Western Beef Development Centre
Division of PAMI

FROM GRAIN TO GRASS – 6-YEAR ANALYSIS

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Introduction

Low commodity prices have many farmers considering turning some of their marginal land back to grass. Actual producer numbers on the "grain-to-grass" transition do exist. Since the spring of 2000, Lorne Christopherson (a mixed farmer near Weldon, Saskatchewan) has been monitoring the expenses and revenues on two adjacent parcels of his land. One 370-acre parcel, **Granrude's**, was seeded to perennial forage while the other 230-acre parcel, **Dahl's West**, was kept in an annually cropping system. Both land bases are classified as Kamsack/Shellbrook silty loam and are assessed at approximately $4,800 - $5,200 per quarter under the old assessment system.

Christopherson's records are an excellent resource to allow a comparison on the economics of A) converting productive cropland to perennial forages versus B) continuing to annually crop this type of land. The following is a 6-year summary of the production, revenues, and expenses from Granrude's and Dahl's West. Data collection for the first four years was summarized by Tim Highmoor (2000-2003) and Kathy Lang (2004-2005) compiled the last two years.

For a more detailed discussion and breakdown of the costs and returns associated with this project see http://www.wbdc.sk.ca/factsheets.html on the WBDC website. Under 2002 Economic Fact Sheets and 2003 Economic Fact Sheets, articles titled "*From Grain to Grass – What Are The Costs?"* discuss the early years of the grain to grass transition on the Christopherson operation.

Granrude's (Newly Seeded Perennial Forage) – 2000

In the spring of 2000 278 of the 370 acres comprising "Granrude's" were seeded to a meadow brome-alfalfa mixture. A nurse crop of oats was seeded with the grass-legume mixture and baled as greenfeed in the fall of 2000. The nurse crop of oats yielded 2.06 tonne/acre of greenfeed valued at $40/tonne, and was used to generate some revenue from the land in the establishment year of the project. The additional 92 acres of Granrude's was seeded to Liberty Tolerant canola in 2000 to also provide income in the first year of the project. The canola yielded 24 bu./acre and was valued at $6/bu.

Dahl's West (Annual Crop Production) – 2000

In 2000 Dahl's West produced 54 bu./acre of malt barley valued at $3.08/bu.

Granrude's – 2001

In the spring of 2001 the remaining 92 acres of Granrude's was seeded to a meadow brome-alfalfa-oat mixture. 200 cow-calf pairs rotationally grazed the other 278 acres of meadow brome-alfalfa seeded the previous year, for 82 days. 8 bulls also grazed on Granrude's for 65 days. Cow-calf pair grazing was valued at $1.00/day and bull grazing was valued at $1.50/day. Ungrazed regrowth was "rolled up" into 100 round bales, each weighing 1800 lbs and valued at $90/bale. The 200 cow-calf pairs then grazed the newly seeded 92 acres of meadow brome-alfalfa-oat mixture from August 1st - 10th 2001.

Dahl's West – 2001

Dahl's West was seeded to flax (linola) in the spring of 2001. The flax was direct seeded at a rate of 1 bushel/acre into standing barley stubble. In the fall of 2001, 18 bushels/acre of flax (excluding dockage) were harvested. The flax was valued at $7.56/bu.

Granrude's – 2002

In 2002 Granrude's supplied 165 cow-calf pairs with grazing from June 12 - October 24 (134 days @ $1/day) and 8 bulls with grazing from July 10 - September 15 (65 days @ $1.50/day). Similar to 2001, one field was cut and baled after recovering from a short single period of grazing. In total 90 bales were produced in this field, each weighing 1800 lbs and valued at $90/bale.

Dahl's West – 2002

In 2002 Dahl's West was seeded to CPS Wheat (Crystal) at a rate of 1.5 bu./acre into flax stubble after a pre-seed burn off. Lorne's crop insurance coverage of 80% came in handy when the wheat crop was written off in late July due to severe drought. The crop insurance payout amounted to $135/acre.

In early August the "skies opened up" and an abundance of moisture allowed for a substantial "second growth." The regrowth was swathed in late September and was to be baled as "greenfeed." However, an abundance of October moisture prevented this from happening. Instead, spring baling of the crop amounted to approximately 1.25 bales/acre. This feed was valued at $30/bale "laid in the yard."

Granrude's – 2003

In 2003 210 cow-calf pairs grazed for 141 days ($1/day). 7 bulls also grazed for 65 days ($1.50/day). The April-May calves came off the pasture in September weighing an average of 468 lbs/head. In the spring of 2003, Lorne also added a solar pump that pumped water from the dugout to a nearby water trough. The cost of pumping unit was $2,700 after rebates.

Dahl's West – 2003

In 2003, 55 bushels/acre of Excel barley (that went malt) was grown and valued at $2.95/bu.

TABLE 1: GRANRUDE'S (2003)

	Acres	370
Gross Product	**$ Total**	**$/Acre**
Cow-Calf Grazing (210 pairs~141 days@$1/day)	29,610	
7 bulls~65 days @ $1.50/day)	683	
Total Gross Product	**30,293**	**81.87**
Expenses		
Supplemental Mineral for livestock	2,448	6.62
Diesel Used Checking Pasture	300	0.81
Wear/Tear on Truck & Labour Checking Pasture	2,100	5.68
Purchased Solar Pumping System	2,700	7.30
Land Rent	11,100	30.00
		0.00
Total Expenses	**18,648**	**50.41**
Return	**11,645**	**31.46**

TABLE 2: DAHL'S WEST (2003)

	Acres	230
Gross Product	**$ Total**	**$/Acre**
55 bu/acre of malt barley @ $2.95/bu.	37,297	162.16
Total Gross Product	**37,297**	**162.16**
Expenses		
Total Seeding	5,865	25.50
Total Fertilizer	5,083	22.10
Pre-Seed Burn off	1,668	7.25
Broadleaf Weed Control	2,185	9.50
Swathing	1,840	10.00
Combining & Trucking	5,060	22.00
Land Rent	6,900	30.00
Crop Insurance Premium	1,035	4.50
Total Expenses	**29,636**	**130.85**
Return	**7,661**	**31.31**

TABLE 3: GRANRUDE'S (2004)

	Acres	370
Gross Product	**$ Total**	**$/Acre**
Cow-Calf Grazing (265 pairs~139 days@$1/day)	36,835	
9 bulls~65 days @ $1.50/day)	878	
Total Gross Product	**37,713**	**101.93**
Expenses		
Supplemental Mineral for livestock	1,700	4.59
Wear/Tear on Truck & Labour Checking Pasture	1,000	2.70
Fence Repairs	500	1.35
Land Rent	11,100	30.00
Total Expenses	**14,300**	**38.64**
Return	**23,413**	**63.29**

TABLE 4: DAHL'S WEST (2004)

	Acres	230
Gross Product	**$ Total**	**$/Acre**
26 bu/acre of canola @ $6.25/bu.	37,375	162.50
Total Gross Product	**37,375**	**162.50**
Expenses		
Total Seeding	10,350	45.00
Total Fertilizer	6,210	27.00
Total Chemical	6,900	30.00
Swathing	1,840	10.00
Total Harvesting	4,600	20.00
Land Rent	6,900	30.00
Crop Insurance Premium	1,380	6.00
Total Expenses	**38,180**	**168.00**
Return	**-805**	**-5.50**

TABLE 5: GRANRUDE'S (2005)

	Acres	370
Gross Product	**$ Total**	**$/Acre**
Cow-Calf Grazing (300 pairs~105 days@$1/day)	31,500	
9 bulls~65 days @ $1.50/day)	878	
Total Gross Product	**32,378**	**87.50**
Expenses		
Supplemental Mineral for livestock	2,000	5.41
Wear/Tear on Truck & Labour Checking Pasture	1,000	2.70
Fence Repairs	500	1.35
Land Rent	11,100	30.00
Total Expenses	**14,600**	**39.46**
Return	**17,778**	**48.05**

TABLE 6: DAHL'S WEST (2005)

	Acres	230
Gross Product	**$ Total**	**$/Acre**
70 bu/acre of feed bly @ $1.65/bu.	26,565	115.50
Total Gross Product	**26,565**	**115.50**
Expenses		
Total Seeding	7,130	31.00
Total Fertilizer	6,900	30.00
Total Chemical	4,600	20.00
Swathing	1,840	10.00
Total Harvesting	4,600	20.00
Land Rent	6,900	30.00
Crop Insurance Premium	1,150	5.00
Total Expenses	**33,120**	**146.00**
Return	**-6,555**	**-30.50**

6 Year Summary

Table 13. 6-Year Summary of Gross Product, Expenses and Returns

	2000	2001	2002	2003	2004	2005	6-Year Avg
Granrude's ($/acre)							
Total Gross Product	97.72	75.62	83.76	81.87	101.93	87.51	
Total Expenses	149.90	57.71	51.49	50.40	38.65	39.46	
Return	**-52.18**	**17.91**	**32.27**	**31.47**	**63.28**	**48.05**	**23.46**
Dahl's West ($/acre)							
Total Gross Product	166.32	136.08	172.50	162.16	162.50	115.50	
Total Expenses	140.08	129.44	130.74	130.85	168.00	146.00	
Return	**26.24**	**6.64**	**41.76**	**31.31**	**-5.50**	**-30.50**	**11.66**

Dahl's West had an average return of **$11.66/acre** during the past 6 years of production and Granrude's had an average return **of $23.46/acre**. However, it is important to keep in mind that Granrude's is a marginal parcel of land with yield variability and sloughs that made it better suited to grass production. At the 2006 Saskatchewan Pasture School Lorne spoke to attendees on his grain-to-grass transition, and stressed that under the right climatic and market conditions both scenarios can yield positive returns.

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