Chemical Savings - Part 2 - Nozzle Care

In part one we explained how to check for worn nozzles in order to spray more precisely saving 10% or more by not over applying spray materials. Well this time we are going to cover how to care for your nozzles and the effects that pressure variances have on spraying.

Cleaning out a clogged nozzle.

Never use a paper clip, torch tip cleaner or any other hard instrument to clear an obstruction out of a nozzle. We suggest removing the clogged nozzle and hold it up to the light. If you do not see any foreign matter obstructing to orifice it might just be the strainer behind the nozzle is covered with debris. If the nozzle is clogged use a tip cleaning brush, (toothbrush), with stiff plastic bristles to clear the blockage.

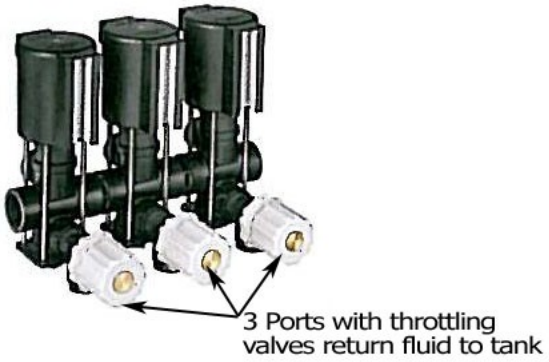
TeeJet® #CP20016-NY Tip Cleaning Brush

Pressure Variances.

Just because the gauge at you pump or manifold reads 40 psi doesn't mean you're getting 40 psi at the spray tip. I have seen rigs that have 30' to 40' of hose between the gauge and the nozzles. As fluid passes through hoses it loses pressure due to friction. The smaller the hose the greater the loss. 1 gpm through a 3/8" I.D. Hose losses 0.7 psi every 10'. That doesn't sound so bad, but factor in a variety of pipe fittings or barbed adapters and you may be losing enough pressure that you are under applying chemical. If drastic enough you might even be sacrificing spray patterns. There are a couple ways to make sure you have adequate pressure at the tip. Set up a testing gauge made up of a tee, gauge and thread to nozzle adapters. The testing gauge can be kept with the rest of your calibration gear*. You can also install a nozzle in-line between two nozzles on your boom section(s). You will want to install the gauge between the fluid entry point and last nozzle in the section.

Boom mount in-line gauge

Do your practices or terrain force you to switch on or off sections of booms frequently during a spray session? Depending on how your system is plumbed this can cause pressure to elevate substantially resulting in applying more product than is needed. To resolve this issue a valve will need be installed to return the same amount of fluid back to the tank that is is being used when the boom section is on. This requires a couple calculations, some fine tuning, extra hose and an extra valve or two but can be well worth the effort.



*Suggested contents of your calibration kit.

- Calibration Jug (Measuring cup with per oz. Increments)
- Calculator
- Stopwatch
- In-line guage or "testing gauge"
- Tip cleaning brush
- Nozzle Data Specific to your nozzles
- Calibration Formulas

PBM can supply you with formulas, nozzle data at no charge. We stock all the other components except the calculator and stopwatch.

If you have any questions, concerns or would like to share something that you have found helpful in you spraying practices e-mail to: pbm@pbmsprayers.com.

Spray tips offered by PBM are from our experiences, some are input we have received from our customers and other spray equipment operators who wish to share successes they have had. We hope these tips help you, but cannot accept liability for any damage to property or individuals should you choose to use them in your spraying practices.