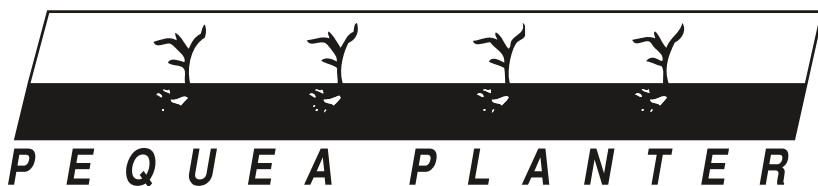


Operators Handbook  
(Revised March 2011)



Manufacturers of

*Custom Built  
Corn Planters*

- 3 point
- Pull-type
- No-till
- Conventional

Pequea Planter  
561 White Horse Road  
Gap, Pennsylvania 17527  
(717) 442-4406



# General Information

The John Deere Max-merge planting units are noted for their accuracy in spacing seed on the row and also for the uniform seed depth placement. This results in a greater yield per acre and a more even ear maturity, which is especially important to the sweet corn grower.

However, as is the case with most farm machinery, if the care and adjustments of the planter are not understood by the operator, a less than satisfactory result can happen.

Important is the replacement of worn parts and the time taken to care for, clean, and store it properly. Much trouble can be avoided by spending time with the John Deere operators manual, especially the service, attachments, and trouble shooting sections.

Another advantage of these units is the wide selection of optional equipment available. (See list in this booklet.) With no-till coulters, down pressure springs, and cast iron closing wheels, you can do a good job of no-tilling under almost any conditions. (See special section on no-till.) Furrow openers with down pressure springs will gouge out a 5" to 7" furrow in front of the unit to allow for plant growth when covered with plastic mulch, for the early sweet corn grower.

The new vacuum system is noted for being more accurate with small corn seeds such as the super sweets, popcorn, etc., and also for soybeans, edible beans, and peas.

A 2 row 3 point planter filled with seed and fertilizer weighs 1600 to 1800 LBS. Therefore the tractor should be able to lift at least 2000 LBS on 3 point. It is best to have at least a 50 HP tractor.

Bent, 3 point frame stands, are for fitting between the wheel wells if hauling with a pick up truck.

Rubber tire drive wheel should be between 25 in. and 26 in. with decent tread for traction.

For tractors smaller than 50 HP, a pull type planter is recommended rather than 3 point.

## Getting ready to plant

1. Replace badly worn parts. Especially coulter blades when no-tilling. Also closely examine seed meter belts by turning by hand, watching for cracks. Check again in the field soon after starting. They can dry out and become brittle over winter.
2. **Always check seed spacing and depth. For seed spacing, remove closing wheel spring pressure from 1 unit, adjust depth gauge wheels to drop the seed on top of the ground and tie the closing wheels and the seed firmers (if you have them), up off of the ground to unit frame. Drive forward at usual planting speed, in field, with planter down. For population check, see page 5.**
3. Some down spring pressure on the units is good if the field is cloddy, stony, shaly, or a field with a crust after a rain. This will keep the unit tighter against the ground.
4. Adjust seed depth by moving handle forward for shallower, back for deeper. Jumping one hole on one side will make 1/4 inch difference. One hole on each side 1/2 inch. As the unit disks wear, the handle will have to be moved back for the same seed depth.
5. The spring pressure on the closing wheels will need to be adjusted according to soil type and condition. Loose, sandy soils need very little pressure, heavy clays will need more. Planters with cast closing wheels usually need no spring pressure in plowed ground. Too much pressure on the closing wheels in very loose soils can result in uneven seed depth or seed being pushed out of the ground.
6. Driving too slow causes skips, too fast, doubles. (Check John Deere operators manual for ground speed. MPH)
7. The fertilizer openers need not have spring pressure in loose plowed ground. With the bolt removed the planter will not pull as hard. (Horse farmers only)
8. On the 3 row pull type planter, don't cock the marker disk harder than needed. The center row plants on gauge mark and can cause uneven seed depth.
9. Don't use marker weight on 3 row plowed ground.
10. Ask for Free Sheets on "Planter Checks in Shop" and "Planter Checks in Field".

## No-till section

1. Adjustments to make when going from conventional to no-till.
  - Increase spring pressure on closing wheels.
  - Tighten down pressure springs on side of unit.
  - Release spring pressure on fertilizer opener. Remove bolt - let opener float.
  - Add weight to planter frame. Tool bar opening preferred.
  - Add weight to gauge marker arms, or foam markers are available.
  - Replace disk marker and bracket with spring tooth and bracket.
  - Keep fertilizer hopper as full as possible.
2. Keep good blades on coulters. No less than 14.5 inches.
3. Coulters blades will not cut through heavy applications of box pen manure. Spread thinly, or use row cleaners.
4. Working at hay or rye crops or hauling manure in soft fields if following with no-till corn can cause problems in getting seed into the ground.
5. Don't plant when the ground is too wet. Disks will throw the soil away from the furrow and seed won't be covered properly.
6. The planter will not lower completely when not in motion. Be sure to drop farther as you start in.
7. Because of better drive wheel traction in no-till fields, seed spacing will be approximately 10% closer than chart shows.
8. Ask for Free Sheets on "Tips for No-till" and "Ways to Increase Yield Per Acre".

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**If you put the seed into the ground,  
cover it, and have good weed control,  
you can grow good no-till corn.**

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**For vacuum planter seed spacing, use 1750 & 7200 operators manual charts.  
Plateless Finger Pickup Corn Seed Spacing Chart**

**Standard 12 Fingers**

Drive Sprocket	Driven Sprocket	Inches
35	27	6
35	28	6¼
29	24	6½
29	25	6¾
29	26	7
29	27	7¼
29	28	7½
24	24	7¾
24	25	8
24	26	8½
24	27	8¾
24	28	9¼
20	24	9½
20	26	10
20	27	10½
20	28	11
16	24	11½
16	25	12
16	26	12½
16	27	13
16	28	13½
16	29	14
16	35	17

This chart is not for 6 finger pumpkin meter. Use 12 finger chart X2.

**Horse Drawn Optional 6 Fingers**

Drive Sprocket	Driven Sprocket	Inches
35	24	7
35	25	7¼
35	26	7½
35	27	7¾
35	28	8
29	24	8½
29	25	8¾
29	26	9
29	27	9½
29	28	10
24	24	10½
24	25	10½
24	26	11
24	27	11½
24	28	12

**Check seed spacings in field. We don't guarantee 100% accuracy.**  
For changing sprockets loosen tightener, remove spacers, realign sprocket, tighten chain.

On planters before 1991, collars on hex shaft on either side of 5 in 1 sprockets must be moved to allow other sprocket combinations.

Whenever using side by side gears on drive sprocket, be sure to have roller chain connector link clips turned out, away from other close running chain.

**For Soybeans, Edible Beans, Peas, etc.**

Because of the great variation in the size of bean, pea, etc. seed, we don't attempt to make charts for all the different seed sizes. A little experimentation is required using the same sprocket combinations as in corn seed chart.

# Population Per Acre

## Row Width

Plant  
Spacing  
in  
Inches

	24	26	28	30	32	34	36	38
6	43,600	42,200	37,300	34,800	32,670	30,700	29,000	27,500
6¼	41,800	38,600	35,800	33,500	31,300	29,500	27,900	26,400
6½	40,200	37,100	34,500	32,200	30,100	28,400	26,900	25,400
6¾	38,700	35,700	33,200	31,000	29,000	27,300	25,800	24,400
7	37,300	34,400	32,000	29,900	28,000	26,300	24,900	23,500
7¼	36,000	33,300	30,100	28,800	27,000	25,400	24,000	22,800
7½	34,800	32,200	29,900	27,900	26,100	24,600	23,200	22,000
7¾	33,700	31,100	28,900	27,000	25,300	23,800	22,500	21,300
8	32,700	30,100	28,000	26,100	24,500	23,100	21,800	20,600
8½	30,700	29,400	26,400	24,600	23,000	21,700	20,500	19,400
8¾	29,900	27,600	25,600	23,900	22,400	21,100	19,900	18,800
9¼	28,300	26,100	24,200	22,600	21,200	20,000	18,800	17,800
9½	27,500	25,400	23,600	22,000	20,600	19,400	18,300	17,300
9¾	26,800	24,700	23,000	21,400	20,100	18,900	17,900	16,900
10	26,100	24,100	22,400	20,900	19,600	18,500	17,400	16,500
10½	24,900	23,000	21,300	19,910	18,700	17,600	16,600	15,700
11	23,800	21,900	20,400	19,010	17,800	16,800	15,800	15,000
11½	22,700	21,000	19,500	18,100	17,000	16,000	15,100	14,300
12	21,800	20,100	18,700	17,400	16,300	15,400	14,500	13,758
12½	20,900	19,300	17,900	16,700	15,700	14,800	13,900	13,200
13	20,100	18,600	17,200	16,000	15,100	14,200	13,400	12,700
13½	19,300	17,800	16,500	15,400	14,500	13,600	12,900	12,200
14	18,500	17,100	15,800	14,800	13,900	13,000	12,400	11,700
17	13,000	12,500	12,000	11,500	11,000	10,500	10,000	9,700

To check population per acre, measure distance below. Seed count is population per acre.

21'9"	20'1"	18'8"	17'6"	16'4"	15'5"	14'6"	13'9"
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**SEE PAGE 2, #2**

## Dry Fertilizer Rate Chart - Approx.

Drive Sprocket	Driven Sprocket	Reg. LBS	Augers (Per Acre)	High LBS
16	36	75		113
16	30	90		135
20	36	94		141
20	30	113		170
24	36	114		171
24	30	136		204
29	36	136		205
16	18	150		225
29	30	163		245
35	36	165		247
16	16	170		255
20	18	188		283
35	30	198		297
20	16	211		317
24	18	227		340
24	16	255		382
29	18	273		410
29	16	307		460
35	18	330		495
35	16	371		556

**Note: These LB figures can vary greatly depending on the density of the fertilizer.** Use the sprocket combinations if wanting more or less.

For changing sprockets, loosen chain tightener, realign desired sprocket by removing spacers, and tighten chain.

For even more fertilizer per acre, an optional extra hi-rate auger can be used for 1½ times the hi-rate auger amount.



# For Pequea Planter Pump with 3/8" Hose

## Liquid Fertilizer Rate Chart Gallons Per Acre

Drive Sprocket	Driven Sprocket	24" Rows	Gallons per Acre			
			30" Rows	36" Rows		
15	35	3.0	2.4	1.8		
17	35	3.4	2.7	2.0		
19	35	3.8	3.0	2.2		
15	27	3.9	3.1	2.3		
21	35	4.3	3.4	2.5		
17	27	4.4	3.5	2.6		
19	27	5.0	4.0	3.0		
15	19	5.1	4.2	3.2		
21	27	5.5	4.4	3.3		
17	19	6.0	4.8	3.6		
19	19	6.8	5.4	4.1		
21	19	7.4	5.9	4.4		
19	17	7.5	6.0	4.5		
21	17	8.3	6.6	5.0		
19	15	8.5	6.8	5.1		
21	15	9.4	7.5	5.6		
27	19	9.5	7.6	5.7		
27	17	10.6	8.5	6.4		
27	15	12.0	9.6	7.2		
35	19	12.3	9.8	7.4		
35	17	13.8	11.0	8.3		
35	15	15.6	12.5	9.4		

**This chart is approximate. Rate must be field checked.**

For less gallons per acre, put larger sprocket on pump.

**For more gallons per acre . . .**

- 1/2" squeeze hose on pump, take chart X 2
- 5/8" squeeze hose on pump, take chart X 3

# Demco Pump with 3/8" Hoses

## Liquid Fertilizer Rate Chart

Pump Setting	Drive Sprocket	Pump Sprocket	Gallons Per Acre		
			30" Rows	32" Rows	36" Rows
8	16	28	5.7	5.4	4.8
7	16	28	4.6	4.3	3.8
6	16	28	3.2	2.9	2.6
5	16	28	2.1	2.0	1.8
4	16	28	1.2	1.1	1.0
8	20	28	7.2	6.7	6.0
7	20	28	5.7	5.3	4.7
6	20	28	3.9	3.6	3.2
5	20	28	2.7	2.5	2.1
4	20	28	1.5	1.4	1.3
8	24	28	8.6	8.1	7.1
7	24	28	6.8	6.4	5.6
6	24	28	4.6	4.3	3.6
5	24	28	3.2	2.9	2.6
4	24	28	1.8	1.7	1.5

**This chart is approximate. Rate must be field checked.**

For less gal. per acre, put larger sprocket on pump.

For more gal. per acre put smaller sprocket on pump or use 29 tooth or 35 tooth as drive sprocket for 20% and 50% increase of 24 tooth.

Also, sprocket on pump can be changed, larger for less, smaller for more.

**For more gallons per acre . . .**

- 1/2" squeeze hose on pump, take chart X 2
- 5/8" squeeze hose on pump, take chart X 3

# Shaft and Sprocket Adjustments

1. Roller chain tightener brackets are moveable to align with different sprocket combinations.
2. When changing row width, loosen both collars on seed drive hex shaft between units to allow drive shaft to maintain original position when moving units. If fertilizer bracket mounting clamps interfere with new unit clamp position, move fertilizer hopper to left or right, keeping as near to the center of frame as possible. To keep auger in center of hopper, compensate by either shifting shaft in fertilizer drive sprocket mechanism or changing length of round tube between hex shaft and auger shaft.
3. 27 tooth sprocket is regular 5027 weld-a-sprocket. Shaft collars are  $1\frac{1}{6}$ " ID with set screw. They can be picked up at farm equipment or farm supply stores.
4. 10  $1\frac{1}{6}$ " shaft collar positions are as follows:
  - 2 on 60" seed drive shaft between units, against bearing, each side.
  - 2 on 36" jack shaft-inside, against bearings, similar to 60 in shaft.
  - 2 on each 5 in 1 sprocket and spacers. Position for minimum changing.
  - 2 on fertilizer 12 in. shaft. One on each side.
5. Down pressure spring on main drive wheel frame is the same as the unit down pressure spring. Spring replacement Part #AB10071 or A43609. Extra holes in place are for additional spring pressure as needed.

## **Important:**

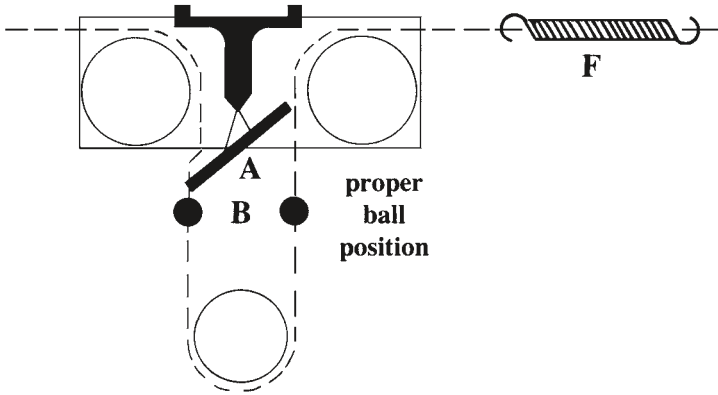
All planter insecticide attachments should be calibrated regularly. Worn rollers or other parts will affect the rate or allow the material to flow through while not in operation.

# Gauge Markers on Pull Type Planters

The automatic marker trip will change each time the planter is completely raised. If you want the same side to drop again, don't raise quite the whole way. These are IH parts off of the IH56 planter.

As the planter is used, the chain or spring will stretch. With the planter the whole way up, the marker arms should be against the frame with the chains snug. If you get some slack, be sure to adjust first on the one side, next time the opposite side.

This will keep the balls in the proper position, just beneath the plastic switcher arm (See diagram). If the ball needs to be changed, drop the planter so the marker arm will lower, bringing the ball out where it can be worked on.

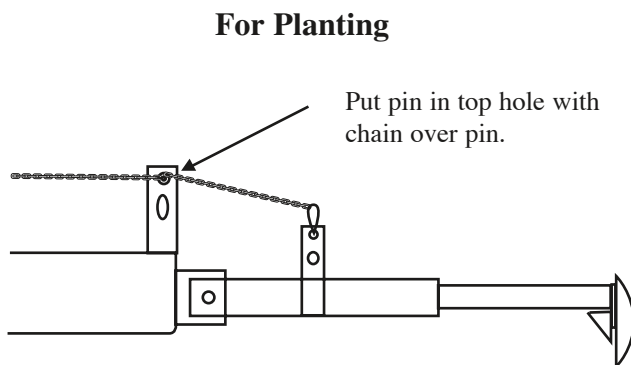
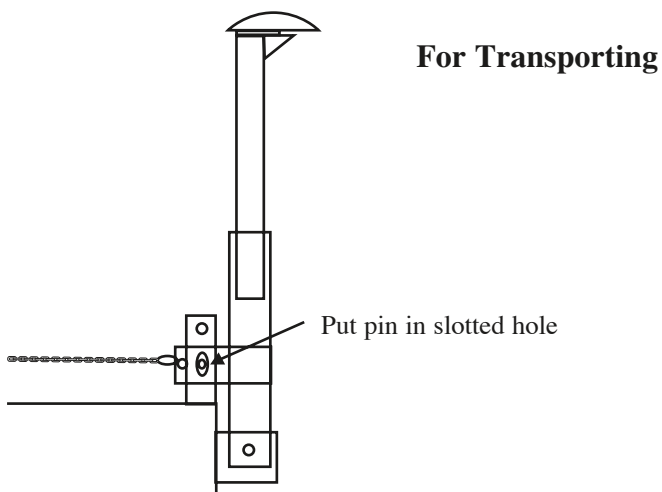


## Troubleshooting

On later model planters, springs are being used to have less stretching of the chain. If the gauges don't alternate properly, check:

- A: broken switcher arm
- B: improper ball position
- C: too much chain slack
- D: marker trip not moving freely. Oil.

## 2 & 3 Row Marker Lock-Up



# Maintenance

1. Use graphite regularly, 1 tsp. every 6 bushel.
2. Grease zerks on gauge wheel arms on each side of unit twice daily, 2 on each unit.
3. Grease zerks on main axle bearing daily, 6 on 2 row, 8 on 3 row. (Pull type.)
4. Grease zerks on drive wheel frame bearing daily.
5. Use special lubricant on roller chains as needed.

# Before Storage

1. Remove meters from hoppers, take off baffle, check fingers, brushes, and belts. Clean, remove chaff, put away in dry place until next season. Do not use WD40 etc., only dry graphite.
2. Clean or wash planter, especially fertilizer attachment. Use crankcase oil on metal parts but not on fiberglass boxes.
3. Use special lubricant or crankcase oil on roller chains.

# Optional Equipment

- No-till coulters
- Down pressure springs
- Cast closing wheels
- Seed firmer
- Walking gauge wheels
- IH depth gauge wheels
- Row cleaners
- Insecticide
- Furrow opener
- Monitor
- Soybean meter
- Radial bean meter
- Manual markers (3 point)
- Hydraulic markers (3 point)
- Foam markers
- 12 volt hydraulic lift
- Vacuum system
- Vacuum PTO pump

# Guarantee

Planter fully guaranteed for one full planting season,  
covering defective parts and workmanship.

\_\_\_\_\_

Date \_\_\_\_\_



