Repair, Replace, Retool, or Retire: On-Farm Engineering

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Vermont Vegetable and Berry Growers Association Annual Meeting –January 28, 2024

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Winter rain— The field stubble Has blackened.

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Basho



First snow

Falling

On the half-finished bridge.

Basho

Chris Kincaid, japanpowered.com, 2018



Cover my head

Or my feet?

The winter quilt.

Buson

Chris Kincaid, japanpowered.com, 2018



To know benefit

Divide the cost by savings.

Payback period



Simple Payback

Payback Period = Initial Cost Premium Cost Cash Flow Savings



Simple Payback

Payback Period = Initial Cost Investment Cash Flow Add'l Profit



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1	Achat rotocu	teur tracté pou	r remplacer le l	honda								
2	DÉPENSES EN PLUS:										Dépenses	
	tiller										600.00\$	
4	TOTAL:										600.00\$	
5	depreciation										2 y	years
6	Dépense/an										300.00\$	
7	Dépenses vai	iables/année										
8		Maintenance	5%	value of the inv	/estment						30.00\$	
	OTAL/ANNÉE ENTRETIEN:									30.00\$		
	TOTAL/ANNÉ	E:									330.00\$	
11	,											
12	DÉPENSES EN MOINS:										Dépenses	
13	Salary saved											
14	Tiller used:		77	hours in 2024		25.00\$	/hour	30%	faster with ne	wtiller	577.50\$	
15												
16											577.50\$	
17	REVENUS EN PLUS:										Revenus:	
18	tiller does not	iller does not bring new revenues										
19												
20												
	TOTAL:										0.00\$	
22												
23	REVENU	REVENUS EN MOINS:									Revenus:	
24	opportunity cost 600.00 \$		at	3.00%	/year					18.00\$		
25												
26	MARGE:										265.50\$	
27											•••••	

High Efficiency Heater

Mid-March through June

90% heater \$4500 vs. 85% heater \$2000

Cost premium \$2500

Fuel saved 88 gallons propane annually

\$325 at \$3.70 per gallon

\$2500 / \$325 per year = 7.7 years





Amortization

PrincipalInitial CostAnnual Cost ==YearsUseful Life





To know yearly cost

Divide initial cost by life

Amortization



Rotary cutter (brush hog) \$1,404.66 brand new in 2000 Agonizing purchase decision Used options seemed rough 25 years later, two new sets of bldes, new guide wheel

\$1404.66 / 25 years =

\$56.18 per year and falling



"The thought in regards to capital expenses is always focused on the primary goal of gaining some level of <u>efficiency</u> or <u>comfort</u> for the investment.

For example:

Does a carrot harvester make sense for us?

a) do we harvest faster?

b) what steps are we adding into the equation by changing a system of harvesting

c) does it make the job physically easier on the crew etc., etc."



"My take is that as farmers, we're in it for the money even though we're not in it for the money.

Or said another way, we didn't get into farming to get rich but we can't ignore the risk of becoming poor."



"If you are not mechanically inclined, start learning how to be.

Yes, a motor overhaul is not doable for most, me included.

But I've seen and heard of farmers paying for oil changes, replacing batteries, filter replacements, etc.

I view that as wasted money."



"... being mechanically inclined and mentally curious is clearly a financially destructive trap.

When junk breaks, I fix it. When that junk doesn't quite work the way I need it to, I change it and usually come up with some clever solution or adaptation that is only slightly less efficient, significantly more expensive, and entirely less user friendly, than what is available from an equipment dealer.

But as farmers, that's just what you do, right?

I have developed a spiritual sense of the limitless potential of junk and a willful amnesia when it comes to how that junk always breaks.

If there is a real superpower in farming, it's the ability to stay focused on the actual production side of farming."

"Just because you can do something for yourself doesn't *University* | **Extension** make it a good idea."



Amortization?

Payback?

Fun?

Joy

Ted and Nate Blomgren, Windflower Farm, NEFVC 2024



Count the years and cents

But above all else, embrace

Joy and playful sense.

