

Small Grains on Very Small Farms

Great Day Gardens – Forest, VA

April 2024

Have you ever considered diversifying your farm with a small grain enterprise? We thought about this for years, and finally tried it out from 2022 to 2024. Thanks to on-farm research funding from Southern SARE, we piloted small plantings of wheat and rye on our farm to test the practicality and economics of integrating wheat and rye with our vegetable enterprise.

To share our results, we are publishing this series of enterprise budgets for Wheat and Rye at 1- and 5-Acre scales. These budgets are based on our cropping system that utilized the tools we already had on our market farm. This included a 39 HP tractor, tandem disc for incorporating seed, and hand tools for cutting the grain. The only specialized equipment was an Almaco portable plot thresher that we rented from a peer farmer. We have found that having a mechanical thresher of some kind is necessary for even the smallest of small grain plantings.

Break Even Prices		
	1 Acre	5 Acres
Rye	\$5.95	\$4.92
Wheat	\$6.69	\$5.59

Unfortunately, the break-even prices we found for both crops are well above a marketable price for wholesale customers, and most retail customers. However, heritage grain seeds are often sold above these prices, and retail customers may be willing to pay more for a product with a great story and good marketing. Our suggestion is that pursuing grain production at this scale is suitable only for:

- Farms with access to a seed market, especially for rare varieties.
- Farms with access to a committed retail base willing to pay much more.
- Farms with access to a threshing device.
- Farms with access to custom combining services.

Even if these conditions are met, the labor requirements of this enterprise prevent it from being scalable much over 1 acre. In the end, we found that this was not a viable enterprise for our farm without significant investments in equipment. However, we believe it could be viable under the right circumstances, and wanted to share what we learned with anyone who may be motivated to try this out!

5 Acres	Wheat							
				Quantity	Unit	\$/Unit	Total	
Receipts	Wheat		4295	lbs.	\$5.59	\$24,028.95		
	Straw		335	bales	\$5.00	\$1,675.00		
Total Receipts								\$25,703.95
Cultivation Costs								
	Supplies							
	Seed		500	lbs.	\$2.00	\$1,000.00		
	Clover Seed		25	lbs.	\$5.00	\$125.00		
	Nitrogen Fertilizer		50	lbs.	\$4.36	\$218.00		
	Labor							
	Soil Preparation		15	hours	\$20.00	\$300.00		
	Seeding		11.25	hours	\$20.00	\$225.00		
	Fertilizing		32.9	hours	\$20.00	\$658.00		
	Overseeding Clover		5	hours	\$20.00	\$100.00		
Total Cultivation Costs								\$2,626.00
Harvesting Costs								
	Supplies							
	Thresher Rental		1		\$895.00	\$895.00		
	Labor							
	Cutting		880	hours	\$15.00	\$13,200.00		
	Threshing		245	hours	\$15.00	\$3,675.00		
Total Harvesting Costs								\$17,770.00
Processing Costs								
	Supplies							
	Bags		90	bags	\$0.51	\$45.90		
	Labor							
	Transportation and Cle		24	hours	\$20.00	\$480.00		
	Services							
	Cleaning		4295	lbs.	\$0.28	\$1,202.60		
	Milling		4295	lbs.	\$0.81	\$3,478.95		
	Transportation							
			150	miles	\$0.67	\$100.50		
Total Processing Costs								\$5,307.95
Total Costs								\$25,703.95

1 Acre	Rye							
			Quantity	Unit	\$/Unit	Total		
Receipts	Rye		911	lbs.	\$5.95	\$5,418.38		
	Straw		71	bales	\$5.00	\$355.00		
Total Receipts							\$5,773.38	
Cultivation Costs								
	Supplies							
	Seed		100	lbs.	\$0.75	\$75.00		
	Clover Seed		5	lbs.	\$5.00	\$25.00		
	Nitrogen Fertilizer		10	lbs.	\$4.36	\$43.60		
	Labor							
	Soil Preparation		3	hours	\$20.00	\$60.00		
	Seeding		2.25	hours	\$20.00	\$45.00		
	Fertilizing		6.58	hours	\$20.00	\$131.60		
	Overseeding Clover		1	hours	\$20.00	\$20.00		
Total Cultivation Costs							\$400.20	
Harvest Costs								
	Supplies							
	Thresher Rental		1	month	\$895.00	\$895.00		
	Labor							
	Cutting		118	hours	\$15.00	\$1,770.00		
	Threshing		91	hours	\$15.00	\$1,365.00		
Total Harvest Costs							\$4,030.00	
Processing Costs								
	Supplies							
	Bags		19	bags	\$0.51	\$9.69		
	Labor							
	Transportation and Cl		12	hours	\$20.00	\$240.00		
	Services							
	Cleaning		911	lbs.	\$0.28	\$255.08		
	Milling		911	lbs.	\$0.81	\$737.91		
	Transportation							
			150	miles	\$0.67	\$100.50		
Total Processing Costs							\$1,343.18	
Total Costs							\$5,773.38	

