SOFTWARE & TECH

John Deere 8350 Grain Drill Settings

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Mastering the John Deere 8350 Grain Drill: A Complete Guide to Settings and Performance

When it comes to achieving a uniform, high-yielding crop stand, few machines are as trusted in the field as the John Deere 8350 grain drill. This rugged, three-point hitch mounted drill has been a mainstay on farms for decades, valued for its durability and precise seed placement. However, even the most reliable equipment is only as good as its setup. Getting the **John Deere 8350 grain drill settings**right is the critical difference between a thriving, even stand and a disappointing, patchy field. Whether you are planting wheat, barley, oats, soybeans, or cover crops, understanding how to adjust this drill for your specific conditions is essential.

This comprehensive guide will walk you through every major adjustment, from seed rate calibration to opener depth, down pressure, and maintenance tips. By the end, you will have the knowledge to dial in your 8350 for optimal performance, saving seed, reducing input costs, and maximizing your yield potential.

Understanding the John Deere 8350 Grain Drill

Before diving into specific settings, it helps to appreciate what the 8350 brings to the table. Typically available in 10-foot, 12-foot, and 15-foot working widths, this drill uses a fluted feed cup metering system. It is renowned for its ability to handle a wide variety of seeds, from fine grasses to larger cereal grains, with excellent accuracy. The 8350 features double-disc openers, a common design that provides good soil penetration and seed-to-soil contact in most tillage conditions. Because it is a mounted drill, it is well-suited for smaller to mid-sized tractors and offers excellent maneuverability in irregularly shaped fields.

The key to mastering this drill lies in understanding its adjustable components. The major settings you will need to manage include the seed rate adjustment, the seeding depth, the down pressure on the openers, and the press wheel adjustments. Each of these interacts with the others, so a holistic approach is best.

Seed Rate Calibration: Getting Your Population Right

Perhaps the most important daily task is setting the correct seeding rate. The John Deere 8350 uses a feed cup system with a fluted rotor. The seed rate is primarily controlled by two factors: the position of the feed cup shut-off plates and the drive sprocket combination.

Each feed cup on the drill has a shut-off plate that slides to open or close the metering cavity. For most cereal grains like wheat and barley, you will typically run the plate fully open. For smaller seeds like canola or certain cover crop mixes, you may need to adjust this plate to a partial open position to reduce the flow. It is crucial that this setting is consistent across all cups on the drill to ensure uniform emergence.

The 8350 features a gearbox with interchangeable sprockets that allow you to fine-tune the revolutions of the feed shaft relative to the ground speed. The available sprocket combinations are listed in your operator’s manual, or you can refer to the decal on the drill itself. For example, if you are planting wheat and find your desired rate is 120 pounds per acre, you will select the sprocket combination that most closely matches that target. This is your coarse adjustment.

While the sprocket chart gets you close, a field calibration is the only way to be certain. The process is

straightforward:

1. Park the drill on level ground and raise it off the ground using the tractor hydraulics.
2. Place a tarp or container under one or two feed cups (use the same cup for consistency).
3. Disconnect the seed hose from that cup and point it into your container.
4. Set your tractor PTO or ground drive wheel to simulate a specific distance, such as 1/100th of an acre. The distance required will depend on your row spacing. For a 7.5-inch spacing, this distance is typically about 170 feet.
5. Rotate the ground drive wheel the correct number of revolutions (usually marked on the drill or in the manual) and collect the seed that falls.
6. Weigh the seed collected and multiply by 100 (or your fraction) to get the seeding rate per acre. Adjust your sprockets or feed cup setting as needed.

This process is essential when changing between different seed varieties that may have different sizes and weights. Taking the time to calibrate properly is the single most effective step you can take to optimize your **John Deere 8350 grain drill settings**.

Depth Control: Setting the Opener for Success

Seeding depth is arguably the second most critical setting. The 8350 uses a depth stop on each opener assembly. Most models feature a simple pin and series of holes that allows you to set the maximum depth the double-disc openers can penetrate. For winter wheat, a common target depth is 1 to 1.5 inches. For soybeans in no-till, you might go deeper, around 1.5 to 2 inches, to get to moisture. For oats or barley, 1 to 1.5 inches is typical.

After setting the depth stops, it is wise to check consistency across the drill. Simply lower the drill onto a hard, level surface (like a concrete pad) and visually inspect that all openers are at the same depth setting. Differences here can lead to uneven emergence and a ragged stand. Also, be aware that the actual seeding depth can vary with soil conditions. In hard, dry soil, the down pressure may not be sufficient to reach the set depth. In soft, moist soil, the openers may run deeper than the stop allows if the soil is too loose.

Down Pressure: Ensuring Consistent Penetration

Down pressure is controlled by springs on each opener. This setting determines how much force is applied to push the opener into the ground. Too little down pressure, and the openers may ride on top of hard soil, leaving seed on the surface. Too much down pressure can cause the openers to run too deep, closing the furrow improperly or placing seed too deep for successful emergence.

Most 8350 models allow you to adjust the spring tension by moving a pin into different notches on the spring assembly. The goal is to apply just enough pressure to achieve your desired depth consistently. A good rule of thumb is to set the down pressure so that the openers penetrate the soil cleanly but do not create a deep furrow wall that will cave in. If you are planting into a no-till field with heavy residue, you will likely need more down pressure than in a conventionally tilled seedbed. Adjust each row individually to match the field’s variability if possible, but at a minimum, ensure the entire drill is set uniformly.

Seed Tube and Furrow Management

The condition of the seed tubes is often overlooked but critically important. The seed tube carries the seed from the feed cup down into the furrow cut by the double-disc openers. If these tubes are worn, cracked, or missing, seed delivery will be inconsistent, leading to skips and poor spacing.

Many 8350 models come with press wheels that follow behind the opener to firm the soil over the seed. This ensures good seed-to-soil contact and helps retain moisture. The press wheel exerts a specific amount of pressure, and on some models, the wheel angle can be adjusted. For most conditions, a moderate pressure is best. In heavy

clay soils, too much press wheel pressure can cause crusting, while in sandy soils, you may need more pressure to ensure good contact. Adjust the press wheel height so it runs just above the bottom of the furrow, applying gentle, consistent pressure behind the seed.

Field Conditions and Real-Time Adjustments

No two fields are the same, and even with perfect initial settings, you will likely need to make adjustments on the go. Soil moisture, residue cover, and field slope all affect how the drill performs. A good operator watches the drill from the cab and makes small changes as needed. For example, if you notice that openers are plugging with residue, you may need to reduce down pressure or adjust the depth to lift the openers slightly. If you see seed bouncing out of the furrow, your press wheel pressure may be too light or your seed tube may be out of alignment.

One of the most common mistakes is setting the drill for an average condition and never checking it. Get out of the cab periodically and walk behind the drill. Dig up some seed in a few rows to check depth. Look for uniform spacing and good furrow closure. This hands-on observation is irreplaceable.

Maintenance for Reliable Performance

Your **John Deere 8350 grain drill settings**will only be effective if the machine is well-maintained. Here are a few maintenance points that directly impact setting accuracy:

- Check Feed Cups: Ensure the fluted rotors are free of rust and debris. Worn cups can cause inconsistent metering. Replace any that are damaged.
- Inspect Openers: Double-disc openers should have a sharp edge and proper blade spacing. Worn discs will not penetrate cleanly and will cause depth inconsistencies.
- Grease Regularly: All pivot points, including the depth stop arms and press wheel linkages, should be greased to ensure smooth, accurate adjustment. A frozen linkage will not move when you try to adjust it, giving you a false setting.
- Check Chains and Sprockets: Worn chains can slip, altering your seed rate. Keep chains properly tensioned and lubricated. Replace sprockets that have hooked or worn teeth. This is especially important for maintaining consistent drive ratios.
- Clean After Use: Leaving seed, especially treated seed, in the drill overnight can cause corrosion and clogging. Thoroughly clean the seed box, feed cups, and seed tubes after each use.

Troubleshooting Common Issues

Sometimes, despite your best efforts, problems arise. Here are common issues and likely solutions related to your settings:

Problem: Uneven emergence (skips and thick spots). Solution: Likely a seed rate calibration issue or a problem with individual feed cups. Check for blocked seed tubes or worn cups. Also, ensure the drill is level front-to-rear and side-to-side during operation.

Problem: Seed planted too deep or too shallow. Solution: Recheck depth stops. Verify down pressure is consistent. Consider soil moisture – if too dry, seed may be placed at the set depth but not germinate; if too wet, the openers may sink deeper than expected.

Problem: Openers plugging with residue. Solution: Reduce down pressure, increase depth slightly to run the discs deeper into the soil, or slow down the forward speed. Consider using a no-till coulter attachment if available for your 8350 model.

Problem: Seed not flowing from the seed box. Solution: Check for bridging in the box. Agitators in the 8350 help, but high-moisture seeds or long-stemmed material can cause issues. Ensure the seed is clean and free of debris.

Also, verify that the shut-off plates are properly opened.

Problem: Press wheels not functioning properly. Solution: Check for accumulated mud or residue. Ensure the wheel arms move freely. Adjust the wheel angle or height to achieve the desired firming action.

Advanced Tips for Specific Crops

While the general principles apply, here are crop-specific notes for your **John Deere 8350 grain drill settings**:

- Winter Wheat: Target 1 to 1.5 inches deep. Use a medium seed rate (around 90-120 lbs/acre depending on your region and planting date). Ensure good down pressure for no-till conditions.
- Soybeans: Depth is critical. Aim for 1 to 1.5 inches into moisture. Be careful not to plant too deep. Seed rate is typically around 140,000-180,000 seeds per acre. Calibrate carefully as soybean size varies greatly by variety.

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