



WI Kernza® Grower Roundtable Discussions

Selling your WI-grown Kernza®

- **The Chicken & the Egg:** *The necessity of growing the supply with demand of WI-grown Kernza®*
- **Understanding your customer's needs:** *End-buyer perspectives & considerations*
- **Other high-quality premium grain pricing:** *How does Kernza® compare?*
- **Early commercialization of Kernza®:** *Historical pricing and impacts on market/buyers*
- **Group exercise:** *Identifying your Kernza® farm-gate price targets*
 - Calculating your cost of Kernza® production + profit margin of 10%
 - *How does yield affect your cost of production?*
 - [Anonymous] reporting of target farm-gate pricing for WI-grown Kernza®
 - Discussion
- **Next steps:** *Preparing for WI Kernza® Supply Chain Field Day with prospective end-buyer*



SAVE-THE-DATE!
WI Kernza® Supply Chain Field Day at Rooster Milling
Wed, Dec 4th
(12pm-4pm)

W1684 Honey Creek Rd.
East Troy, WI 53120

From your Customer's perspective: Average conventional grain farm-gate price to first-buyer

USDA-reported Farm-gate Grain Prices *Represents sales from producers to first buyers. They include all grades and qualities*

	Sept 2020		Sept 2022		Sept 2023		Aug 2024*	
WI Corn 56 lbs/bu	\$3.26/bu	\$0.06/lb	\$7.12/bu	\$0.13/lb	\$5.07/bu	\$0.09/lb	\$3.73/bu	\$0.07/lb
<i>US Avg</i>	<i>\$3.41/bu</i>	<i>\$0.06/lb</i>	<i>\$7.09/bu</i>	<i>\$0.13/lb</i>	<i>\$5.21/bu</i>	<i>\$0.09/lb</i>	<i>\$3.84/bu</i>	<i>\$0.07/lb</i>
MN Spring Wheat 60 lbs/bu	\$5.32/bu	\$0.09/lb	\$9.01/bu	\$0.15/lb	\$7.21/bu	\$0.12/lb	\$5.31/bu	\$0.09/lb
<i>US Avg</i>	<i>\$4.73/bu</i>	<i>\$0.08/lb</i>	<i>\$8.80/bu</i>	<i>\$0.15/lb</i>	<i>\$7.02/bu</i>	<i>\$0.12/lb</i>	<i>\$5.39/bu</i>	<i>\$0.09/lb</i>
MN Malting Barley 48 lbs/bu	NDA	-	NDA	-	NDA	-	NDA	-
<i>US Avg</i>	<i>\$4.92/bu</i>	<i>\$0.10/lb</i>	<i>\$7.66/bu</i>	<i>\$0.16/lb</i>	<i>\$7.28/bu</i>	<i>\$0.15/lb</i>	<i>\$6.95/bu</i>	<i>\$0.14/lb</i>

Sources:

2024, NASS. *Agricultural Prices: Farmers Received*. National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA). 27 September 2024.

2023, NASS. *Agricultural Prices: Farmers Received*. National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA). 31 October 2023.

2020, NASS. *Agricultural Prices: Farmers Received*. National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA). 30 October 2020.

Average wholesale price reference points: *Specialty 'Ancient' grains per lb*

How does Kernza® compare?

	2020	2022	2023	2024
Kamut® (wheat)	<i>Hull-less; certified organic by trademark</i>			
Conventional	-	-	-	-
Certified organic	\$1.16¹	NA	NA	\$1.26²
Einkorn (wheat)	<i>Requires dehulling</i>			
Conventional	NA	NA	NA	NA
Certified organic	\$2.60³	NA	\$4.48⁴	\$3.00⁴
Spelt (wheat)	<i>Requires dehulling</i>			
Conventional	NA	NA	NA	\$2.32⁵
Certified organic	NA	NA	NA	\$2.97⁶
Quinoa	<i>Requires dehulling & washing saponins</i>			
Conventional	NA	NA	NA	\$1.45-2.64⁷
Certified organic	NA	NA	NA	\$3.05⁸

¹ ³ Cureton, C. *Unpublished*. Pricing Kernza Perennial Grain: Fair returns for growers, viability in the market. *Agro-economic analysis submitted for consideration by Perennial Promise Farmers Cooperative*. Forever Green Initiative, University of Minnesota. 08 December 2020.

² Food to Live, 2024. Food in Bulk: Organic Kamut Khorasan Wheat Berries-50lbs. Webpage. <https://foodinbulk.com/shop/organic-kamut-khorasan-wheat>. Accessed 12 Sept 2024.

⁴ Einkorn.com, 2024. Organic Einkorn Berries in paper bags. Webpage. <https://www.einkorn.com/organic-einkorn-berries-in-paper-bags/> Accessed 12 Sept 2024.

⁶ All Bulk Foods, 2024. Wheat Montana Spelt Berries 50lbs. Webpage. <https://www.allbulkfoods.com/spelt-berries-50lb> Accessed 12 Sept 2024.

⁶ *Average taken between:*

Grand Teton Ancient Grains, 2024. 48 lbs Organic Spelt Berries. Webpage. <https://www.ancientgrains.com/shop/spelt/48-lbs-whole-grain-organic-spelt-berries-free-shipping> Accessed 12 Sept 2024.

Grow Nebraska, 2024. Hulled Spelt | 25lb bag. Webpage. <https://buynebbraska.com/products/hulled-spelt-25-lb-bag-shipping-included> Accessed 12 Sept 2024.

⁷ Baker's Authority, 2024. Quinoa. Webpage <https://www.bakersauthority.com/products/quinoa> Accessed 12 Sept 2024.

⁸ The Nut Garden, 2024. Bulk Quinoa, Organic. Webpage. <https://thenutgarden.com/products/bulk-quinoa-organic-25-lbs> Accessed 12 Sept 2024

From your Customer's perspective:

Ingredient wholesale example, and Prospective WI buyers' "sustainable price" for Kernza inclusion

Malting Barley	\$0.30-\$0.36/lb
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Brewer 1	<p>\$0.30-\$0.60/lb (whole grain or steam-flaked)</p> <p><i>*depending on inclusion rates</i></p>
Brewer 2	<p>\$0.65-\$0.95/lb (steam-flaked)</p>
Brewer 3	<p>\$1.00/lb or less (steam-flaked)</p>
Brewer 4	<p>\$1.00-\$3.00/lb (whole grain, cracked or flaked)</p> <p><i>but they are also interested in growing their own</i></p>

KERNZA 2024		
Regional Recommendations	Farm Gate	Wholesale
Conventional	\$1.00-\$2.00¹	\$2.00⁴
Certified organic-ROC	\$1.50-\$2.50¹	\$3.00⁴



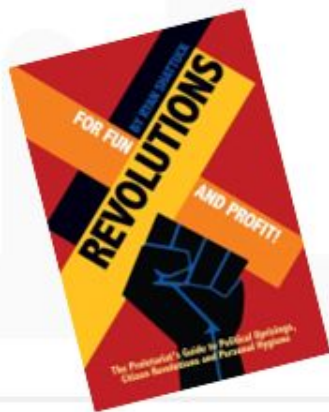
WI Kernza® Grower Exercise

**Farm level financials
beginning with enterprise
budgets**

Paul Dietmann, Compeer Financial (emerging markets)

What is an enterprise budget?

- A mini feasibility study for a farm enterprise
- Very rough estimate of profit potential
- “Profit” is not the same as cash flow



Format of an enterprise budget

Expected gross revenue

- **Variable costs**
 - **Overhead costs**
- = Net return**



Two types of costs

- **Variable Costs**

- Costs that increase as farm production increases
- Includes cost of seed, fertilizer, soil amendments, utilities, trucking, marketing, machinery repairs, interest on operating loans, hired labor
- Usually paid in cash during the operating year



- **Overhead Costs**

- Costs that exist on the farm whether or not anything is being produced
- Can include depreciation, interest on capital debt, repairs, property taxes, insurance, rent, and return on the farm owner's equity
- May or may not be cash costs during the operating year

Enterprise budgeting

- Variable costs are usually easy to estimate
- Overhead costs are tougher and tend to be underestimated
 - We need to factor in the costs of owning capital investments (“economic depreciation” of stuff that rusts and rots)
 - + Machinery
 - + Buildings
 - + Grain storage
 - + Titled vehicles
 - + Irrigation systems
 - + Other capital investments
 - We also need to factor in costs that can't easily be allocated to specific crops
 - + Insurance
 - + Repairs
 - + Return on owner's equity





Overhead cost assumptions for our example farm



- 1,000 acre conventional grain operation
- “Opportunity cost” of land is \$250 per acre
- \$50,000/year *economic depreciation* of machinery, buildings, bins, etc.
- \$20,000/year farm insurance and non-machinery maintenance & repairs
- Farmer has \$2 million of farm equity and would like a 5% rate of return on equity
- Grower estimates that he puts in two hours of labor per acre, per year

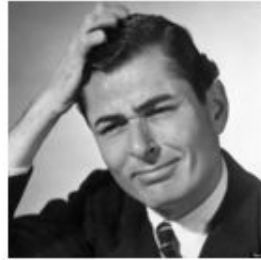
Corn

Income				
220	Yield	\$ 4.00	price	\$ 880.00
Variable Expenses				
	Seed	\$ 125.00		
	Fertilizer	\$ 170.00		
	Chemicals	\$ 100.00		
	Fuel	\$ 25.00		
	Repairs and maintenance	\$ 40.00		
	Supplies	\$ -		
	Utilities	\$ 5.00		
	Crop drying and storage	\$ 30.00		
	Hauling and marketing	\$ 20.00		
	Crop insurance	\$ 20.00		
	Labor - hired	\$ -		
	Operating interest	15		
	Total variable expenses	\$ 550.00		\$ 550.00
Overhead Expenses				
	Land charge (rent or opportunity cost)	\$ 250.00		
	Economic depreciation of capital assets	\$ 50.00		
	Insurance,building repairs, taxes	\$ 20.00		
	interest on farm term loans			
	Return on farmer's equity	\$ 100.00		
	Return on unpaid labor/management	\$ 50.00		
	Total overhead expenses	\$ 470.00		\$ 470.00
	Return per acre			\$ (140.00)
	Breakeven price to cover variable costs			\$ 2.50
	Breakeven price to cover ALL costs			\$ 4.64

Soybeans

Income				
65	Yield	\$ 9.50	price	\$ 617.50
Variable Expenses				
	Seed	\$ 75.00		
	Fertilizer	\$ 50.00		
	Chemicals	\$ 70.00		
	Fuel	\$ 25.00		
	Repairs and maintenance	\$ 35.00		
	Supplies	\$ -		
	Utilities	\$ 5.00		
	Crop drying and storage	\$ 5.00		
	Hauling and marketing	\$ 20.00		
	Crop insurance	\$ 10.00		
	Labor - hired	\$ -		
	Operating interest	15		
	Total variable expenses	\$ 310.00		\$ 310.00
Overhead Expenses				
	Land charge (rent or opportunity cost)	\$ 250.00		
	Economic depreciation of capital assets	\$ 50.00		
	Insurance,building repairs, taxes	\$ 20.00		
	interest on farm term loans			
	Return on farmer's equity	\$ 100.00		
	Return on unpaid labor/management	\$ 50.00		
	Total overhead expenses	\$ 470.00		\$ 470.00
	Return per acre			\$ (162.50)
	Breakeven price to cover variable costs			\$ 4.77
	Breakeven price to cover ALL costs			\$ 12.00

How do we justify growing crops that seem to lose money?



Most of this stuff
doesn't hit the
farm's cash flow

Land charge	\$250
Other overhead costs	\$ 70
Return on owner's equity	<u>\$150</u>
-	\$470

Example of Enterprise Budgets for:

(A) An organically-certified, 18 acre Kernza operation:

1. Direct marketing OG Kernza flour
2. Direct marketing OG Kernza whole grain (wholesale)

(B) A conventional/transitional, 6 acre Kernza operation:

3. Direct marketing conventional Kernza whole grain (wholesale)
4. Selling to regional Kernza aggregators (farm-gate pricing for conventional whole grain)



[Kernza Enterprise Budget](#)

***How does cost of production change if you increase yield
(impact of access to new TLI C8_801 variety)?***



WI Kernza® Supply Chain Field Day at Rooster Milling

W1684 Honey Creek Rd., East Troy, WI 53120

Wed, Dec 4th (12pm-4pm)

Inclement Weather Make-up Date: Wed, Dec 11th (same time)

**Bringing together WI Kernza® growers, businesses and
SE Wisconsin's *first* commercial-scale Kernza® processor
to grow an equitable, sustainable WI-grown Kernza® supply chain**



**RSVP by
November 22nd!**

Space is limited to 30



Confirmed WI business RSVPs, who have also reserved Kernza® samples:

- ✓ Delta Beer Lab (Madison)
- ✓ Karben4 Brewing (Madison)
- ✓ Hillsboro Brewing Co (Hillsboro)
 - *Bringing keg of Kernza® Lager (made with whole grain, at 18% inclusion rate)*
- ✓ Central Waters Brewing (Milwaukee)
- ✓ Third Space Brewing (Milwaukee)
- ✓ Great Lakes Distillery (Milwaukee)
- ✓ Dancing Goat Distillery (Cambridge)

