

Sunflower 9412 (10 foot) No-Till Drill

Operating Instructions



-Video Tutorials-

1. [Connecting the No-Till Drill](#)
2. [Seed Chart and Sprocket ration video](#)
3. [Adjusting the seed cup openings](#)
4. [Row Unit settings](#)



Drill transport

The drill can be transported on a ¾ ton truck or tractor with a pin and a 3-point hitch. When you attach the drill to your truck, make sure the hydraulics on the drill are lowered. Hook the drill up to your truck or tractor by backing up the truck or tractor to meet the transport hitch. Once the drill is hooked up to a truck, attach the hydraulics to a nearby tractor, and lift the machine up. The planter wheels should be lifted up, and the transport wheels on the ground. Place the black safety blocks on the hydraulics. If you are transporting the drill on a tractor, also make sure to put in the safety blocks. Tuck the jack away and secure it with the pin provided.



Safety blocks
will go here



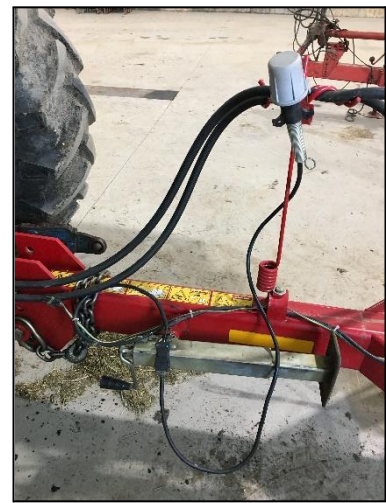
Next, plug in the four-flat hook up for the lights that connect to the drill. There is an adapter stored on the tractor if you need it. If neither of those options will work, please make sure you have an adapter available! **You must travel with the lights on, regardless of time of day.**



Four flat hook up



Adapter available



Storage of adapter plug

Before you start driving, do a walk-around and make sure everything is ready to go on the drill. In particular, double check that the opener discs, press wheels, and planting wheels are not touching the ground, and the transport wheels are down.

The drill will extend wider than your truck or tractor, and will take up more than one lane of traffic. Please drive carefully – no faster than 25 mph.

Hooking the drill up to your tractor

You will need at least a 90 hp tractor. The harder your soil, the harder it will be to pull the drill through it, the more horsepower you will need. Make sure that your tractor has a pin hitch drawbar, and two hydraulic hook ups. The hydraulic lines on the drill have a universal hook-up; if your tractor does not have that hook-up, you will need to supply an adapter or temporarily replace the hook-ups with ones that match your tractor. Please make sure to put the universal hook-ups back on the hydraulics when you pass the drill on to the next user.

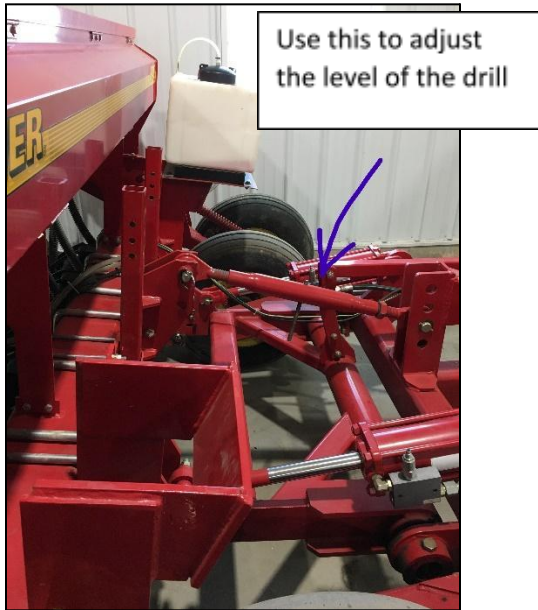
Do not climb on the back of the drill until it is fully hooked up to your tractor.

Lift the drill up with the hydraulics, remove the transportation safety blocks, and secure them to the back of the tractor. Move the jack out of the way.

Drill calibration

Adjusting the level of the drill

Once you have the drill attached to your tractor and the hydraulics lowered, make sure that the drill is level with the ground. Use the adjustment in the picture below to change the angle of the drill. Make sure that the top of the big seed box is level with the ground.



Make sure the top of the big seed box is level with the ground



Adjusting the seed openings

The Sunflower no-till drill has two seed boxes – one in the front, for larger seed (like oats, barley, alfalfa, or wheat & rye), and one in the back, for smaller seed (like clovers, birdfoot trefoil, and grasses).

There is a chart on the inside lid of each box that will tell you how big to make the opening depending on the type of seed and the desired seeding rate.

Attachment Seeding Rate Chart

OPERATOR SHOULD VERIFY ACTUAL OUTPUT.

TIRE [93 IN. CIRCUMFERENCE]

10" ROW SPACING

SEED	ARROWLEAF CLOVER CRIMSON CLOVER PEARL MILLET	ANNUAL RYEGRASS ALKALI SCATON	BIRDFOOT TREFLOIL SERICEA LESPEDEZA HULLED	SIBERIAN WHEATGRASS	ALFALFA RED CLOVER SWEET CLOVER YUCHI CLOVER LADINO CLOVER LEHMANN LOVEGRASS	WEEPING LOVEGRASS KLUENGRASS	SAND DROPSSEED	INDIAN RICEGRASS	ORCHARD GRASS	REDTOP	TIMOTHY LESPEDEZA UNHULLED	KENTUCKY BLUEGRASS
SPROCKET RATIO	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1
SEEDER OPENING (INCHES)												
1/16	1/4	—	1/2	—	1/2	3/4	1/2	—	—	1/4	—	1/2
1/8	1	1/2	1 1/2	1/4	1 1/4	1 1/4	1	1/2	—	1/2	3/4	3/4
3/16	2	1	2 1/2	1/2	2	2	1 1/2	1 1/4	1/4	3/4	1 1/2	1
3/8	5	2 1/2	5 1/4	1 1/4	4 1/4	3 3/4	2 1/2	3	3/4	1 1/2	3 3/4	1 3/4
5/8	9	4 1/4	9	2 1/4	7 1/2	6 1/4	4 1/4	5 3/4	1 1/2	2 1/2	6 3/4	3
7/8	13	6	13	3 1/4	10 1/2	8 1/2	5 3/4	8 1/4	2	3 1/2	9 3/4	4
1 1/8	17	7 3/4	16 3/4	4 1/4	13 1/2	11	7 1/2	10 3/4	2 3/4	4 1/2	12 3/4	5 1/4

Seeding rate chart for grass box

Grain Drill Seed Chart

SEEDING RATE CHART - RATES IN POUNDS PER ACRE. RATES ARE APPROXIMATE.
OPERATOR SHOULD VERIFY ACTUAL OUTPUT. 9.5L X 15 INCH TIRE (93 IN. CIRCUMFERENCE)

SEED	SOY-BEAN			RICE			WHEAT			RYE		
ROW SPACING	7 1/2	10	7 1/2	10	7 1/2	1	7 1/2	1	7 1/2	1	7 1/2	1
SPROCKET RATIO	1:2	1:1	1:2	1:1	1:2	1:1	1:2	1:1	1:2	1:1	1:2	1:1
METER OPENING (INCHES)												
3/16	—	—	—	—	—	—	—	—	—	—	—	—
1/4	—	—	—	—	—	—	—	—	—	—	—	—
5/16	—	—	—	—	—	—	—	—	—	—	—	—
3/8	16	32	12	24	23	47	18	35	25	54	19	40
7/16	23	44	17	33	28	59	21	44	35	71	26	53
1/2	30	56	23	42	32	70	24	53	45	87	33	77
9/16	35	72	26	54	45	85	31	63	49	103	36	77
5/8	42	79	31	60	47	94	35	70	59	117	40	88
11/16	46	93	34	69	52	108	38	80	60	124	45	93
3/4	52	103	38	77	56	119	42	89	62	141	47	106
13/16	62	123	47	91	60	132	45	98	79	155	60	117
7/8	65	132	49	98	65	139	49	104	84	166	63	124

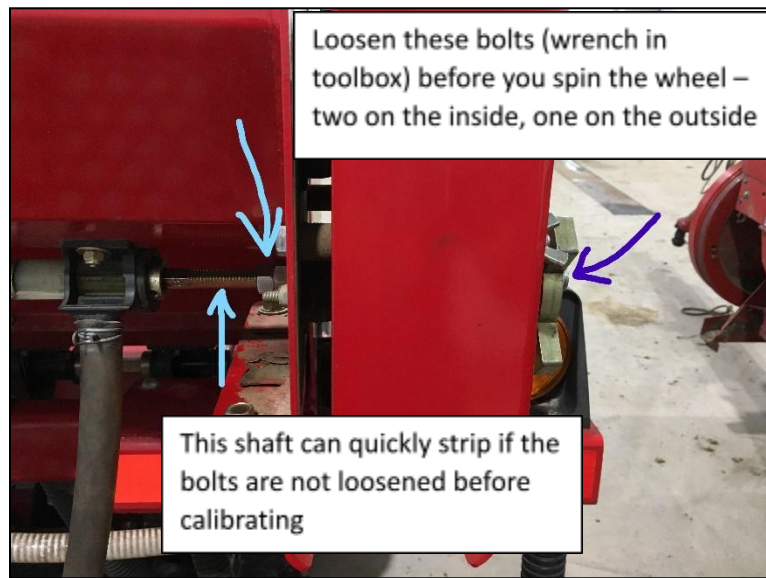
With 10" row spacing & a 1:1 sprocket ratio (already set on the drill), if you set the opening at 9/16", wheat & rye will be seeded at approximately 77 lbs per acre

*USE OF SEED METER REDUCER RECOMMENDED

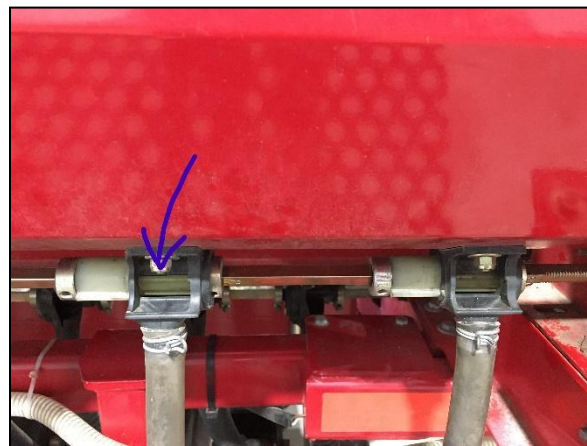
Seeding rate chart for the grain box



To operate the calibration wheel, loosen the bolt on the outside of the wheel, and the two bolts directly on the other side of drill. It is very important that you loosen both bolts; the calibration wheel will still turn if you don't loosen in the inside bolt, but it can strip the shaft that runs the length of the seed box.

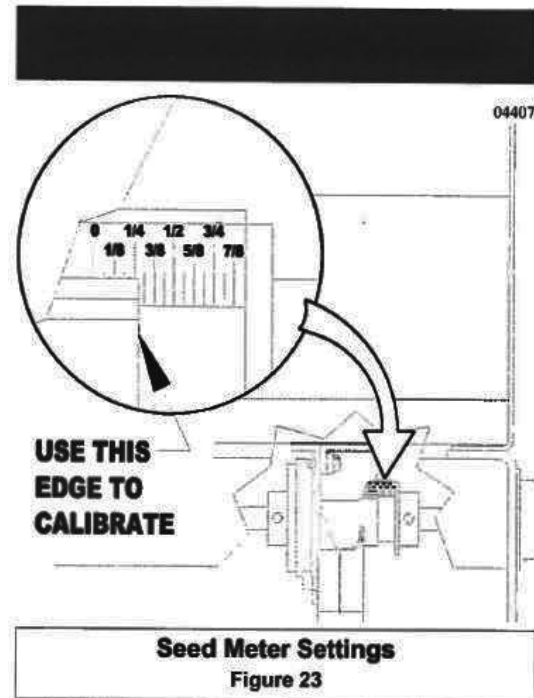
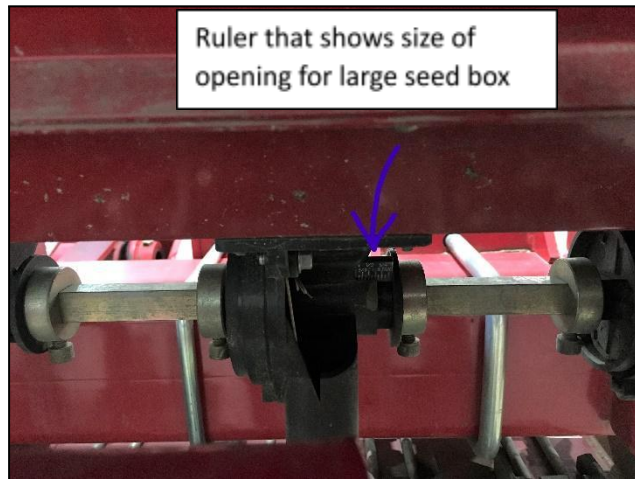


Once you have the bolts loose, twisting the wheel will change the size of the opening from the seed box into the hose. To go the opposite way, use a block and hammer to push back the rod and re-tighten the nuts. [Youtube](#)



Seed opening is as large as possible in this picture

On the larger seed box, you can tell how big the opening is with the ruler next to the opening closest to the calibration wheel.

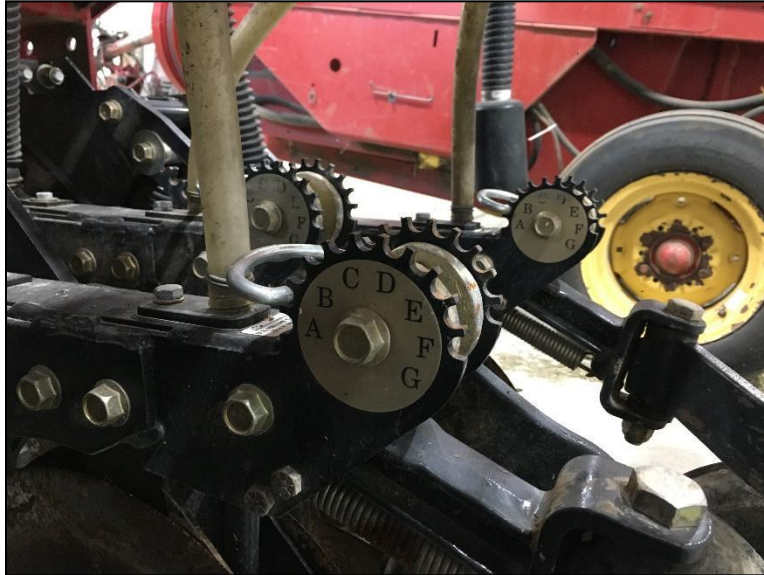


You may put a mix of seeds in a single box. This will require careful calibration, and likely involve watching the drill as it moves to make sure that the seed is moving freely through the opening.

The seeding chart on the seed box is a good place to start; if you'd like to be even more accurate, you can put a measured quantity (lbs) of seed in the drill, travel a known distance, and vacuum out and weigh the remaining seed.

Another option is to count the number of wheel revolutions in a given length (say, 200 ft), and then with the planter wheels lifted, move the wheel by hand and catch the seed in some way.

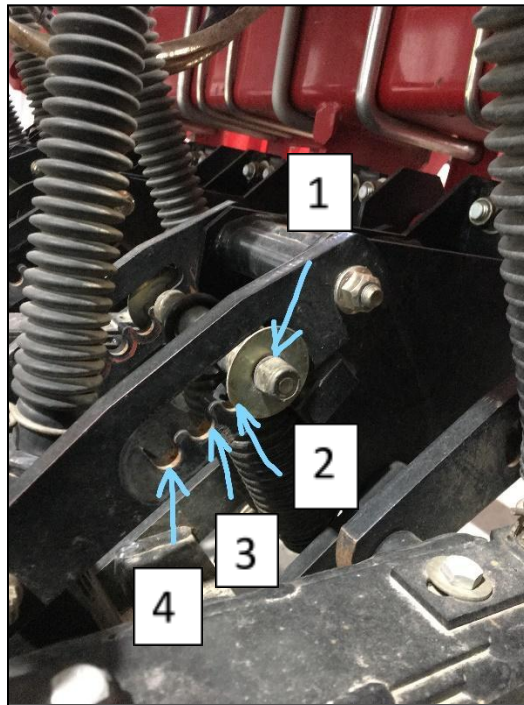
Depth Control Adjustment



Depth control adjustment

The seeding depth of each opener is controlled by the position of the depth cam assembly located on the back of the opener frame, as shown in the picture above. A is the shallowest; G is the deepest. To change the setting, pull the spring-loaded T-handle out of the notch while rotating the cam to a different setting, and release the T-handle in the new notch.

Opener down pressure



Opener down pressure adjustment

The first notch, 1, provides the least down pressure; in the picture, the drill is set at notch 1. The rear notch, 4, provides the most down pressure. To adjust, stop the tractor and raise the drill until the openers are off the ground. Move the adjustment bolt from one notch to the other by grasping each end of the bolt and moving it to the new notch setting. All the openers should be set at the same notch. ** “C” is about 1”. The adjustments are in 1/4” intervals

[YouTube - Row Unit Settings](#)

Tips for success

- Don't just set it and forget it – especially in the beginning, make sure you get off the tractor and look at where the drill has been to make sure the depth, seeding rate, and seed to soil contact are appropriate; refer to troubleshooting guide, found in the operator's manual on page 43 for further guidance
- If your seed is not perfectly clean, bits of chaff can block the seed openings inside the hoppers, or chaff could stop the seed from flowing freely along the hose. Use the long skinny tool in the toolbox to move the seed around in the box when you re-load. You can also loosen the bolts that connect the hose to the coulters and clean out any blockages from there.



If you loosen this bolt, you
can disconnect the hose
and clean out any
blockages

- DO NOT BACK UP WITH THE DRILL SET DOWN.
- You may turn with the drill, but only wide, sweeping turns; no sharp turns please.