



A Note on Glyphosate and Other Forest Herbicides.

Glyphosate is the active ingredient in Roundup™ and many other branded herbicides used to control unwanted vegetation. Many forest owners are well-acquainted with glyphosate and know how to use it in compliance with state and federal labeling laws to help restore a healthy, diverse, and sustainable forest.

Glyphosate works by inhibiting plant enzymes that synthesize amino acids. These amino acids are essential for the formation of proteins that support the growth of plants. Animals do not have the enzyme systems common to plants; hence glyphosate is non-toxic to animals.

In addition to active ingredients, herbicide products often have proprietary chemicals added to their formulations to make the active ingredients more effective at lower doses. These added chemicals are generally known as adjuvants. In the case of herbicides, adjuvants are usually surfactants - chemicals similar to detergents. Surfactants break down the waxy layer on the surface of the leaf, allowing better penetration of the herbicide into the plant. These surfactants can interfere with animal systems and may have adverse effects on organisms in water. The adjuvants, not the active ingredients in a herbicide, may be the reason that many herbicide formulations have restrictions for use around waterways. Some formulations of herbicides have minimal surfactant content and are labeled for use near waterways.

While the active ingredient of an herbicide will have little effect upon the applicator, the adjuvants in herbicides can have an effect. Consequently, even though glyphosate is much less toxic than caffeine, it still carries an EPA "Caution" designation on the label. This means that the herbicide can be harmful if it is inhaled or ingested or contacts the eyes or the skin, especially in concentrated form. Applicators must wear long pants, long sleeve shirts, socks, and shoes. Use of a respirator and eye protection is recommended when applying glyphosate with a powered mist blower.

In summary, glyphosate and related herbicides will be indispensable in restoring forest health. We should respect it, but not fear it. Always follow label instructions, and remember, it is non-selective. Any plant it touches may be killed or compromised.