



# FIVE TIPS FOR A SUCCESSFUL TANK MIX

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The term “tank mixing” in the greenhouse generally refers to mixing multiple chemicals together in one tank. Those of us who have been around a year or two refer to it as “bucket chemistry.” Whichever term you prefer to use, there are some advantages and disadvantages to using multiple products together. Some advantages include:

- **Labor savings.** Tank mixing gives the growers the ability to make one application that would normally be done multiple times during the week. This not only saves them the actual application time, but also reduces the downtime from the re-entry intervals of the chemicals.
- **Synergy.** Chemistries sometimes provide better results when applied together rather than alone.
- **Timing.** A grower is able to target multiple pests in a single application versus multiple treatments spread across time.

While there are very good reasons to have the tank mix option available, there are potentially negative aspects to tank mixing to consider:

- **Increased phytotoxicity.** Some product labels clearly indicate that they should not be mixed with other chemicals. Individually they are safe and effective, but when combined with another product there can be an increased chance for plant damage.
- **Antagonistic effects.** Products can work against each other, reducing efficacy as compared to when applied separately
- **Plant safety.** Products combined together can develop incompatibility problems, affecting the plant safety, even though they are safe on the plant when applied individually.
- **Wrong timing.** Generally, growers apply chemicals on a predetermined day, commonly referred to as “the spray day.” Spray treatments work differently for different stages of development in both insects and disease, therefore it is advisable to spray according to conditions and pressure (unless on a preventative program).

While there are cons to tank mixing, there are times when growers find it necessary to have a tank mix option available. If you choose to tank mix, here are five tips to consider:

## EXPERT TIPS

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### ➔ TIP #1 Read the label



There may be restrictions or suggestions on mixing multiple products.

### ➔ TIP #4 Run a phytotoxicity test



Spray small groups of different plant species and determine if the specific tank mix is safe for larger scale applications.

### ➔ TIP #2 Do a physical compatibility "jar test"



This is a simple way to identify immediate chemical compatibility.

### ➔ TIP #5 Monitor



Regular scouting will help identify product combinations that have positive and negative efficacy on your crops.

### ➔ TIP #3 Research



Start to identify industry reports and scholarly articles that have been published about mixing products. In addition, some chemical companies have published compatibility charts to help growers identify potential tank mix combinations and what to avoid.



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Always read and follow the entire label direction before use. Use strictly in accordance with precautionary statements and direction.

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