

JAR TESTING & TANK MIXING PROCEDURES

Tank mixtures allow applicators to save time and resources while applying a multitude of turfgrass products at once. While it is tempting to assume that all products are compatible once mixed in the same container, the fact is that each product is uniquely formulated to promote the safety, efficacy and applicability of the active ingredient.

Jar tests are important for two reasons:

1. Identifying the correct mixing order
2. Ensuring the products being mixed are compatible

Jar Test Procedure:

Using a quart jar, add the proportionate amounts of products to approximately one quart of water with agitation using the WALES sequence for adding ingredients to the jar. It is preferred that water from the intended source be used to mimic conditions where the application will occur.

An easy way to remember the fill sequence is to use **WALES**:

- W:** Wettable powders, water dispersible granules
- A:** Agitate until uniformly dispersed
- L:** Liquid flowables (e.g. SC formulations)
- E:** Emulsifiable concentrates
- S:** Soluble liquid products



After thorough mixing, allow this mixture to stand for 5 minutes. If possible, allow the mixture to sit overnight and evaluate the following day. If the combination remains mixed or can be readily remixed, it is physically compatible.

Example Jar Calculations:

- 2 gallon per 1,000 sq ft = 80 mL total jar volume
- 4 gallons per 1,000 sq ft = 160 mL total jar volume

For liquid products: Take the amount in fl. oz. and multiply by 0.313 to get the number of ml to add to the jar.

Example: Talstar® P Professional Insecticide @ 0.25 fl oz/1000 sq ft = 0.078 mL

For dry products: Take the amount in oz. and multiply by 0.30 to get the amount of gram to add to the jar.

Example: Blindside® Herbicide @ 0.15 oz/1000 sq ft = 0.045 gram

It is recommended to make a small test application before large-scale treatment. This is especially important when working with formulations for the first time. Wait a few days and evaluate the turf for any symptoms of phytotoxicity, antagonism or poor efficacy of the mixture.

STEP	Tank Mix Order Directions
1	Fill spray tank or mix tank ½ full and begin agitation.
2	Add water conditioners, water compatibility agents and/or foam or drift control agent. These products should be added first to control foam or improve water quality for best pesticide results.
3	Add dry water-soluble products and allow to completely dissolve.
4	Add water dispersible granules or dry flowable products. Allow to completely disperse. Continue agitation to ensure proper mixing.
5	Add suspension concentrates (SC) and liquid flowable (LF) products.
6	Add emulsifiable concentrate (EC) products.
7	Add soluble pesticides.
8	Fill spray tank or mix tank to nearly full and maintain agitation.
9	Add fertilizers.
10	Add adjuvants. Add oil based adjuvants last.
11	Complete carrier volume. Add remaining water or liquid fertilizer.

FMC Product Formulation Types

	Insecticide		Fungicide			Herbicide		
WDG/DF	Aria® Insecticide					Blindside® Herbicide	Solitare® Herbicide	
SC/LF	Talstar® P	Talstar® Select	Rayora™ Fungicide	Fame® +C Fungicide	Fame® +T Fungicide	Dismiss® Herbicide	Dismiss® CA	Dismiss® South
			Fame® SC Fungicide	Regime™		Echelon®	Xonerate® 2SC	
SE	Triple Crown® Golf	Triple Crown® T&O				Dismiss® NXT		
EC	Astro® Insecticide	Scion™						
EW						Quicksilver® Herbicide		
SL								Soliatre® WSL

- This information serves only as a guideline and not a rule. Products listed are only examples of formulation types and do not necessarily represent compatibility with others.
- Do not tank mix with any product that contains a restriction on tank mixing.
- If any remaining pesticide cannot be used properly, safely dispose of pesticides to protect people, pets, and the environment. Follow all disposal instructions on the pesticide label. State and local pesticide disposal laws may differ than the federal requirements on the label. Check with your state or local agencies before disposing of extra pesticides.