

# Soil Mix Line Calibration with Cubic Foot Blending Box



Along with regularly testing all incoming raw materials as well as your final blends, it is critical to run routine calibrations on your mixing equipment. The Cubic Foot Blending Box was created to offer growers and blenders a reliable and proven tool to calibrate their substrate mixing equipment. The methods highlighted in this guide are the best practices and techniques used by our HydraFiber<sup>®</sup> team to assure that HydraFiber and all other raw substrate components are calculated and dosed into blends at the right amount.

## CALIBRATION MATERIALS LIST

### REQUIRED ITEMS:

- > Cubic Foot Blending Box
- > Rigid straight edge or metal ruler, approximately 18 in. long
- > Shovel and broom
- > 1-yard box or other collection vessel
- > Clean work area, preferably on concrete

### OPTIONAL ITEMS:

- > ½-in. wire screen (only for critical applications)
- > Scale (if measuring bulk density)

## OBTAIN A BASELINE MEASUREMENT

*IMPORTANT: The HydraFiber and other raw substrate materials being measured must always be in a fluffed state.*

- 1A)** Use soil system controls to make a call of 1 cubic yard of all substrate materials and components.
- > A smaller amount can be run if your system is set to a lower frequency.

- 1B)** Collect bulk mix into a 1-yard box or other collection vessel.

- > If you are running material into a 1-yard box, it is likely that you will see space at the top of the box.



- 1C) After collection, empty the contents onto the ground or floor. Follow the Blending Box guidelines below.



## USING THE CUBIC FOOT BLENDING BOX

- 2A) Place the Blending Box near the collected pile, with enough available work space for filling and measuring.
- 2B) Using a shovel, scoop material being measured and gently place it into the Blending Box. Be careful not to hit the box with shovel to cause artificial settling.



- 2C) Fill Blending Box until substrate is approximately 1 to 2 in. above the top of the box.
- 2D) Once the Blending Box is filled, use your hand to gently move substrate into any pockets at the top of the box. *Do not compress raw materials being measured as this creates artificial compaction which will give incorrect results.*

- 2E) Use the straight edge to level the surface with the top of box. To do this, start at the center and gently sweep the first half off the box, then return to the center and sweep to the other direction. *Never add more substrate after leveling or moving the box.*
- 2F) If needed, the Blending Box can be moved, being careful to not spill the contents. The contents will settle when moving, which is acceptable.



- 2G) When measuring large quantities, lay out measured substrate so you can accurately track how many boxes were measured.



**IMPORTANT:** Yield results will determine the next step.

- > If yield is 27 cubic feet +/- 1 cubic foot, you are ready to determine each raw material input percentage. A separate [Calculating the Amount of HydraFiber Ultra in the Mix tech sheet](#) is available to guide you through this process. Visit [www.HydraFiber.com](http://www.HydraFiber.com) or contact your HydraFiber Technical Account Manager to obtain a copy.
- > If yield is greater than 28 cubic feet or less than 26 cubic feet, the mix line **MUST** be recalibrated. Your equipment supplier and your HydraFiber Technical Account Manager can provide assistance if needed.

## MEASURING AMOUNT OF PEAT IN THE MIX

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- 3A) Turn off the HydraFiber infeed or adjust the HydraFiber percentage to zero (0).
- 3B) Use soil system controls to make a call of 1 cubic yard.
  - > A smaller amount can be run if the system is set to a lower frequency.
- 3C) Collect peat into a 1-yard box or other collection vessel.
- 3D) After collection, empty the contents on the ground or floor. Follow steps 2A through 2G in the Blending Box guidelines above.
- 3E) Using a 60-yard per hour system and a 1-cubic yard call, with a target of 60% peat: 40% HydraFiber, the yield should be 16.2 cubic feet of peat only.
  - > If peat adjustment is needed, this can be done by either adjusting the peat outfeed gate or adjusting the speed of the peat bin belt. Contact your equipment supplier or HydraFiber Technical Account Manager for additional details or assistance.

## CUBIC FOOT BLENDING BOX CARE

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- > *Do not stand or sit on the Blending Box, and handle with care when not in use.* The Box dimensions are critical to help properly calibrate equipment; dents and dings alter the shape and affect calibration. We recommend that you periodically measure the internal dimensions of the Box to ensure measurement of 12 in. x 12 in. x 12 in.
- > If the Blending Box becomes damaged or you need additional boxes, any wood, plastic or metal box can be used as long as the internal dimensions measure 12 in. x 12 in. x 12 in.
- > Additional Cubic Foot Blending Boxes are available directly from AgriNomix at 440-774-2981, or contact your HydraFiber Technical Account Manager.

## QUESTIONS?

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Your HydraFiber Account Manager can provide detailed steps for calibrating your soil system from AgriNomix and other suppliers. We're here for you!

Contact a HydraFiber expert today at 800-508-8681 or [hydrfiber@profileproducts.com](mailto:hydrfiber@profileproducts.com).



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