Economic Impacts of Broadband Access on Washington Agriculture:

A regional Assessment of Island, San Juan, Skagit, Whatcom, and Snohomish Counties

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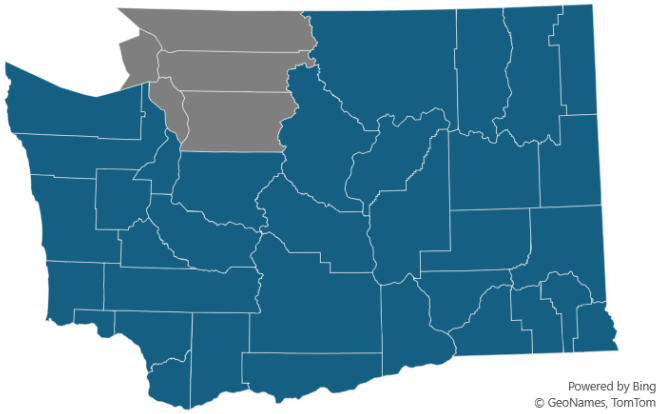
This Fact Sheet provides the economic overview of broadband availability and the associated agricultural impacts in the five-county region of Island, San Juan, Skagit, Whatcom, and Snohomish Counties.



Broadband access in this region has evolved over the years in terms of access, quality, and adoption. The primary crop land in the region is Grass Hay (24%), Shellfish (20%), Pasture (14%), Corn, Field (9%), Blueberry (4%), and Other (28%).[2] Total agricultural value of all commodities produced in the region has grown from $784 million to $1.2 billion over the last decade.

Table 1 shows the estimated values of select commodities produced in 2023 by county within the region. Table 1 only lists a set of the key commodities produced and, as such, does not reflect the entire value of agricultural production. Shellfish and Pastureland, for example, are not included.

Table 1: ***2023 Region 1 Production Value Estimates by County and Commodity***

County	Island	San Juan	Skagit	Snohomish	Whatcom	Regional Total
Wheat	$17,596	$30,667	$1,221,658	$135,237	$264,441	**$1,669,600**
Barley	$349,237	$35,189	$3,099,313	$311,392	$49,132	**$3,844,264**
Apples	$105,965	$381,476	$529,827	$837,127	$614,600	**$2,468,996**
Cherries	$0	$15,031	$0	$7,515	$0	**$22,546**
Pears	$0	$15,974	$87,857	$23,961	$0	**$127,792**
Potatoes	$461,555	$0	$69,637,141	$2,617,883	$0	**$72,716,579**
Onions	$0	$0	$231,040	$0	$0	**$231,040**
Dry Peas	$4,161	$0	$21,267	$63,800	$0	**$89,227**
Grapes	$69,137	$84,501	$107,546	$88,341	$53,773	**$403,298**
Blueberries	$159,440	$8,858	$8,662,928	$7,050,809	$33,030,736	**$48,912,772**
Corn	$217,971	$0	$11,579,290	$9,114,541	$23,515,718	**$44,427,520**
Grasses and Hay	$1,788,884	$0	$926,319	$582,544	$204,378	**$3,502,126**
Milk	$3,716,621	$0	$46,260,827	$74,595,015	$239,045,412	**$363,617,875**
County Sub Total	***$6,890,568***	***$571,695***	***$142,365,014***	***$95,428,167***	***$296,778,190***	***$542,033,634***

Source: USDA NASS, WSDA, and author's calculations

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[2] Commodities are reported on an acreage basis rather than a value basis. Apple and potatoes, generate more value per acre, but compose much less acreage than wheat and forage crops.

Thirteen percent of the growth in the region's agricultural production is estimated to be a result of broadband enhancements and the adoption of precision agriculture. Without access to these new technologies agriculture in the region would not have seen the growth or growth rate that has helped to make farms more efficient and profitable. This allows agriculture in the region to remain competitive and on the cutting edge of efficiency.

The impacts of broadband access and subsequent precision ag technology utilization generate more than simply increases in farm output and reduced input costs. Those gains in production efficiency ripple through the economy as increased spending, resulting from increases in farm output, and increased income for farm households.[3] Table two shows the direct agricultural gains in sales, gross regional product, household income and jobs for the region, all resulting from broadband access and utilization. The direct sales amounted to just over $54 million. Those direct gains resulted in increased farm-to-business transactions within the region of $11.3 million (indirect contributions). Increased farm profits improved farmer's take-home pay and household expenditure, consumer-to-business transactions, produced another $23.1 million (induced contributions). Total sales of $88.4 million in the region were a result of broadband access and utilization. This occurred in two ways: farm purchases of business inputs (everything from seed and fertilizer to business services including accounting and legal fees), and the personal purchases of both farmers and their employees (eating in local restaurants, attending a local sporting event, buying clothes for their families, etc.).

Table 2: ***Regional Economic Impacts from Agricultural Productivity Under Broadband Expansion***

	Sales	GRP	Income	Jobs
Direct	$54,038,814	$33,788,373	$24,612,575	1,091
Indirect	$11,281,483	$4,278,815	$2,546,159	40
Induced	$23,116,371	$12,821,836	$8,857,807	137
Total	$88,436,668	$50,889,024	$36,016,541	1,267

Source: IMPLAN and author's calculations

The $88.4 million in total sales translated to $50.9 million in total Gross Regional Product (GRP) for 2023. Household incomes attributable to gains in broadband access and precision agricultural utilization amounted to $36.0 million. The agricultural expenditures and gains from broadband infrastructure supported a total of 1,267 jobs within the 5-county economy. Broadband access and gains from precision agriculture can then claim responsibility for 0.37% of regional employment.

GRP is the economists' primary measure of economic activity because it removes the double counting included in the sales figures, though it is larger than the household income measure. As such broadband expansion, access, and utilization in the five-county region is responsible for $50 million of the 2023 economy.

[3] Farmer household income is a gross measure. Reduced expenditures on fertilizers, for example, mean less farm spending on local vendor purchases that also ripple through the economy.