BigFoot Baler BF300

Basic Training Curriculum

Required Training

- **Basic Safety Training** is required before anyone can transport, load or otherwise assist in working with a BigFoot BF300 baler that was purchased by, or is used under the auspices of, the New York State Recycling Agricultural Plastics Project (RAPP).

- **Trainee Liability Release.** After receiving the required training and before beginning to work with the baler, helpers must read, sign, and submit the Trainee Liability Release form provided by the RAPP trainer. This liability release attests that trainees received training and take responsibility for their own safety. Baler managers will keep these forms on file for a minimum of six years.

- **Advanced Training for Baler Operators.** The person operating the baler controls is required to be thoroughly familiar with all information in RAPP’s guidelines for operating a BigFoot BF300 baler. A RAPP trainer will give these individuals a signed, wallet-sized *BigFoot Baler Operator Certification* card. Only persons with an *Operator Certification* card are permitted to operate or direct operation of a BigFoot plastics baler associated with the RAPP program.

Overview of the BigFoot BF300

- The BigFoot BF300 is an integrated unit with a vertical stroke baler, two hydraulic power systems, and a trailer designed for on-road and off-road travel.

- The baler plunger (also called the compaction ram), door latches, and ejection feet are controlled by a hydraulic system located on the trailer bed. A second, smaller hydraulic system (located in the right side of the storage box) controls lifting and lowering of the trailer bed.

- Tools and supplies are in the left side of the storage box. Do not put tools in the right side.

- The baler compacts loose plastic into dense, square, stackable bales about 40” x 40” x 35”.

- Full bales weigh about 1000 lb. (1000 lb. = bale wrap from about 300 individually wrapped bales, three or four silage bags, or several acres of mulch film).

Preparing Plastic for Baling & Recycling

- Shake plastic to remove grit, clumps of soil and plant debris.

- Roll into pillow-sized bundles.

- Store bundles out of mud, off gravel, and under cover to keep as clean and dry as possible.
SETTING UP THE BigFoot BF300 FOR BALING

- Position the trailer on flat, dry ground with at least 10’ clearance behind the baler door.
- It is recommended that the BigFoot remains hitched to the tow vehicle during baling.
- If the trailer is unhitched during baling or at other times, place wheel chocks (blocks) between the wheels on both sides of the trailer to prevent rolling and reduce stress on the trailer jack.

- **Lower the trailer bed:**
  - (i) The trailer moves back as it moves down, so clear the area behind the trailer.
  - (ii) Remove the trailer-bed locking pin.
  - (iii) Push the **down** button on the hand-held control device (located in the storage box).
  - (iv) Lower the trailer bed firmly to the ground.

STEPS IN BALING PLASTIC WITH THE BigFoot BF300

- **Baler operator:**
  - (i) Starts the engine to warm the hydraulic fluid.
  - (ii) Raises the plunger (also called compaction ram) to its maximum height.
  - (iii) Unlatches the door.
  - (iv) Checks that the ejection feet are flush with the base of the baling chamber.

- **Baler operator or a helper** puts a 4’x4’ sheet of plastic (white on the outside) on the bottom of the baling chamber and then manually closes the baler door.

- **Baler operator** latches the door by pushing down on the middle hydraulic control lever.

- **Baler operator or a helper** attaches the door backup safety chain if the baler has been equipped with one.

- **Baler operator** verifies that the door is securely closed and latched.

- **Baler operator** steps away from the controls and gives the signal to load plastic.

- **Helpers** fill the compaction chamber and the space above it with bundles of plastic.

- **When no more plastic can fit,** the baler operator steps back to the controls, calls out a warning to “stand clear”, and then pulls the lever to lower the plunger.

- **Repeat the cycle** of filling the compaction chamber and lowering the plunger five or more times before the bale is full.

  → **Helpers:** Take care not to let loose film dangle near the control box where it can get caught in the levers, activating the plunger or the door-unlocking mechanism.

  → **Helpers:** Take care not to let bundles of plastic fall on the control levers.

  → **Helpers:** Load only the one type of material being baled—anything else is considered a contaminant. For example, cut off string that may have been used to tie the bundles.
• **Square the bale:** Stuff plastic into the corners and along front and back edges of the baling chamber so that the finished bale will be square. If corners and edges are not packed, the bale will tend to become round, making it difficult to stack and transport. Pay particular attention to squaring the bale during the final loading-compression cycle.

**When the Bale is Full**

• **Indicators that the bale is almost full:**
  (i) 2-3” of shiny metal will be visible on the piston rods after the compaction ram is lowered as far as it will go.
  (ii) 2500 psi of pressure will be needed to compress the load.

• **Baler operator or a helper** lays a sheet of plastic (white on the outside) as the top layer of the bale before the plunger is lowered for the final compression.

• **Plunger stays down** and the engine is kept running until the door is opened.
  ➔ ** Helpers:** Stay well clear of the door, which can swing open quickly under pressure.

  ➔ **J-bar.** If the door sticks and won’t open when the latches are unlocked, use a J-bar (wrecking bar) to pry the door open. Stand to the side of the baler to be clear of the door and avoid possible injury when the door swings free. No one other than the person working with the J-bar should be in the vicinity of the door.

• **Tying bale wires:** Engine is off. Only two people should be standing near the baler and involved with wire-tying. Use eye protection and gloves. Communicate and stay alert. Listen to the baler operator’s step-by-step directions on how to tie off the bale. For written instructions, see step #18 in the checklist *BigFoot Baler BF30 –Summary of Operating Steps.*

• **Eject the bale:** Place two pallets or a sheet of plastic behind the baler door to keep the ejected bale clean. Bales may roll.
  ➔ ** Helpers:** Stay at least 10’ away from the door until the bale is ejected.

• **Baler operator turns engine on** to raise ejection feet and kick out the bale. Once the bale is ejected, the operator lowers the ejection feet into the base of the compaction chamber.

**Finishing Up:**

• **Move the bale** out of the way with a forklift or the bucket of a skid steer.

• **Store bale** out of mud and gravel, on pallet or under cover.

• **Label bale:** Name of farm or producer. City. State. Contents of bale. Date. Weight, if known.

• **Cleanup:**
  (i) Put tools back in the toolbox and lock the storage box.
  (ii) Brush or hose out the compaction chamber to remove organic debris, soil and loose bits of plastic. Pay particular attention to clearing the wire guide channels.
  (iii) Wash down the baler to remove corrosive materials such as road salt and silage juice.
TRANSPORTING THE BIGFOOT

• **Tow vehicle:** A three-quarter ton or larger truck equipped with a tow package adequate for loads of at least 7,000 lb is needed. The tow package must have a standard seven-pin electrical plug to power the trailer lights, turn signals, and brakes. The tow vehicle must have a hitch with a 2-5/16” ball. The hitch should have a raised ball or a 1” rise so that the BigFoot trailer rides level.

• **Preparing the BigFoot for travel**
  The baler operator will:
  (i) Turn on the engine.
  (ii) Use the hydraulic control levers to latch the door and lower the plunger.
  (iii) Use the hand-held control devise to raise the trailer bed.

  The baler operator or helpers will check that:
  (i) Hitch connections are secure.
  (ii) Tires have adequate pressure.
  (ii) All trailer lights are working: emergency flashers, signal lights, brake lights, running lights.

• **Driving the tow vehicle:** Make big loops when turning, both because tight turns wear on the tandem trailer wheels and also because the short trailer turns quickly when backing up and can jackknife on a tight turn.

• **Transport finished bales** in the bed of the tow vehicle or on a tow trailer, not in the compaction chamber or elsewhere on the BigFoot. The BigFoot is not designed to carry more than a few hundred pounds of plastic.

SAFETY PROTOCOLS

• **Emergency off button.** Red button located on the control box. Pushing the button will immediately shut down all operations in case of emergency.

• **Fire extinguisher.** Mounted in the toolbox.

• **Hydraulic fluid pressure.** Monitor the pressure gauge on the control box. Hydraulic fluid pressure must not be allowed to exceed 2500psi.

• **When the baler operator is at the controls** it is a signal that something is about to move (plunger, door, bale).

  → **Helpers:** Stop loading and stand back at least 10’.

  → A baler operator with appropriate training and experience, and who has received a *BigFoot Baler Operator Certification* card is the only person permitted to be at the controls.

• **Use personal protection equipment** as needed: ear plugs, eye protection, dust mask, waterproof apron.

• **If the baler is used indoors,** be sure the space is well ventilated.