

# SOLUTIONS FOR HEALTHY PLANTS AND HEALTHY ENVIRONMENTS

## 5 TIPS FOR SUCCESSFUL TANK MIXING



### ASK THE EXPERT!

Vincent Livengood  
Technical Services Manager

The term “tank mixing”, in commercial horticultural operations, 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.** A tank mix 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 a tank mix option available, there are potentially negative aspects to a 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).

Turn the page to  
read the 5 tips.



KEMIN | Crop Technologies Division  
1900 Scott Avenue, Des Moines, IA 50317 - United States  
Tel: +1 515.559.5100 | Toll-free: 800.777.8307  
[www.kemin.com/tankmix](http://www.kemin.com/tankmix)





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# 5 STEPS FOR SUCCESSFUL TANK MIXING

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:



## 1) READ THE LABEL

There may be restrictions or suggestions on mixing multiple products.



## 2) DO A COMPATIBILITY "JAR TEST"

This is a simple way to identify immediate chemical compatibility.



## 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.



## 4) RUN PHYTOTOXICITY TRIALS

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



## 5) MONITOR

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

Contact us for more information | Vince Livengood: 515-537-4812 | [croptech@kemin.com](mailto:croptech@kemin.com)

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