

Between smart phones, tablets and tractor software, farmers are likely to have weather data at their finger tips.

Still, recognizing potential for severe weather in a specific location may also require careful observation of developing weather and an understanding of how quickly storms can build and strike.

Iowa State University Emergency Manager, Angie Jewett, says lightning, high winds and tornadoes can quickly threaten the life of a farmer working in a field or around the farm site.

“With thunderstorms, the biggest threat is lightning,” Jewett says. “Any time you hear thunder, you can know lightning is close enough to harm you. This is especially true if you’re in an open area where you’re the tallest object. Lightning is drawn to the tallest object.”

Fully enclosed buildings offer the best protection from lightning, however it’s not advisable to lean against a concrete wall during the storm or sit on the building’s concrete floor.

Sheds, picnic tables, tents and covered porches do not offer adequate lightning protection. If no safe buildings are near, a vehicle – such as a tractor with a cab – is the best place to seek shelter. For at least 30 minutes after the last rumble of thunder, remain in a safe place.

It’s okay to use cordless and cell phones during a thunderstorm, but don’t use a corded phone, computer or other electrical equipment when it’s thundering and lightning. Farmers should also stay away from metal tools during a storm.

Since water conducts electricity, any activities involving water should be postponed until the storm is over. It’s also important to stay away from doors and windows and off from porches.

According to NOAA (National Oceanic and Atmospheric Administration), lightning kills an average of 49 people each year in the United States. Hundreds more are injured by lightning strikes, some suffering lifelong neurological damage.

When lightning strikes a human being, it primarily causes injury to the nervous system, including brain and nerve injury. Serious burns seldom occur with a lightning strike. Persons who don't experience cardiac arrest due to a lightning strike may recover from lesser injuries over a few days.

Symptoms of lightning strike can include muscle soreness, headache, nausea, stomach upset and other types of post-concussion symptom. Survivors may experience a myriad of long term problems from a lightning strike, including personality changes, frustration with memory loss, depression and chronic pain and headaches.

In research conducted from 1980 through 2016, NOAA found that severe local storm events are most common in the Plains and Ohio River Valley states. Those storms often involve high winds that cause significant damage.

When farmers are caught in an open area during a local storm, either their tractor or a vehicle may be the safest place to weather the event.

"Today's tractors are heavy enough it would take a very strong wind gust to overturn it," Jewett says. "Even around the farm site, a tractor is likely to be safer place during a storm than a machine shed with large, open doors. It's common for these types of sheds to sustain significant damage during a wind storm."

Because of the glass in a tractor cab, finding shelter there may require covering oneself with clothing or

some type of protection in the event the glass shattered.

“There are so many weather apps available through nearly all local TV stations and some commercial ones, such as the Weather Channel,” Jewett says. “Even if you’re traveling, these apps generally track your location and provide both access to radar and weather alerts. The best way to prepare for severe weather is to listen to local weather reports and develop a plan for responding to severe weather before it happens.”

Radar technology is very advanced, however the occurrence of a tornado can still be difficult to predict until a tornado is sighted either forming or touching the ground. Jewett notes that staying informed about local weather conditions are the primary way to remain aware of the potential for tornadic activity.

“Often, on a hot, sticky day, if you see a weather front coming that includes a shelf or wall cloud, the potential for a tornado in that storm is high,” she explains. “Before a tornado occurs, the sky often displays a greenish color. If you observe these conditions, it’s time to locate a safe place to go if a severe storm or tornado develops.”

Safety experts have recently recommended riding out this type of storm in a vehicle if no other shelter is available. If seat belts are available, they should be used.

“These guidelines apply if you find yourself in an emergency situation with no other place to take shelter,” Jewett says. “In a vehicle or a tractor, it’s advisable to get low, cover your head with something that will protect you from flying glass and hope for the best outcome.”

Emergency weather situations develop most often when people are traveling because they are distracted by their plan to reach a destination and

may not be listening to a radio that provides weather updates.

“When you’re traveling, a storm can come up behind you and you won’t even see it,” Jewett says.

Tornados, which typically occur in spring and summer, can develop quickly and sustain winds up to 300 miles per hour. A tornado watch indicates that weather conditions are favorable for a tornado to develop. A tornado warning means a tornado has been spotted either on the ground or forming in the sky.

If a storm occurs and takes down power lines, authorities advise no travel or activity near the downed lines to avoid electrocution.

“Be aware of weather conditions at all times,” Jewett says. “That’s especially true if severe weather is predicted. It’s easy to download a weather app and sign up for local weather alerts. If you know there’s severe weather in the area, don’t hesitate to share that information with others you know who are working outside.”

Additional information about staying safe in severe weather is available at www.nws.noaa.gov/os/thunderstorm. The page also contains links to lightning and tornado information.