Maximizing the Efficacy of Glyphosate

by Jim Johnson / jpjohnson@noble.org

Many producers think glyphosate is no longer working for them. In some areas of the U.S., we are seeing glyphosate-resistant weeds. One strategy to prevent herbicide-resistant weeds from developing is to get a good kill with all herbicides that are used. Following are several actions you can take to get the most out of your glyphosate application.

First, and most importantly, carefully and thoroughly read the herbicide label. Among many other important things, the label will state what, if any, additives are needed, the amount of water to use and how big the weeds should be at the time of application.

Add the appropriate additives as directed by the label. These may include spreaders, stickers, drift reducers, wetting agents, water conditioners, liquid fertilizer, etc. If an additive is recommended on the label, it is there to make the herbicide more effective. Also don’t use dish soap instead of high quality surfactant. One additive that is highly recommended is 17 pounds of spray grade ammonium sulfate (AMS) per 100 gallons of spray volume. AMS is frequently overlooked as a way to make glyphosate applications more effective.

Use the appropriate amount of water or other carrier as recommended by the label. For any given rate per acre of herbicide, when the rate of water per acre goes up, the concentration or final dilution goes down. This means the mixture of glyphosate is weaker as a percent of the solution.

Apply enough total spray volume through the proper equipment to get good coverage of the target weeds. An application rate of 15 gallons of solution per acre is only 1.3 milliliters or .25 teaspoon per square foot. This illustrates how important it is to have well equipped and calibrated application equipment to get thorough spray coverage.

Remember, almost all weeds are easier to kill when they are small and actively growing. If the label states the maximum height for controlling weed “abc” at rate “xyz” is 6 inches, then control will be reduced or nonexistent for larger weeds or lower rates. Also, if it is too cold, too hot or...
to dry, and the plants are not growing well, control will be reduced. Another problem when it is very dry is the potential for a heavy layer of dust on the leaves. This prevents the herbicide from being taken in by the weed.

Mixing the glyphosate with another herbicide with another mode of action can also be very helpful. One example is to add 2,4-D to glyphosate applications according to label directions.

Don’t overlook the importance of using clean water for the spray solution with glyphosate. Glyphosate binds to soil particles, so if muddy pond water is used, the herbicide effectiveness will be reduced.

Finally, use a trustworthy formulation of glyphosate. There are many quality name brand and generic products. However, the buyer assumes some risk when using a “cheap” formulation from an unproven supplier. Whether you choose name brand or generic, be sure to purchase a quality product.

These tips can also make many other pesticides more effective. By following them, you will be happier with your weed control program now and in the years ahead.