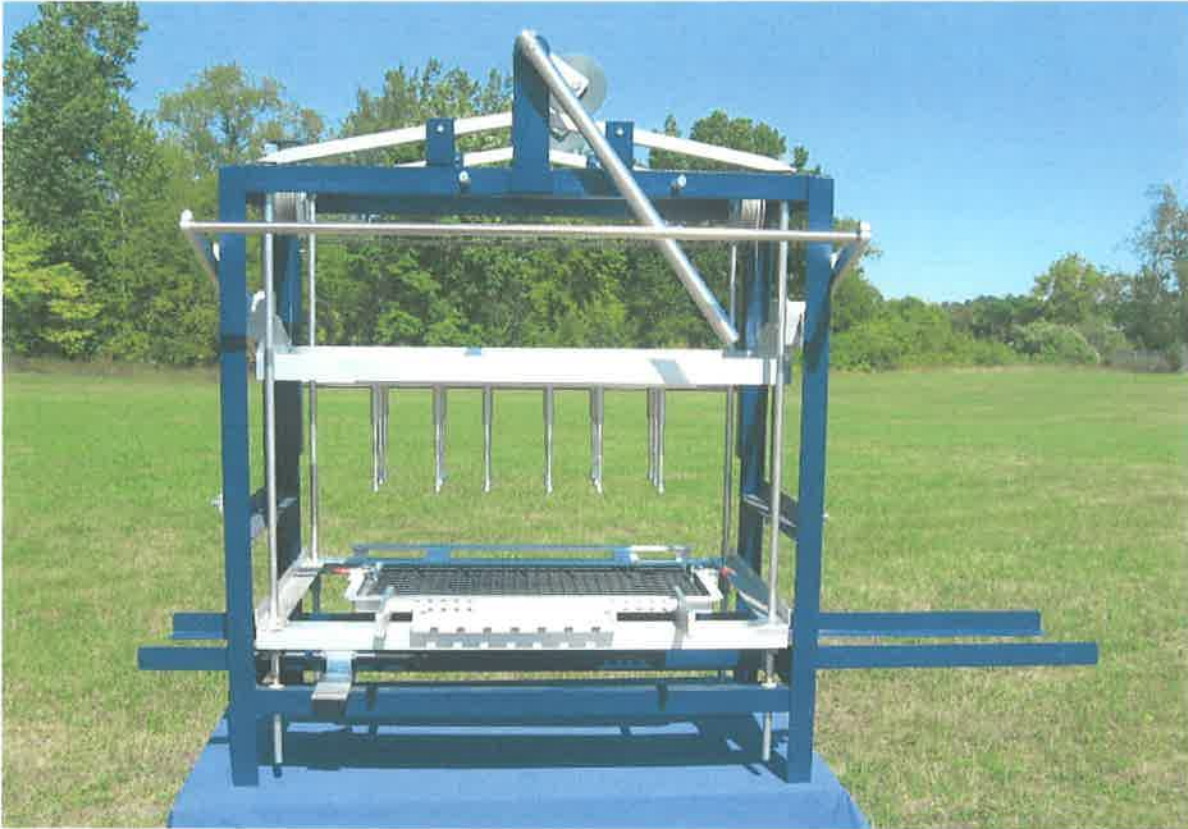


# **Puncher II**

## **Set-Up and Operation Manual**



**Applies to Puncher II Transplanter  
serial number 08H001 and higher.**

**This manual may differ slightly from transplanter.**

## Set-up and Operation Sequence

Place Puncher II Transplanter on a stable bench, table or cart at a comfortable height for the operator. Be sure transplanter is sitting on a level surface.

- 1.) Install Punch Plate, Locator Block and Plug Tray Rack per page 2 of this document.
- 2.) Install and adjust Rails per page 3 of this document.
- 3.) Measure height of receiving Flat and length of Punch Pins being used.  
“Rounded” bottom pins are 7” long and “Horseshoe” pins are 9” long.
- 4.) If using 7” pins, Pivot Pin should be in the lower position. If using 9” pins, Pivot Pin should be in the upper position.
- 5.) Using page 4 as a reference, set Lift Pin location, Scale, Upper Stop and Lower Stop as indicated. Refer to pages 5, 6 and 7 for details. These are suggested starting points. However, due to exact height of flat, desired planting depth, etc, some minor adjustments may have to be made to obtain optimum results.

Note:

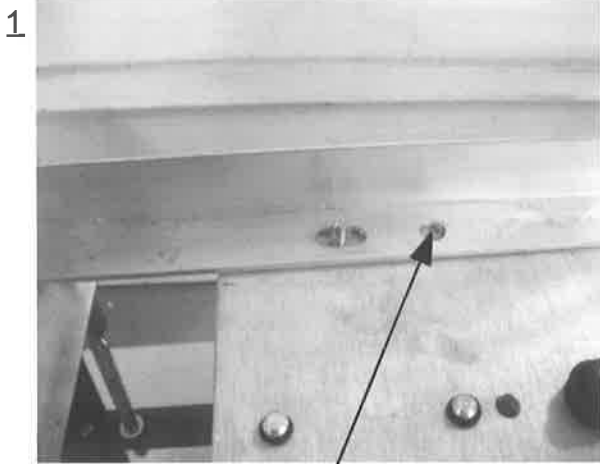
Planting depth can be adjusted in two ways:

- A.) The chain/scale assembly can be raised for a shallower planting depth and lowered if a deeper depth is desired.
  - B.) The Lower stop blocks can be raised or lowered to adjust planting depth.
- 6.) Operate Puncher II machine as described on pages 8, 9 and 10 of this document.

Note: The Puncher II is designed so minimum maintenance is required. The machine should be kept as clean as possible and blown off with an air hose a minimum of once a day. Lubricants should be used sparingly. If a lubricant is required, a non-petroleum product such as a silicone based lubricant or Pledge Furniture Polish can be used.

Please read through this entire document before starting setup and operation.

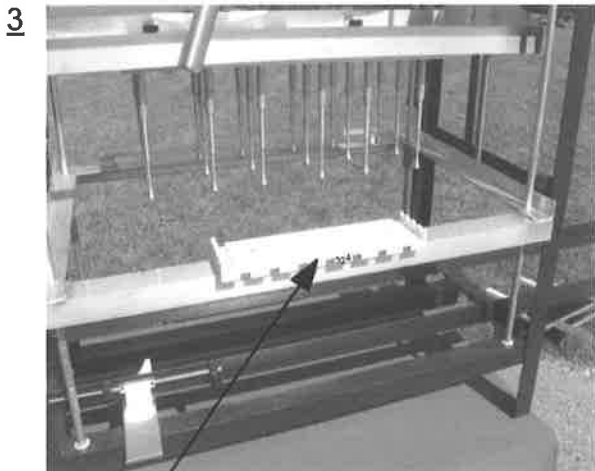
If questions arise, please call 303-210-6052 and ask for Warren Ida.



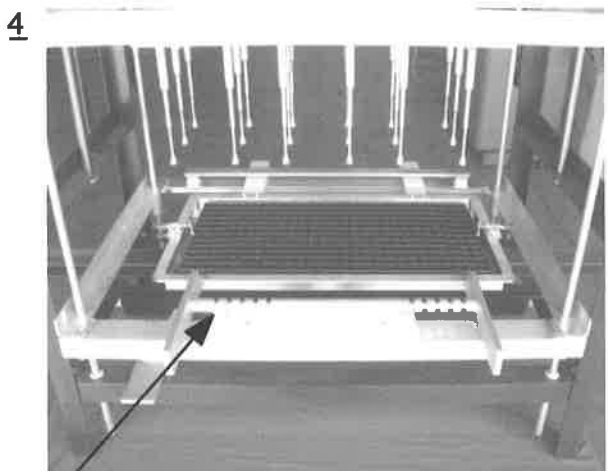
Mount Punch Plate using round holes when punching the 105 Plug Tray. Use the slotted holes for all other plug trays.



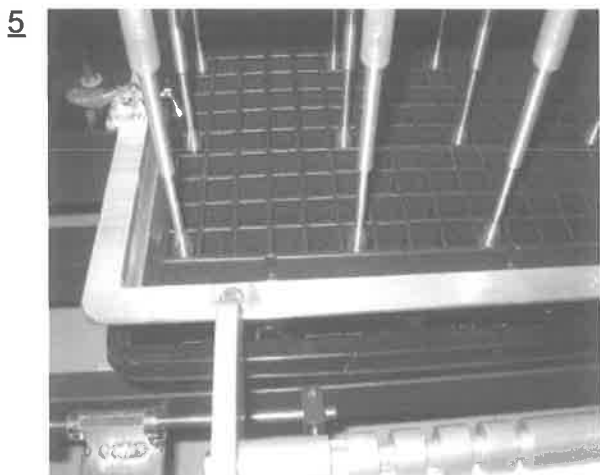
Mount Punch Plate with washers and thumbscrews so numbers are readable from the operator side of puncher. Do not tighten thumbscrews at this time.



Install Locator Block with letters defining plug tray toward operator



Place Plug Tray Rack in Puncher II as shown. First notch in handle must be in upper left (0) notch of the locator block.



Lower Punch Plate so pins enter tray as shown. Adjust position of punch plate so pins are "centered" in cells. Tighten Punch Plate Thumbscrews. Later style Racks have slotted handles to aid in this adjustment.

### Punch Plate and Locator Block Installation



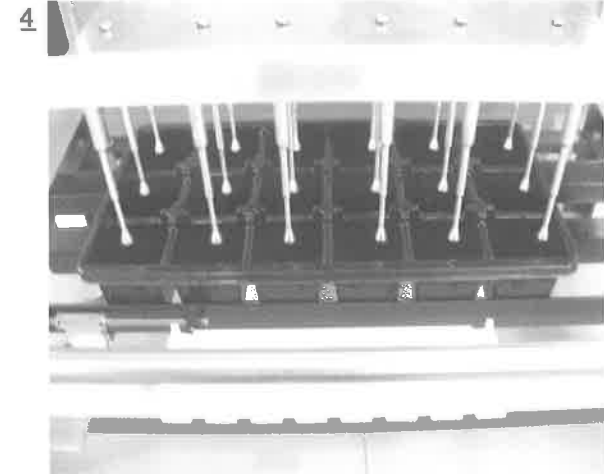
Approximate locations and orientation of rails



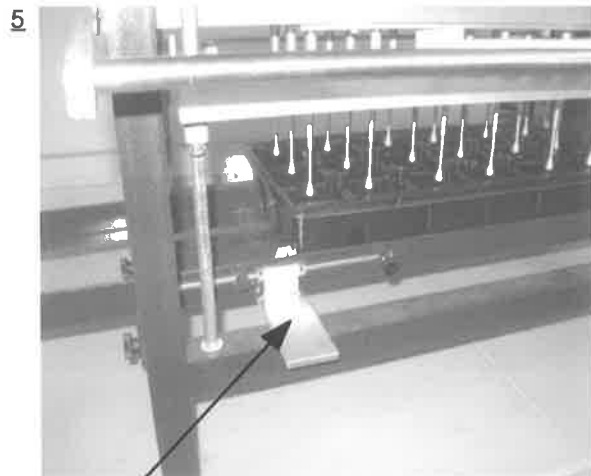
Install Rail Mounting Blocks and Thumbscrews as shown. Do not tighten.



Position flat onto rails. Pull Upper Rack Handle down so pins are just over flat. Adjust rails so pins are in optimum widthwise position. Tighten Rail Blocks.



Position flat to obtain optimum lengthwise positioning.



Adjust Flat Stop Bracket to front of flat. Tighten thumbscrew.

### Rail Installation and Adjustment

To install and properly adjust rails, follow instructions, in order, from 1-5.

**Suggested settings for initial setup. Minor adjustments may have to be made depending on desired pla**

**Suggested settings using 7" long punch pins and no shifter:**

Pivot pin must be in lower position.

<u>Height of Flat</u>	<u>Lift Pin Location</u>	<u>Scale Number</u>	<u>Upper Stop</u>	<u>Lower Stop</u>
2.5"	4	9.5	3" down	0 Position
3.0"	6	8	3" down	0 Position
3.5"	9	6.5	3" down	0 Position
4.0"	11	5	3" down	0 Position
4.5"	14	3.5	3" down	0 Position
5.0"	16	3.5	3" down	.5" up
5.5"	18	3.5	3" down	1.0" up

**Suggested settings using 7" long punch pins with a shifter:**

Pivot pin must be in lower position.

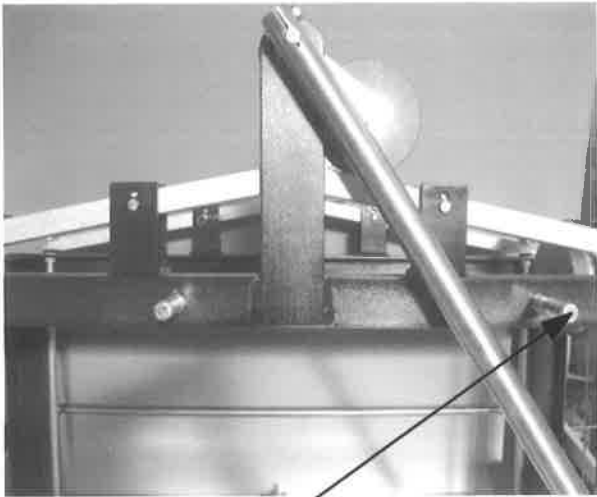
<u>Height of Flat</u>	<u>Lift Pin Location</u>	<u>Scale Number</u>	<u>Upper Stop</u>	<u>Lower Stop</u>
2.5"	4	8	3" down	0 Position
3.0"	6	6.5	3" down	0 Position
3.5"	9	5	3" down	0 Position
4.0"	11	3.5	3" down	0 Position
4.5"	14	2	3" down	0 Position
5.0"	16	2	3" down	.5" up
5.5"	18	2	3" down	1.0" up

**Suggested settings using 9" long punch pins with a shifter:**

Pivot pin must be in upper position.

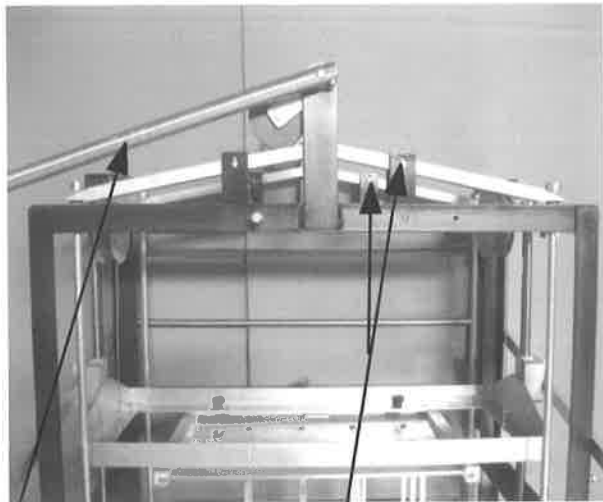
<u>Height of Flat</u>	<u>Lift Pin Location</u>	<u>Scale Number</u>	<u>Upper Stop</u>	<u>Lower Stop</u>
2.5"	1	1	0	0"
3.0"	3	1	0	.75"
3.5"	6	1	0	1.5"
4.0"	8	1	0	2.25"
4.5"	11	1	Highest	3"
5.0"	13	1	Highest	3.75"
5.5"	15	1	Highest	4.5"

1



Remove Handle Stop Bolt

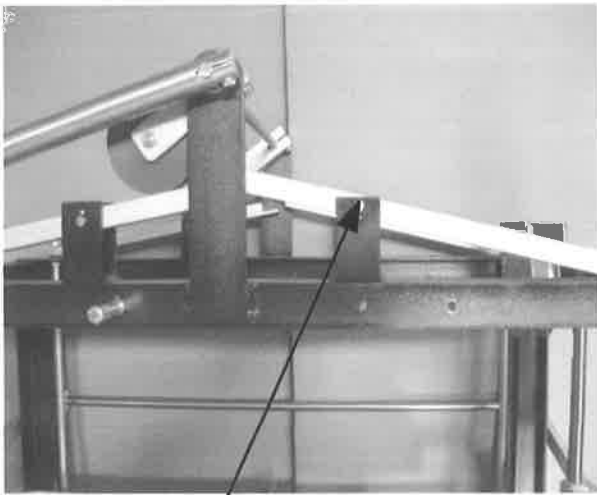
2



Rotate Handle as shown

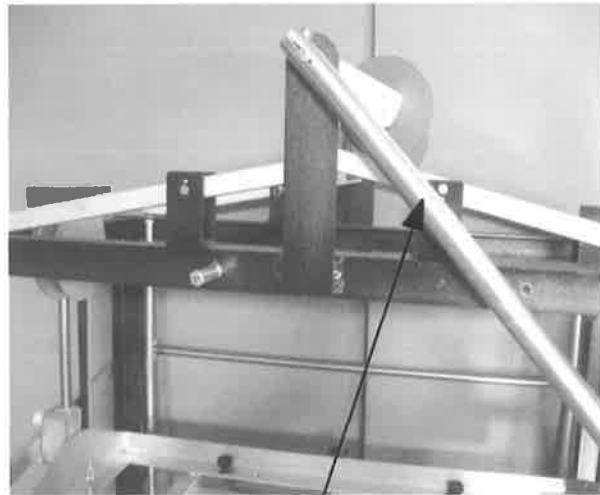
Remove Pins from Right Front and Right Rear Riser Bars

3



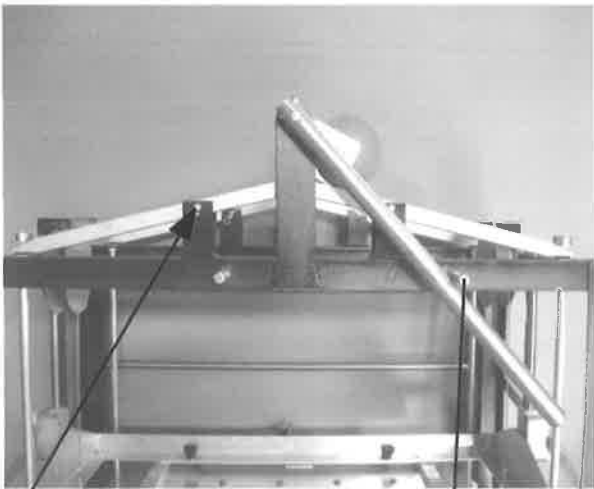
Re-position Pins in Upper Position.

4



Rotate Handle as shown

5

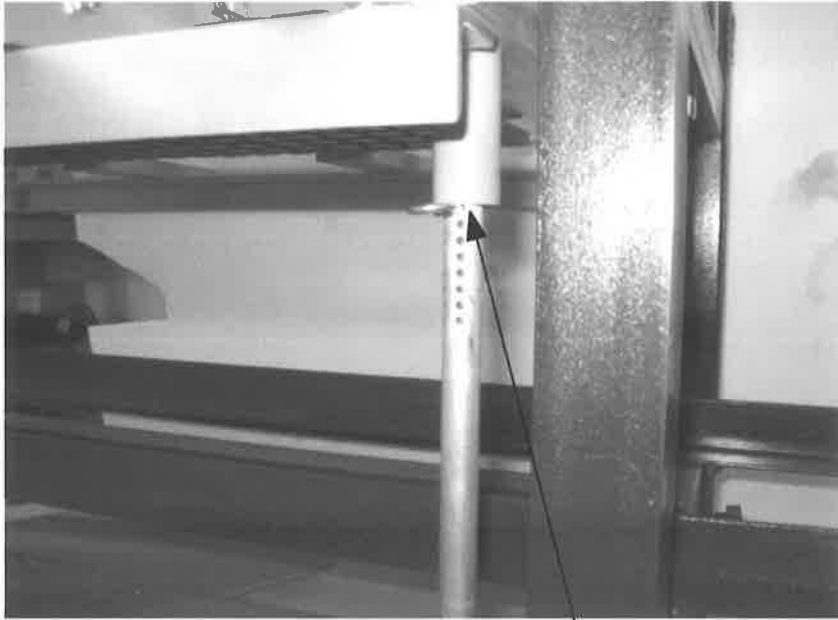


Re-position Pins in Upper Position.

Re-install Handle Stop Bolt

### Pivot Pin Location Instructions

To change from Lower Position to Upper Position, follow directions, in order, from 1 to 5.



Lift Pin Adjustment  
Position 8 shown.  
Must adjust 4 places.

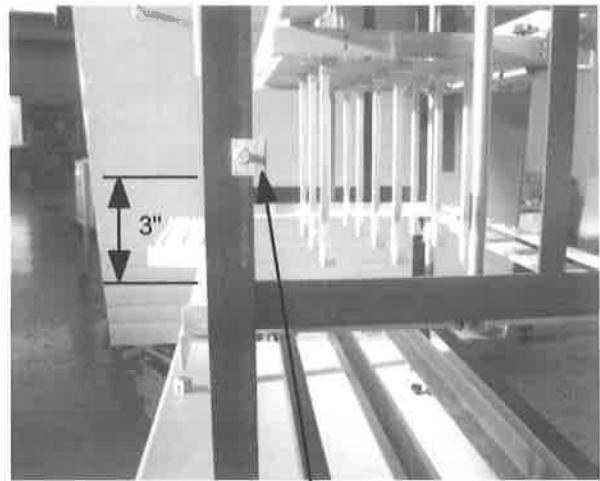


Scale Indicator

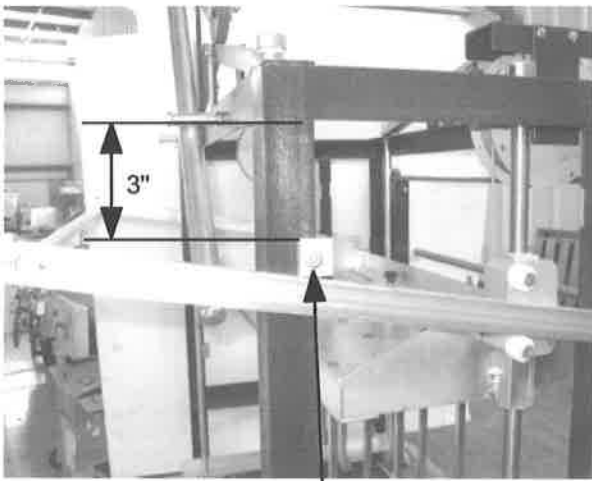
Adjust to desired setting by rotating chain assembly.



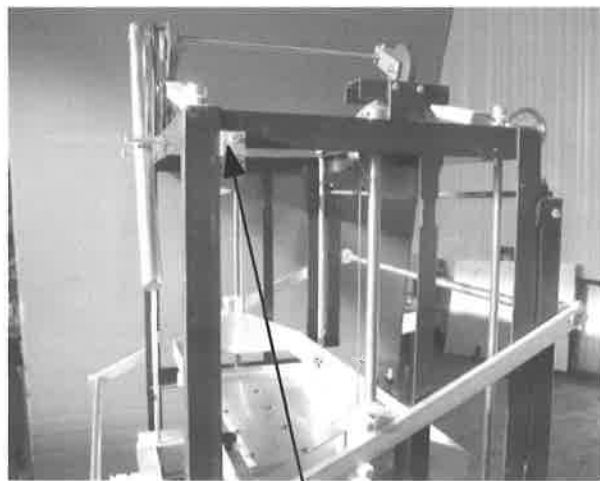
Lower Stop - 0 Position



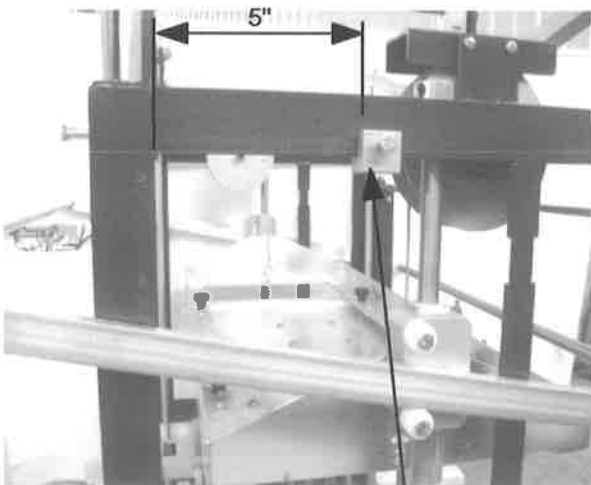
Lower Stop - 3" Up



Upper Stop - 3" Down



Upper Stop - 0 Position



Upper Stop - Highest Position

Upper and Lower Stop Positions



## Puncher II Transplanter Operation



- 1.) Set up Puncher II Transplanter as described on pages 1-7.  
Make sure the rail stop and rails are adjusted for the best possible plug positioning in the flats. Position the plug tray so the "0" pin on the pin plate is over the "0" cell in the plug tray.



- 2.) Lower the plug tray onto the flat by moving the Plug Tray Rack Lift Handle to the RIGTH position. The rack height should be adjusted so the bottom of the plug tray just touched the soil in the flat beneath. It is also important that flats be filled uniformly. This helps anchor plugs during transfer from the plug tray to finished flats



- 3.) Lower the Punch Plate by pulling the Punch Plate Lift Handle to the **DOWN** position. This will push the plugs through the plug tray and into the flat. The depth of the plugs can be adjusted by re-positioning the two lower Stop Blocks or adjusting the chain/scale assembly.



- 4.) While holding the Punch Plate Lift Rod in the **DOWN** position, raise the Plug Tray Rack Lift Frame by rotating the Lift Handle to the **LEFT** position. The pins must hold the plugs in place as the foliage is pulled through the plug tray when the plug tray rack is raised.



5.) Raise the Punch Plate by lifting the Lift Rod to the UP position.



6.) Remove the planted flat. Position a new flat under the plug tray by sliding the flat firmly against the Rail Stop. Re-position the Plug Tray by indexing the notched Rack Handle in the Locator Block. Repeat planting operation.

Note: To insure best possible results with the punching system, it is necessary that flats be uniformly filled. This is something growers are not normally concerned with when hand transplanting. However, it is imperative for proper puncher operation, both so the machine transfers the plant cleanly and so the plant is seated into the soil properly.