

THE BERRY PRODUCTION SEEDER SYSTEM

OPERATING INSTRUCTIONS

The Berry Production Seeder System is a high-speed seeding device with capabilities of over 500 trays per hour. To best utilize these capabilities, the seeder operator has to provide a high volume of trays to the machine as well as provide for the removal of seeded trays from the seeding area. This can best be accomplished by conveyors in conjunction with the Berry Production Tray Loader.

The principle of operation involves a vacuum power source which supplies vacuum to the seeder body (plenum). This vacuum serves to "hold onto" the seeds until they are in the appropriate position over the growing tray. At which time, the direction of air flow is reversed and the seeds are discharged into the growing tray. The seeded growing tray is then conveyed forward and the next growing tray is indexed into position to be seeded.

The following controls should be located and their function understood before attempting to operate the seeder:

1. The ON/OFF switch is located on the second shelf.
2. The seeder plate tapper angle actuator levers are located on the end of the metal box on the back side of the seeder plate near the hinges. They are clear plastic and can be moved to actuate the tapping device at the desired angle so as to help eliminate multiple seeds.
3. The motor on-delay control is located within the cabinet directly under the on/off switch and is accessible by removing the side panel. The motor on-delay control is a white 2" square cube and has an adjustment of from .25 to 5.0 seconds delay before the motor starts after seeding. This feature allows the seed time to fall and come to rest before conveying the growing tray forward. Normally, 0.5 to 1.0 second is adequate for most seeds.
4. The seeder has a stop-bolt which is located below and between the hinges. It can be adjusted so as to control the downward tilting angle of the seeder plate. Too great an angle may result in seeds bouncing out. Too little an angle results in excess time for the seed to roll down the plate.
5. Vacuum hose connections are located at the end of the seeder cabinet and at the corresponding side of the polycarbonate seeder box.
6. The tube and sliding gate valve located at the opposite end from the vacuum connection is the vacuum bypass valve. It is used to set the vacuum level inside the seeder box. A setting of about 1/8-1/3" open works well for pelleted seed.
7. The four mounting bolts are used for height adjustment as well as leveling of the seeder plate. The height adjustment should be made so the growing tray is 1/8" below the wooden cross-braces. **In order for the seeder to function properly, it must be level!** Locate a level area to place the seeder. The seeder plate can best be leveled by tilting the plate up and down completely 10 times, noting the direction of the migration of seed. The

leveling bolts on the end of the seeder frame that correspond to the direction of seed movement should be adjusted so as to raise that end of the seeder. Note: adjustment should be made on both leveling bolts at that end, otherwise, the frame will be twisted and the seeder plate will not make proper contact with the activation switch. The process should be repeated until seed migration is minimal. A small amount of seed migration can be corrected via brushing the seed to the high side of the plate periodically. An alternative way of leveling is to simply shim the legs of the cart.

8. The momentary contact switch on the top side of the seeder activates the control circuitry which deposits the seed and turns on the conveyor. When the seeder is turned over to release the seed, the vacuum valve temporarily reverses air flow and blows air for a designated length of time. This blowing air serves two purposes. First, it helps to deposit the seeds into the cells. The force in which it blows depends on the position of the white plastic valve with the red handle located within the cabinet in conjunction with the vacuum bypass valve setting on the clear polycarbonate seeder body. Second, the blowing air helps prevent airborne soil mix from contaminating the seed. The length of time in which air blows is adjustable via the off-delay module which is similar to the on-delay module, but has more connectors.

9. The seeder is shipped without the photoelectric switch installed. It is the cylindrical device with the wire coming out of it. It should be installed in the slot in the side of the seeder with the lens pointing toward the reflector. The photoswitch can be positioned along the slot and therefore serves to position the growing tray correctly. Once the photoswitch is installed correctly, the photoswitch shield should be installed in order to protect it from harm.

10. Included is a seed recovery jar which is used to empty or change seed from the seeder plate. To operate, first open the vacuum bypass valve and insert the jar nozzle into the tube. With the vacuum on, use the tube to vacuum seed from the seeder plate.

11. Periodically, clean the back edge of the seeder plate of accumulated debris with a "dust-buster" or similar vacuum. Avoid using the seeder vacuum for this purpose as it causes accelerated clogging of the vacuum bag and hence lower vacuum performance. Periodically check, clean, and/or replace vacuum bag as needed.

Please Note: ELECTRICITY CAN KILL; ALWAYS UNPLUG BEFORE CHANGING PLATES OR SERVICING! REFER TO A QUALIFIED INDIVIDUAL FOR SERVICE.

ANY QUESTIONS? CALL: 1 (800) 327-3239, ~~1-800-327-3239~~

BERRY SEEDER COMPANY
1231 SALEM CHURCH ROAD
ELIZABETH CITY, NC 27909