Certificate
- Sustainable Agriculture Fundamentals Microcertificate
- Greenhouse-Nursery Operations Microcertificate
- Sustainable Culinary Practices Microcertificate

Upon completion of this program, students will have fundamental, agriculture-related knowledge and skills to fill the IPZs human capital needs in farm management, greenhouse production, plant propagation or food systems (farm to table).

Infrastructure

The agricultural industry is built on a complex infrastructure of research, planning, irrigation, crop inputs, equipment, suppliers and markets.

Approximately 90,000 acres in Skagit County are zoned for agricultural uses. The feasibility and efficiency of commercial agriculture relies on large, unencumbered acreage. Skagit County farmers, in the early 1970’s, were the first in Washington to create 40-acre minimum lot sizes. This fundamental planning policy set the stage for subsequent farmland protection efforts pursued by the agricultural community. Skagit County farmers recognized early on the need to have strict land use laws and zoning, balanced with programs to sell and transfer development

rights, in order to protect their land base. The County's policies and regulations reflect this priority.

The riparian and coastal geography of Skagit County's agriculture, combined with the rainfall and stream flow patterns, put high importance on drainage and irrigation infrastructure and the policies and relations impacting this complex system. The extensive network includes 147 miles of levees and dikes, with 380 miles of drainage ditches and approximately 130 tide and flood gates.² In 2010, the valley's drainage districts, under the leadership of the Western Washington Agriculture Association, entered into a historic agreement known as the Tidegate Fish Initiative (TFI) to permit the maintenance of tidegates in conjunction with habitat restoration activities for the Skagit Chinook. Groups such as Skagitonians to Preserve Farmland continue to advocate for policies and regulations that positively impact the infrastructure of the agricultural sector.

An infrastructure element important to the success of this collaborative venture is the ability to easily connect to the digital world. Led by the City of Mount Vernon, Skagit County offers high speed, broadband fiber optic internet connectivity. This fiber optic network makes it possible for Skagit County researchers, growers, value-added producers and educators to easily connect locally and globally with peers, partners and prospective customers.

Critical infrastructure for the region also includes the ability to process locally grown products and to purchase crop inputs and machinery. Two local processing companies serve the area, securing raw products from Skagit County growers. The North Sound Food Hub provides another distribution option for local producers. Businesses, institutions and buying groups are able to order fresh, seasonal produce, meat and dairy products online through the Hub. Farms bring their orders to the Hub, where local buyers can pick up orders from multiple farms at one location. In addition, the Hub delivers orders to Seattle customers. The Valley is also home to two major Ag-supply dealers: Skagit Farmers Supply and Wilbur-Ellis.

Long-Term Market Growth for the Technology

Solving the national and global need for sustainable food sources is one of the greatest challenges of this century. The future of agriculture will have dramatic effects on humanity and the global environment. As identified by the Skagitonians to Preserve Farmland, there are four key elements to the long term viability of agriculture in this region: farmland protection; economic viability; agricultural infrastructure and community support. Skagit County has each of these elements in place, making it an ideal location to sustain long-term growth resulting from research into value-added agriculture products.

Established in 1996 by the Skagit County Commissioners, the County's Farmland Legacy Program assesses a 6-1/4% per \$1,000 of property valuation Conservation Futures tax on all properties in the County. These monies are leveraged with Federal, State and private donor funds and distributed via a rigorous evaluation process to worthy farmland preservation projects. Through this program, Skagit farmers are compensated for the removal of the right to develop their farm and to maintain its "highest and best (agricultural) use".

² "Agricultural Drainage Fact Sheet" by Skagitonians to Preserve Farmland.

Through the engagement of the farming community, cities, non-profits and citizen advocates, the Farmland Legacy Program removed development pressure on valuable fertile grounds and now protects 7,000 acres or 6% of the County's farming land base in perpetuity. This success involved government collaboration and private donors for financing, along with the development of a viable, strong farming community vision. Farmers involved in the program benefit from being paid for their development rights and the thriving agricultural community.

The political leaders, entrepreneurs, farmers and citizens working together to ensure the strength and well-being of the rural agricultural economy in Skagit County are key driving forces for the agriculture industry. They ensure the viability of the region's food system through farmland protection programs, strong agricultural infrastructure and community support.

Setting land and water aside for farming alone cannot guarantee that farms in Skagit County will yield enough income for farmers to continue using their land for farming. Emerging opportunities for farmers to increase their income come from the value-added products and the industry's responsiveness to market forces. The research performed at the WSU Research Center provides prospects for new crops, technologies and farming practices with the potential to maximize the net profit per acre.

Entrepreneurial Climate in the Zone

Skagit County maintains one of the largest and most diverse agricultural communities west of the Cascade Mountains. Agriculture is the number one industry in the county. Local farmers produce about \$300 million worth of crops, livestock and dairy products on approximately 100,000 acres of land. There is a strong organically grown entrepreneurial spirit. Eagerness exists among the Ag community to meet, share challenges and successes, and consider new opportunities. This is evidenced by the networking opportunities and programs already in place. There are numerous organizations, businesses and agencies serving Skagit County Agriculture (Appendix A).

WSU Field Days

Skagit Valley farmers work to increase their competitiveness by lowering costs and increasing efficiency. A common strategy to achieve this outcome involves farm-specific decisions to adopt seeds, breeds and farming methods which increase output and lower costs. These opportunities often stem from research provided by the WSU Research Center at Mount Vernon. The Research Center hosts field days throughout the year for local producers to tour the research fields and discuss production. The Small Grain Field Day held in June 2013 focused on the production of wheat, oats, rye and barley in Western Washington for food, feed and malt. In attendance were farmers, millers, bakers, maltsters, distillers and brewers.

Monthly AG Leaders Meetings

In addition to hosting field days, the WSU Research Center gathers local agriculture leaders for a breakfast meeting on the first Friday of each month.

Future AG Summit

Skagit County Commissioners have tasked EDASC to organize an Ag Summit for the region. The management team for the IPZ sees this as an opportunity to promote and expand the partnerships of the IPZ.

Skagitonians to Preserve Farmland (SPF)

More land in agricultural production within Skagit County increases the overall financial viability of the agricultural sector. As its mission states, “Skagitonians to Preserve Farmland exists to ensure the economic viability of Skagit County agriculture and its required infrastructure through farmland protection, advocacy, research education and public awareness.” This group supports the existing agribusinesses and the entrepreneurial climate for the new ones.

Additionally, the **Northwest Agriculture Business Center (NABC)** and the **Economic Development Association of Skagit County (EDASC)** provide infrastructure to support entrepreneurs. Both have strong entrepreneurial support systems that offer business development services to start-up companies. These programs successfully assist new businesses with planning, product development, marketing/sales assistance, organizational development, infrastructure development, office resources and access to capital.

Several real life examples of the entrepreneurial spirit that exists in the Skagit Valley can be found in the most recent innovative, value-added agriculture businesses: Provitro Biosciences, a Pendrell Company (Boo Shoot); Farm Power Northwest; and Skagit Valley Malting. The IPZ will enhance the existing entrepreneurial climate with the formal cultivation of the research opportunities into commercialization.

Commercialization Plan

The role of the IPZ in the commercialization process is to help determine the most promising technologies, help identify the commercialization pathway (new business formation or licensing and transfer to existing companies), and to organize and stimulate collaboration. Dependent upon the research outcomes, a commercialization plan may vary from company to company. The intent of the IPZ is to improve commercial opportunities through a supportive forum which connects researchers, individual farmers and entrepreneurs. The IPZ will assist companies with early stages of business plan development, industry support and access to facilities, infrastructure, capital and other resources. The management team consists of a talented group of individuals and entities with diverse backgrounds and significant potential to support commercial opportunities. The research will guide these prospects.

Plan for Measuring and Reporting

Consistent with statutory requirements, the Zone Administrator, EDASC, will collect and report annual performance criteria.

GOAL	REPORTING
Facilitate the start-up of successful new enterprises in the Skagit Valley, capitalizing on research conducted at the Washington State University Research Center	Track start-ups
Encourage the development of new high-margin, value-added agribusiness products stemming from the research focus at the Washington State University Research Center	Track new products
Create new private sector jobs based on the production, processing, packaging, marketing and distribution of regional agricultural products	Track new jobs
Recruit new innovative partners from research institutions and start-up companies utilizing emerging technology	Track new IPZ partners
Increase the net profit per acre as a result of partnerships between the research sector and agribusiness	Track net profit per acre before partnerships and after
Support succession planning to sustain generational farms and ensure agriculture survives and thrives in Skagit County	Track activities initiated or supported by the IPZ relative to succession planning
Promote continued collaboration and networking opportunities among research and private sector partners	Track attendance at monthly meetings and other opportunities for networking as initiated or supported by the IPZ
Collaborate with Skagit Valley College to ensure a well-trained, qualified workforce	Track existence of, and enrollment in, relevant Skagit Valley College programs / courses.
Enhance the potential of the IPZ through federal and/or state grant funding opportunities	Track opportunities for grant funding as appropriate

Reporting will be centered on the research conducted at the WSU Research Center and the team's ability to connect the right entrepreneurs with the right opportunities for commercialization. This part of the annual report will be qualitative in nature, providing quantitative results when appropriate.

APPENDIX A

Organizations, Businesses and Agencies Serving Skagit County Agriculture

Compiled by the Washington State University Skagit County Extension in its
“2012 Skagit County Agriculture Statistics”

Ag Tech Services	WA Lettuce and Vegetable Commission
Agrilink Foods	WA Red Raspberry Commission
Alf Christianson Seed Company	WA Seed Potato Commission
Barnett Implement Company	WA State Dairy Federation
Brim Tractor	WA State Potato Commission
Cascadian Farms	WA Strawberry Commission
Cucumber Industry Advisory Committee	Western WA Agricultural Association
D & D Farms	Western WA Fruit Research Foundation
Farm Service Administration	Western WA Small Seed Advisory Committee
Farmers Equipment Co.	Wilbur Ellis Company
Natural Resources Conservation Service	WSU Mount Vernon Northwestern Washington Research & Extension Center
North Washington Implement	WSU Skagit County Extension
NW Ag Business Center	
NW Agricultural Research Foundation	
NW Bulb Growers Association	
NW Food Processors Association	
Puget Sound See Growers Association	
Rijk Zwaan Seed	
Sakuma Brothers Farms	
SBF Processing	
Schafer Agriculture Services	
Skagit Conservation District	
Skagit County Cattlemen’s Association	
Skagit County Dairy Federation	
Skagit County Farm Bureau	
Skagit County Farmland Legacy Program	
Skagit County Horticultural Pest and Disease Board	
Skagit Dairy Women	
Skagit Farmers Supply	
Skagit Seed Services	
Skagit Valley Red Potatoes Growers Association	
Skagitonians to Preserve Farmland	
Small Fruit Advisory Committee	
Syngenta Seeds, Inc.	
USDA Natural Resources Conservation Service	
USDA Farm Service Agency	
Valley Pride Sales	
WA Blueberry Commission	