

CPDA Tech Sheet

Optimizing Glyphosate Performance in 2022 or every year for that matter!

In 2022, there is a significant probability of having supply shortages of one of the most important crop protection products in U.S. agriculture. The cost of glyphosate has already risen considerably from what it has been in past years!

Therefore, optimizing every ounce of glyphosate we have is in everyone's best interest.

Examples of some labeled use rates for 5.5 lbs. of glyphosate are as low as 9 oz. per acre when used with a broadleaf herbicide, or 12 oz. per acre when used alone for some weed species. The high-end rate is 36 oz. per acre for annual weeds. The new Roundup PowerMAX 3 use rate is 10 oz. to 30 oz. per acre for annual weeds. How many of you are using those rates? Please check individual labels for use rates!

The following are research proven methodologies on how to make glyphosate work better and get back to those labeled use rates!

1. Use 10 gallons per acre "GPA" or less spray volume when other tank mix partners do not require more (Research at NDSU was conclusive that 10 GPA or less gave better weed control; the idea is to get more glyphosate in each spray droplet and reduce the amount of antagonistic ions in the spray tank). Many glyphosate labels have lower use rates labeled when you are applying in 3-10 GPA of water.
2. Get the right droplet size, a 350 to 400 um VMD (Coarse spray) would be best!
3. Utilizing a drift and deposition agent not only minimizes the potential for fines, but it also increases canopy penetration. Even with drift reduction spray tips, DRT adjuvants deliver more herbicide to the weeds. Utilize the right spray tip and DRT adjuvant to get to the correct droplet size (*talk to your retail agronomist*).
4. Use the correct amount of Ammonium Sulfate "AMS". Glyphosate recommends 8.5 to 17 pounds of AMS per 100 gallons of spray solution. Test the spray water to find out how hard it is as this will help indicate how much AMS is needed.
5. Use additional Non-Ionic surfactant "NIS"! Most labels recommend an additional 1 to 2 quarts of NIS per 100 gallons of spray solution. Hot, dry, and sunny conditions require more surfactant in the tank!
6. Look closely at the NIS + AMS combination products many are not what they claim. Know what you are buying!
7. Set your sprayer up correctly! Correct boom height is usually under 20 inches for a 110-degree spray tip or go to an 80-degree tip if you need to raise the boom on a 20-inch spacing.
8. Slow down! A sprayer traveling at 10 MPH is far more effective than at 15 MPH or more. Slowing down reduces shear at the nozzle which causes addition fines and reduces boom bounce that allows you to have a lower boom height.
9. Spray when weeds are small. It is not always possible but weeds under 6 inches are easier to kill.
10. Use a CPDA approved adjuvant!

Summary: 12 to 24 ounces of glyphosate will kill most non-resistant annual weeds when applied with additional non-ionic surfactant, AMS, a drift and deposition agent, and applied correctly!

Stretch your Round Up/glyphosate by using proven products!