



The Farmer's Guide to On-Farm Grain Cleaning

What to ask, what to avoid, and how to plan for the future.

Buying a grain cleaner is one of the most important decisions for a family farm. While it may seem like a simple choice of "capacity," the wrong machine can quickly become a bottleneck that costs you more in labor than it saves in dockage.

This guide is designed to help you navigate the technical realities of on-farm cleaning so you can invest in a machine that actually works for your workflow.

Part 1: The Questions You Already Have

1. How much capacity do I *actually* need?

Don't just look at your total bushels; look at your **harvest window**.

- **The Trap:** Buying a machine based on your total acreage.
- **The Reality:** If you have 10,000 bushels and have plenty of time to clean it, you do not need a machine that has 500 bushels per hour capacity.

2. Technology: Vibratory vs. Rotary

Many farmers assume all cleaners are the same, but the **motion** of the machine determines the final purity.

- **The Rotary Issue:** Traditional rotary cleaners often struggle with precision. They are prone to letting small impurities ride through or "bouncing" good grain into the trash chute.
- **The Vibratory Edge:** A modern vibratory system uses oscillation to keep the grain in a steady "fluid" state across the screens. This ensures every single kernel is exposed to the screen surface and the air curtain, resulting in a significantly higher purity level.

3. How do I calculate a real ROI?

It's more than just "higher price per bushel." Calculate these three numbers:

1. **Direct Savings:** Cost of retail seed minus the market value of your bin-run grain.
2. **Dockage Recovery:** The average 2–3% dockage fee you lose at the elevator.
3. **Storage Value:** The cost of one "hot spot" in a bin caused by fines. If cleaning prevents the loss of one 5,000-bushel bin, the machine paid for itself instantly.

Part 2: The Questions You Should Be Asking (But Might Not Be)

1. What is the "Clean-Out" time between crops?

If you grow three different crops, you will spend a lot of time switching screens.

- **The Question:** Can I see every internal corner of this machine?
- **Why it matters:** If grain gets trapped in hidden internal "dead spots," you'll spend hours with a vacuum or risk contaminating your organic wheat with last week's conventional corn. Look for an **open-frame design**.

2. Does the machine use Air, Screens, or Both?

Screens sort by **size**; air sorts by **weight**.

- **The Secret:** You can have two seeds the exact same size (e.g., a good wheat kernel and a shriveled, diseased one). A screen won't catch the difference, but a fan air system will "lift" the light, diseased seed out, leaving only the heavy, high-germination seed behind.

3. What are the Power Requirements?

- **The Question:** Do I need a 3 Phase Converter or a 220V drop?
- **The Impact:** Some industrial cleaners require heavy-duty electrical work that can cost thousands just to install. Look for machines that run on **standard 110V** if you want to be able to plug in anywhere in the shop or run off a portable generator in the field.



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4. How "Portable" is it really?

- **The Reality:** If a machine weighs 2,000 lbs and requires heavy equipment to move, it's not portable.
- **The Goal:** You want a machine that can be moved by a small utility tractor. It's much easier to move the cleaner to the grain than to haul grain across the farm just to clean it.

5. Space Planning: The Footprint

A common mistake is buying a machine that dominates the shop. You don't need a massive industrial plant to get industrial results.

- **Calculate the Static Footprint:** A mid-sized cleaner typically requires about 15–20 square feet of floor space.
- **Evaluate Vertical Clearance:** Most hoppers sit at the top of the machine, meaning you need a "loading zone" roughly 5 feet off the ground. Ensure your shop has enough overhead height to accommodate buckets or the end of an intake auger.

Part 3: The "Red Flags" to Watch for

1. Complex Power Needs

- Some cleaners require expensive electrical upgrades. Ensure the unit is compatible with your shop's existing 110V outlets or can be run off a standard portable generator for field use.

2. "Speed-Only" Cleaning Motion

- Be cautious of machines that prioritize high-speed throughput (often seen in basic rotary cleaners) over cleaning precision.

3. Proprietary Screen Lock-In

- Check the availability and lead times for replacement screens before you purchase. If the lead times are long, a single damaged screen during harvest could stall your entire operation; look for suppliers who can provide custom screens in a standard two-week window.

A Note from the Farmstead Family

We manufacture our machines in the USA because we want to be there when you have a question. We don't want you to buy a machine that sits in the corner of your shed because it's too hard to use or too slow to keep up. We want you to find the right machine for your specific needs.

Still have a specific crop or workflow question?

Give us a call at (320) 384-0003

We'll talk about your acreage and your goals—even if we end up telling you that our machine isn't the right fit for you.