

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

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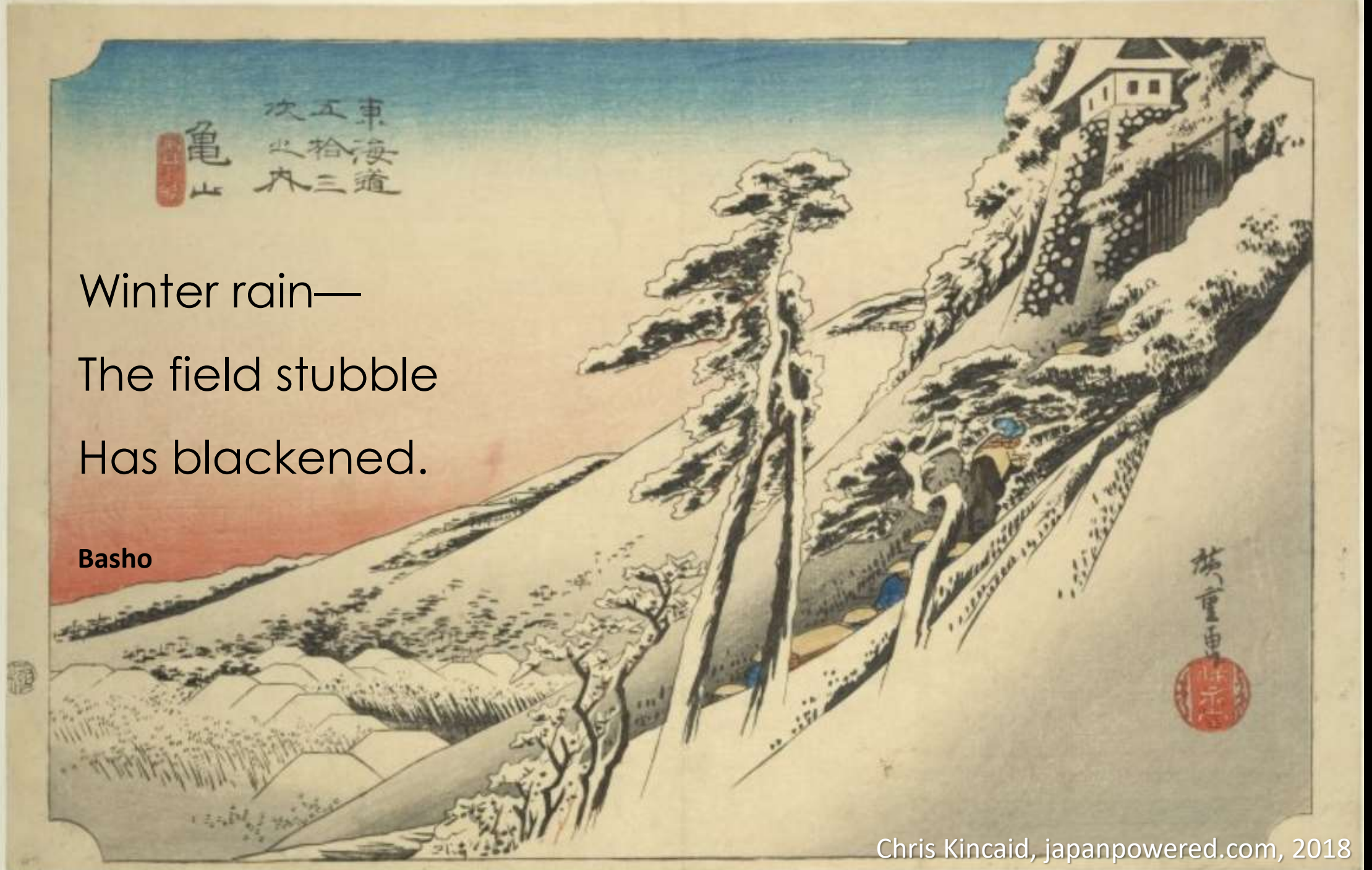
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Winter rain—  
The field stubble  
Has blackened.

Basho







First snow

Falling

On the half-finished bridge.

Basho

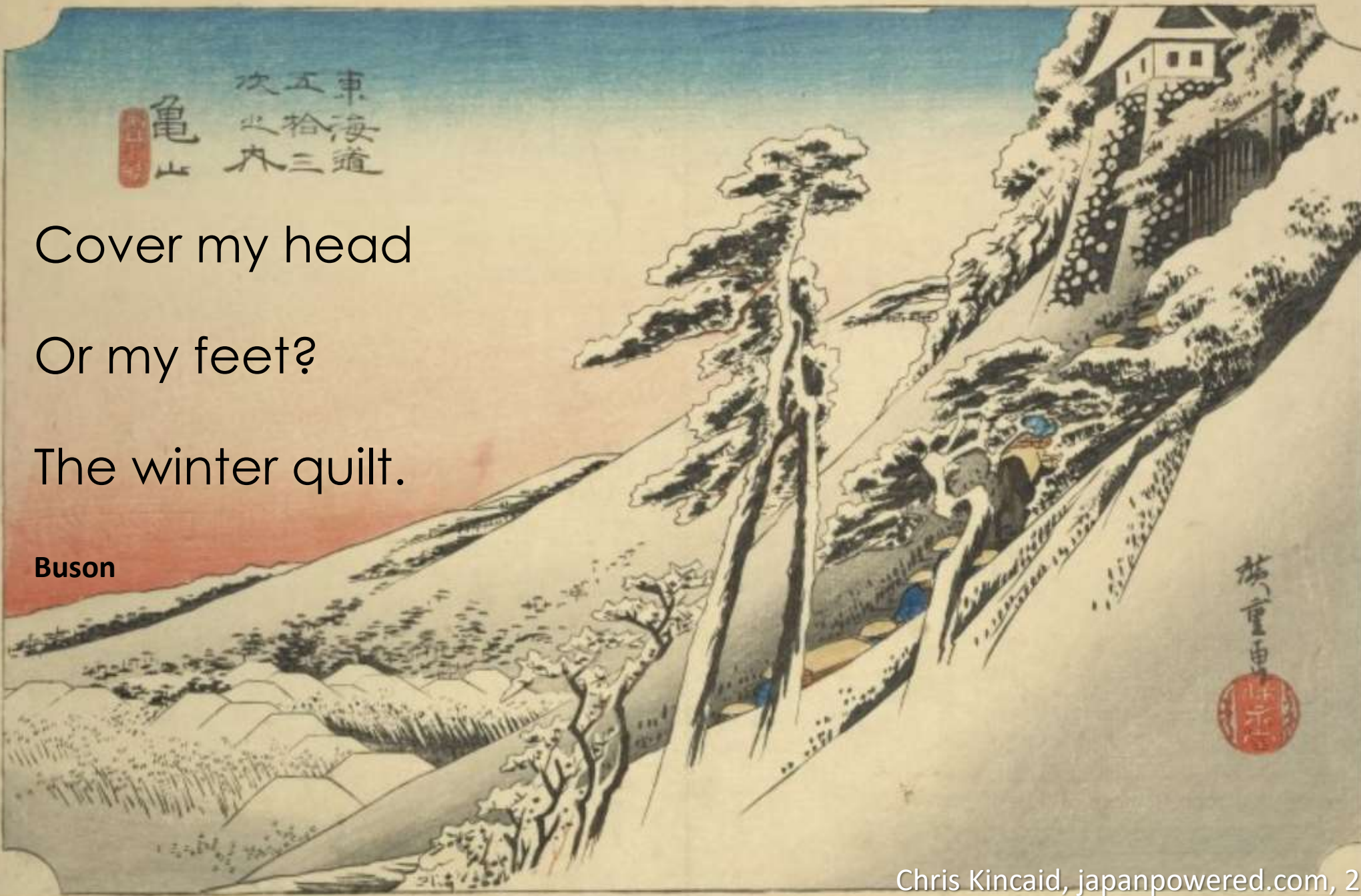


Cover my head

Or my feet?

The winter quilt.

Buson



# Simple Payback

To know benefit

Divide the cost by savings.

Payback period

# Simple Payback

$$\text{Payback Period} = \frac{\text{Initial Cost}}{\text{Cash Flow}} = \frac{\text{Premium Cost}}{\text{Savings}}$$

# Simple Payback

$$\text{Payback Period} = \frac{\text{Initial Cost}}{\text{Cash Flow}} = \frac{\text{Investment}}{\text{Add'l Profit}}$$

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

$$\text{Annual Cost} = \frac{\text{Principal}}{\text{Years}} = \frac{\text{Initial Cost}}{\text{Useful Life}}$$

# Amortization

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  
blades, new guide wheel

$\$1404.66 / 25 \text{ years} =$

**\$56.18 per year and falling**



Chuck Wooster, Sunrise Farm, email



“The thought in regards to capital expenses is always focused on the primary goal of gaining some level of efficiency or comfort 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  
make it a good idea.”





Ted and Nate Blomgren, Windflower Farm, NEFVC 2024



Amortization?

Payback?

Fun?

Joy?

Ted and Nate Blomgren, Windflower Farm, NEFVC 2024

# Sense of Joy

Count the years and cents

But above all else, embrace

Joy and playful sense.