Roundup PowerMAX® 3 Herbicide Tank Mix Recommendations

Roundup PowerMAX® 3 Herbicide has a higher concentration of glyphosate per gallon with a proprietary surfactant blend. The potassium salt-based formulation (K-salt) contains 4.8 lbs. acid equivalent (AE) or 5.88 lbs. active ingredient (AI) of glyphosate per gallon. The higher concentration of glyphosate, compared to other glyphosate-based herbicides with lower AE per gallon and higher use rates in equivalent package sizes, allows growers to spray more acres with less product. The formulation also includes Bayer's proprietary CROPSHIELD® technology providing high levels of crop safety on glyphosate-tolerant crops. Following proper tank mix recommendations helps to insure successful application and performance of the herbicide.

Tank-Filling Process When Mixing Products

Successful herbicide applications start with reading the respective labels for herbicides and any additives and following the prescribed recommendations. Following the proper mixing order for multiple products can help prevent incompatibility which can result in the spray mix becoming solidified, having reduced efficacy, or having an increased potential for drift. Small proportional quantities of the tank-mix products should be tested for compatibility in an acceptable container (jar test) before beginning to fill the spray tank.
Prepare tank mixtures of Roundup PowerMAX 3 Herbicide as follows:

1. Place a 20- to 35- mesh screen or wetting basket over the filling port of the tank and add all liquid components, including water, through the screen.
2. Fill the tank ½ full of water and start gentle agitation. AGITATION SHOULD BE ONGOING DURING MIXING AND THROUGH TO THE END OF APPLICATION.
3. If ammonium sulfate (AMS) is to be used, add it slowly through the screen. If dry AMS is used, it should be completely dissolved in the tank before adding other components.
4. If a wettable powder is used, prepare a slurry of it with water and add it SLOWLY through the screen.
5. If a flowable formulation is used, add slowly through screen into the tank. Mixing and compatibility may be improved when the flowable is premixed one part flowable with one part water and add slowly to the tank in diluted form.
6. If an emulsifiable concentrate formulation is used, premix one-part emulsifiable concentrate with two-parts water and add the diluted mixture SLOWLY through the screen.
7. If a drift reduction additive is needed, add it SLOWLY through the screen.
8. Continue filling the tank with water and add any water-soluble liquids or the required amount of Roundup PowerMAX 3 Herbicide near the end of the filling process.
9. 2,4-D products can be added after Roundup PowerMAX 3 Herbicide is fully mixed.
10. If a nonionic surfactant is used, add it to the tank before completing the filling process.

Roundup PowerMAX® 3 Herbicide Tank Mix Recommendations

- DO NOT MIX CONCENTRATES. ALWAYS ADD EACH PRODUCT SEPARATELY AND ALLOW ENOUGH TIME FOR COMPLETE MIXING BEFORE AN ADDITIONAL PRODUCT IS ADDED TO THE TANK.
- Mix only the quantity of spray solution that will be applied that day. Application of tank-mix solutions that are allowed to stand overnight could result in reduced weed control. Maintain gentle agitation at all times until the contents of the tank are completely sprayed out. If the spray mix is allowed to settle, agitate thoroughly to re-suspend the mixture before resuming application. Keep by-pass and return lines on or near the bottom of the tank to minimize foaming.
- It is not recommended to use spray volumes of less than 10 gallons/acre. More water in the spray tank improves compatibility.
- Use at least 1% AMS, 28% UAN or a compatibility agent that contains phosphate ester to improve compatibility of atrazine, products containing atrazine, Direx® 4L Herbicide, Caparol® 4L Herbicide, and Cotoran® 4L Herbicide. These additives will assist in minimizing the amount and size of flocculants and reduce the potential of clogged nozzles. Add a defoamer to reduce the amount of foam build up if atrazine settles out. If atrazine is not adequately dissolved, the precipitate can be caught up in the foam and create a stable foam layer. Adding a defoamer after the foam has developed will not minimize the foam that has built up in the tank.
- Do not pour Roundup PowerMAX® 3 Herbicide into the spray tank at the same time as Enlist One® herbicide with COLEX-D® technology, and do not allow concentrated glyphosate and 2,4-D to come into contact with each other. It is recommended to add each product individually to water with enough time to complete mixing before an additional product is added to the tank. Salting out can occur if products are added at the same time without ample water and agitation. The recommended water carrier volume is 10 to 15 GPA.
- Roundup PowerMAX 3 Herbicide can be tank-mixed with XtendiMax® herbicide with VaporGrip® technology, a restricted use herbicide, with an approved drift reduction adjuvant. Other additives such as ammonium salts, including AMS and UAN, are prohibited from the tank mix because of significant increase in dicamba volatility potential.
- When using cone mixers, it is a good practice to run water through the cone between products.

Tank-mixing pesticides can help reduce the cost of application and widen the range of treatments in a single application. However, mixing must be approached carefully so that there are no antagonisms interfering with the efficacy of various components, synergisms which cause crop damage, or chemical reactions creating un-sprayable sludge. Always read and follow label recommendations.