2020 Farm Expenses- Cost Cutting Opportunities

One North Dakota farmer's perspective

Background

- Not all paths to the farm are the same:
  - Texas Christian University: Finance Major and Economics Minor
  - Investment Bank Analyst for NationsBanc Capital Markets:1995-1997
    - Dallas, TX
  - Commodity Merchant and Supply Chain Analyst for Cargill:1998-2008
    - Paris, IL, Wichita, KS, Minneapolis, MN, Tower City, ND
  - Farming since 2001
    - JR Farms 2005
  - Married to Rachel Richman; Microbiology Lecturer, NDSU
    - 4 children: Iris, Lila, Violet, Jack

Office Farming

Review Invoices

- Line by line detailed review of parts and input invoices-mistakes happen ($9200 worth)
  - The typo
    - One $7.50 bolt…….$750
    - 80 units of $52 unit soybeans……$130 unit = $6,240
  - The double up
    - Floater spreads the dry half of the quarter, one week later spreads the other half
    - Initial 75 acre application billed, 150 acres billed upon completion of the quarter upon final submission of the application map
    - 75 acres extra charge at $6/ac = $450
  - The forgotten core
    - Parts counter forgets to give the core **charge** on electric meter roll motor =$76 (credit 6 months later)
  - The invisible parts invoice
    - Skid shoes for flex draper never received….$372 (credit 3 months later)
  - The hose job
    - Replacement scrapers for high speed disk….$29/scraper (not hardened)
    - Eventual net cost after complaint credits, researching competing parts cost for competing brand, contacting a local short-line manufacture for production and getting another set for $5/scraper….$13/scraper avg cost=$1296 (4 months later)

Right-Sized Labor Force

Utilize combination of full-time and seasonal labor

- Limited need for year round labor
- Increasingly difficult to find capable seasonal help—retired farmers finally retiring!
- H-2A agricultural worker program fills void
  - Positive experience-2 years
  - Agents handle the paperwork
  - Must provide air travel, annually inspected housing, transportation and fuel to job site and Workman's Compensation coverage
  - Minimum wage set by state (2020 ND-$14.99/hr, MN $14.40/hr)-no withholding taxes
  - Can send home if they don't work out at their cost
- Risk management
  - Flexibility to adjust labor force to seasonal outlook-one versus two
    - Uncertain spring…2020 planted acres?
    - Less grain to haul from 2019…prevent plant acres
    - Can add back laborer in future

VRT Input Application

Resources are scarce…critical to spend wisely

- Overcome temptation of reducing input cost only to sacrifice greater return
  - Cost of mapping vs. return
    - Input savings…maybe
    - Yield enhancer…use %s to help estimate benefit

VRT Breakeven Analysis								
Assuming no additional fertilizer--reallocated from unresponsive areas to good								
acres	160		corn price	$ 3.50				
vrt cost/ac	$ 10.00		% increase	10%				
vrt gross	$ 1,600							
	high yield potential areas (% of field)							
base yield	5%	10%	15%	20%	25%	30%	35%	40%
50	$ 140	$ 280	$ 420	$ 560	$ 700	$ 840	$ 980	$ 1,120
75	$ 210	$ 420	$ 630	$ 840	$ 1,050	$ 1,260	$ 1,470	$ 1,680
100	$ 280	$ 560	$ 840	$ 1,120	$ 1,400	$ 1,680	$ 1,960	$ 2,240
125	$ 350	$ 700	$ 1,050	$ 1,400	$ 1,750	$ 2,100	$ 2,450	$ 2,800
150	$ 420	$ 840	$ 1,260	$ 1,680	$ 2,100	$ 2,520	$ 2,940	$ 3,360
175	$ 490	$ 980	$ 1,470	$ 1,960	$ 2,450	$ 2,940	$ 3,430	$ 3,920
200	$ 560	$ 1,120	$ 1,680	$ 2,240	$ 2,800	$ 3,360	$ 3,920	$ 4,480
225	$ 630	$ 1,260	$ 1,890	$ 2,520	$ 3,150	$ 3,780	$ 4,410	$ 5,040
250	$ 700	$ 1,400	$ 2,100	$ 2,800	$ 3,500	$ 4,200	$ 4,900	$ 5,600
values = acres x high yield pot. area x base yield x % increase x corn price								

  - Look beyond upfront cost to understand opportunity cost
    - Drive the good areas harder…extra bushels above and beyond cost to reduce overall cost per bu

VRT Input Application

- Currently making poor areas worse by applying more fertilizer
  - Raise toxicity in salty soils and spending money to do it
- Aberhart Farms (Langenburg, SK) example (provided at recent NWFM meeting)
  - $7/ac cost reduction + $28/ac yield gain=$35/ac gross benefit

- Go beyond fertilizer…fungicide?
  - No need to apply in poor areas, corn and soy…limited upside
  - Eliminate the double hit of white mold in soybeans
    - Yield reduction…in best areas
    - Opportunity cost of the best areas not raising the field average

VRT Input Application

Aerial Map

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surety

Map Center: 47° 9' 36.75, -97° 48' 5.18

0ft 823ft 1647ft

32-143N-56W
Barnes County
North Dakota

2/3/2020

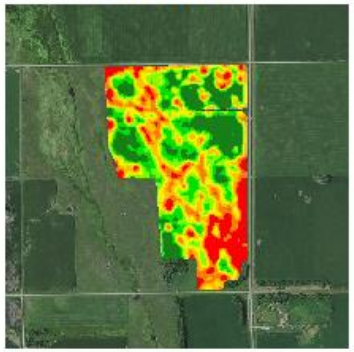
ProfitZ nutrients

Zone Rate Map

Prepared For:	GEORGE RICHMAN	**Date:**	2/3/2020	**Section:**	32
Common Name:	GPS-E HALF 32			**Quarter:**	E HALF
County:	Barnes			**Acres:**	289.8
Township:	ELLSBURY				

Aerial photography provided by USDA-FSA-APFO

White mold



Zone Rate Legend	Acres: 289.8	Gal/acre	Total	.791 Cost
1	33.5	0.00	0.00	$0.00
2	34.2	0.00	0.00	$0.00
3	40.7	0.00	0.00	$0.00
4	44.0	0.00	0.00	$0.00
5	42.8	20	856.00	$677.10
6	41.4	20	828.00	$654.95
7	53.4	20	1,068.00	$844.79
		9.5	2,752.00	$2,176.84

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White mold spray is $0.791/gal of spray solution. 137.6 acres treated @ 20gpa vs. 289.8 acres (whole field) treated for a savings of $2407.81

VRT Input Application

VRT fungicide application example

- Straight application:290 acres x $16=$4640
- VRT application:136 acres x $16=$2176
- Savings: $2464
  - $8.50/ac on 290 acres
  - Breakeven at $8/bu beans =272bu or .9bu/ac
    - Vs 580bu or 2bu/ac
- Execution (and enthusiasm) benefits: 2720 gal water applied vs 5800 gal

The Chemical Programs

2020 Opportunities to save on chemical?

- Deciphering the manufacturer programs
  - BAYER
  - Corteva
  - BASF
  - FMC
  - Plan now
  - Deadlines? Corteva = March 13
  - Fit with my weed control program?
  - Rotation impact?
    - Need crop advisor input
  - Communicate with supplier and avoid execution crunch
- New pricing of name brand vs. generics
  - Roundup
- Incorporate into budgets
  - Reverse a negative trend
  - Find a positive for the banker

Petroleum Inputs

Recent market developments providing opportunities to save on fuel in 2020

- Midpoint of past year range for Heating Oil is approximately $1.90 gal vs. $1.60 currently…16% reduction
  - Down almost 25% vs. recent January high!
  - If 16% reduction applied to largest 20% of RRV farms (3500acres) in the MN and ND Farm Business Mang. 2018 Report (latest available), equates to approx. $13,000

Petroleum Inputs

Propane Bullet

- Opportunity to significantly reduce cost and control supply
- Requires significant investment…approximately $115k for new 30k gal tank installed (just one quote)
- 2019 saw frequent supply disruptions for bobtail customers
  - First week of corn harvest…"this may be last fill this fall"….what????
  - Home heating needs come first
  - Surcharges for extra freight, even on contracted supplies…plus 20c/gal
- Transport loads vs. bobtail loads offer significant savings
  - Currently over 50c per gal, summer fill 60-70c per gal vs fall cak
  - NDSU assumption: .02 gal propane per bushel per point moisture removed
    - 175bu/ac at 5 pts = 17.5 gal propane at 50c/gal savings = $8.75/ac savings
    - 175bu/ac at 10 pts = 35 gal. propane at 50c/gal savings= $17.50/ac savings
  - Impact on hybrid selection?...add yield if moisture was less expensive and drying was easier to execute?