



Great Plains

Manufacturing, Inc.
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Seed, Small Seed and Fertilizer Rate Charts

for 1510HDF, 2010HDF & 2510HDF Drills

The following pages are to assist in the proper setting of seeding and fertilizer rates for the 1510HDF, 2010HDF & 2510HDF 15-, 20- and 25-Foot 3-Point HD Drills. The rates indicated in the charts are approximate values. To assure the most accurate seeding rate it is recommended that the drill be calibrated for the desired seed at the time of planting.



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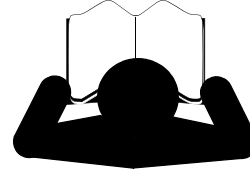
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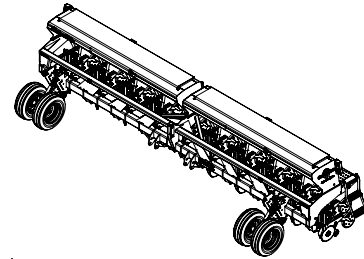
Introduction

This manual is your guide to drill adjustments for achieving specific seed population targets. Although some setup/adjustment material herein is repeated from the Operator's Manual, you need to be thoroughly familiar with drill operations and adjustments before applying this Seed Rate manual and its table data.



Models Covered

1510HDF-1810	15-Foot, 18-row, 10in spacing
1510HDF-2475	15-Foot, 24-row, 7.5in spacing
2010HDF-2410	20-Foot, 24-row, 10in spacing
2010HDF-3275	20-Foot, 32-row, 7.5in spacing
2510HDF-2015	25-Foot, 20-row, 15in spacing
2510HDF-20TR30	25-Foot, 20-twin-row, 30in pairs
2510HDF-2910	25-Foot, 29-row, 10in spacing
2510HDF-4075	25-Foot, 40-row, 7.5in spacing



Document Family

288-340M	Operator's Manual
288-340P	Parts Manual
288-340B	Seed Rate Charts (this manual)

This manual relies on information in the Operator's Manual. Have both available when preparing to plant.

Setting Planting Rate

There are six steps to obtaining the desired number of seeds per acre:

1. *Know the characteristics of the seed.*
Consult your seed supplier's reference documents.
2. Find your settings in the Rate Charts.
3. Set the Drive Type (Main Seed box only).
4. Set the Rate Handle or Adjuster.
5. Adjust Seed Cup doors (Main Seed box only).
6. Calibrate the rate.

The charts are based on original factory tires, and cleaned, untreated seed of average size and test weight. Many factors will affect field results, including field conditions, foreign material, seed size, seed treatment and tire pressure.

Minor adjustments are likely to be needed.



Setting Material Rates

Material rates for each of the boxes are set independently.

Great Plains recommends calibration with your seed and fertilizer for most accurate results.

Adjustment	Main Seed Box	Small Seeds Attachment	Fertilizer
Drive Type	Controls Coarse Rate	Unaffected by Drive Type	Unaffected by Drive Type
Adjuster Scale	Handle Controls Fine Rate	Handle Controls Rate	Knob Controls Rate
Meter Door	Controls Rate Consistency	No Adjustment Required	No Adjustment Required
See...	page 3	page 11	page 15

Use the settings in the Seed and Fertilizer Rate charts as a starting point for the calibration.

To reduce unnecessary wear, remove chains for any drives not used.

Revolutions Per Acre/Ha

Calibrating any seed or fertilizer rate relies on the values in the table below. The values are for gauge wheel tire revolutions per acre(ac) or hectare(Ha).

Whether turning the tire, or the jackshaft, count tire revolutions, and use an rpm rate close to actual field rate. Turning too slowly or too rapidly has unreliable results.

Tire rpm:
55 rpm = 5 mph = 8 kph.

Planted Row Spacing	1510HDF Drill		2010HDF Drill		2510HDF Drill	
	Row Count	Revolutions	Row Count	Revolutions	Row Count	Revolutions
7 ¹ / ₂ in (19.1cm)	24	365/ac 902/Ha	32	268/ac 662/Ha	40	214/ac 529/Ha
10in (25.4cm)	18	365/ac 902/Ha	24	268/ac 662/Ha	29	221/ac 546/Ha
15in (38.1cm)					20	214/ac 529/Ha
Twin Row 30in (76.2cm)					20*	214/ac 529/Ha

* Each row of a twin-row is a pair of row units. The 2510HDF-20TR30 has 40 row units.

Non-Standard Configurations

If you modify your row spacing by plugging seed meters, this may alter the revolutions per acre or hectare.

Measure between the centerlines of the active end rows (the *Span*). If the change was to simulated twin-row, treat each pair as a single row, and measure to pair centerline.

$$RowSpacing = \frac{Span}{RowCount - 1}$$

The new swath is the measurement times the new row count.

$$NewSwath = RowSpacing \times RowCount$$

Check the Dimensions for your drill in the Appendix of the drill Operator Manual. *SpecSwath* below is the factory specification), If the swath changed, adjust the revolutions as follows:

$$UseRevolutions = TableRevolutions \times \frac{SpecSwath}{NewSwath}$$

If you are using markers, also re-check the marker extension. See the drill Operator manual for marker setup.



Main Box Seed Rate

Main seed box planting rate is controlled by:

- Drive Type sprocket set
- Seed Rate handle setting
- Seed Cup door setting

Before setting the rate, raise the drill and rotate gauge wheels. Check that seed meters, seed tubes and drives are working properly and are free from foreign material.

The procedure for setting the main box rate is:

1. Consult chart for your crop in the Seed Rate manual. Note initial Drive Type and Rate Handle settings.
2. Configure Drive Type and Seed Rate handle on one or both sides of the drill.
3. Set the Seed Cup doors per advice on page 4.
4. Calibrate the drill for your specific seed.
5. Set both gauge wheels and rate handles identically.

Drive Type

Before setting the Drive Type, rotate the gauge wheels. Check that seed meters, seed tubes and drives are working properly and free from foreign material.

Refer to Figure 1

1. Consult the rate charts in the Seed Rate manual, and determine the Drive Type required. If there are multiple choices (different Drive Types) for the same seed population, choose the one that has a rate handle setting closest to 50.
2. These Types correspond to the following pairings of Driving ① and Driven ② sprockets mounted on the right side of the gauge wheel assembly.

Drive Type	Driving ① Sprocket	Driven ② Sprocket	Coarse Speed
1	14	44	Slowest
2	24	36	2.1x
3	24	24	3.1x
4	24	15	5.0x

If the Drive Type needs to be changed:

3. Loosen idlers ③ and remove chain ④. Remove retaining pins at shafts and at storage tower shaft ⑥.

Note: Many factors affect seeding rates: seed treatment, weight of seed, size of seed, surface condition of seed, tire configuration, tire pressure and tire slip-page. Minor adjustments may be needed to compensate for these factors.

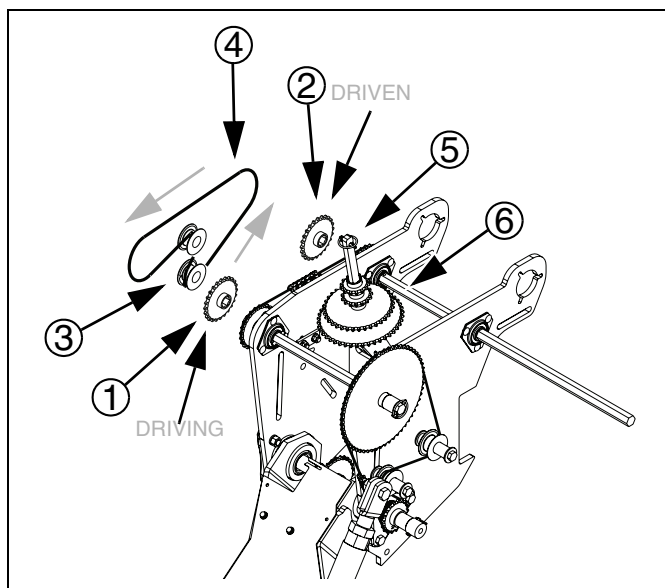


Figure 1
Drive Type Sprockets

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- Exchange sprockets between drive shafts and towers, installing the correct sprockets on the DRIVER and DRIVEN shafts.

Refer to Figure 2

- Reroute chain over sprockets and idlers. Make sure open end of chain clip faces away from direction of chain travel (shown by gray arrows).
- Move idler into chain so chain has $\frac{1}{4}$ in slack in its longest span. Tighten idler. Re-pin all three shafts.
- Configure other gauge wheel to match.

Note: Each gauge wheel drives half of the drill. If a chain breaks or is removed, that drill half does not plant.

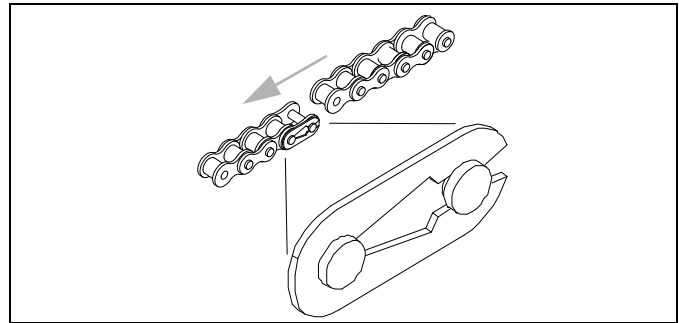


Figure 2
Chain Clip Orientation

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Main Box Seed Rate Handle

There are identical seed rate handles for each half of the drill. Generally, both need to be set identically. You can stop seed flow to one half of the drill by setting a handle to zero (for point-row planting, for example).

The seed rate handle controls the percent engagement of the seed sprocket in each seed cup.

Refer to Figure 3

- Loosen wing nut ① under handle.
- Set indicator ② to about 10 past value from Seed Rate Chart, then move handle back to target value.
- Tighten wing nut.

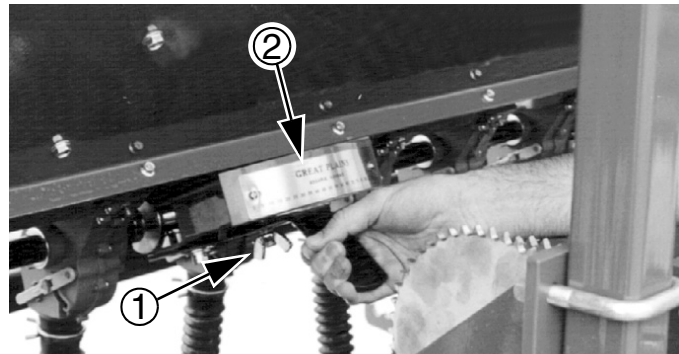


Figure 3
Main Box Seed Rate Handle

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Seed Cup Door

Refer to Figure 4, which depicts the seed cup door handle in position ③.

At each seed box seed tube, adjust the seed cup door handle ④ for the seed size.

The handle has three normal operating position detents:

- (top detent) is for the smallest seeds. Use it for wheat and similar small seeds.
- (middle detent) is for larger seeds. Use it for soybeans and similar larger seeds.
- (bottom detent) is for oversize or fragile seeds. If you experience excessive cracking with setting ②, use setting ③.

Note: Handle position ⑤ is used for cleanout, not planting. If set to this position with seed loaded, it may be difficult to reset it to a normal operating position.

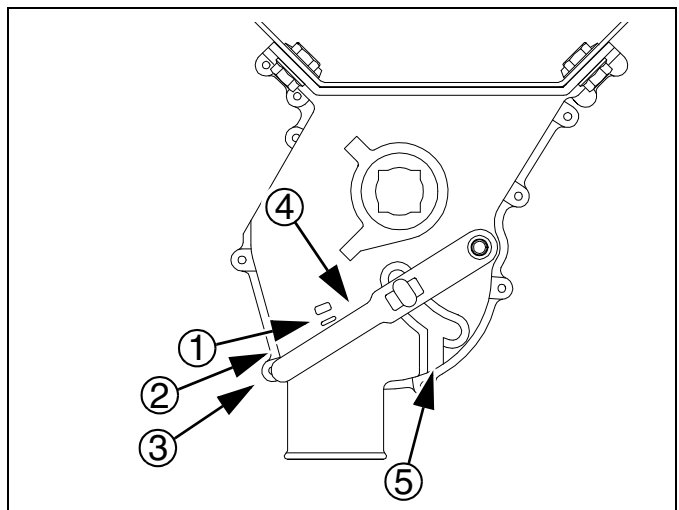


Figure 4
Seed Cup Door Handle

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Main Box Calibration

Refer to sample data and formulas at right.

1. As necessary, convert your target seed population to pounds per acre.
 2. Set Drive Type, rate handle and seed cup door per the earlier instructions.
 3. Record weight of an empty container large enough to hold seed metered for one acre for three rows.
 4. Place several pounds of seed over three seed cups on an outside end of a drill box. Pull seed tubes off of these three openers and route them to container.
 5. Raise the drill.
 6. Rotate gauge wheel or calibration crank a few turns to confirm gearbox has engaged and to confirm that the seed paths are free from foreign matter.
 7. Turn gauge wheel several times to fill seed cups with seed. Turn wheel until seed falls from each cup. Place seed collected so far back in the box.
 8. Rotate gauge wheel until one acre has been tallied (see table on page 2). Simulate field speed.
- Note: You can also rotate the gauge wheel jackshaft by means of a wrench or socket, on the drill side that does not have the acremeter. When turning the gauge wheel jackshaft, count tire rotations, as the axle and jackshaft sprockets are not 1:1.
9. Check that the three seed cups have ample seed coming into them.
 10. Weigh metered seed.
 11. Subtract initial weight of container (tare weight).

$$\text{SeedWeight} = \text{TotalWeight} - \text{ContainerWeight}$$

12. Divide by three.

$$\text{PoundsPerCup} = \frac{\text{SeedWeight}}{3}$$

13. Multiply by the number of openers on your drill to determine total pounds seeded per acre.

$$\text{PoundsPerAcre} = \text{PoundsPerCup} \times \text{OpenerCount}$$

14. If this figure is different than desired, set your seed rate adjustment handle accordingly.

Note: You may want to repeat the calibration procedure if your results vary greatly from seed rate chart.

When drilling, check seeding rate by noting acres drilled, amount of seed added to drill and seed level in drill box. If you are seeding more or less than desired, adjust seeding rate slightly to compensate for field conditions.

For example:

Drill: 2510HDF-2910

Seed: Soybeans, 80,000 seed bag weight: 35 pounds

Target population: 210,000 seeds per acre

$$80000 \div 35 = 2286 \text{ seeds per pound}$$

$$210000 \div 2286 = 92 \text{ pounds per acre}$$

Drive Type: 3

Rate Handle: between 50 and 55, approximately 51

Assume empty *ContainerWeight* of:

2.5 pounds

From table, rotations per acre is:

214

For a 25-foot drill, tire rpm for 5 mph is:

52

Assume container plus seed weighs:

12.6 pounds

SeedWeight:

$$12.6 - 2.5 = 10.1$$

PoundsPerCup:

$$10.1 \div 3 = 3.36$$

PoundsPerAcre:

$$3.36 \times 29 = 97.5$$

Target was 92. Result is 6% high.

Adjust handle down by 3 (6% of 51)

to a Seed Rate Handle setting of:

48

Main Seed Box Charts

Seed cup planting rate is determined by:

- Crop and seed variant
- Drive Type sprockets
- Seed Cup sprocket engagement (Seed Rate Handle)

There are no other adjustments.

Reading a Main Box Rate Chart

NOTICE

These charts are estimations of maximum seed rates. Actual results will vary based on conditions and machine maintenance. Maintain your machine regularly for optimum performance.

1. Find the table for your seed;
for example:
Barley.

For some seeds, there may be multiple tables, allowing a wider range of populations.

2. Find the table row for your row spacing;
for example:
7.5 inch

3. Find your target seed rate
(which is pounds per acre);
for example:
43 pounds per acre.

4. The Drive Type is shown in the top row for that column. The Seed Rate Handle setting is shown in the second row for that column;
in this example:
Drive Type: 2
Seed Rate Handle: 35

10 in	0	3	5	7	9
15in/30TR	0	2	3	5	6
Barley					
	0	5	10	15	20
Rows	Drive Type 1				
7.5 in	0	4	6	9	12

10 in	0	3	5	6	9	11
15in/30TR	0	2	3	4	6	7
Drive Type 2						
7.5 in	0	7	13	17	24	30
10 in	0	5	10	13	18	22
15in/30TR	0	3	6	9	12	15

15in/30TR	0	2	3	4	6	7	9	10	12
Drive Type 2									
7.5 in	0	7	13	17	24	30	36	43	49
10 in	0	5	10	13	18	22	27	32	37
15in/30TR	0	3	6	9	12	15	18	21	25

Seed Rate Handle										
0	5	10	15	20	25	30	35	40	45	50
Drive Type 1										
0	4	6	9	12	15	18	21	24	28	31
0	3	5	6	9	11	13	16	18	21	23
0	2	3	4	6	7	9	10	12	14	16
Drive Type 2										
0	7	13	17	24	30	36	43	49	57	64
0	5	10	13	18	22	27	32	37	43	48
0	3	6	9	12	15	18	21	25	28	31
Drive Type 4										
0	17	31	42	58	72	88	105	121	139	155
0	13	22	29	41	51	63	76	91	107	122

Main Seed Box Rates

(U.S. customary units: Metric main box charts begin on page 18)

Alfalfa or Rape

		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 1	Seed Rate in Pounds per Acre																				Based on 60 lbs/bu.
7.5 in		0	4	7	10	12	15	18	22	25	29	33	36	40	43	47	51	55	59	63	65	67
10 in		0	3	5	7	9	12	14	16	19	22	25	27	30	33	35	38	41	44	48	49	50
15in/30TR		0	2	3	5	6	8	9	11	13	15	16	18	20	22	20	25	27	30	32	33	34

Barley

		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 1	Seed Rate in Pounds per Acre																				Based on 51 lbs/bu.
7.5 in		0	4	6	9	12	15	18	21	24	28	31	35	38	42	46	49	52	55	58	59	59
10 in		0	3	5	6	9	11	13	16	18	21	23	26	29	32	34	37	39	42	44	44	44
15in/30TR		0	2	3	4	6	7	9	10	12	14	16	17	19	21	23	25	26	28	29	29	29
		Drive Type 2																				
7.5 in		0	7	13	17	24	30	36	43	49	57	64	70	77	83	91	98	106	114	121	123	125
10 in		0	5	10	13	18	22	27	32	37	43	48	52	58	63	68	74	80	85	91	92	94
15in/30TR		0	3	6	9	12	15	18	21	25	28	31	35	38	42	45	49	53	57	61	62	63
		Drive Type 4																				
7.5 in		0	17	31	42	58	72	88	105	121	139	155	170	188	204	222	240	260	279	297	301	306
10 in		0	13	23	32	44	54	66	79	91	104	117	128	141	153	167	180	195	209	222	226	230
15in/30TR		0	8	16	21	29	36	44	53	60	69	78	85	94	102	111	120	130	139	148	151	153

Buckwheat

		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 3	Seed Rate in Pounds per Acre																				Based on 48 lbs/bu.
7.5 in		0	9	17	24	34	42	52	62	74	85	99	109	120	132	144	156	167	179	192	194	196
10 in		0	7	13	18	25	31	39	47	55	64	74	81	90	99	108	117	126	134	144	145	147
15in/30TR		0	5	8	12	17	21	26	31	37	43	49	54	60	66	72	78	84	90	101	97	98

Buffalograss

		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 1	Seed Rate in Pounds per Acre																				Based on 23 lbs/bu.
7.5 in		0	1	2	3	4	5	7	8	10	11	13	14	15	17	18	19	20	20	20	20	20
10 in		0	1	2	2	3	4	5	6	7	8	9	11	12	12	13	14	15	15	15	15	15
15in/30TR		0	1	1	1	2	3	3	4	5	6	6	7	8	8	9	9	10	10	10	10	10
		Drive Type 2																				
7.5 in		0	2	4	6	8	11	14	17	20	23	26	29	32	34	36	38	40	41	42	42	41
10 in		0	2	3	5	6	8	10	13	15	17	19	22	24	26	27	29	30	31	31	31	31
15in/30TR		0	1	2	3	4	5	7	8	10	11	13	14	16	17	18	19	20	21	21	21	21
		Drive Type 3																				
7.5 in		0	5	7	9	12	16	20	24	29	34	38	43	47	51	55	58	61	63	64	65	64
10 in		0	3	5	7	9	12	15	18	22	25	29	32	35	38	41	44	46	47	48	48	48
15in/30TR		0	2	3	5	6	8	10	12	14	17	19	21	24	26	27	29	30	31	32	32	32
		Drive Type 4																				
7.5 in		0	7	11	15	20	26	33	40	47	55	62	70	77	83	89	94	99	102	104	105	104
10 in		0	6	8	11	15	20	24	30	35	41	47	52	57	62	67	71	74	77	78	79	78
15in/30TR		0	4	5	7	10	13	16	20	24	27	31	35	38	42	45	47	50	51	52	53	52

Main Seed Box Rates, continued...

Flax or Sudan

		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 1	Seed Rate in Pounds per Acre																				Based on 55 lbs/bu.
7.5 in	0	3	7	9	13	16	19	23	26	30	34	37	40	44	47	52	56	61	66	67	68	
10 in	0	2	5	7	10	12	15	17	20	22	25	27	30	33	35	39	42	45	49	50	51	
15in/30TR	0	1	3	5	6	8	10	11	13	15	17	18	20	22	24	26	28	30	33	33	34	

Millet

		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 1	Seed Rate in Pounds per Acre																				Based on 60 lbs/bu.
7.5 in	0	4	7	9	13	16	19	22	25	29	32	35	39	42	46	49	53	57	61	62	63	
10 in	0	3	5	7	9	12	14	16	19	21	24	26	29	32	34	37	40	43	46	46	47	
15in/30TR	0	2	3	5	6	8	9	11	13	14	16	18	19	21	23	25	26	28	30	31	31	

Milo

		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 1	Seed Rate in Pounds per Acre																				Based on 64 lbs/bu.
7.5 in	0	4	7	10	14	18	22	27	31	36	41	45	50	55	60	65	69	73	78	80	82	
10 in	0	3	5	8	11	14	17	20	23	27	31	34	38	41	45	49	52	55	59	60	61	
15in/30TR	0	2	4	5	7	9	11	13	16	18	21	23	25	28	30	32	35	37	39	40	41	

Oats

		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 3	Seed Rate in Pounds per Acre																				Based on 37 lbs/bu.
7.5 in	0	4	10	14	19	25	31	37	44	51	58	64	70	77	84	90	97	104	111	112	112	
10 in	0	3	7	10	14	19	23	28	33	38	43	48	53	58	63	68	73	78	83	84	84	
15in/30TR	0	2	5	7	10	13	15	19	22	25	29	32	35	38	42	45	48	52	55	56	56	

Peas

		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 3	Seed Rate in Pounds per Acre																				Based on 61 lbs/bu.
7.5 in	0	0	15	27	42	55	67	82	95	110	123	136	149	161	175	188	201	213	225	226	227	
10 in	0	0	11	20	31	41	50	61	71	82	93	102	112	121	131	141	151	160	169	170	171	
15in/30TR	0	4	8	14	21	27	34	41	48	55	62	68	74	81	87	94	100	106	113	113	114	

Pinto Beans

		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 1	Seed Rate in Pounds per Acre																				Based on 61 lbs/bu.
7.5 in	0	0	7	10	14	19	24	28	33	38	42	47	51	55	60	65	68	73	77	77	77	
10 in	0	0	5	8	10	14	18	21	25	28	32	35	38	41	45	49	51	54	58	58	58	
15in/30TR	0	0	3	5	7	9	12	14	16	19	21	23	25	28	30	32	34	36	39	39	39	

Main Seed Box Rates, continued...

Rice, Short Grain

		Seed Rate Handle Setting																					
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Rows	Drive Type 3	Seed Rate in Pounds per Acre																	Based on 43 lbs/bu.				
7.5 in	0	9	14	23	31	37	44	51	59	67	77	85	94	102	111	118	125	132	139	139	139		
10 in	0	7	11	17	23	27	33	38	44	50	57	64	70	77	83	89	94	99	105	105	105		
15in/30TR	0	4	7	11	15	18	22	25	29	33	38	43	47	51	55	59	63	66	70	70	70		
		Seed Rate Handle Setting																					
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Rows	Drive Type 4	Seed Rate in Pounds per Acre																	Based on 43 lbs/bu.				
7.5 in	0	14	24	37	50	60	72	83	96	109	125	139	153	167	181	193	204	215	227	227	227		
10 in	0	11	18	28	38	45	54	62	72	82	94	105	115	125	136	145	153	162	170	170	170		
15in/30TR	0	7	12	18	25	30	36	41	48	15	62	70	76	83	90	96	102	108	114	114	114		

Rice, Long Grain

		Seed Rate Handle Setting																					
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Rows	Drive Type 1	Seed Rate in Pounds per Acre														Based on 47 lbs/bu.							
7.5 in	0	1	4	6	8	11	14	16	18	21	25	26	28	31	33	35	38	40	41	42	43		
10 in	0	1	3	4	6	8	10	12	14	16	19	19	21	23	25	27	28	30	31	32	32		
15in/30TR	0	1	2	3	4	5	7	8	9	10	13	13	14	15	16	18	19	20	21	21	22		
		Seed Rate Handle Setting																					
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Rows	Drive Type 2	Seed Rate in Pounds per Acre																	Based on 47 lbs/bu.				
7.5 in	0	2	7	12	17	23	28	33	38	43	52	53	58	63	68	73	77	81	85	87	89		
10 in	0	2	6	9	13	17	21	25	28	32	39	40	43	47	51	55	58	61	64	65	67		
15in/30TR	0	0	4	7	10	13	16	19	22	25	28	31	33	36	39	42	45	48	50	52	54		
		Seed Rate Handle Setting																					
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Rows	Drive Type 3	Seed Rate in Pounds per Acre																	Based on 47 lbs/bu.				
7.5 in	0	0	11	17	25	34	42	49	57	65	72	79	85	92	100	108	116	123	129	134	138		
10 in	0	0	8	13	19	25	32	37	42	49	54	59	64	69	75	81	87	92	97	100	104		
15in/30TR	0	0	5	9	13	17	22	24	28	32	36	39	43	46	50	54	58	61	64	67	69		
		Seed Rate Handle Setting																					
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Rows	Drive Type 4	Seed Rate in Pounds per Acre																	Based on 47 lbs/bu.				
7.5 in	0	0	17	28	41	55	69	80	92	105	117	128	139	151	163	176	188	200	210	218	226		
10 in	0	0	13	21	31	41	52	60	69	79	88	96	104	113	123	132	141	150	158	164	169		
15in/30TR	0	0	9	14	21	27	34	40	46	53	59	64	69	75	82	88	94	100	105	109	113		

Rye

		Seed Rate Handle Setting																					
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Rows	Drive Type 1	Seed Rate in Pounds per Acre																	Based on 57 lbs/bu.				
7.5 in	0	2	6	10	15	19	22	28	33	38	42	46	50	55	59	64	69	75	81	81	82		
10 in	0	2	5	8	11	14	17	21	24	28	32	35	38	41	44	48	52	56	61	61	61		
15in/30TR	0	1	3	5	7	10	11	14	16	19	21	23	25	27	30	32	35	37	40	41	41		

Main Seed Box Rates, continued...

Soybeans

		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 1	Seed Rate in Pounds per Acre																			Based on 58 lbs/bu.	
7.5 in	0	2	6	11	15	19	23	27	31	36	40	44	49	53	57	62	65	70	74	74	75	
10 in	0	2	5	8	12	14	17	20	24	27	30	33	37	40	43	46	49	52	56	56	56	
15in/30TR	0	1	3	5	8	9	11	13	15	17	19	21	23	25	27	29	32	34	36	36	36	
		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 2	Seed Rate in Pounds per Acre																			Based on 58 lbs/bu.	
7.5 in	0	5	13	22	32	38	47	55	64	73	81	91	100	109	118	127	134	143	152	153	153	
10 in	0	4	10	16	24	29	35	42	48	55	61	68	75	82	88	95	101	107	115	115	115	
15in/30TR	0	2	6	11	16	19	24	28	32	37	41	46	50	54	59	63	67	71	76	76	77	
		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 3	Seed Rate in Pounds per Acre																			Based on 58 lbs/bu.	
7.5 in	0	9	18	32	48	57	71	81	93	105	119	131	145	157	171	182	199	212	227	227	227	
10 in	0	7	14	24	36	42	53	61	70	79	89	98	108	118	128	137	149	159	170	170	170	
15in/30TR	0	5	9	16	24	28	36	40	47	53	59	66	72	79	85	91	99	106	114	114	114	
		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 4	Seed Rate in Pounds per Acre																			Based on 58 lbs/bu.	
7.5 in	0	15	29	53	78	92	116	132	152	171	193	214	236	256	279	297	324	346	370	371	371	
10 in	0	11	22	40	58	69	87	99	114	128	145	160	177	192	209	223	243	260	278	278	278	
15in/30TR	0	8	15	26	39	46	58	66	76	86	96	107	118	128	139	148	162	173	185	185	186	

Sunflowers

		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 1	Seed Rate in Pounds per Acre																			Based on 28 lbs/bu.	
7.5 in	0	0	2	3	5	7	9	10	12	14	16	18	20	22	24	26	27	29	31	32	33	
10 in	0	0	1	3	4	5	6	8	9	11	12	14	15	16	18	19	20	22	23	24	24	
15in/30TR	0	0	1	2	2	3	4	5	6	7	8	9	10	11	12	13	14	14	15	16	16	

Wheat

		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 2	Seed Rate in Pounds per Acre																			Based on 64 lbs/bu.	
7.5 in	0	10	18	24	32	40	46	56	64	73	84	92	102	112	122	131	142	152	162	164	165	
10 in	0	8	13	18	24	30	34	42	48	55	63	69	76	84	91	99	106	114	122	123	124	
15in/30TR	0	5	9	12	16	20	23	28	32	37	42	46	51	56	61	66	71	76	81	82	82	
		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 3	Seed Rate in Pounds per Acre																			Based on 64 lbs/bu.	
7.5 in	0	13	25	36	48	59	70	83	96	109	123	134	149	162	176	192	205	219	232	237	239	
10 in	0	10	18	27	36	45	53	62	72	82	92	101	111	121	132	144	154	164	174	178	179	
15in/30TR	0	6	12	18	24	30	35	41	48	55	61	67	74	81	88	96	102	109	116	119	120	

Wheatgrass

		Seed Rate Handle Setting																				
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 1	Seed Rate in Pounds per Acre																			Based on 23 lbs/bu.	
7.5 in	0	1	2	3	4	5	6	7	8	9	10	11	11	12	13	14	15	15	17	17	17	
10 in	0	1	1	2	3	3	4	4	5	6	7	7	8	9	9	10	11	12	11	13	13	
15in/30TR	0	0	1	1	2	2	2	3	3	4	4	5	5	6	6	7	7	8	7	8	8	

Small Seeds Attachment Rate

Small seeds attachment box planting rate is controlled by:

- Seed Rate handle setting

Small seeds rate is independent of the Drive Type used for main seed box planting. The small seeds cups do not have doors to adjust.

Before setting the rate, raise the drill and rotate the gauge wheels. Check that seed meters, seed tubes and drives are working properly and are free from foreign material.

The procedure for setting the main box rate is:

1. Consult the charts for your crop in the Seed Rate manual. That provides the initial Rate Handle settings.
2. Configure Seed Rate handle on one or both sides of the drill.
3. Calibrate the drill for your specific seed.
4. Set both rate handles identically.

Small Seeds Rate Handle

Refer to Figure 5

Position the small seeds seed cup lever to setting indicated on the Rate Chart in the Seed Rate manual.

To adjust:

1. Loosen wing nut ① under handle ②.
2. Slide handle ② until indicator is about 10 past the desired value, then move it back to the desired value.
3. Tighten wing nut.

Small Seeds Rate Calibration

Note: You may need to increase seed cup setting for lighter than average seed or decrease seed cup setting for heavier than average seed.

Note: The seed rate charts are based on cleaned, untreated seed of average size and test weight. For seed not listed on the charts, compare weight and size to those listed and use a similar setting.

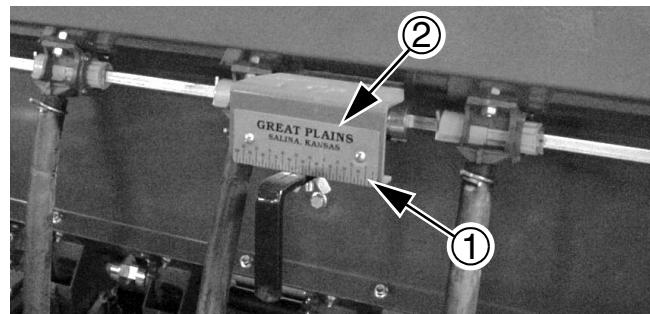


Figure 5 Small Seeds Seed Cup Lever Adjustment

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Refer to sample data and formulas at right.

1. Consult the rate chart for your seed.
2. Set rate handle per the earlier instructions.
3. Record weight of an empty container large enough to hold seed metered for one acre for three rows.
4. Place several pounds of seed over three seed cups on an outside end of a drill box. Pull seed tubes off of these three openers and route them to container.
5. Raise the drill.
6. Rotate gauge wheel or calibration crank a few turns to confirm gearbox has engaged and to confirm that the seed paths are free from foreign matter.
7. Turn gauge wheel several times to fill seed cups with seed. Turn wheel until seed falls from each cup. Place seed collected so far back in the box.
8. Rotate gauge wheel until one acre has been tallied (see table on page 2). Simulate field speed.

Note: You can also rotate the gauge wheel jackshaft by means of a wrench or socket, on the drill side that does not have the acremeter. When turning the gauge wheel jackshaft, count tire rotations, as the axle and jackshaft sprockets are not 1:1.

9. Check that the three seed cups have ample seed coming into them.
10. Weigh metered seed.
11. Subtract initial weight of container (tare weight).

$$\text{SeedWeight} = \text{TotalWeight} - \text{ContainerWeight}$$

12. Divide by three.

$$\text{PoundsPerCup} = \frac{\text{SeedWeight}}{3}$$

13. Multiply by the number of openers on your drill to determine total pounds seeded per acre.

$$\text{PoundsPerAcre} = \text{PoundsPerCup} \times \text{OpenerCount}$$

14. If this figure is different than desired, set your seed rate adjustment handle accordingly.
15. Configure other Small Seeds box to match.

Note: You may want to repeat the calibration procedure if your results vary greatly from seed rate chart.

When drilling, check seeding rate by noting acres drilled, amount of seed added to drill and seed level in drill box. If you are seeding more or less than desired, adjust seeding rate slightly to compensate for field conditions.

For example:

Drill: 2510HDF-2910

Seed: Millet

Target population: 5 pounds per acre

Rate Handle from chart:
between 30 and 35, approximately 34

Assume empty *ContainerWeight* of:
0.8 pounds

From table, rotations per acre is:
214

For a 25-foot drill, tire rpm for 5 mph is:
52

Assume container plus seed weighs:
1.25 pounds

SeedWeight: (pounds)
1.25 - 0.8 = 0.45

PoundsPerCup:
0.5 ÷ 3 = 0.15

PoundsPerAcre:
0.15 x 29 = 4.35

Target was 5.0 pounds per acre.
Result is 13% low.

Adjust handle up by 4 (13% of 34)
to a Seed Rate Handle setting of:
38

Small Seeds Rate Charts

U.S. Customary Units - Metric charts begin on page 23.

Alfalfa, Red Alsike, Crimson Clover Canola, Canary Grass

		Seed Rate Handle Scale Setting																			Chart: c1c	
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Pounds per Acre																				
7.5 in	0	0.0	1.8	2.8	3.9	4.8	6.0	7.0	7.9	9.0	10	11	12	13	14	15	16	17	18	19	20	
10 in	0	0.0	1.3	2.1	2.8	3.5	4.4	5.1	5.8	6.6	7.4	8.1	8.9	9.7	10	11	12	13	13	14	15	

Ladino Clover, Timothy

		Seed Rate Handle Scale Setting																			Chart: c2c	
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Pounds per Acre																				
7.5 in	0	0.0	0.9	1.6	2.6	3.9	4.9	6.1	7.4	8.6	9.8	11	13	14	15	16	18	19	20	22	24	
10 in	0	0.0	0.6	1.5	1.9	2.5	3.6	4.5	5.4	6.3	7.2	8.1	9.1	10	11	12	13	14	15	16	17	

Red & Sweet Clover, Lespedeza Hulled

		Seed Rate Handle Scale Setting																			Chart: c3c	
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Pounds per Acre																				
7.5 in	0	0.0	1.2	2.7	4.2	5.7	7.2	9.1	11	12	14	15	17	18	20	21	23	24	26	27	29	
10 in	0	0.0	0.9	2.0	3.1	4.2	5.3	6.7	7.8	9.0	10	11	12	13	14	16	17	18	19	20	21	

Bermuda, Lespedeza Unhulled, Red Top, Sand, Sercia, Weeping Love Grass

		Seed Rate Handle Scale Setting																			Chart: g1c	
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Pounds per Acre																				
7.5 in	0	0.0	0.5	0.9	1.4	2.1	2.6	3.3	4.0	4.7	5.3	5.8	6.3	6.7	7.2	7.6	8.2	8.8	9.3	9.8	10	
10 in	0	0.0	0.4	0.6	1.0	1.5	1.9	2.4	3.0	3.5	3.9	4.2	4.6	4.9	5.3	5.6	6.0	6.4	6.8	7.2	7.6	

Birdsfoot Trefoil, Sudan

		Seed Rate Handle Scale Setting																			Chart: g2c	
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Pounds per Acre																				
7.5 in	0	0.0	1.4	2.6	4.2	5.4	7.0	8.6	10	12	14	15	17	19	21	23	24	26	28	29	31	
10 in	0	0.0	1.0	1.9	3.1	4.0	5.1	6.3	7.5	8.6	9.9	11	13	14	15	17	18	19	20	21	23	

Rate Charts, Small Seeds Box, continued...

Fescue, Kentucky Bluegrass, Annual Rye Grass

		Seed Rate Handle Scale Setting																			Chart: g3c	
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Pounds per Acre																				
7.5 in	0	0.0	0.2	0.9	1.5	2.2	2.7	3.3	3.7	4.2	4.6	5.1	5.5	5.9	6.3	6.7	7.0	7.4	7.7	8.1	8.4	
10 in	0	0.0	0.1	0.7	1.1	1.6	2.0	2.4	2.7	3.1	3.4	3.7	4.0	4.3	4.6	4.9	5.2	5.4	5.7	5.9	6.2	

Millet, Reed Canary

		Seed Rate Handle Scale Setting																			Chart: g4c	
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Pounds per Acre																				
7.5 in	0	0.3	1.2	2.0	2.8	3.6	4.4	5.2	6.0	6.8	7.6	8.4	9.3	10	11	12	13	13	14	15	15	
10 in	0	0.3	0.8	1.4	2.0	2.6	3.2	3.8	4.4	5.0	5.6	6.2	6.8	7.4	8.0	8.6	9.2	9.8	10	11	12	

Orchard Grass

		Seed Rate Handle Scale Setting																			Chart: g5c	
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Pounds per Acre																				
7.5 in	0	0.0	0.0	0.2	0.5	0.7	1.1	1.2	1.6	1.9	2.3	2.6	2.8	3.2	3.5	3.9	4.0	4.4	4.6	4.9	5.1	
10 in	0	0.0	0.0	0.1	0.4	0.5	0.8	0.9	1.2	1.4	1.7	1.9	2.1	2.3	2.6	2.8	3.0	3.2	3.3	3.6	3.7	

Fertilizer Rate

Fertilizer rate is controlled by:

- Rate adjuster setting

Fertilizer rate is independent of the Drive Type used for main seed box planting.

Before setting the rate, raise the drill and rotate the gauge wheels. Check that meters, tubes and drives are working properly and are free from foreign material.

The procedure for setting the fertilizer rate is:

1. Know your material density. If it is substantially different from the material used to generate the charts, apply a correction factor before selecting the initial rate from the charts.
2. Consult the fertilizer rate chart for desired applications density (pounds/acre or kg/hectare). The chart provides the initial adjuster setting.
3. Configure the adjuster on one or both sides of the drill.
4. Calibrate the drill for your specific material.
5. Set both rate adjusters identically.

Setting the Fertilizer Adjuster

Refer to Figure 6

Each fertilizer box has its own adjuster, located near box center. Position the adjuster to the rate from the fertilizer Chart in the Seed Rate manual.

To adjust:

1. Rotate the adjuster knob located to the right of the scale ①. Rotate counter-clockwise to increase rate. The knob stays at your setting due to springs clamping a nut at the left end of the shaft.
2. Rotate the adjuster until indicator ② is about 10 past the desired value, then move it back to the desired value.

Agricultural chemicals can be dangerous. Improper use can seriously injure persons, animals, plants, soil and water.



- ▲ Do not use liquid treatments with drill.
- ▲ Read and follow chemical manufacturer's instructions.
- ▲ Wear protective clothing.
- ▲ Handle all chemicals with care.
- ▲ Avoid inhaling smoke from any type of chemical fire.
- ▲ Never drain, rinse or wash dispensers within 100 feet (30m) of a freshwater source, nor at a car wash.
- ▲ Store or dispose of unused chemicals as specified by chemical manufacturer.
- ▲ Dispose of empty chemical containers properly. Laws generally require power rinsing or rinsing three times, followed by perforation of the container to prevent re-use.

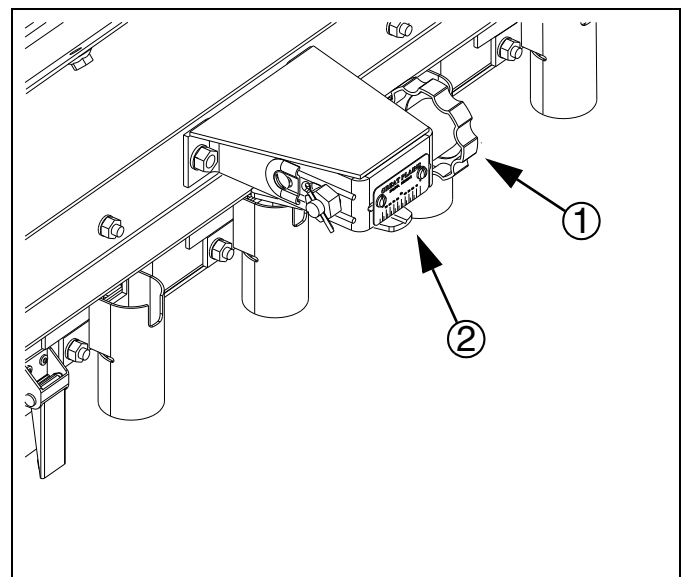


Figure 6
Fertilizer Rate Adjuster

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Fertilizer Density Correction

The Fertilizer Rate charts in the Seed Rate manual are based on a *StandardDensity* of:

65 pounds/cu-ft or
1.04 kg/liter.

If your material is substantially different, and/or if you don't intend to calibrate, calculate a *CorrectedRate* before consulting the rate chart.

1. Obtain your material density from the packaging. If it is not documented, you will need to weigh a known volume of it, and convert the results to pounds-per-cubic-foot or kilograms-per-liter.
2. Compute the correction factor.

$$\text{CorrectionFactor} = \frac{\text{StandardDensity}}{\text{YourDensity}}$$

3. Apply the correction factor to your desired application rate.

$$\text{CorrectedRate} = \text{ActualRate} \times \text{CorrectionFactor}$$

4. Look up the setting for the *CorrectedRate* in the Fertilizer Rate chart.
5. The *CorrectedRate* is used only to obtain an initial setup for the rate adjuster. Calibrate to your real field rate (the *ActualRate*).

Fertilizer Rate Calibration

Calibration is strongly recommended. Fertilizer density and granularity can be substantially different from the material used to generate the chart.

Refer to sample data and formulas at right.

1. Consult the rate chart for your material (after correcting for density, if that step was completed).
2. Set rate adjuster on one of the drill boxes.
3. Record weight of an empty container large enough to hold material metered for one acre for three rows.
4. Place several pounds of material over three fertilizer drop tubes on an outside end of a drill box. Pull delivery tubes off of these three openers and route them to container.
5. Raise the drill.
6. Rotate gauge wheel or calibration crank a few turns to confirm gearbox has engaged and to confirm that the fertilizer paths are free from foreign matter.
7. Turn gauge wheel several times to verify even flow of material from the three fertilizer drop tubes. Place materials collected so far back in box.

Example Fertilizer Density Correction

Drill: 2010HDF-2410

Desired Application Rate (*ActualRate*): 60 lbs/ac

Fertilizer Density:
42 pounds per cubic foot.

CorrectionFactor:
 $65 \div 42 = 1.55$

CorrectedRate:
 $60 \times 1.55 = 93$ (pounds/acre)

The closest chart rate to 93 is 92.
Use adjuster setting: 50

For example:

Drill: 2010HDF-2410

Assuming the material density corrected earlier:

ActualRate: 60 (pounds/acre)

CorrectedRate: 93

Rate Adjuster setting from chart:
50

Assume empty *ContainerWeight* of:
1.1 pounds

8. Rotate gauge wheel until one acre has been tallied (see table on page 2). Simulate field speed.

From table, rotations per acre is:
268

Note: You can also rotate the gauge wheel jackshaft by means of a wrench or socket, on the drill side that does not have the acremeter. If turning the gauge wheel jackshaft, count tire rotations, as the axle and jackshaft sprockets are not 1:1.

For a 20-foot drill, tire rpm for 5 mph is:
66

9. Check that the three fertilizer drop tubes have ample fertilizer coming into them.

10. Weigh metered fertilizer.

Assume container plus material weighs:
7.3 pounds

11. Subtract initial weight of container (tare weight).

FertilizerWeight:
7.3 - 1.1 = 6.2

$$FertilizerWeight = TotalWeight - ContainerWeight$$

12. Divide by three.

PoundsPerDropTube:
6.2 ÷ 3 = 2.1

$$PoundsPerDropTube = \frac{FertilizerWeight}{3}$$

13. Multiply by the number of openers on your drill to determine total pounds applied per acre.

PoundsPerAcre:
2.1 x 24 = 49.6

$$PoundsPerAcre = PoundsPerDropTube \times OpenerCount$$

14. If this figure is different than desired, set your fertilizer rate adjuster accordingly.

Actual Target was 60 pounds per acre.
Result is 17% low.

Note: You may want to repeat the calibration procedure if your results vary greatly from the rate chart.

Change adjuster up by 8.5 (17% of 50) to a Fertilizer Rate Adjuster setting of:
59

When drilling, check material rate by noting acres drilled, amount of material added to drill and material level in drill box. If you are applying more or less than desired, adjust rate slightly to compensate for field conditions.

Fertilizer Rate Chart

Metric chart is on page 24.

Rates in Pounds per Acre

Rows	Fertilizer Rate Handle Scale Setting																			Chart: f1c	
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
7.5 in	0	0	7	11	20	38	54	72	89	105	123	138	157	174	187	209	223	234	242	245	247
10 in	0	0	5	8	16	29	40	54	67	79	92	104	118	131	140	157	167	175	182	183	185

Density Conversion Chart

The fertilizer meter rate charts are based on fertilizer with a density of 65 pounds per cubic foot (1.04 kilograms per liter). If you are applying fertilizer of a different density, use the following table to convert application rate.

Density, lb/ft ³	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0
Conversion Factor	1.45	1.30	1.20	1.10	1.00	0.93	0.87	0.81



Main Seed Box Metric Rates

(Main Box rates in U.S. customary units begin on page 6)

Alfalfa or Rape

Metric	Seed Rate Handle Setting																													
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100									
Rows	Drive Type 1										Seed Rate in Kilograms per Hectare										Based on 0.77 kg/liter									
19.1cm	0	4.9	7.5	10.8	13.8	17.2	20.5	24.4	28.3	33.0	36.8	40.3	44.6	48.7	53.0	56.8	61.7	66.4	71.2	73.3	75.4									
25.4cm	0	3.7	5.6	8.1	10.3	12.9	15.4	18.3	21.2	24.7	27.6	30.2	33.5	36.5	39.7	42.6	46.3	49.7	53.4	55.0	56.6									
38.1cm 76.2twin	0	2.5	3.7	5.4	6.9	8.6	10.2	12.2	14.2	16.5	18.4	20.1	22.3	24.4	26.5	28.4	30.8	33.2	35.6	36.6	37.7									

Barley

Metric	Seed Rate Handle Setting																													
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100									
Rows	Drive Type 1										Seed Rate in Kilograms per Hectare										Based on 0.66 kg/liter									
19.1cm	0	4.0	6.8	9.5	12.9	16.3	20.0	23.5	27.1	31.0	34.9	38.8	43.0	47.4	51.3	55.5	58.8	62.1	65.2	65.7	68.2									
25.4cm	0	3.0	5.1	7.2	9.7	12.1	14.9	17.6	20.3	23.2	26.2	29.2	32.2	35.6	38.5	41.5	44.1	46.6	48.8	49.3	49.6									
38.1cm 76.2twin	0	2.0	3.4	4.8	6.5	8.1	10.0	11.7	13.5	15.5	17.5	19.4	21.5	23.7	25.6	27.7	29.4	31.0	32.6	32.8	33.1									
	Drive Type 2																													
19.1cm	0	7.7	14.3	19.3	26.7	33.2	40.5	48.3	55.5	63.8	71.3	78.1	86.1	93.5	101.9	110.1	119.2	127.9	136.1	138.2	140.4									
25.4cm	0	5.8	10.7	14.5	20.1	24.9	30.4	36.2	41.7	47.8	53.4	58.6	64.6	70.2	76.5	82.6	89.5	95.9	100.1	103.7	105.3									
38.1cm 76.2twin	0	3.9	7.2	9.7	13.4	16.6	20.2	24.1	27.8	31.9	34.3	39.1	43.0	46.8	51.0	55.1	59.6	64.0	68.1	69.2	70.2									
	Drive Type 4																													
19.1cm	0	19.0	34.8	47.4	65.5	81.2	99.1	118.0	135.7	155.9	174.4	191.1	210.5	228.7	249.5	269.4	291.7	312.8	332.9	338.2	343.4									
25.4cm	0	14.3	26.2	35.5	49.1	60.9	74.3	88.5	101.8	117.0	130.8	143.3	157.9	171.5	187.0	202.1	218.8	234.6	249.7	253.6	257.7									
38.1cm 76.2twin	0	9.5	17.4	23.7	32.7	40.6	49.5	59.0	67.8	78.0	87.2	95.5	105.3	114.3	124.7	134.7	145.8	156.4	166.4	169.1	171.7									

Main Seed Box Metric Rates, continued...

Buffalograss

Metric	Seed Rate Handle Setting																				
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 1					Seed Rate in Kilograms per Hectare										Based on 0.37 kg/liter					
19.1cm	0	1.3	2.2	3.3	4.6	6.0	7.5	9.1	10.8	12.4	14.1	15.7	17.2	18.6	19.8	20.9	21.8	22.4	22.8	22.9	22.6
25.4cm	0	1.0	1.7	2.5	3.4	4.5	5.6	6.8	8.1	9.3	10.5	11.7	12.9	13.9	14.9	15.7	16.4	16.8	17.1	17.1	16.9
38.1cm 76.2twin	0	0.6	1.1	1.6	2.2	2.9	3.6	4.4	5.2	6.0	6.8	7.5	8.2	8.9	9.5	10.0	10.5	10.8	10.9	11.0	10.8
Rows	Drive Type 2					Seed Rate in Kilograms per Hectare										Based on 0.37 kg/liter					
19.1cm	0	2.7	4.6	6.8	9.4	12.3	15.4	18.7	22.1	25.5	28.9	32.2	35.3	38.2	40.8	43.0	44.8	46.1	46.9	47.0	46.4
25.4cm	0	2.0	3.4	5.1	7.1	9.2	11.6	14.0	16.6	19.1	21.7	24.1	26.5	28.6	30.6	32.3	33.6	34.6	35.2	35.2	34.8
38.1cm 76.2twin	0	1.3	2.2	3.3	4.6	6.0	7.5	9.1	10.8	12.5	14.1	15.7	17.2	18.6	19.9	21.0	21.9	22.5	22.9	22.9	22.7
Rows	Drive Type 3					Seed Rate in Kilograms per Hectare										Based on 0.37 kg/liter					
19.1cm	0	5.1	7.3	10.2	13.8	17.9	22.4	27.3	32.4	37.5	42.7	47.8	52.7	57.3	61.4	65.1	68.1	70.4	71.8	72.3	71.7
25.4cm	0	3.8	5.4	7.7	10.3	13.4	16.8	20.5	24.3	28.2	32.0	35.9	39.5	43.0	46.1	48.8	51.1	52.8	53.8	54.2	53.8
38.1cm 76.2twin	0	2.5	3.5	5.0	6.7	8.7	10.9	13.3	15.8	18.3	20.8	23.3	25.7	27.9	30.0	31.7	33.2	34.3	35.0	35.3	35.0
Rows	Drive Type 4					Seed Rate in Kilograms per Hectare										Based on 0.37 kg/liter					
19.1cm	0	8.3	11.8	16.6	22.5	29.2	36.6	44.5	52.8	61.2	69.7	78.0	85.9	93.4	100.2	106.1	111.0	114.7	117.1	117.9	117.0
25.4cm	0	6.2	8.9	12.5	16.9	21.9	27.4	33.4	39.6	45.9	52.2	58.5	64.4	70.0	75.1	79.6	83.2	86.0	87.8	88.4	87.7
38.1cm 76.2twin	0	4.0	5.7	8.0	10.8	14.0	17.5	21.3	25.3	29.3	33.4	37.3	41.1	44.7	47.9	50.8	53.1	54.9	56.0	56.4	56.0

Buckwheat

Metric	Seed Rate Handle Setting																				
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 3					Seed Rate in Kilograms per Hectare										Based on 0.62 kg/liter					
19.1cm	0	10.1	18.9	26.5	37.6	46.9	58.4	70.1	83.0	95.9	110.6	121.8	135.1	148.5	161.2	175.6	187.9	201.2	214.4	214.6	218.9
25.4cm	0	7.6	14.1	19.9	28.2	35.1	43.8	52.5	62.2	72.0	83.0	91.4	101.3	111.4	120.9	131.7	141.0	150.9	160.8	164.7	170.1
38.1cm 76.2twin	0	5.1	9.4	13.2	18.8	23.4	29.2	35.0	41.5	48.0	55.3	61.0	67.6	74.3	80.6	87.8	94.0	100.4	107.2	107.4	109.4

Flax or Sudan

Metric	Seed Rate Handle Setting																				
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 1					Seed Rate in Kilograms per Hectare										Based on 0.71 kg/liter					
19.1cm	0	3.4	7.4	10.6	14.5	18.1	21.7	25.4	29.4	33.2	37.6	41.1	44.8	48.8	53.1	58.0	62.6	68.0	73.5	74.8	76.2
25.4cm	0	2.5	5.5	7.9	10.9	13.6	16.3	19.1	22.1	24.9	28.2	30.8	33.6	36.6	39.7	43.6	47.0	51.0	55.2	56.0	57.1
38.1cm 76.2twin	0	1.7	3.7	5.2	7.2	9.0	10.8	12.7	14.7	16.6	18.8	20.5	22.4	24.4	26.6	29.0	31.4	34.0	36.8	37.4	38.1

Millet

Metric	Seed Rate Handle Setting																				
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows	Drive Type 1					Seed Rate in Kilograms per Hectare										Based on 0.77 kg/liter					
19.1cm	0	4.2	7.4	10.6	14.0	17.5	21.0	24.5	28.3	32.0	35.7	39.5	43.6	47.0	51.2	55.5	59.3	63.5	68.0	69.2	70.2
25.4cm	0	3.1	5.5	7.9	10.6	13.1	15.7	18.3	21.2	24.0	26.8	29.6	32.7	35.4	38.4	41.5	44.5	47.7	51.1	51.9	52.7
38.1cm 76.2twin	0	2.1	3.7	5.2	7.0	8.8	10.5	12.2	14.2	16.0	17.9	19.8	21.8	23.5	25.6	27.7	29.6	31.8	34.0	34.6	35.1

Main Seed Box Metric Rates, continued...

Milo

Metric	Seed Rate Handle Setting																													
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100									
Rows	Drive Type 1										Seed Rate in Kilograms per Hectare										Based on 0.82 kg/liter									
19.1cm	0	4.2	7.9	11.7	15.9	20.2	24.9	30.1	35.0	40.3	46.3	51.0	56.5	61.9	67.1	72.5	77.8	82.3	87.7	90.0	91.6									
25.4cm	0	3.1	6.0	8.8	11.9	15.2	18.7	22.6	26.3	30.2	34.7	38.2	42.3	46.4	50.3	54.5	58.4	61.7	65.8	67.6	68.7									
38.1cm 76.2twin	0	2.1	4.0	5.8	8.0	10.1	12.5	15.0	17.5	20.1	23.1	25.5	28.2	30.9	33.6	36.3	38.9	41.2	43.9	45.0	45.8									

Oats

Metric	Seed Rate Handle Setting																													
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100									
Rows	Drive Type 1										Seed Rate in Kilograms per Hectare										Based on 0.48 kg/liter									
19.1cm	0	4.7	10.9	15.6	21.5	28.3	34.7	42.0	49.3	56.8	64.8	71.5	79.0	86.3	93.9	101.4	108.9	116.4	124.4	124.5	127.5									
25.4cm	0	3.5	8.2	11.7	16.2	21.2	26.0	31.5	36.9	42.6	48.6	53.7	59.3	64.8	70.4	76.0	81.6	87.3	93.3	93.4	95.6									
38.1cm 76.2twin	0	2.3	5.4	7.8	10.8	14.2	17.4	21.0	20.6	28.4	32.4	35.8	39.5	43.2	46.9	50.7	54.4	58.2	62.2	62.3	63.5									

Peas

Metric	Seed Rate Handle Setting																													
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100									
Rows	Drive Type 3										Seed Rate in Kilograms per Hectare										Based on 0.79 kg/liter									
19.1cm	0	8.4	17.1	30.5	46.6	61.7	75.3	91.5	106.8	123.4	138.5	152.2	167.2	181.0	196.0	211.5	225.3	239.0	252.8	254.1	255.2									
25.4cm	0	6.4	12.8	22.9	34.9	46.3	56.5	68.6	80.2	92.5	104.0	114.2	125.4	135.7	147.0	158.6	169.0	179.3	189.6	190.5	191.4									
38.1cm 76.2twin	0	4.3	8.5	15.3	23.3	30.8	37.7	45.8	53.4	61.7	69.3	76.1	83.6	91.3	98.0	105.7	112.6	119.5	126.4	127.0	127.6									

Pinto Beans

Metric	Seed Rate Handle Setting																													
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100									
Rows	Drive Type 1										Seed Rate in Kilograms per Hectare										Based on 0.79 kg/liter									
19.1cm	0	0.0	7.6	11.6	15.8	21.2	28.5	31.7	37.0	42.3	47.8	52.3	57.1	61.9	66.8	72.3	76.7	81.5	86.1	87.9	88.3									
25.4cm	0	0.0	5.7	8.8	11.7	15.9	19.9	23.8	27.7	31.8	35.7	39.2	42.9	46.4	50.2	54.5	57.5	61.1	64.6	64.8	64.8									
38.1cm 76.2twin	0	0.0	3.8	5.8	7.8	10.6	13.3	15.8	18.5	21.2	23.8	26.1	28.6	30.9	33.4	36.3	38.4	40.7	43.1	43.1	43.2									

Rice, Short Grain

Metric	Seed Rate Handle Setting																													
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100									
Rows	Drive Type 3										Seed Rate in Kilograms per Hectare										Based on 0.55 kg/liter									
19.1cm	0	0.0	9.9	16.2	25.4	34.5	41.0	49.8	57.0	65.9	75.2	85.9	95.9	105.3	114.9	124.4	132.9	140.6	148.3	156.4	158.9									
25.4cm	0	0.0	7.4	12.1	19.1	25.8	30.8	37.4	42.8	49.4	56.4	64.4	72.0	78.9	86.1	93.3	99.7	105.4	111.3	117.3	119.8									
38.1cm 76.2twin	0	0.0	4.9	8.1	12.7	17.2	20.5	24.9	28.5	32.9	37.6	42.9	48.0	52.6	57.4	49.8	53.2	70.3	74.2	78.2	79.3									
	Drive Type 4																													
19.1cm	0	0.0	16.1	26.4	41.4	56.1	66.8	81.3	93.0	107.3	122.6	140.0	158.4	171.7	187.3	202.9	216.7	229.1	241.8	255.0	262.3									
25.4cm	0	0.0	12.0	19.9	31.1	42.1	50.1	61.0	69.7	80.5	91.9	105.0	117.3	128.8	140.4	152.2	162.5	171.9	181.3	191.2	196.6									

Metric	Seed Rate Handle Setting																				
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
38.1cm 76.2twin	0	0.0	8.0	13.2	20.7	28.1	33.4	40.6	46.5	53.7	61.3	70.0	78.2	85.8	93.6	101.4	108.3	114.6	120.9	127.5	130.3

Main Seed Box Metric Rates, continued...

Rice, Long Grain

Metric	Seed Rate Handle Setting																													
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100									
Rows	Drive Type 3										Seed Rate in Kilograms per Hectare										Based on 0.60 kg/liter									
19.1cm	0	0.0	11.8	19.4	28.4	37.6	47.4	55.0	63.5	72.6	80.6	88.1	95.7	103.7	112.5	121.0	129.7	137.6	144.6	150.1	155.3									
25.4cm	0	0.0	8.9	14.6	21.2	28.2	35.5	41.2	47.6	54.5	60.5	66.1	71.7	77.8	84.4	90.7	97.2	103.3	108.5	112.6	116.4									
38.1cm 76.2twin	0	0.0	5.9	9.7	14.2	18.8	23.7	27.5	31.8	36.3	40.3	44.0	47.8	51.9	56.3	60.5	64.8	68.8	72.3	75.0	77.6									
Rows	Drive Type 4										Seed Rate in Kilograms per Hectare										Based on 0.60 kg/liter									
19.1cm	0	0.0	19.3	31.7	46.3	61.3	77.2	89.6	103.6	118.3	131.5	143.7	155.9	169.1	183.4	197.3	211.4	224.4	235.8	244.7	253.2									
25.4cm	0	0.0	14.5	23.8	34.7	45.9	57.9	67.2	77.7	88.8	98.6	107.8	117.0	126.9	137.6	148.0	158.5	168.4	176.8	183.6	189.8									
38.1cm 76.2twin	0	0.0	9.6	15.8	23.1	30.6	38.6	44.8	51.8	59.2	65.7	71.8	78.0	84.6	91.8	98.6	105.8	112.2	117.9	122.4	126.6									

Rye

Metric	Seed Rate Handle Setting																													
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100									
Rows	Drive Type 1										Seed Rate in Kilograms per Hectare										Based on 0.73 kg/liter									
19.1cm	0	2.5	7.1	11.3	16.6	21.6	25.1	31.1	36.6	42.2	47.6	52.1	56.5	61.4	66.2	72.3	77.7	84.0	90.7	91.3	91.6									
25.4cm	0	1.9	5.3	8.5	12.5	16.2	18.9	23.4	27.4	31.7	35.7	39.1	42.4	46.0	49.7	54.2	58.3	63.0	68.0	68.5	68.7									
38.1cm 76.2twin	0	1.2	3.5	5.6	8.3	10.8	12.6	15.5	18.3	21.1	23.8	26.0	28.2	30.7	33.2	36.2	38.8	42.0	45.4	45.7	45.8									

Sunflowers

Metric	Seed Rate Handle Setting																													
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100									
Rows	Drive Type 1										Seed Rate in Kilograms per Hectare										Based on 0.36 kg/liter									
19.1cm	0	1.8	3.8	5.5	7.5	9.5	11.6	13.8	15.9	18.2	20.2	22.3	24.6	26.6	28.6	30.6	32.3	34.5	35.4	36.5	37.5									
25.4cm	0	1.3	2.8	4.2	5.6	7.2	8.8	10.3	12.0	13.6	15.2	16.7	18.4	20.0	21.4	22.9	24.3	25.8	26.6	27.4	27.8									
38.1cm 76.2twin	0	0.9	1.9	2.7	3.7	4.8	5.8	6.9	8.0	9.1	10.1	11.2	12.2	13.3	14.3	15.3	16.2	17.2	17.7	18.3	18.4									

Soybeans

Metric	Seed Rate Handle Setting																													
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100									
Rows	Drive Type 1										Seed Rate in Kilograms per Hectare										Based on 0.75 kg/liter									
19.1cm	0	2.5	7.0	11.8	17.3	20.8	25.7	30.3	35.1	40.1	44.3	49.7	54.8	59.5	64.2	69.2	73.2	78.0	83.1	83.5	83.8									
25.4cm	0	1.9	5.3	8.9	13.0	15.6	19.3	22.7	26.4	30.1	33.3	37.4	41.1	44.6	48.2	51.9	54.9	58.5	62.3	62.8	62.9									
38.1cm 76.2twin	0	1.2	3.5	5.9	8.7	10.4	12.9	15.1	17.6	20.1	22.2	24.9	27.4	29.7	32.1	35.4	36.6	39.0	41.5	41.8	41.9									
Rows	Drive Type 2										Seed Rate in Kilograms per Hectare										Based on 0.75 kg/liter									
19.1cm	0	5.2	14.4	24.3	35.6	42.7	52.9	62.2	72.3	82.4	91.3	102.3	112.5	122.1	131.9	142.1	150.3	160.4	170.8	171.7	172.1									
25.4cm	0	3.9	10.8	18.2	26.7	32.0	39.6	46.7	54.2	61.9	68.5	76.8	84.4	91.6	98.9	106.5	112.8	120.4	127.6	128.8	129.1									

Metric	Seed Rate Handle Setting																				
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
38.1cm 76.2twin	0	2.6	7.2	12.1	17.8	21.3	26.4	31.1	36.1	41.2	45.6	51.2	56.3	61.1	65.9	71.0	75.2	80.2	85.4	85.8	86.1
	Drive Type 3																				
19.1cm	0	10.3	20.2	36.3	53.4	63.5	79.8	90.7	104.5	118.0	133.0	147.3	162.3	176.3	191.9	204.3	223.0	238.2	253.9	254.1	254.5
25.4cm	0	7.7	15.2	27.2	40.1	47.6	59.8	68.0	78.4	88.5	99.7	110.5	121.7	132.3	143.9	153.2	167.2	178.7	190.5	190.8	190.8
38.1cm 76.2twin	0	5.2	10.1	18.2	26.7	31.8	39.9	45.4	52.2	5.9	66.5	73.6	81.2	88.2	95.9	102.2	111.5	119.2	127.0	127.1	127.2

Main Seed Box Metric Rates, continued...

Wheat

Metric	Seed Rate Handle Setting																													
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100									
Rows	Drive Type 2										Seed Rate in Kilograms per Hectare										Based on 0.82 kg/liter									
19.1cm	0	11.2	19.8	27.3	35.5	44.6	51.5	62.8	72.3	82.1	94.1	103.	114.	126.	136.	147.	159.	170.	182.	184.	184.									
25.4cm	0	8.4	14.8	20.4	26.6	33.5	38.6	47.0	54.2	61.5	70.5	77.6	85.8	94.5	102.	110.	119.	128.	136.	138.	138.									
38.1cm 76.2twin	0	5.6	9.8	13.6	17.7	22.3	25.8	31.4	36.1	41.0	71.0	51.7	57.2	63.0	68.4	73.7	79.5	85.3	91.2	92.4	92.5									
	Drive Type 3																													
19.1cm	0	14.3	27.5	40.2	53.4	66.6	78.6	93.1	107.9	122.6	137.6	150.9	166.7	181.8	197.8	215.4	229.7	245.8	260.4	266.5	268.3									
25.4cm	0	10.7	20.7	30.1	40.1	50.0	58.9	69.5	80.8	91.9	103.3	113.2	125.1	138.3	148.3	161.6	172.3	184.3	195.2	199.8	201.3									
38.1cm 76.2twin	0	7.2	13.8	20.1	26.7	33.3	39.3	46.5	53.9	61.3	68.8	75.4	82.6	90.9	98.9	107.7	114.9	122.9	130.2	133.2	134.2									

Wheatgrass

Metric	Seed Rate Handle Setting																													
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100									
Rows	Drive Type 1										Seed Rate in Kilograms per Hectare										Based on 0.30 kg/liter									
19.1cm	0	0.8	1.9	2.7	3.8	4.6	5.4	6.6	7.5	8.6	9.7	10.7	11.8	12.8	13.9	15.0	16.1	16.3	16.6	18.6	19.0									
25.4cm	0	0.7	1.5	2.0	2.8	3.5	4.0	4.9	5.7	6.5	7.3	8.0	8.9	9.5	10.4	11.3	12.0	12.2	12.5	14.0	14.3									
38.1cm 76.2twin	0	.04	1.0	1.4	1.9	2.3	2.7	3.3	3.8	4.3	4.8	5.4	5.9	6.4	6.9	7.6	8.0	8.2	8.3	9.4	9.5									

Small Seeds Box Metric Rate Charts

See page 11 for instructions.

Charts in U.S. customary units begin on page 13.

Alfalfa, Red Alsike, Crimson Clover Canola, Canary Grass

		Seed Rate Handle Scale Setting																		Chart: c1m		
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Kilograms per Hectare																				
19.1cm	0	0.0	2.0	3.1	4.4	5.4	6.7	7.8	8.9	10	11	12	14	15	16	17	18	19	21	22	23	
25.4cm	0	0.0	1.5	2.4	3.1	3.9	4.9	5.7	6.5	7.4	8.3	9.1	10	11	12	13	13	14	15	16	17	

Ladino Clover, Timothy

		Seed Rate Handle Scale Setting																		Chart: c2m		
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Kilograms per Hectare																				
19.1cm	0	0.0	1.0	1.8	2.9	4.4	5.5	6.8	8.3	9.6	11	12	14	15	17	18	20	21	23	25	26	
25.4cm	0	0.0	0.7	1.7	2.1	2.8	4.0	5.0	6.1	7.1	8.1	9.1	10	11	12	13	14	15	17	18	19	

Red & Sweet Clover, Lespedeza Hulled

		Seed Rate Handle Scale Setting																		Chart: c3m		
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Kilograms per Hectare																				
19.1cm	0	0.0	1.3	3.0	4.7	6.4	8.1	10	12	14	15	17	19	20	22	24	25	27	29	30	32	
25.4cm	0	0.0	1.0	2.2	3.5	4.7	5.9	7.5	8.7	10	11	13	14	15	16	17	19	20	21	22	23	

Bermuda, Lespedeza Unhulled, Red Top, Sand, Sercia, Weeping Love Grass

		Seed Rate Handle Scale Setting																		Chart: g1m		
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Kilograms per Hectare																				
19.1cm	0	0.0	0.6	1.0	1.6	2.4	2.9	3.7	4.5	5.3	5.9	6.5	7.1	7.5	8.1	8.5	9.2	9.9	10	11	12	
25.4cm	0	0.0	0.4	0.7	1.1	1.7	2.1	2.7	3.4	3.9	4.4	4.7	5.2	5.5	5.9	6.3	6.7	7.2	7.6	8.1	8.5	

Birdsfoot Trefoil, Sudan

		Seed Rate Handle Scale Setting																		Chart: g2m		
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Kilograms per Hectare																				
19.1cm	0	0.0	1.6	2.9	4.7	6.1	7.8	9.6	11	13	15	17	19	21	23	25	27	29	31	33	35	
25.4cm	0	0.0	1.1	2.1	3.5	4.5	5.7	7.1	8.4	9.6	11	13	14	15	17	18	20	21	23	24	25	

Metric Rate Charts, Small Seeds Box, continued...

Fescue, Kentucky Bluegrass, Annual Rye Grass

		Seed Rate Handle Scale Setting																		Chart: g3m		
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Kilograms per Hectare																				
19.1cm	0	0.0	0.2	1.0	1.7	2.5	3.0	3.7	4.1	4.7	5.2	5.7	6.2	6.6	7.1	7.5	7.8	8.3	8.6	9.1	9.4	
25.4cm	0	0.0	0.1	0.8	1.2	1.8	2.2	2.7	3.0	3.5	3.8	4.1	4.5	4.8	5.2	5.5	5.8	6.1	6.4	6.6	6.9	

Millet, Reed Canary

		Seed Rate Handle Scale Setting																		Chart: g4m		
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Kilograms per Hectare																				
19.1cm	0	0.3	1.3	2.2	3.1	4.0	4.9	5.8	6.7	7.6	8.5	9.4	10	11	12	13	14	15	16	17	17	
25.4cm	0	0.3	0.9	1.6	2.2	2.9	3.6	4.3	4.9	5.6	6.3	6.9	7.6	8.3	9.0	9.6	10	11	12	12	13	

Orchard Grass

		Seed Rate Handle Scale Setting																		Chart: g5m		
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Seed Rate in Kilograms per Hectare																				
19.1cm	0	0.0	0.0	0.2	0.6	0.8	1.2	1.3	1.8	2.1	2.6	2.9	3.1	3.6	3.9	4.4	4.5	4.9	5.2	5.5	5.7	
25.4cm	0	0.0	0.0	0.1	0.4	0.6	0.9	1.0	1.3	1.6	1.9	2.1	2.4	2.6	2.9	3.1	3.4	3.6	3.7	4.0	4.1	

Fertilizer Metric Rates

Chart in U.S. customary units is on page 17.

Rates in Kilograms per Hectare

		Fertilizer Rate Handle Scale Setting																		Chart: f1m		
		0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Rows		Fertilizer Rate in Kilograms per Hectare																				
19.1cm	0	0	8	12	22	43	61	81	100	118	138	155	176	195	210	234	250	262	271	275	277	
25.4cm	0	0	6	9	18	33	45	61	75	89	103	117	132	147	157	176	187	196	204	205	207	

Great Plains Manufacturing, Inc.

Corporate Office: P.O. Box 5060
Salina, Kansas 67402-5060 USA
