CHAPTER 1

Chapter 1: The Myth That You Own Your Machine

In the spring of 2022, a Missouri corn and soybean farmer named Jared Wilson watched his combine sit dead in the field. The ECU — the machine's electronic brain — had failed during fall harvest. Wilson had the replacement part. An independent mechanic was ready. The combine would not move. Not because anything mechanical was wrong. Because the software that authorized the new component lived on a server controlled by a dealership that was not there.

His soybeans fell to the ground while he waited.

Wilson later became a plaintiff in a class action lawsuit against John Deere. But before he was a plaintiff, he was just a farmer standing next to a $400,000 machine that he had paid for in full and could not operate. That moment — not the lawsuit, not the legislation, not the FTC filing — is where this book begins.

What Ownership Meant in 1985 Versus What It Means Today

In 1985, if you bought a John Deere 4640, you owned it. Every bolt, every gear, every wiring harness. You could tear the engine down on a Sunday afternoon, order parts from any supplier willing to sell them, and have it running by Monday morning. Your mechanic neighbor could fix it. Your son could fix it. You could fix it. The machine did what the machine did, and the manufacturer had no further say in the matter.

That world is gone.

The tractors and combines sold today contain **Engine Control Units** (ECUs) — computers that manage fuel delivery, emissions systems, hydraulic functions, and dozens of other core operations. When you replace a sensor, a fuel injector, or a hydraulic valve on a modern Series 8 tractor, the ECU often detects an unauthorized component and flags a fault code. The machine may limit power, refuse to start, or shut down entirely. Clearing that fault code requires proprietary diagnostic software. That software belongs to John Deere. Access to it, until very recently, belonged only to authorized dealers.

The physical machine is yours. The software that makes it run is not. And without the software, the machine is a very expensive piece of stationary steel.

The End User License Agreement Buried in Every Modern Deere Purchase

Most people associate an **End User License Agreement** (EULA) with software they download on a phone. Nobody reads them. Everyone clicks accept.

John Deere's EULA works the same way. Except the "I agree" button is the ignition key.

When you turn the key on a modern Deere machine, you are automatically bound by a licensing agreement that forbids nearly all unauthorized repair and modification. That agreement also contains language that indemnifies the company against lawsuits for, in its own words, "crop loss, lost profits, loss of goodwill, loss of use of equipment arising from the performance or non-performance of any aspect of the software"[1].

Read that again slowly.

You bought a machine to grow food. The company that sold it to you has pre-emptively absolved itself of liability if its software causes you to lose that crop. You agreed to this by starting your tractor. There was no separate document. There was no attorney present. There was no negotiation. You signed away remedies worth hundreds of thousands of dollars without knowing you had done it.

> John Deere controls **53% of the U.S. large tractor market** and **60% of the combine market** — meaning most American grain farmers have limited practical alternatives when the EULA binds them to one company's service network[2].

I have spent years talking to farmers and independent mechanics about this agreement. Almost none of them knew it existed until the moment it was used against them.

The Legal Distinction Between Owning Hardware and Licensing Software

American property law was built on a simple premise: you buy a thing, you own the thing. You can use it, modify it, repair it, sell it, or destroy it. No one can tell you otherwise.

Software licensing law operates on different logic entirely. When a company embeds proprietary software in a physical product, courts have generally allowed the company to maintain ownership of that software even after the hardware is sold. The buyer owns the tractor. The manufacturer owns the code running inside it. These are treated as two separate legal objects — even though, functionally, one cannot exist without the other.

John Deere exploited this gap deliberately. The FTC's formal complaint, filed in January 2025, alleged that the company had used "two decades of engineering choices to make its equipment increasingly dependent on proprietary software while withholding that software from anyone outside its authorized dealer network, thereby maintaining an illegal repair monopoly"[3]. This was not an accident of technology. It was a business architecture designed by lawyers and engineers working together toward the same commercial outcome.

Until recently, courts had largely allowed it. The class action *Forest River Farms v. Deere & Co.*, filed in the Northern District of Illinois in January 2022, was one of the first serious legal challenges to the repair monopoly framing[4]. Progress was slow. A U.S. District Judge eventually denied Deere's motion to dismiss the Colorado class action, ruling that farmers could proceed with Sherman Act monopolization claims[5]. That ruling mattered — but it took years, and most farmers lost money during every year of the wait.

> You own the steel. You license the function. And a machine you cannot operate is not property — it is a liability.

Three Farmers, Three States, Three Identical Stories

The stories below are not hypothetical. They are drawn from court records, legislative testimony, and documented journalist accounts.

Missouri: Jared Wilson described waiting three days during fall 2022 soybean harvest after a combine ECU failure. The replacement ECU arrived. His mechanic installed it. The machine would not move until a dealer technician drove out and uploaded a proprietary software payload. His soybeans fell to the ground. In 2019, a Deere dealership had his fertilizer spreader for 28 days for a repair Wilson had hoped would take hours[3].

> **Case:** Nebraska farmer Kevin Kenney paid $230 plus $130 per hour for a John Deere technician to drive out and "plug a connector into their USB port" to authorize a part after an independent mechanic had already replaced a transmission. The tractor could not leave the shop until Deere's software gave permission[6].

Nebraska: Danny Kluthe testified before his state legislature: "When crunch time comes and we break down, chances are we don't have time to wait for a dealership employee to show up and fix it. Most all the new equipment requires a download to fix." He was not describing a glitch. He was describing a system (Digital Trends, citing Motherboard).

In each case, the farmer owned the machine outright. In each case, the machine was physically repaired or repairable. In each case, a software authorization gate — controlled entirely by the manufacturer — determined whether the farmer could return to work.

The geographic dimension compounds this. A Nebraska farmer and repair mechanic told VICE Motherboard: "The nearest dealership is 40 miles away, but you've got me or a diesel shop a mile away. The only way we can fix things is illegally, which is what's holding back free enterprise more than anything."

That mechanic paid into an invite-only underground forum to access cracked Eastern European firmware. He did it not because he wanted to break the law. He did it because his neighbors needed their machines running and there was no legal path to get there.

Why This Is a Property Rights Story With a $400,000 Price Tag

This is not a story about technology. Technology is the mechanism. The story is about who controls property after the sale is complete.

A U.S. PIRG Education Fund report calculated that repair restrictions cost American farmers $4.2 billion per year — $3 billion in tractor downtime losses and $1.2 billion in excess dealership repair costs[7]. A survey of 53 farmers across 14 states found that 53% had lost crops due to equipment downtime, and roughly one in three feared losing their family farm to such a breakdown[7].

Since 2020, John Deere has seen a 270% increase in profits — through a pandemic, labor strikes, supply disruptions, and a drop in equipment sales[8]. That profit does not come only from selling machines. It comes from controlling what happens to those machines for every year of their operational life.

The EULA is the instrument. The ECU lock is the enforcement mechanism. The dealer network is the distribution channel. And the farmer, standing in a field with a machine that cost more than most houses in his county, is the revenue source.

> "When you have machines that are failing at those critical times of the year — when you have that one shot to get things right — it can severely impact your bottom line." — Jared Wilson, Missouri farmer and class action plaintiff[9]

I keep that quote because it understates things precisely enough to be devastating. "Severely impact your bottom line" is how you describe something when you are trying to stay calm in front of a reporter. What Wilson actually lost is harder to calculate and harder to say out loud.

The principle of this chapter has one name: the Ownership Illusion. You believe you own the machine because you signed the check and hold the title. The manufacturer believes it retains operational control because you accepted a software license by starting the engine. Both beliefs are legally defensible. Only one of them costs you $4.2 billion a year.

KEY TAKEAWAYS

- **Pull the EULA before the next purchase.** Ask your dealer for a written copy of John Deere's End User License Agreement before signing any equipment purchase contract. Read the indemnification clause specifically. If you cannot get a copy before signing, that is itself important information.
- **Identify what your machine cannot do without dealer software.** Before your next repair situation becomes an emergency, ask your dealer which functions on your current equipment require diagnostic software authorization to reset. Document the list.
- **Calculate your real downtime exposure.** Identify your three most likely failure points during planting or harvest. Estimate the dealer response time from your location. That number — in days, not hours — is your actual operational risk.
- **The problem is property law, not technology.** Every conversation you have with legislators, lenders, or neighboring farmers should frame this as a property rights issue, not a computer issue. The framing changes who listens and who acts.
- **The 2026 FTC settlement changed the legal landscape but not immediately the field reality.** Chapter 11 covers what the settlement actually requires and what it leaves untouched. Do not assume the problem is solved because a headline said so.

Activation exercise: Pull your most recent John Deere service invoice. Find every line item that required a dealer technician to complete a software step — any "programming," "initialization," "ECU reset," or "software update" charge. Add those line items. That number is what you paid, in this invoice alone, for access to software on a machine you own. Keep that number in mind as you read forward.

The ownership structure described in this chapter does not exist in isolation. It generates revenue. Specifically, it generates revenue for John Deere across four distinct streams, one of which has grown faster than all the others combined since 2015. Understanding how the money actually moves is not an academic exercise. It is the only way to understand why the lock was built, why it has been defended in court and in Congress for two decades, and what it will take to change it permanently.