

INSIDE GRUNDY COUNTY
By Bill Arndorfer
Grundy County Extension Education Director
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As I began writing my column, the forecast was for a high of minus ten degrees. That is not very helpful in removing ice and hard pack snow from sidewalks or driveways. With all of the snow we have had recently, there are plenty of slick areas that make getting around a bit dangerous. There are times when a shovel or scraper just aren't enough to remove ice or hard pack snow. That is when the help of deicers can come in handy. How do they work? They work by dissolving into the ice and lowering the freezing point so that the ice turns into water or slush (this can occur at temperatures well below thirty two degrees).

However, using only deicers is not enough. For best results, you will use the deicer along with scraping and shoveling. The deicer will loosen up the ice or hard pack snow which will make it easier to remove from the sidewalk or driveway. The shape of the deicer granule is important in how effective it will be. Round pellets, roughly 1/16 to 3/16 inch in size, will melt through layers of ice faster than will irregular shapes, flakes or powders.

There are five kinds of chemical deicers that are commonly used, each with its advantages and disadvantages. In fact, they may be used in combination with each other to take advantage of the strengths of each. Common rock salt, (sodium chloride) has been used for a long time. It is fairly inexpensive but is not as effective as other choices. It is also very corrosive to steel and concrete and can burn plants where the ice is pushed or thrown. Another salt form, calcium chloride, works at much lower temperatures than other deicers. As it dissolves in water, a chemical reaction gives off heat. Another option, potassium chloride, is more likely to harm plants. Urea fertilizer (which is made from ammonia and carbon dioxide) is less likely to damage plants than potassium chloride but may result in excessive plant growth along the edges of sidewalks and driveways. Another deicer choice is not a salt but instead is a melting agent made from limestone and acetic acid known as calcium magnesium acetate (CMA). Because it has little impact on plants, it is used in environmentally sensitive areas. It is also used on bridges.

When using deicers, be sure to read and follow label directions. To minimize injury to plants or damage to concrete, use deicers sparingly. Adding sand to the deicer can make sidewalks and driveways safer. While sand does not melt ice, it does improve traction.

For more information, please contact the Grundy Office of ISU Extension at 319-824-6979.