



Compatibility Quick Reference for Common Orchard Fungicides

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INTRODUCTION

It is common practice to tank mix two or more products for a single application when spraying tree fruit with fungicides. This saves time and reduces input costs. However, compatibility of tank-mix partners is critical for effective disease management. Factors such as water pH and product formulation must be considered. Physical incompatibility results in products clumping in the tank or products failing to remain suspended. Chemical incompatibility, on the other hand, can lead to phytotoxicity or reduced efficacy of products. This quick reference table provides some common incompatibility issues with fungicides and tank-mix partners. However, because the information in this table could be incomplete, it is important to refer to product labels for further details.

ADDITIONAL RESOURCES

- Planning a Pesticide Application, Kentucky Pesticide Safety Education Program
<https://www.uky.edu/Ag/Entomology/PSEP/9planning.html#:~:text=Pesticides%20are%20compatible%20when%20they,incompatible%20products%20are%20mixed%20together>
- Pesticide Formulations, Kentucky Pesticide Safety Education Program
<https://www.uky.edu/Ag/Entomology/PSEP/3formulations.html>
- Pesticide Calculations for Small Acreages (EntFact-800)
<https://entomology.ca.uky.edu/files/ef800.pdf>



SPRAYING AN APPLE ORCHARD WITH AN AIR-BLAST SPRAYER.
(PHOTO: JOHN HARTMAN, UK)

Trade Name	Common Name (active ingredient)	FRAC	Comments
Cabrio	pyraclostrobin	11	- Compatible with most additives or adjuvants.
Captan	captan	M	- Do not mix with oil or within 14 days of an oil application. - May be phytotoxic when mixed with emulsifiable concentrate (EC) formulations (Aprovia, Fontelis, and several insecticides). - Do not mix with strongly alkaline materials (reduces fungicidal activity) such as Bordeaux mixture or lime. - Phytotoxic to apple when mixed with sulfur. - Captan's stability is dependent on water pH: pH5=32 hrs; pH 7=8hrs; pH8=10 mins.
Copper	copper	M	- Not compatible with Topsin M. - Do not apply under cool, slow-drying conditions. - Do not tank-mix with phosphorus acids. - Tank-mixing with mancozeb may cause phytotoxicity.
Dithane/Manzate	mancozeb	M	- Compatible with most insecticides, fungicides, or growth regulators. - Mancozeb's stability is dependent on water pH: pH5=20 days; pH7=17 hrs; pH9=34 hrs.
Flint	trifloxystrobin	11	- Compatible with most insecticides, fungicides, and foliar nutrients.
Fontelis	penthiopyrad	7	- Compatible with surfactants & oil.
Inspire Super	difenoconazole + cyprodinil	3 & 9	- Do not tank-mix with surfactants or foliar fertilizers.
Pristine	pyraclostrobin + boscalid	7 & 11	- Compatible with oil (except on pear). - Do not use Pristine + oil on pear. - Do not use surfactants when applying by air.
Rally	myclobutanil	3	- Compatible with oil. - Stable at a wide range of pH.
Revus Top	mandipropamid + difenoconazole	3 & 40	- Do not tank-mix with surfactants or foliar fertilizers.
Scala	pyrimethanil	9	- Not compatible with captan.
Sovran	kresoxim-methyl	11	- Can be tank-mixed with most recommended insecticides, fungicides, plant growth regulators, adjuvants, or additives.
Sulfur	sulfur	M	- Do not mix with oil or use within 2 weeks of each other. - Do not mix with Bt. - Phytotoxic to apple when mixed with captan. - Do not apply to sensitive crop cultivars. - Do not use at temperatures above 80°F.
Syllit	dodine	M	- Do not mix with Bordeaux or lime.
Topguard	flutriafol	3	- Compatible with surfactants.
Topsin M	thiophanate-methyl	1	- Do not tank mix with highly alkaline materials such as Bordeaux or lime sulfur. - Do not tank mix with copper.
Vanguard	cyprodinil	9	- Compatible with most tank additives. - Adjust pH to 5.0 – 7.0 when tank-mixed with Rovral (stone fruit, small fruit).
Ziram	ziram	M	- Compatible with most commonly used adjuvants.

NOTE: THE ABOVE COMMENTS AND COMPATIBILITIES ARE PER LABEL RECOMMENDATIONS, THUS TERMINOLOGY AND LANGUAGE MAY VARY FROM ONE PRODUCT TO ANOTHER.

May 2024