

John Deere

MODEL:

490

Four Row Corn Planter

OPERATOR'S
MANUAL



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OPERATOR'S MANUAL

No. OM-B2-845

JOHN DEERE

This manual
contains correct
information
regarding lubrication,
operation, main-
tenance, setting-up
and repair parts.

No. 490
FOUR-ROW TRACTOR
CORN PLANTER
and
ATTACHMENTS

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TO OPERATE THE PLANTER IN THE FIELD

Planter Wheel Tread Adjustment.

If possible, it is always best to run the planter carrying wheels in the center of tracks left by rear wheels of tractor, and the planter wheels are adjustable for this purpose. If this cannot be done, it is best to adjust planter wheels to run entirely out of the tractor wheel tracks. If rubber-tired planter wheels are used, the tires should be inflated to 32 pounds pressure.

Row Width Adjustment.

The planter can be set to plant rows 36, 38, 40, and 42 inches apart. It is set at the factory for 40-inch rows. To change the row width, move planting units over to the desired row spacing on front of planter, and move lift chain sheaves the same amount on planter back frame. **BE SURE THE LIFT CHAINS ARE LENGTHENED OR SHORTENED THE SAME DISTANCE THAT EACH UNIT IS MOVED IN OR OUT, AND BE SURE CHAINS ARE NOT TWISTED.** There are four holes in marker arm indicating 36-, 38-, 40-, and 42-inch rows. The inside end of the marker pipe should be in line with center of hole desired.

Planting Depth Adjustment.

Depth of planting is regulated by adjusting press wheels up or down by means of threaded adjusting rod (see Figure 1).

Wire Release.

The wire is released from checkheads by pressure against wire release arm "A", Figure 2. When the planter is nine buttons from the anchor stake, as it approaches end of field, the angle of wire is such that it contacts this arm which then opens the checkhead and drops wire. If this arm is not set at the correct position to release wire nine buttons from anchor stake, counting the button attached to stake, it can be adjusted by loosening bolt "B" and turning as necessary.



Figure 1

Marker Adjustment.

The markers are automatic in their action. When planting units are raised, the marker is raised and when planting units are dropped, the right and left markers are released at alternate times. The marker latch release rods are operated at alternate times by mechanism located on back frame behind power lift. This is set at the factory, but should it get out of adjustment, proceed as follows: If, when starting the planter in the field, it is found that the right-hand marker drops when the left-hand marker is needed, stop the tractor, leaving planter in lowered position. Lower the left-hand marker by pulling on marker latch rod "A", Figure 4, toward center of planter. Push right end of marker trip cam "B", Figure 5, forward as far as possible as shown in Figure 4. Now raise the right-hand marker. Use the reverse procedure when left-hand marker drops, if right-hand marker is needed. Figure 5 shows the trip cam "B" in neutral position which can be used if it is desired to plant with both markers in the raised position, such as near the fence when finishing up a field.

The length of marker latch rods can be adjusted by means of threaded castings "C", Figure 3. The marker control actuating rod "D", Figure 4, is threaded and has two nuts on the end. This rod should have $1/8$ " of play when planter is in raised position as shown in Figure 3. If it does not have the right amount of play, adjust the two nuts at the end of rod when planter is raised. The main lift chains which raise the markers can be adjusted for length by means of hook bolts "E", Figure 5. These should be adjusted so that markers will latch properly when raised. This adjustment must be made when planter is in raised position.

Be sure that check forks are spread $1/4$ " here.

Wire release should be set here to release wire from checkhead at ninth button from stake.



Figure 2

Adjustment for length of checkhead rod. There should be no play in rod when rocker shaft is home.

Hitch Adjustment.

If the planter hoppers do not run about level, the rear of planter hitch bars can be adjusted. If fertilizer attachment is used and fertilizer boots have a tendency to clog, adjust the hitch so as to lower front of planter. This will raise the boots. If this is done, however, it may be necessary to move the checkheads back one hole to get hills in check. (See 8, Figure 2.) Always hitch planter so it is pulled from the exact center of tractor and see that there is no side play in hitch connection.

To Set Planter for Drilling.

The power lift should be in the lowered position with runners down. Adjust the arm "A", Figure 6, so that it engages arm "B" and holds the valves fully open. The drilling will now automatically start and stop as planter runners are lowered and raised by power lift. (See table of drilling distances on page 25.)

To Set Planter for Checking Again.

Be sure runners are in the lowered position, then adjust the drill device adjusting arm on drill device rod to a horizontal position as at "C", Figure 7. When checking with 40- or 42-inch wire, the drill shaft drive chain should be on the medium 13-point sprocket. When using 36- or 38-inch wire, the chain should be on the large 15-point sprocket.

Planting Speed.

When planting, do not run tractor over 5 miles per hour. This means you should not pass more than 125 buttons per minute using 42-inch wire, 130 using 40-inch wire, 135 using 38-inch wire, and 140 using 36-inch wire. If planter is set to plant 4 in a hill do not go over 4 miles per hour. Consult page 22 for speeds recommended when using automatic hill-drop attachment.

Set for drilling with runners down. Valves should open as far as possible.



Figure 6

*Chains locked in transport position
with runners up.*

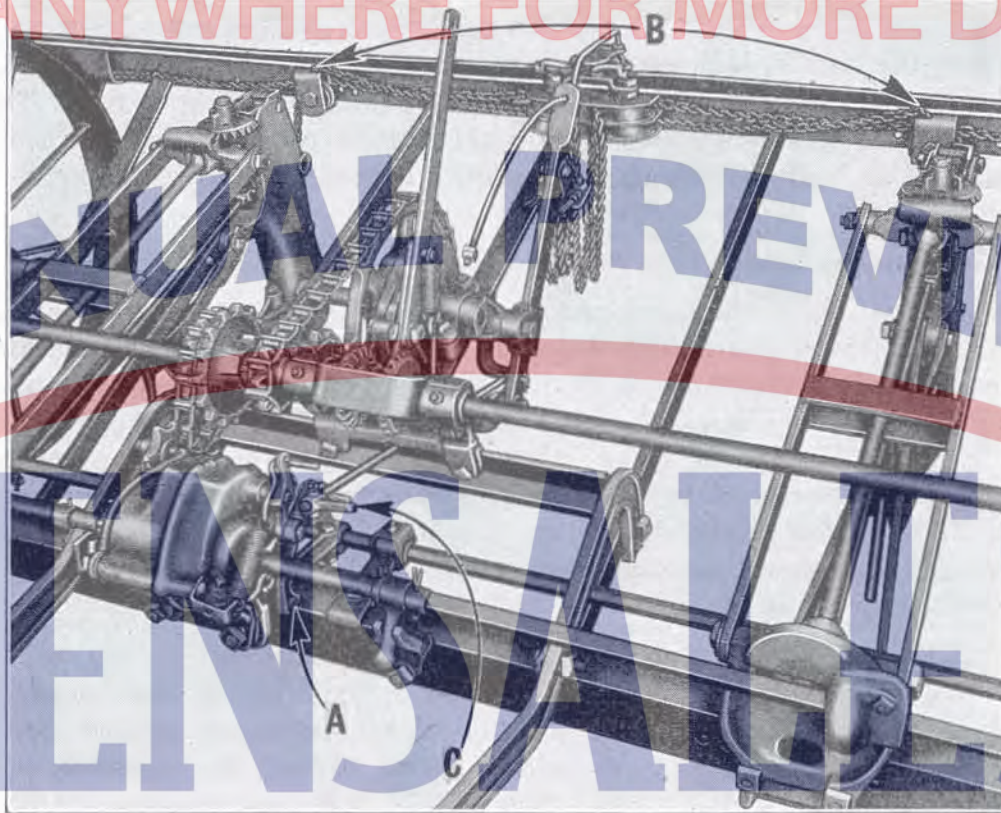


Figure 7—Set for checking.

Trash Removers.

Trash removers should be set to go into the ground about 1/2-inch. They can be adjusted by loosening bolt "E", Figure 26, on page 32, and moving up or down.

To Plant in Checkrows.

(First study Chart on page 9.) When checkrow planting, it is advisable to first drill eight rows across each end of the field where the wire anchor stakes will be set. These rows, as well as mark made by markers, when drilling, then serve as a guide to indicate where to stop the planter after turning around at the ends.

After drilling eight rows across one end of the field, the wire should be laid out before drilling the rows at the other end. Be sure reel on planter is next to edge of field. Place reel in position, as explained on page 34, so wire will unwind backwards from the top of reel. Lock reel chain over bolt as shown in Figure 29, page 34, so the reel shaft will not turn. Place the wire on wire guide on back frame of planter. Set anchor stake in corner of field and drive forward. The tension of wire is regulated by tightening or loosening the nut on each end of wire reel.

Do not use too much tension on wire reel friction. As the wire reel is used, the tension will automatically increase. If the friction is adjusted too tight, it will result in unnecessary wear or breakage.

After the wire is laid out, drill the eight rows across the end of field, then stop the planter in position to check plant the first four rows. The wire should be staked down behind the second runner from wire side, nine buttons back of planter counting the button attached to stake.

To Set Anchor Stake.

When you reach the other end of field, pull the trip rope once, about 11 buttons from the end. This will raise the planting units and the marker. The wire will be automatically released from the checkhead at about the ninth button when it contacts the release arm on checkhead. Turn the planter in position for planting the next four rows, stopping as squarely over the mark as possible, 9 buttons from stake. You can easily determine correct position to stop by observing the position of mark, made by marker when drilling end rows, with relation to tractor when 9 buttons from stake.

Pull the anchor stake and let the dog down in the first notch on pulley. With the stake in your hands, stand directly behind checkhead on planter and throw the wire toward the planter using an upward circular motion, moving about 50 buttons. Next thread the wire into the

check forks and close checkhead by a quick jerk on wire. With the wire tight enough to take up all slack, set the anchor stake in the ground directly behind the second runner from the wire side of planter. Then pull up on arm of spring tension meter until the arm just touches the forward stop. (See Figure 8.) This gives a uniform tension each time the wire is staked down. The anchor stake foot bracket may be pushed up or down to regulate the length of stake in the ground for hard or soft ground. You are now ready to plant the next four rows. Drive the tractor as straight as possible over the mark. Sighting some distance ahead of the tractor instead of close to it, makes it possible to drive straighter.



Figure 8

Runner Adjustment.

The runners act as rudders and should they get out of alignment, will cause planter to run diagonally or dog fashion, resulting in a poor check. If runners are out of line, loosen bolts holding runners and runner braces. Runners can then be set straight or at right angles to planter front frame, after which bolts should be tightened again.

Figure 10 shows an exaggerated example of what happens when runners are pointing off to the left. In the lower portion of the illustration, the planter has been stopped squarely behind tractor after turning. Notice position the planter assumes as it moves forward, as shown in the upper part of Figure 10. The planter would run off in the opposite direction if the runners pointed off to the right. Turning with the planting units in the lowered position, especially in hard ground, could put the runners in the condition shown in Figure 10.

Valve Adjustment.

The valves are adjusted properly at the factory and it should, therefore, be unnecessary to adjust them when setting up the planter. However, if it is necessary at any time to replace or adjust the valves, proceed as follows: Detach rear part of the runners as shown in Figure 11, and be sure the rocker shaft stop is in the home position on front frame next to gear case. (See "A", Figure 7.)



Figure 11