

'Tuning' Your D-Cup Diffusers

How to send 20-50% of the delivery air down through the seed boot while still diffusing the rest to atmosphere



Why would you 'tune' the D-Cup Diffusers?

The D-Cup Diffuser is designed specifically to remove 100% of the air from the seeding line above the point of seeding. This gives the seed and fertilizer a pure gravity drop into the seeding trench - minimizing seed bounce and scatter while maximizing placement accuracy, depth consistency, and evenness of crop germination.

While the 100% diffusion is very effective for most seeding systems, the situation may arise where there is a need to send a small portion of the available air down through the seed boot - whilst still diffusing the majority of the delivery air to atmosphere. (Still allowing you the benefit of running your air seeder fan at higher speeds.) Situations where it may be advantageous to send a small amount of air through the seed boot include:

- Highly curved drop tube or seed boot design where the seed is required to change direction radically away from a vertical trajectory while on its path into the final seed trench. A small amount of air can help prevent the seed from 'stalling' at this point.
- The use of anhydrous ammonia on the same shank as the seed boot can sometimes cause a build-up of mud and moisture at the exit of the seed boot causes blockages. The presence of a small amount of air at this point can help to keep things drier and prevent seeds from stalling or blocking the boot as a result of the moisture.

How do you 'tune' the D-Cup Diffusers?

The process of 'tuning' the D-Cup Diffusers is very simple and effective. It basically involves the insertion of a piece of standard air-seeder type hose into the top of the diffuser lid. By varying the length of the hose inserted, we can vary the amount of air diffused to atmosphere, and thus the amount of air sent down through the seed boot.

- (A) Source any standard flexible air-seeder style of hose that has an outside diameter of 1.5" (38mm), and an inside diameter of 1.25" (32mm). Hint: this is the same hose used when mounting the D-Cup Diffusers. Cut the hose to a length of between 2" (25mm) and 5" (125mm). Note that the longer this insert hose is, the more air will be sent down through the seed boot.
- (B) Push the hoses into the lids until they are firmly held in place by the tapered inner profile of the lid's vortex tube. The insert hose can protrude above the top of the lid for longer hose lengths, but make sure that the bottom of the insert hose doesn't extend past the base of the lid vortex tube into the diffuser.
- (C) Test the diffuser's newly 'tuned' air flow properties, and adjust the length of the insert hose as required.