



The Economics of Pacific Northwest Grains: Investor Summary

OVERVIEW

Small grains are an established part of Pacific Northwest agriculture and food systems. Wheat is by far the most important small grain crop in the Pacific Northwest, with over 3 million acres harvested across Washington and Oregon. Most of that wheat is conventionally grown, and approximately 90% of it is exported out of the region.

The two most economically and ecologically important emerging trends in this sector are 1) the rise of **no-till farming** and related practices of conservation tillage, and 2) the increasing diversity and complexity of **crop rotations**. These two interrelated sets of farming practices make up a range of alternative small grain production systems that vary within the region, based on local differences in temperature and precipitation. Accompanying no-till or conservation tillage wheat are a group of differentiated, high-value varieties of small grains, oilseeds, and legumes grown as rotation crops.

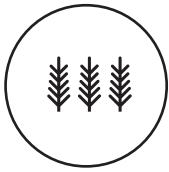
To get to the scale needed to sell into mass markets, the Pacific Northwest no-till wheat and rotation crops industry will require investment in processing infrastructure for diverse grain, oilseed, and legume crops that is accessible for small- to mid-size producers; investment in commercialization of rotational crops with potentially high nutritional and commercial value; and increased funding of marketing and storytelling efforts explaining the benefits of no-till crops for ecology, economics, and nutrition to consumers.



Direct seed drills are required for no-till production and a significant initial investment. -PHOTO Shepherd's Grain

SUPPLY DRIVERS

- **Production costs:** no-till can be cost-competitive for wheat and most rotation crops, depending on the geographic production zone.
- **Markets for rotation crops:** all are at different stages of development; most are growing
- **Pricing systems:** cost-plus pricing by farmer-owned companies offers greater economic stability than commodity markets.
- **Scale and machinery:** expensive no-till machinery has led to rising land rents and increasing farm size
- **Processing infrastructure:** for crops other than wheat, regional processing infrastructure has been scarce



DEMAND DRIVERS

- **Transparency:** large buyers and consumers are seeking transparent supply chains.
- **Crop Diversity:** demand for grain, oilseed and legume crops is diversifying.
- **Nutrition:** consumers are seeking crops with high nutritional content.
- **Environmental Values:** consumers may be willing to pay a premium for an environmental attribute such as no-till.

OPPORTUNITIES

The good news for eaters and investors alike is that there is already burgeoning momentum toward no till, conservation tillage, and crop rotation production systems in the Northwest, led primarily by farmers in eastern Washington. Experimentation over the last 20 years in seed varieties, equipment, seeding and harvesting methods, processing, pricing, and marketing have created a rich foundation from which to scale. That said, as a 2008 article in Scientific American puts it, “No-till is not a cure-all; such a thing does not exist in agriculture. Rather it is part of a larger, evolving vision of sustainable agriculture, in which a diversity of farming methods from no-till to organic—and combinations thereof—is considered healthy.”



The Dobbins produce no-till wheat and rotation crops; David & Margaret, Bryan & Carolyn -PHOTO Shepherd's Grain

- Investment in emerging processing infrastructure for diverse grain, oilseed, and legume crops.
- Investment in commercialization of rotational crops with potentially high nutritional and commercial value.
- Funding of marketing and storytelling efforts explaining the benefits of no-till crops for ecology, economics, and nutrition to consumers to accelerate growth in demand.

For more detail on the economics of small grains production in the Pacific Northwest see the full narrative that accompanies this investor brief.