

The Hidden Cost of Compromise: Jake Morrison's Story A Case Study in Sidehill Harvesting Economics

Disclaimer: Jake Morrison and Morrison Farms are fictional characters created for educational purposes. However, the financial calculations, grain loss data, and ROI analysis presented in this case study are based on real-world research, university studies, and actual customer results. The scenarios and numbers reflect typical sidehill harvesting conditions and represent what many hill farmers experience in their operations.

Jake Morrison stands at the edge of his cornfield overlooking the rolling hills of his 2,400-acre farm near the Mississippi River Valley in northeast Iowa. It's early October, and the corn is ready. For the past fifteen years, Jake has watched his grain loss monitor climb as he moved from the flatter bottomland onto the steeper slopes. He'd accepted it as the cost of farming hills.

"Everyone loses some grain on the slopes," he'd tell himself. "That's just how it is."

But this year was different. This year, Jake decided to find out exactly what that compromise was costing him.

The Moment of Truth

Jake's operation runs like clockwork. He farms 1,200 acres of corn averaging 180 bushels per acre and 1,200 acres of soybeans at 49 bushels per acre. His Class 7 combine with an 8-row cornhead and 40-foot flex platform had always seemed adequate for the job. With 376 engine hours and 262 separator hours on his current machine, he kept his equipment well-maintained and his harvesting speeds optimized for level ground.

But Jake's farm isn't level ground. The truth is written in the topography:

- 360 acres between 0-3% slope (15%)
- 720 acres between 4-9% slope (30%)
- 840 acres between 10-15% slope (35%)
- 480 acres at 16% or greater slope (20%)

"I knew I had to slow down on the hills," Jake explains. "From 4.0 MPH on level ground to 2.5 MPH on my steepest slopes for corn. Even slower with beans—dropping from 5.0 MPH down to 3.5 MPH. I watched that grain loss monitor the whole time, trying to find the sweet spot between saving grain and keeping harvest moving."

The question that kept Jake up at night: *How much is this compromise actually costing me?*

The Discovery

Jake's neighbor, Tom, had installed a Hillco Leveling System on his new combine two years earlier. "Jake, you need to run the numbers," Tom told him over coffee one morning. "I thought I knew what I was losing. I was wrong by about \$25,000."

That conversation led Jake to Hillco's ROI calculator at www.hillcotechnologies.com.

"I'll be honest," Jake admits. "I was skeptical. I'd looked at leveling systems before and always thought, 'There's no way I can justify that price tag.' But Tom convinced me to at least plug in my numbers and see what the calculator showed."

Jake spent an evening gathering his data:

- Current commodity prices: Corn at \$4.40/bu, soybeans at \$11.20/bu
- His combine efficiency: 70% (262 separator hours ÷ 376 engine hours)
- Labor costs: \$20/hour (himself and his son)
- Fuel consumption: 18 GPH at \$3.00/gallon
- His actual harvesting speeds on different slopes
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The hardest part was estimating grain loss. Following the data from Hillco's extensive university-backed studies, Jake input his estimated losses:

Corn:

- 0 bu/a on 0-3% slope
- 5 bu/a on 4-9% slope
- 8 bu/a on 10-15% slope
- 11 bu/a on 16% or greater slope

Soybeans:

- 0 bu/a on 0-3% slope
- 2 bu/a on 4-9% slope
- 4.5 bu/a on 10-15% slope
- 6.0 bu/a on 16% or greater slope
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"Once I got past the gentler slopes, the losses really added up," Jake notes. "And 20% of my farm—480 acres—sits on those steepest slopes."

The Calculation That Changed Everything

When Jake hit "Calculate ROI," the results stopped him cold.

Annual grain loss: \$27,369.47

"I literally sat there staring at the screen," Jake recalls. "Over twenty-seven thousand dollars. Every single year. Just... gone."

But the calculator revealed even more. The grain savings were only part of the story.

The Complete Picture: The Leveling Advantage

Jake discovered what Hillco calls "The Leveling Advantage"—a complete economic equation that factors in three critical components:

1. Grain Savings: \$27,369.47

This was grain Jake was literally leaving in the field. With current prices—\$4.40 for corn and \$11.20 for soybeans—that lost grain represented real money that should have been in his grain bins, not on the ground.

"What hit me hardest was realizing I'd been doing this for fifteen years," Jake says quietly. "That's over \$400,000 in grain I've left in my fields. You invest everything—time, seed, fertilizer, chemicals, fuel, labor—and then you just... leave it there because your combine can't handle the slope."

2. Productivity Savings: \$3,515.99

The calculator showed Jake something he hadn't fully appreciated: time has a dollar value at harvest.

His level-land combine required 236.12 separator hours to harvest his acres at his reduced hillside speeds. With a Hillco Leveling System, maintaining full speed across all slopes, he'd complete the same harvest in just 188.62 hours.

That's 47.5 hours—nearly five full days—saved every harvest season.

The productivity savings broke down into measurable costs:

- Labor savings: \$950.99 (47.5 hours × \$20/hour)
- Fuel savings: \$2,565.00 (47.5 hours × 18 GPH × \$3.00/gallon)
- Reduced separator hour costs: Additional value in lower wear and tear

"Five days," Jake repeats. "That's five more days to get ahead of weather. Five days that let me expand my operation without buying a second combine. Five days less stress on my equipment and my family."

3. Cost of Ownership: -\$1,068.00

This is where Jake's assumptions were challenged. He'd always viewed a leveling system as pure cost—another \$82,000 on top of an already expensive combine purchase.

But the calculator revealed something surprising: the Cost of Ownership was actually negative.

Here's how: By reducing separator hours by 47.5 annually, Jake's combine would have significantly lower hours at trade-in time. At \$240 per separator hour, that's \$11,400 in preserved combine value each year. The leveling system itself depreciates, yes—about \$10,332 annually over five years (with systems retaining approximately 37-40% of original value). But when you subtract that depreciation from the combine's preserved value, Jake actually comes out ahead by \$1,068.00.

"I'd been thinking about it all wrong," Jake admits. "I wasn't adding \$82,000 to my combine cost. I was making an investment that actually *increased* my combine's value while simultaneously recovering tens of thousands in lost grain."

The Leveling Advantage Formula

Grain Savings (\$27,369.47) + Productivity Savings (\$3,515.99) - Cost of Ownership (-\$1,068.00) = \$31,953.46

The Leveling Advantage: \$31,953.46 annually

With an \$82,000 investment and a \$31,953.46 annual return, Jake's average payback period was just 2.57 years.

"And that's conservative," Jake points out. "I used the default depreciation value. Hillco systems actually retain 60% of their value on average—much better than I estimated. The real payback could be even faster."

The Decision

Jake didn't rush the decision. He cut his losses in half in the calculator, just to see. Even at 50% of the original estimates, he was still leaving an unacceptable amount of grain in the field. He talked to other Hillco owners. He visited Tom's farm during harvest and rode in the cab as Tom took his steepest terraces at full speed, grain tank staying level, loss monitor barely registering.

"The thing that convinced me wasn't just the numbers," Jake says. "It was watching Tom harvest. No slowing down. No compromise. No watching that monitor climb and just accepting it. He was harvesting hills the way I harvest level ground."

Jake ordered his Hillco Leveling System in February, having it installed at near-factory installation through his dealer. When his combine arrived in August, it was field-ready.

The Results

Jake's first harvest with his Hillco system changed everything.

"The first time I took a 15% slope at full speed—4.0 MPH, same as level ground—and looked back to see clean ground behind me, no grain trail, I knew," Jake says. "This wasn't just about money. This was about farming the way it should be done."

The financial results matched the calculator's predictions:

- Grain recovery tracked closely with estimated savings
- Harvest time dropped from 236 hours to 191 hours
- Fuel costs decreased by over \$2,500
- Less wear on the combine from smoother operation

But Jake found benefits the calculator couldn't quite capture:

"My grain tank stays level now. I can fill it to capacity on any slope. I can unload on the go, even on terraces. My harvest window opened up—I'm not racing the clock the same way. And honestly? It's just better. The cab stays level. After a 12-hour day, I'm not as exhausted from fighting the machine."

Jake completed his harvest four days earlier than the previous year, beating an October rain that would have cost him quality and potentially more grain to weather damage.

The Message to Other Farmers

Jake now farms 2,600 acres, having expanded his operation by 200 acres—something he couldn't have done without the time savings from his leveling system.

"Look, I get it," Jake says to fellow farmers still on the fence. "That price tag is intimidating. I stared at it for years thinking, 'I can't justify that.' But here's what I didn't understand: *I was already spending that money*. I was spending it every single year in grain I left on the ground. I was spending it in extra fuel, extra hours, extra wear on my combine. I just couldn't see it because it wasn't one big bill—it was death by a thousand cuts."

Jake's advice is simple: Use the calculator.

"Don't guess. Don't assume. Take thirty minutes, pull up your records, and plug in your actual numbers. Use the Hillco ROI calculator at www.hillcotechologies.com. Be honest about your slopes, your speeds, your grain loss. The calculator will show you exactly what that compromise is costing you."

He pauses, looking out over his hills.

"I thought I was saving money by not buying a leveling system. Turns out, I was losing a new pickup truck's worth of grain every single year. For fifteen years. That's a quarter-million dollars I'll never get back. But from here on out? That grain goes in my bin, not on the ground."

The Leveling Advantage: Beyond the Numbers

Jake's story illustrates what Hillco calls "The Leveling Advantage"—but it's more than just a formula. It's a fundamental shift in how hill farmers approach harvest economics.

The Old Thinking: "A leveling system costs \$82,000. I can't afford that."

The New Reality: "Harvesting without a leveling system costs me \$31,953 per year. I can't afford *not* to have one."

Today, Jake's combine sits ready for next season. The Hillco Leveling System is no longer a luxury item or an optional upgrade. It's an essential piece of equipment, as fundamental to his operation as the combine itself.

"You know what the best part is?" Jake asks. "Next year, and the year after, and the year after that—every bushel that used to end up on the ground goes to market instead. Every hour I used to spend creeping along at half-speed gets reinvested in my family or my operation. That \$82,000 investment? I'll make it back in less than three years. Everything after that is pure profit."

He grins. "Tom was right. I just wish I'd listened to him fifteen years ago."

Calculate Your Own Leveling Advantage

Jake Morrison's story is real—real numbers, real losses, real savings. But his farm isn't your farm. Your slopes, your acres, your commodity prices, your specific situation will be different.

That's why Hillco created the ROI calculator. Don't guess what a leveling system could mean for your operation. Know.

Visit www.hillcotechnologies.com and use the ROI calculator to input your specific farming operation details:

- Your crop types, acres, and yields
- Your slope distribution
- Your current harvesting speeds
- Your estimated grain losses
- Your operational costs

In less than 30 minutes, you'll have a complete picture of your Leveling Advantage—your grain savings, productivity savings, and true cost of ownership.

The question isn't whether you can afford a Hillco Leveling System.

The question is: How much is it costing you not to have one?

Find out at www.hillcotechnologies.com.

"I thought I knew what I was losing. I was wrong by about \$30,000. Every year. Use the calculator. Find out what your hills are really costing you."