Swathe Grazing
Plum Thicket Farms

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Plum Thicket is a family owned and operated LLC consisting of Rex and Nancy Peterson, our son, Patrick, and his wife, Krista, who is in veterinary school.

Our mission is to produce high quality cattle, forage, and grain with management practices that foster the best stewardship of our land, our livestock, our soil, and our human resources.

Resources

340 cows
560 acres of farm ground under irrigation
1740 acres dry land farm ground
2200 acres of deeded pasture (no wet meadows)
4,421 acres of leased pasture
3 family members
1 summer intern

The single biggest driver of business decisions is stewardship.

Why swathe graze?

Forage crops play a vital role in a no-till crop rotation and are soil builders.
Uses much less fuel.
Requires significantly less labor.
The only nutrient that leaves the field walks off as beef.
Distributes manure evenly across the field.
In the long term, will improve organic matter and soil health.

What are the down sides?

In a drought year, may have issues with nitrate levels.
Hard to know how much hay is there.
Hard to get a good representative feed sample.
A truly severe storm could block access to feed.
You feel like a foolish grasshopper when all your neighbors are being busy ants.

How do we address these problems?

Always test for nitrate level a few days after swathing so that if it is too high, you can bale it and blend it with other feeds.
Raise swather to its highest setting, leaving maximum stubble height.

Estimate production by using the same hoop we use for pasture production.
Clip at same stubble height as swather.
Take a minimum of 10 samples across field.
Dry, and weigh in grams, averaging weights of samples.
Multiply by 50 to get pounds per acre.

Sample at least 10 swathes, taking sub-samples from middle of swathe.
If you have a better idea, **speak up!!**

Keep a baled hay reserve to get you through a bad storm.
One option is to bale a few windrows, leave the bales in place and fence them off (bale grazing does a wonderful thing to the soil).
The hay in the windrows will still be good when the snow melts.

What do we plant? (God doesn't plant a monoculture, so we don't either.)

15 pounds conventional soybeans (3.7 RM or higher)
5 pounds BMR sorghum
5 pounds millet
1 pound sunflowers
1 pound sweet clover
1 pound turnips (only if planting it later in the season)
1 pound radishes

When do we swathe it?

As soon as the first sorghum heads begin to emerge from the sheath.
Sorghum makes up the biggest part of the tonnage, so we look to it for the optimum balance between quality and quantity.

How does swathe grazing perform?

The cow herd has winter grazed swathes since 2005.

Swathe grazing allows us a 10 to 11 month grazing season.

The snow has never interfered with their ability to find the swathes

Year		acres	# head	AU	days	AUM	AUM/acre
2005	cows	261	350	1.29	48	722.4	2.77
2007	cows	169	229	1.29	55	541.59	3.20
2008*	cows	169	235	1.29	10	101.05	0.60
2008*	cows	84	235	1.29	7	70.74	0.84
2009	cows	84	210	1.29	26	234.78	2.80
2009	cows	60	210	1.29	12	108.36	1.81
2010	steer calves	70	140	0.55	55	141.17	2.02
2011	weaned calves	11.7	282	0.43	11	44.46	3.80
2011**	steer calves	70	150	0.5	25	62.50	0.89
2011**	heifer calves	70	127	0.58	45	110.49	1.58
2011	steer calves	80	150	0.67	108	361.80	4.52
2012	bred heifers	70	106	0.95	72	241.68	3.45
2012***	cows	70	201	1.29	5	43.22	0.62
2012	cows	70	201	1.29	15	129.65	1.85

* In 2008, we planted a cover crop after we harvested the wheat and turned cows on it mid winter. Cover crop was a mixture of BMR sorghum, soybeans and clover

** In 2011 we had an 18" snow cover and couldn't see how much feed was left, so we moved the steers early and went back with heifer calves later to clean up.

How do calves perform on swathes?

Year	**ADG**
2010	1.69
2011	1.96

2012 data

	date	Age (days)	weight	ADG
weaning wt	10/10/2011	155	436.5	
background in wt	12/10/2011	216	573	1.9
midwinter wt	2/17/2012	285	723	2.3
Background out wt	3/30/2012	326	834	2.8

How were the steer calves supplemented?

Steer ration
3.7 pounds light test weight milo
3.8 pounds DDG
Supplement containing Rumensin (80 mg/day), some urea for DIP and trace minerals

Utilizing NRC's predicted intake, the steers were fed to gain around 1.8 pounds ADG. Between December and late February, the steers gained 2.3 pounds ADG.

Between Feb 17 and Mar 30th gained 2.8 ADG.

Why did the steers out-perform the projection?

The steers were either eating more hay than NRC predicted

or

The hay was a better quality than the feed sample showed.

The sample could not measure the regrowth.

The sample probably missed the turnips and radishes.

Probably a bit of both.

What is the cost per acre of raising a summer annual cocktail?

Spring burn-down herbicide	$ 6.74
Fertilizer	$29.08
Seed	$25.00
Planting cost	$18.00
Swathing	$14.00
Total:	**$92.82/acre**

How does swath grazing compare to traditional feeding programs?

Average AUM/acre over 7 years is 2.98 AUM/acre
Cost per AUM $31/AUM
1290 pound cow $24.00/month or $0.80/day

Compare it to feeding 30 pounds of $65/ton hay, which costs $0.975/day.
Labor of feeding the cows is not included in this calculation.

What was the cost of gain in back-grounding the 2011 born steers?

Steer ration	
3.7 pounds light test weight milo* valued $3.33/bu ($.06/#)	$0.22
3.8 pounds DDG valued at $220/ton ($0.11/#)	$0.42
1/3 pound Supplement valued at $540/ton ($0.27/#)	$0.09
($92.82 x 80 acres) / (150 calves x 108 days)	$0.46
Total:	**$1.19**

*I sold corn @ $5.95/bu. Milo is usually worth 80% of corn.
I discounted it by another 30%, because I couldn't sell it, to come up with $3.33/bushel.

At 2.3 ADG cost of gain was $0.52.
At 2.8 ADG cost of gain was $0.425.