



A CHARACTERIZATION OF PUGET SOUND AGRICULTURE

A REPORT TO THE
PUGET SOUND SHARED STRATEGY

Dennis Canty and Helena Wiley
Evergreen Funding Consultants
Seattle, Washington

March, 2004

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OVERVIEW

The agricultural sector in Puget Sound is facing critical challenges and an uncertain future. While there are some farms that remain profitable, there are many that are just getting by and some that are likely to go out of business soon. Some types of farms, most notably dairy farms, are in dire straits. The reasons for this downturn are a mix of national, regional, and local factors, with some trends mimicking the downturn in small farms nationwide and others reflecting unique circumstances in this region. This report aims to identify the economic trends affecting Puget Sound agriculture, examine beneficial trends in the economic health of farming in the region, and identify ways to strengthen the relationship between farming and salmon recovery.

This report has been commissioned by the Shared Strategy for Puget Sound, a nonprofit organization that is facilitating the development of a regional recovery plan for Puget Sound Chinook, Bull Trout, and Hood Canal summer chum salmon, recent additions to Endangered Species Act listings of threatened species.

Agricultural issues are of interest to the participants in the Shared Strategy, because large segments of many salmon-bearing rivers in the region are bordered by agricultural land. Farmers can be some of the best stewards of the land for the future of agriculture and the health of the environment. The quality of farm practices can have a significant impact on the fate of salmon in these rivers. A better understanding of the economic circumstances affecting Puget Sound farms will help the Shared Strategy leaders promote strategies that encourage the future of agriculture and enhance



opportunities to restore streamside habitat, prevent pollution, and conserve water on farms along salmon-bearing rivers, practices that can result in immediate and long-term benefits to salmon.

The Shared Strategy supports the protection of farmland from conversion to other uses. Further loss of farmland will jeopardize the economic future of remaining farmers and foreclose options for a partnership between farming and salmon recovery that could serve both interests successfully.

Enhancing environmental practices on farms, restoring salmon habitat, and slowing the conversion of farms to urban uses can best be accomplished by building on the existing base of programs that encourage voluntary cooperation of Puget Sound farmers in these activities. Compelling restoration through regulations has been unsuccessful in achieving significant benefits for salmon and has been divisive. Incentives that take into account the motivations and constraints of farmers while promoting restoration and rewarding increased environmentally responsible practices beyond current regulations appears to be a promising approach.

This is the first of three publications that the Shared Strategy is preparing on farming in the region. The second addresses trends at the county level in the 12 counties in the Puget Sound region and will be released in the spring of 2004. The third, to be released in late summer, is an analysis of incentive programs that may be useful in promoting restoration and stewardship practices and addressing conversion issues. For more information on this series, contact Shared Strategy staff at (206) 447-3336.



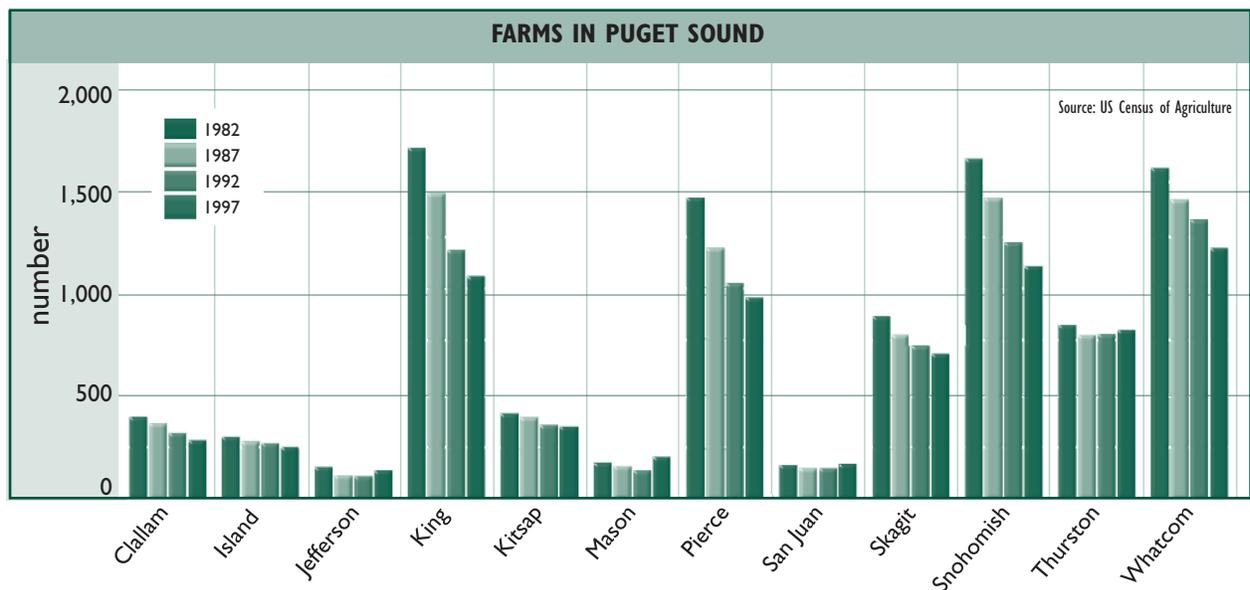
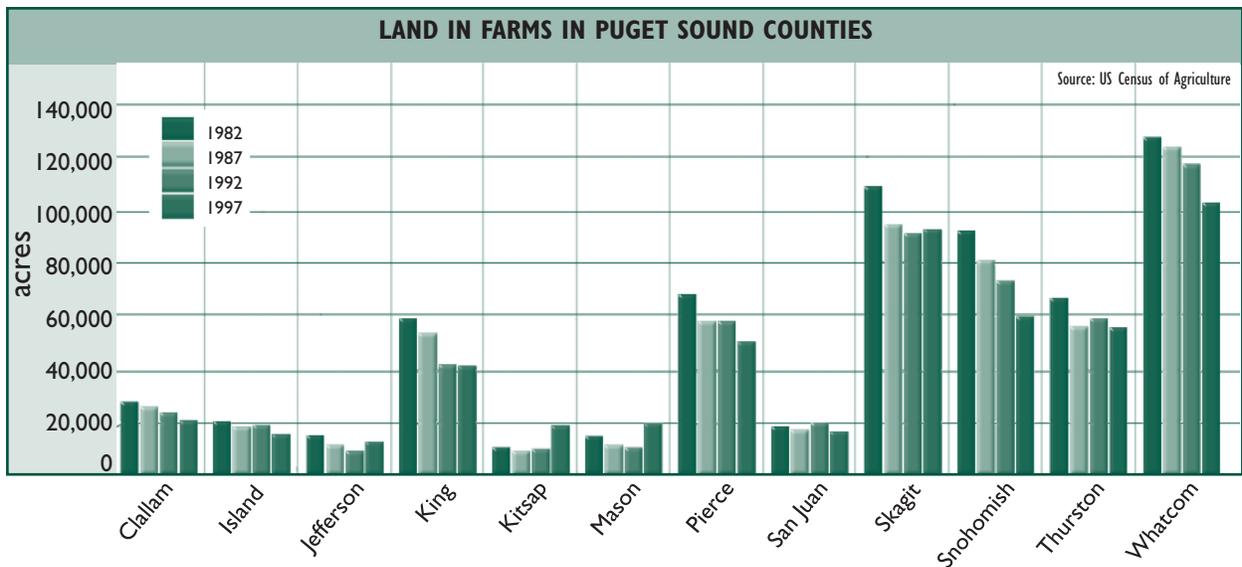
IMPORTANT FACTS ABOUT PUGET SOUND AGRICULTURE



Agriculture is a major industry in Washington State. In 2001, the value of Washington's food and agricultural (or farmgate) production (including food processing) was \$5.6 billion and ranked 12th in the nation. The value of crops at \$3.2 billion placed the state in the 8th ranked position. Livestock and specialty products totaled \$1.5 billion and ranked 23rd. Taken as a whole, agricultural production, processing, distribution, and marketing account for approximately \$29 billion of the state's total economy, or about 20 percent of the gross state productionⁱ. The agricultural industry is the state's largest employer, with more than 87,000 people working directly on farms or in the processing, distribution, and marketing of farm productsⁱⁱ.

Washington's agricultural industry is quite different east and west of the Cascade Mountains. The majority of agricultural jobs are on the east side, which has larger farms producing wheat and barley, potatoes, fruit, and vegetables. In Puget Sound and the rest of the west side of the state, farms tend to be small. Dairy products, poultry, and berries are the primary products, and there are more jobs in food processing.

While Washington State leads the nation in production of several farm products, including apples, hops, lentils, and sweet cherries, the only Puget Sound crops that are nationally prominent are red raspberries, flower bulbs, vegetable seeds, and dairy. Production from Whatcom and Skagit counties is sufficient to place Washington State first in production of red raspberries, growing 78% of national productionⁱⁱⁱ. Skagit County leads the nation in production of tulip, daffodil, and iris bulbs and produces nearly 50% of the world's spinach, beet and Brussels sprout seeds^{iv}, while Whatcom County is ranked 1st in the state and 12th in the nation for dairy production^v.



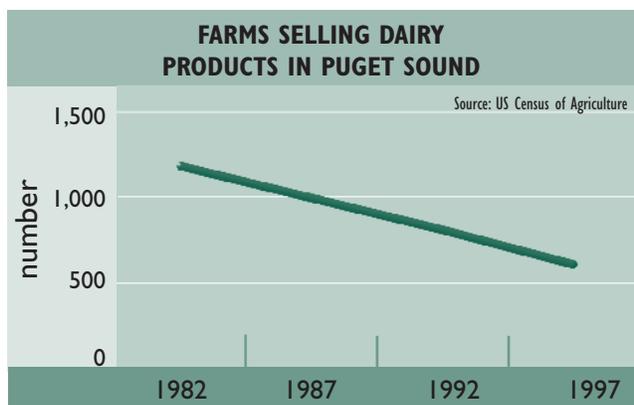
Many statistics on Puget Sound farming are not encouraging. More than 20% of the farmland in the region, greater than 100,000 acres, was lost to other uses in the fifteen years between 1982 and 1997^{vi}. The loss of farmland was particularly acute in the mid-Sound sub-region. King and Snohomish counties lost 30% of their farmlands to other uses in this period, with a total conversion of 32,000 acres in Snohomish County.

The number of farms in the Puget Sound region has also decreased by 25% in the same period^{vii}. Again, this is particularly acute in the central Puget Sound area, where King, Snohomish, and Pierce counties have each lost between 31% and 36% of their farms. Whatcom County has also been hard hit in loss of farms, experiencing a decrease of 24% in this 15-year period.

SIZE AND NUMBER OF PUGET SOUND FARMS				
SIZE OF FARMS	1982	1997	CHANGE IN NUMBER	PERCENT CHANGE
0-9 acres	2342	1960	-382	-16
10-49 acres	4497	3268	-1229	-27
50-179 acres	2242	1570	-672	-30
180-499 acres	662	486	-176	-27
500-999 acres	108	111	3	3
1000+ acres	28	39	11	39

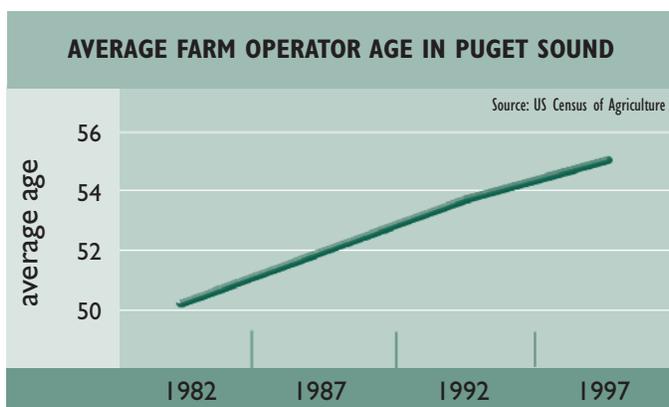
Source: US Census of Agriculture

Smaller farms have declined most dramatically. As the table indicates, more than 1,500 farms of less than 50 acres were either converted to non-farm uses or consolidated into larger farms in the 15-year period^{viii}.

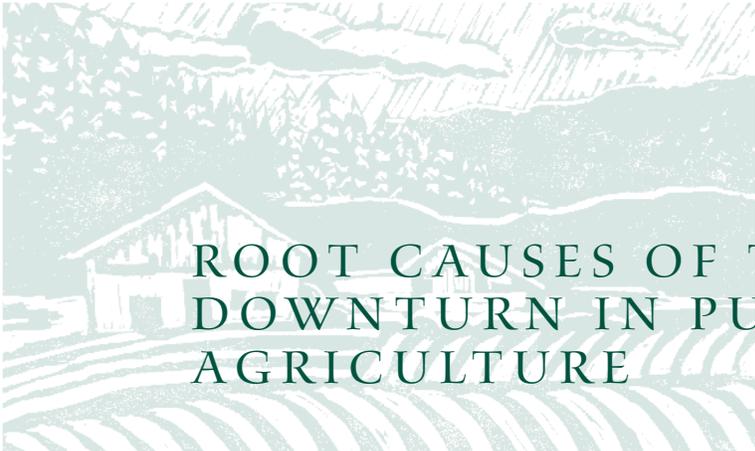


Dairy farms have disappeared at a very rapid rate. Puget Sound has lost 50% of dairy operations in the 15-year period^{ix}.

Processing facilities are also on the decline. According to a long-time agriculturalist in the region, there were nine commercial processors in the North Sound region in the late 1970's; today there is one^x. The National Frozen Foods plant in Skagit County closed in 2000, resulting in a marked loss in green pea production in the Skagit valley. Vitamilk's long-time Seattle plant closed in 2003.



Even the farmers themselves are changing. The average age of Puget Sound farmers has increased by 4.8 years in the study period, with an average age of 55 in 1997^{xi}. This indicates that there are fewer young people entering the industry as existing farmers age.



ROOT CAUSES OF THE DOWNTURN IN PUGET SOUND AGRICULTURE

Many farming activities in the region have become unprofitable. Prices for Puget Sound farm products are subject to national and international market forces, particularly competition from larger domestic and offshore suppliers and consolidation in grocers. Wal-Mart is currently the number one food retailer in the United States, and 40% of the retail grocery business is controlled by just five firms^{xii}. The consolidation in the grocery business has allowed the major players to have an inordinate impact on the price paid for farm products nationwide as they demand low prices on high volumes from suppliers. If low prices cannot be found among U.S. suppliers, offshore products are often a cheaper option.

The downward trend in wholesale prices is well illustrated by milk prices. According to Washington State Dairy Federation staff, September 11th was the most recent reason behind low milk prices. With less people dining out, the demand for milk-based products declined. Instead of the expected 3% growth, the dairy industry only saw a 1% growth. This overproduction combined with inexpensive imported milk from Europe and New Zealand pushed prices down. Prices have sunk from about \$15 per hundredweight of milk prior to September 11th, to \$10.13 in March 2002, roughly the same as paid to the farmer in 1977 without discounting for inflation. Dairy operators lost \$1 a day per cow in 2002 because of low milk prices and the continued production of milk by their herds^{xiii}.

One farmer notes that twenty-five years ago, he got ten cents a pound for his acorn squash; today's equivalent price factoring in inflation should be twenty-eight cents; he currently gets thirteen cents a pound^{xiv}.

At the same time, production costs have increased, including the costs of fuels, pesticides, equipment, and labor. Gasoline prices increased by 34% between 1998 and 2000^{xv}. Washington currently has one of the highest minimum wages in the country, which affects farmers who employ farm laborers. Land prices have also increased. The loss of infrastructure, as processors and other farm support companies leave the region, increases farm expenses like transportation and storage.



One signal of unprofitable conditions in the industry is that many farmers rely on off-farm jobs for the majority of their income. In 1997, 56% of farmers considered farming a secondary occupation. Skagit and Whatcom counties had the lowest percentage of farmers in this category^{xvi}.

There is also increased competition for the land base. The increasing value of agricultural land for residential home sites, compounded by the flat or declining values of farmland, has led to widespread conversion of farms to non-farm uses, particularly in the urban fringes. The combined Puget Sound/Willamette Valley area is considered the 5th most highly threatened agricultural area in the country due to the pressures to develop farmland to urban uses^{xvii}.

In Washington State as a whole, more than 1,000,000 acres of farmland was converted to non-farm uses between 1982 and 1997, with an average loss of 100,000 acres annually between 1992 and 1997^{xviii}.

Development potential is reflected in land values as well. One farm expert pointed out the difference in price between the rural Lynden area (Whatcom County), where land sells for approximately \$4,000-5,000/acre, compared with King County land that can go for \$85,000/per acre^{xix}. A 1996 report cited agricultural land in King County ranging from \$3,500/acre to over \$100,000/acre^{xx}. Increasing land values are detrimental to farmers in several ways. First, on lands not enrolled in the current use taxation through Washington State's Open Space Taxation Act, increasing land values trigger higher property taxes, a major cost factor to farmers remaining in business in developing areas. Second, high land prices prevent farmers from expanding their farms or creating new farmland. Third, high land values are often pivotal in the decision by farmers and their heirs to sell farms to land developers and leave the industry.

The conversion of farmland to non-farm uses tends to accelerate over time in the suburban fringes. As subdivisions crop up in farm areas, the remaining farmers face added pressures. New suburban neighbors often complain about noise, dust, and odors from nearby farms as well as slow-moving tractors on highways. As farm communities are fragmented in urban fringe areas, these nuisance complaints increase. The Right to Farm Act prevents lawsuits from being filed against farmers facing nuisance complaints, but tensions in fringe areas contribute to the wearing down of farmers who sometimes feel unwanted in urbanizing areas.

In addition, the loss of farms erodes the "critical mass" needed to support processors and other farm service businesses. As local processors shut down, added transportation and processing costs intensify stress on farms that are no longer surrounded and supported by a strong agricultural community. This perpetuates an increasingly steep downward spiral in farming on the urban fringe.

Regulations contribute to the problems. A variety of labor, health, and environmental regulations contribute to the problems facing the agricultural economy of the Puget Sound region. While farm activities have been exempt from some regulations, other regulations have added to costs and therefore contributed to uncertain or unprofitable conditions. They are probably manageable costs for the more profitable sub-sectors of the industry but are definitely making it more difficult for the rest.

Health regulations, while generally regarded as necessary to protect consumer health, often create barriers to farmers who wish to process and direct market their own products. Processed foods including jams, pies, cheese, and salad mixes, require commercial kitchen facilities that are expensive investments for small scale producers.

Environmental and labor regulations are of particular concern to farmers. Existing agricultural activities are exempt from some regulations including parts of the Shoreline Management Act. However, permitting for construction projects on the farm or changes to waterways by diking districts is expensive and time-consuming. Water quality regulations, including repair to water storage structures, discharges, and diversions all require permitting from a variety of agencies. Some dairies were installing nutrient management equipment and facilities before any requirement was made official by the Dairy Nutrient Management Act. Though some financial assistance was available for nutrient management, many farms faced increased expenses, new constraints on their operations, and time-consuming record keeping that have affected how dairy farmers are managed and what flexibility they have. Regarding minimum wage regulations, one farmer explained that he no longer employs pickers to pick his strawberries, having converted to a U-Pick operation, and another farmer noted that she gets paid less than the laborers she pays to work on her farm.

Costs of existing regulations take the form not only of dollars, but time away from the farm to file permits, delays in farm activities due to wait time on agency approvals, and sometimes constraints on future changes to the land. Farmers are reportedly frustrated by the loss of individual discretion and creativity to solve problems, as well as the changing and sometimes seemingly duplicative nature of some regulations. Where fees and new costs are the outcome of regulations, the farm sector often cannot pass on the costs associated with regulations to consumers due to national and international price setting for commodities, and therefore can face decreases in income.

Of equal or perhaps greater concern is the unknown impact of future regulations. There is widespread speculation in farm communities about additional requirements of the Growth Management Act and the Endangered Species Act. As Critical Areas Ordinances are debated throughout

the region, farmers are reportedly concerned about whether land will be taken out of production along riparian areas without compensation, who will hold responsibility for managing buffers, and how buffers will affect adjoining farmland. While alternatives to buffers are also being debated, uncertainty remains. Uncertainty results in farmers being less willing to invest in the future or encourage their children to continue farming. With an unclear future, efficiencies and expansions of current operations may not be good investments and conversion of farmland becomes an increasingly tempting option.



HOPE FOR THE FUTURE OF PUGET SOUND AGRICULTURE

While there are major fundamental problems facing agriculture in the Puget Sound region, there are also reasons for optimism about the future of the industry. Some parts of the region continue to support farms of sufficient size, number, and products to make them profitable. In other areas, an expanding group of farmers are looking to creative marketing and specialty crops to raise farm incomes.

Some farm areas and types remain profitable. The viability of farming varies greatly across the Puget Sound region with the northern counties — Skagit and Whatcom — continuing to lead the way in profitability of farm activities. The principal reasons for the continued health of the farm economy in these areas are the large and mostly intact land base devoted to agriculture, the great diversity in crops grown, and concerted efforts by local farmers and governments to keep the industry viable.

There are more than 150,000 acres in crops and 60,000 acres in hay in Whatcom and Skagit counties, and the large blocks of intact farmland prevent the encroachment and nuisance problems that are found in more urban areas in the region. The large intact farm communities also support three major agricultural suppliers in the Skagit valley (Skagit Farmers Supply, Wilbur-Ellis, and UAP), ensuring that supplies are readily available^{xxi}. The health of agriculture in this area is also the result of the diversity of crops — more than 100 crops are grown in the Skagit valley alone — and by the high values of some of the crops, including berries in Whatcom county and flower bulbs and seeds in the Skagit valley.

Protecting this thriving agricultural economy has been a major focus of government agencies and community organizations. Both Skagit and Whatcom counties have put a strong emphasis on agricultural preservation in their land use plans through organizations like the Skagit County Agricultural Advisory Board and the Whatcom County Agricultural Advisory Commission to the County Council. The Conservation Districts are among the strongest in the region, and there is an active WSU Research and Extension Unit in Mount Vernon. There are also strong networks among farmers

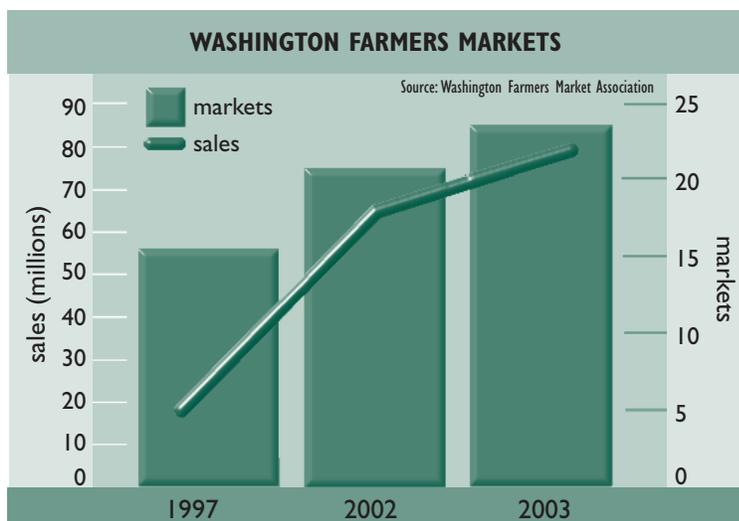


and farm supporters through organizations such as the Darigold Cooperative, Skagitonians to Preserve Farmland, the Farm Bureau, the Washington State Dairy Federation, and the Western Washington Agriculture Association.

Many farmers are experimenting with direct marketing to boost prices for farm products. In conventional markets, particularly those driven by the biggest grocery chains, the farmer receives very little of the market price. For instance, recently recorded wholesale milk prices paid to the farmer are \$13.30 per hundredweight, the weight of approximately 8 gallons of milk, or a per gallon price of \$1.66. Along the way from farmer to processor to distributor to store and finally to consumer, the price of that gallon of milk increases to the \$3.00+ retail price^{xxii}. The attraction of direct marketing is that it cuts out distribution and processing costs between the producer and the consumer, allowing more of the retail price of farm products to be passed to the producer.

There are many forms of direct marketing: farmers markets, internet sales, U-Pick sales, direct supply to restaurants and cafeterias, and community supported agriculture (CSA), a system in which consumers pay farmers directly for a share of the farm's harvest. The use of these alternative marketing methods has increased significantly in recent years. As of January 2003, 41 CSAs were in operation around Puget Sound, and selling \$1.9 million worth of products directly to consumers^{xxiii}. The Pike Place Market Basket CSA, which piloted in 1997, has seen 10-50% growth every year since the inception of the program, and currently provides 750 shares from 40 farmers^{xxiv}. Many farmers involved in CSA or direct farm sales have to turn customers away because they cannot meet the high demand.

As the graph indicates, farmers markets have increased in number and sales around the state. A year-round farmers market is currently being built in the Puyallup valley. Five new farmers market locations were added in



the Puget Sound region in 2003. The potential for institutional and restaurant contracts is growing as well. Recent research shows that the hospitality industry in King County spends \$54 million annually on agricultural products, but only buys \$2 million of it locally^{xxv}, representing an existing market in which local producers could compete more actively.

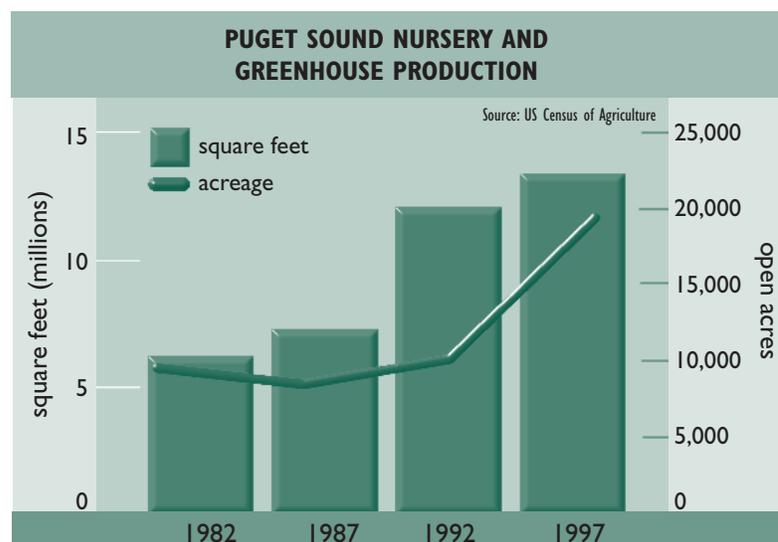
The trend towards direct marketing is being actively supported by government agencies and a variety of organizations. The WSDA Small Farm

and Direct Marketing Program was created by the State Legislature solely to nurture economic development skills and direct marketing channels for Washington farms. Many publications discuss on-farm processing, gaining access to farmers markets, and advertising products as local. The “From the Heart of Washington” advertising campaign was funded in 2001 by WSDA. “Puget Sound Fresh” is another advertising and marketing campaign started in 1999 to highlight crops grown in the Puget Sound region. The Chefs Collaborative is a national organization of chefs established in 1999 to encourage local restaurants to buy directly from local, sustainably managed farms.

The future of direct marketing is unclear. While at the moment it represents a small niche in the overall market structure for Puget Sound agricultural products, growing public concerns about food security in the wake of mad cow disease, contaminated salmon, and other health issues could propel direct marketing, with its appeal of a more direct and personal link from producer to consumer, into a much more prominent role in the region.

There is an emerging trend towards specialty crops. Many farmers are turning to specialty crops to increase farm income and decrease the amount of land needed in production. A good example of this trend is in berry production. Puget Sound berries are sold for processing and for fresh market sales. Most berry acreage is found in Skagit and Whatcom counties where there were approximately 10,000 acres under production in 2001. Soundwide, berry sales have increased from about \$20 million in 1982 to \$33 million in 1997, \$29 million of which was in Whatcom and Skagit counties^{xxvi}.

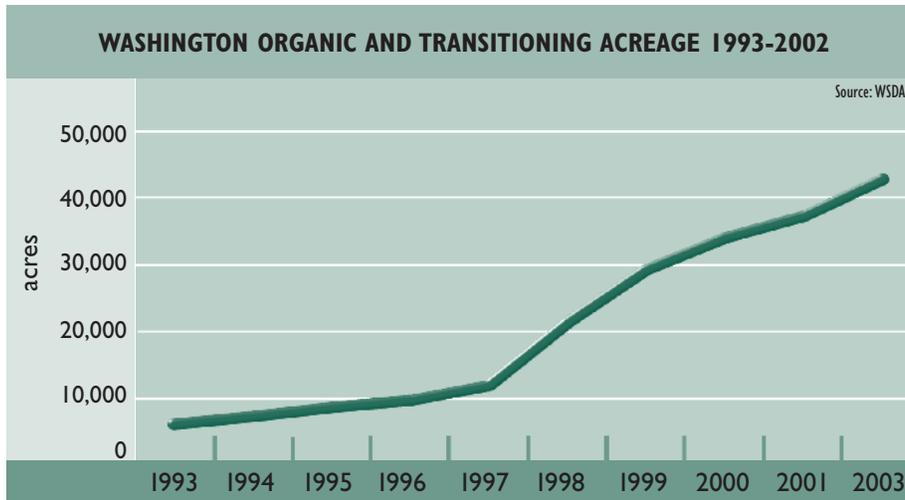
The urbanization of the Puget Sound region is supporting a major increase in production and sales of nursery and greenhouse crops, including potted and foliage plants, tree stock, vegetable and flower seed, bulbs, Christmas trees, and greenhouse grown vegetables. Nursery and greenhouse sales in Puget Sound have increased by 212% over the fifteen-year period, accounting for 33% of Puget Sound’s total crop sales in 1997, or \$173 million. Skagit has the highest acreage of open grown nursery products (7,000 acres in 1997), while Snohomish and King have the most greenhouse space dedicated to agricultural products (5 million square feet total in 1997).



The increasingly urban market for crops is also supporting substantial increases in organically grown produce. National sales of organic food are growing 20-25% annually^{xxvii}. Washington state has averaged a 24% growth rate in organic products from 1997-2001, and sales of organic

products have grown from \$70 million in 1998 to over \$200 million in 2001^{xxviii}.

Growers, NGOs, and agencies are supporting specialty crop production. In 1987, Washington State became the second state in the country to develop an organic certification program. In 2001, WSDA received \$10 million in federal funding for



“specialty crop” programs, which by national standards, includes almost all crops grown in Washington. In 2002, the Washington legislature mandated WSDA to research the need for an Organic Commission given the growing nature of the industry. The WSU Farm and Food Connection has published a “West of the Cascades” series which includes discussion of specialty crops like baby corn and edamame beans. Several Tilth organizations bring growers, processors, and advocates of sustainable farming together in order to forge partnerships around organic and sustainable products. In 2003, 16 Snoqualmie Valley farmers came together to form Sno-Valley Tilth in order to share ideas and experiences from their small, diversified, organic farms.

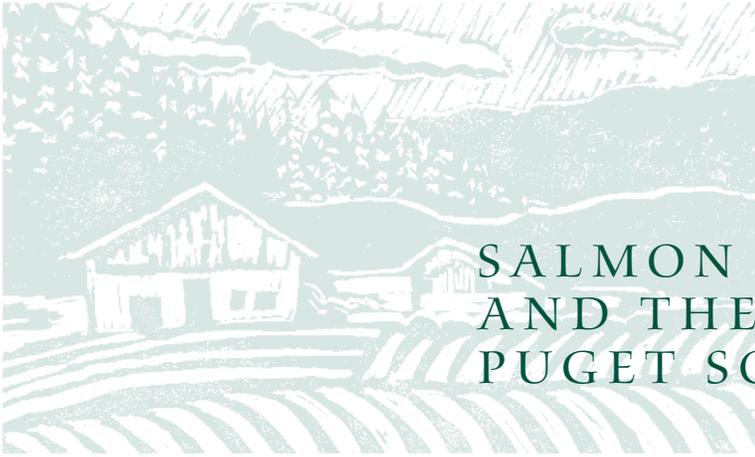
Governments and NGOs are trying to help. The plight of Puget Sound agriculture has received a great deal of public and political attention over the years, spawning a wide variety of regulatory, incentive, and other assistance programs to support the farming industry.

Recognizing the need to address the growing pressures to convert agricultural land to urban uses, many governments have initiated reforms of their agricultural zoning and taxation and begun to purchase or transfer development rights from farmland. Comprehensive plans under the state’s Growth Management Act are currently being updated and will require counties and cities to protect designated farmland. King County’s \$50 million bond issue for the purchase of development rights (PDR) on farmland in 1979 set the stage for many subsequent PDR programs, as has their more recent effort on a transfer of development rights (TDR) program. Farmers have enrolled 12,800 acres in the King County PDR so far.^{xxix}

Current use taxation is available statewide for qualifying landowners, which can significantly lower property taxes and encourage owners to keep their land in farming. Numerous tax exemptions are in place for farm related purchases of equipment and certain manufacturing activities, which help alleviate financial pressures^{xxx}.

Many incentive programs provide financial and technical assistance to farmers to establish riparian buffers and other environmental installations. Farmers and farm experts generally view incentive programs as a better way to encourage environmental enhancements on farms than regulations. Under the Conservation Reserve Enhancement Program (CREP), USDA and Washington State offer farmers lease payments on riparian buffers. In November 2003, 216 Puget Sound farms were participating in CREP, protecting 1900 acres along streams^{xxxii}. 80% of 599 registered dairy farms in the state met the December 31, 2003 deadline for implementation of dairy nutrient management plans, with the aid of the Washington State Conservation Commission^{xxxiii}. The Environmental Quality Incentive Program (EQIP) provided approximately \$1.8 million in 2003 to Puget Sound assist farmers in enhancing soil, water, and natural resources on their farms^{xxxiiii}.

Several efforts to reconcile current resource uses with ESA and the Clean Water Act, including the Ag, Fish, and Water Process are currently in development with the participation of farmers, government agencies, and private interests. The Ag, Fish, and Water Process is the largest regional effort, attempting to coordinate technical standards between National Resource Conservation Service (NRCS) best management practices with Endangered Species regulations, providing a set of practices farmers can use to assure compliance under all necessary regulations. This effort and other negotiations which attempt to bring many differing groups to the same table, are slow and difficult processes, but have begun to tackle important issues for salmon and farm advocates.



SALMON RECOVERY AND THE FUTURE OF PUGET SOUND FARMING



As stated in the overview of this report, the third purpose of this work, beyond identifying the issues faced by Puget Sound farmers and investigating profitability on farms, is to identify issues that could improve the relationship between farming and salmon recovery. In particular, if salmon advocates understand the economic pressures on farms, they are likely to be in a better position to seek mutually satisfying solutions that meet the needs of fish and farms. As mentioned earlier in this report, the presumption is that keeping land in farming will ensure future opportunities for both salmon restoration and continued farm uses, and so it is useful for salmon advocates to consider how they might promote the economic viability of farming as they develop salmon recovery plans. While economically viable farms are not necessarily more likely to use salmon-friendly practices, they are more likely to stay in farming than unprofitable farms. The authors recommend the following actions.

Identify the potential costs and benefits of salmon recovery actions on individual farms and farm communities. The first and most fundamental step in reconciling farm/salmon issues is evaluating the impact of salmon recovery actions on farms. Ideally, this should be accomplished by rigorous economic analyses of impacts, similar to recent work in the Stillaguamish and Skagit watersheds^{xxxiv}, which allow the quantification of costs on individual farms. In the absence of such analyses, it is probably sufficient for watershed recovery plans to identify cost items — acres taken out of production, costs of replanting buffers, and the like — as well as to investigate the use of incentive programs to increase profitability on farms.

There may be some potential costs to farmers that are avoidable without sacrificing salmon benefits. For instance, some accommodation may be possible in buffer widths by modifying the planting plans within the buffer to improve performance. Given the small average size of Puget Sound farms, flexibility in buffer size has already entered discussions as a potential solution that would be very welcome in farming communities.

It is also important to consider impacts to farm communities as a whole. As discussed previously, the viability of individual farms depends on maintaining the “critical mass” of farms to maintain processors and farm service businesses. In addition, the proximity of farms is important, reducing the farm/urban interface and problems with nuisance complaints and tensions. Thus, while it may be possible to buy farms for habitat restoration, the impacts on the integrity of the farm community should be considered. Purchase and sale-back or lease-back options, in which some farm use is retained but protections on habitat are established as deed or lease provisions, may be more appropriate.

Identifying the costs of salmon recovery on individual farms will be an important step in the dialogue between farm communities and salmon advocates. Recognition of the significant effect some recovery actions may have on farmland will allow a discussion of what assistance can be provided in meeting these costs. In addition to the identification of costs, benefits of certain actions to farmers should also be emphasized. Riparian buffers can decrease erosion and loss of nutrients from fields, and effective fish-friendly flood control can aid farmers by keeping fields drained. Water quality protections will ensure the health of livestock, farm families, and farm communities.

Promote incentive and assistance programs to offset added costs. There are numerous county, state, and federal incentive programs aimed at compensating farmers for the costs of conservation actions. Salmon advocates can work with conservation districts and cooperative extension agents within their watersheds to ensure that farmers are aware of these incentive programs. Action may be needed at the regional and statewide scale to ensure that these programs are adequately funded to provide relief across the entire Puget Sound region.

Support markets for locally grown and “greener” farm products. In addition to considering these issues in their individual buying decisions, salmon advocates may be in a position to create new markets on a larger scale. Farmers and salmon advocates should explore “salmon friendly” labeling and other marketing measures that promote higher prices for environmentally benign products. For instance, farmers and salmon advocates in Oregon’s Yamhill valley have established a “Salmon Safe” certification program and are cooperating on marketing of certified products. It may also be sensible to look to local farmers to grow the trees and shrubs needed for habitat restoration in the watershed, a potentially substantial new market.

Keep lines of communication open between farmers and salmon advocates. The biggest challenge to progress on farm/salmon issues is building trust between farmers and salmon advocates. Given the precariousness of their financial situation, Puget Sound farmers are likely to be resistant to

new environmental programs that have the potential to increase costs or decrease farm incomes. In addition, recent discord between the farm industry and environmentalists on compliance with water quality and waste management regulations have left many farmers with bitter feelings about environmental initiatives. Regardless of the merits of salmon recovery, salmon advocates need to be sensitive to these concerns and ready to help with solutions.

The most important action that salmon advocates can take to ensure the continued viability of farming in the region is to open lines of communication with local farmers in order to understand the costs and other consequences of recovery actions and discuss opportunities to recover salmon and to ensure the continued health of the Puget Sound farm industry.

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ⁱⁱ Washington State Employment Security Department. 2003. Agricultural Work Force in Washington State 2002. Source available at: http://www.workforceexplorer.com/admin/uploadedPublications/1372_Ag02R.pdf.

ⁱⁱⁱ Washington Agricultural Statistics Service. Washington 2003 Annual Bulletin. Source available at: <http://www.nass.usda.gov/wa/annual03/content3.htm>.

^{iv} Skagit County Cooperative Extension. 2002. 2001 Skagit County Ag Stats. Source available at: <http://skagit.wsu.edu/Agriculture/images/2001%20ag%20stats%20final.pdf>.

^v National Agricultural Statistics Service. 1997 U.S. Census of Agriculture. Source available at: <http://www.nass.usda.gov/census/>.

^{vi} National Agricultural Statistics Service. 1997 U.S. Census of Agriculture.

^{vii} National Agricultural Statistics Service. 1997 U.S. Census of Agriculture.

^{viii} National Agricultural Statistics Service. 1997 U.S. Census of Agriculture.

^{ix} National Agricultural Statistics Service. 1997 U.S. Census of Agriculture.

^x Shelby, Mike. Western Washington Agricultural Association, personal communication, November, 2003.

^{xi} National Agricultural Statistics Service. 1997 U.S. Census of Agriculture.

^{xii} Washington State Family Farm Summit. October, 2003. The current status of family farming within a globalizing and industrializing food system, Lecture by Bill Heffeman, Professor Emeritus University of Missouri.

^{xiii} Wilhelm, Steve. June 9, 2003. "Region's dairies hurting," Puget Sound Business Journal.

^{xiv} Tidball, Bob. T&M Berry Farm in King County, Washington, personal communication, November, 2003.

^{xv} Energy Information Administration. 2002. Annual Energy Review. Source available at: <http://www.eia.doe.gov/emeu/aer/contents.html>.

^{xvi} National Agricultural Statistics Service. 1997 U.S. Census of Agriculture.

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