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Storing extra pesticides over the winter

When winter comes, you may be wondering how and if you can store any leftover pesticides or herbicides from your lawn or garden over the winter. The label on the chemical should have storage instructions. If there are instructions, follow those first. If you cannot find the storage instructions, you can also call the manufacturer. But in cases where the chemical does not specify how to store it in the winter, there are some rules of thumb you can follow.

The first guideline is to keep the chemical in a safe location. You want it out of reach of children and animals. It should be in its original container with the label on it, and tightly closed. Many pesticides can be flammable, so keep them away from heaters or open flames.

It can get trickier trying to ensure that the pesticides are kept at an ideal temperature. Pesticides, especially liquids, should be kept away from freezing temperatures. This comes down to the way that liquid pesticides are formed. Similar to medications, you can broadly separate the ingredients in a pesticide or herbicide into two categories: active ingredients and inactive ingredients. The active ingredients are the things that kill the pest or weed. The inactive ingredients (like solvents and emulsifiers) are other additives that help the active ingredients to do their job. The solvent allows the pesticide to dissolve and form a liquid that can penetrate a plant's leaf. Emulsifiers are responsible for keeping active ingredients suspended in the solvent.

If a liquid pesticide freezes, the active ingredients may separate from the solvents and emulsifiers, and the emulsifiers may become inactive or even crystalize. If a liquid chemical has been exposed to freezing temperatures, you may notice crystals or granules from the emulsifiers separating when you look inside the container. The type of solvent in the pesticide, however, may lower its freezing point, so some liquids can handle lower temperatures than others.

If your liquid pesticide has been frozen, you may be able to re-suspend the contents by thawing and agitating the container depending on the pesticide. In this scenario, you should call the manufacturer to get instructions on how to re-suspend the pesticide. Other times you just need to discard it. The other risk is that when liquids freeze and thaw, they expand and contract, which can cause plastic containers to break and create a hazardous spill. Generally low temperatures do not damage powders and granules, although they are more susceptible to damage from moisture and humidity.

The best practice is to not stockpile pesticides and only buy them as you need them. Even if you store it properly, many pesticides lose potency after two years.