

# A Tale of Forgotten Splendor: The Oat Crop in Coastal Pacific Northwest History

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Figure 1. Topographical map showing the division of Washington state into eastern and western regions by the Cascade Mountains. Bouchirron, Wikimedia Commons.

**Western Washington**, the focus of this research, comprises nineteen counties lying west of the Cascade Mountain Range in the coastal Pacific Northwest (Figure 1).

- The Koepfen climate classification of the region is Csb (warm-summer Mediterranean).
- Average annual rainfall is around 875mm (1).



Figure 6. Whatcom County farmers with their oats in 1942. Washington Rural Heritage.

The British Hudson Bay Company established the first farms in western Washington and the coastal Pacific Northwest in the mid nineteenth century, to supply its trading routes (2). Immigrants began to flow to the region in the 1860s, attracted by timber, mineral resources and fertile agricultural land. Much of the land was alluvial floodplain and needed to be diked. The economic engine for this expensive work was the oat crop (Figure 2).



Figure 2. Threshing oats with horse-power and steam-power at King Farm, San Juan County, late 19th century (San Juan County Historical Museum).

## A cash crop

- The price of oats, "that leading staple of the agricultural section", was \$30 per ton in 1880: more valuable by weight than carrots or sometimes potatoes (3).
- Oats were shipped by sea to Seattle and further south down the west coast. A single merchant in Skagit County (the Gaches Brothers of La Conner) shipped 5,930 sacks of oats offshore in 1876 (3).
- There was strong demand for oats as a horse feed.
- Oats were also processed for human food by local mills. In the early 1900s, as many as 1.25 million bushels of the region's oats may have been made into breakfast foods each year (4).

## The Western Washington advantage

- Indications are that oat crops were highly productive in the region. Many contemporary accounts quote yields of over 100 bu/a, or 3.7 t/ha. A group of farmers in 1876 made legal testament that their oat yields exceeded 89 bu/a, or 3.3 t/ha (2). For comparison, Iowa's average annual oat yield during the period 1903-1907 was reported at 29.5 bu/acre (4).
- While wheat was the most important grain for Washington state as a whole, oats predominated in the nineteen western counties. (Figures 3 and 4, below). It is notable that despite the higher economic status of wheat, state-wide oat yields exceeded those of spring wheat until the mid twentieth century (Figure 5, right).

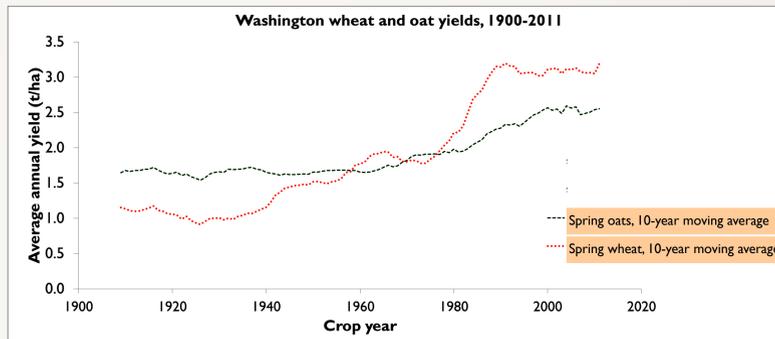
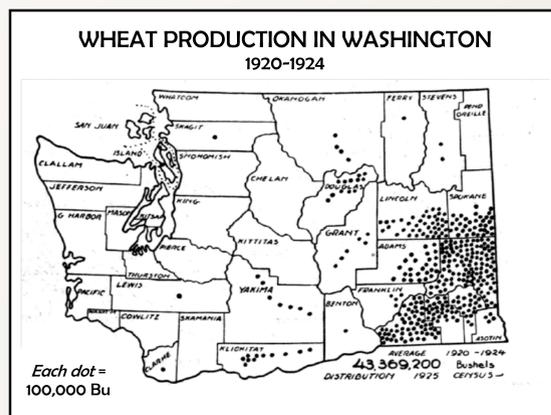
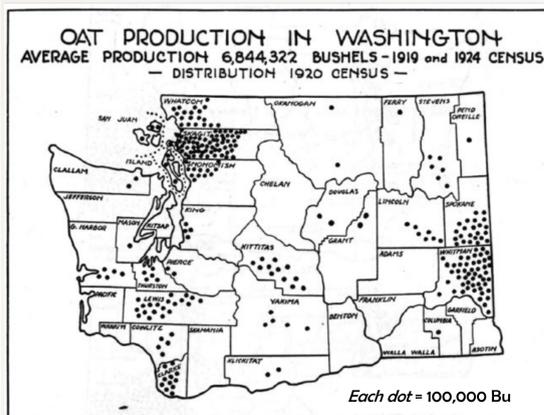


Figure 5. Comparison of spring oat and spring wheat yields in Washington State, 1900-2011. Data from USDA NASS.



Figures 3 and 4. Distribution and scale of oat (left) and wheat (right) production in Washington, early twentieth century, showing the concentration of oats to the west of the Cascades and of wheat to the east (6).

Oats remained important in western Washington's small-scale mixed farming systems until the mid twentieth century. Washington's oat production peaked in the 1910s, remained comparatively high until the 1950s, and then entered a rapid decline (Figure 7). The market value of oat grain had been in steady decline throughout (Figure 8).

Figure 7. Washington state annual oat production, 1880-2011. Dotted line represents 10-year moving average. Data from USDA NASS.

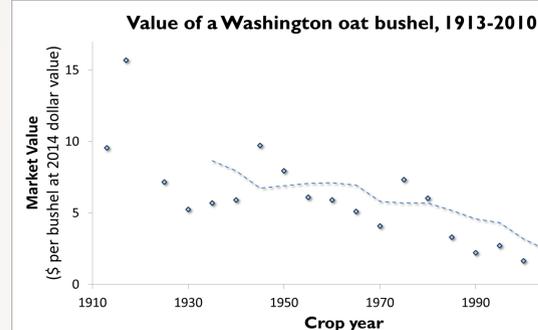
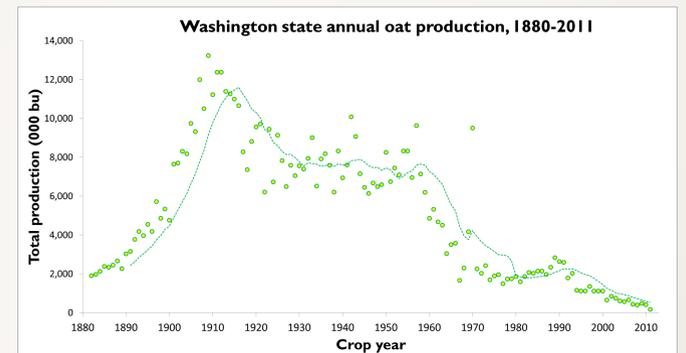


Figure 8. Dollar value in today's currency terms of a bushel of oats in Washington, 1913-2010. Dotted line represents 20-year moving average. Data from USDA NASS.

## Explaining the collapse

- The contraction of the oat crop in western Washington coincides with the mechanization of agriculture and transport, suggesting that the loss of the horse-feed market was an important factor.
- Nationwide, agricultural policy frameworks have accelerated the replacement of oats in livestock feeds by corn, soy and wheat.

- The sustained stronger interest in wheat vs. oats eventually led to spring wheat yields overtaking spring oat yields in the 1960s (Figure 5, left).
- Farmers discovered that western Washington's climate suits production of higher-margin crops such as hybrid spinach seed, blueberries and potatoes (Table 1, below).

Crop	Returns per acre
Blueberries	\$ 17,429.00
Potatoes	\$ 4,090.00
Wheat	\$ 485.00
Oats	\$ 288.00

Table 1. Washington state average crop values, 2013. Data from USDA NASS.

## The future of oats in western Washington

- While small grains cannot compete economically with vegetable seed and other high-value crops grown in western Washington, they are frequently used by growers as a rotation crop; at present, these are predominantly wheat and barley.
- New markets are needed for the oat crop. Poultry producers are funding work to develop oats as a GM-free and high-nutrition feed, and there may be potential to develop identity-preserved regional oat food products (above, right).



- Oats may offer agronomic advantages including high yield potential. Average oat yields across the counties of western Washington between 1974 and 2001 were 70.4 bu/a, exceeding recent state-wide average yields in Wisconsin (65 bu/a in 2013) and Minnesota (57 bu/a in 2013), the top two oat-producing states in the USA (USDA NASS).
- Research at the Northwestern Washington Research & Extension Center (left) is characterizing current oat varieties for agronomic and grain quality performance under local climate conditions and establishing a regionally focused breeding program.



References: 1. 1996-2008 Western Regional Climate Center data from stations in Olympia, Whidbey Island and Bellingham; 2. Scheuerman, R. D. & McGregor, A. C. (2013). Harvest Heritage: Agricultural Origins and Heirloom Crops of the Pacific Northwest. WSU Press, Pullman; 3. Anonymous (1906). An Illustrated History of Skagit and Snohomish Counties. Interstate Publishing Company, Chicago; 4. Gaches, C. E. (1913). Our Breakfast Foods. Mount Vernon Argus Tenth Anniversary Issue, May 2nd, 1913; 5. USDA (1910). Experiment Station Work, LV1. Farmers' Bulletin 388, March 23; 6. State College of Washington (1926). Washington State Extension Bulletin No. 134, Washington Agriculture Part 4: Cereal Crops.

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