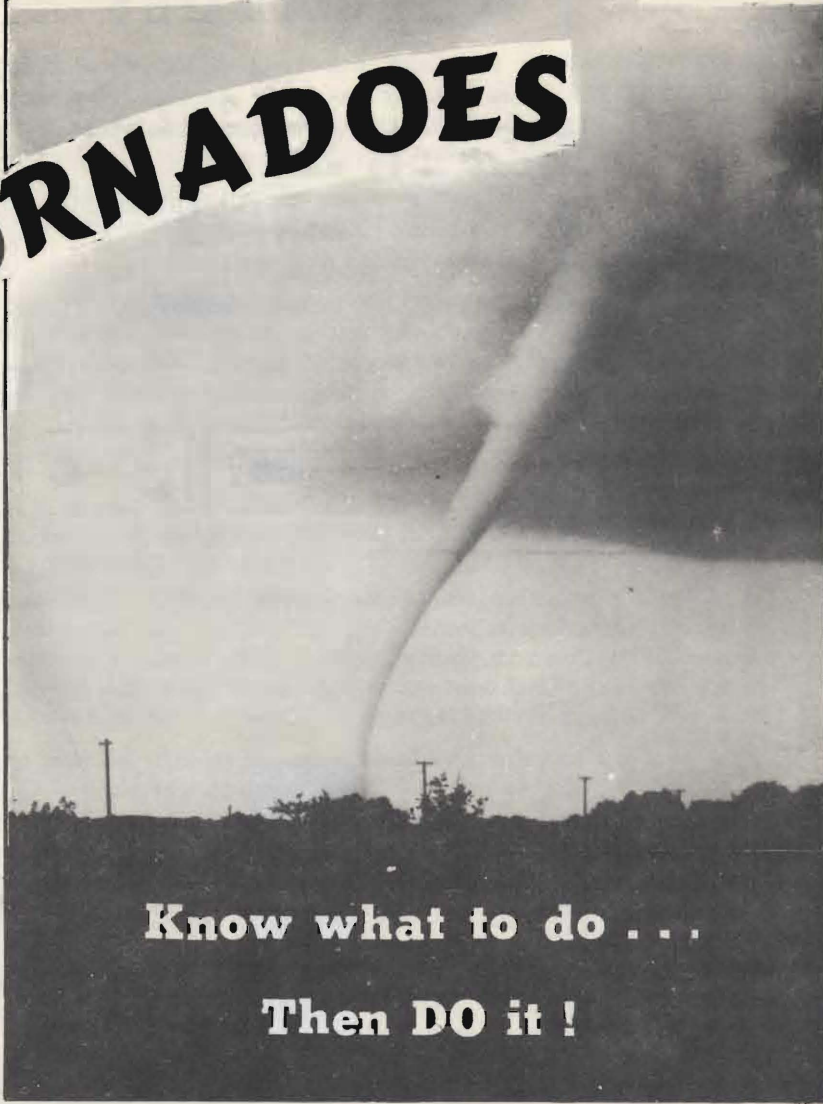


TORNADOES



Know what to do . . .

Then DO it !

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David G. Gosslee
 Experiment Station

NDAC *Extension Service, Fargo*

NORTH DAKOTA AGRICULTURAL COLLEGE

TORNADOES

Tornadoes are more numerous in the central and southern Great Plains region than in any other place in the world. However, in North Dakota only from 5 to 10 have been reported annually in recent years.

Fortunately, all tornadoes do not cause major damage. Only when they touch the ground do they disturb life and property. Then, the destruction is devastating and complete.

Tornadoes usually move northeast-- that is from southwest to northeast. The path of destruction averages about 1/4 mile wide. The storm itself moves across country with an average speed of about 40 miles per hour but speeds of all the way from 5 to 65 miles per hour have been reported.

Most tornadoes occur in connection with severe thunderstorms-- but thunderstorms do not cause the tornadoes.

Tornadoes can't be prevented--so the important thing is to avoid loss of human life or injury when one appears.

It's important for you and your family to know how to recognize a tornado and know what to do when that black twister comes swooping down in your vicinity. This means knowing what to do in advance, because you often won't have too much time to act after you spot the tornado.

This circular has been prepared to tell you how to recognize a tornado, how to escape from a tornado when there is time to do so, and to tell you how to reduce your chances of being injured when escape is not possible.

Information used here comes from several sources but mainly from F. J. Bavendick, Meteorologist in Charge of the Weather Bureau, U.S. Department of Commerce, Bismarck, North Dakota. Facts also have been taken from a publication by Gerald L. Barger, Area Climatologist and Associate Professor of Agricultural Climatology, Iowa State College, Ames, Iowa.

TORNADO ADVICE IN A NUTSHELL

1. Seek shelter in an underground excavation, ditch, basement of a frame house, or reinforced building.
2. Escape by moving at right angles (to left or right) to the storm's path.
3. Be alert when tornadoes are likely.

TORNADOES IN ACTION

These pictures are shown to give you an idea what a tornado looks like. When twisters like these appear--it's time to seek shelter.

Boats moving toward shore in this tornado picture taken in the midwest.



Tornado near Vulcan, Alberta, Canada, in 1927.



Near Hartner, Kansas, June 2, 1929, this tornado moving slowly in excellent light was visible for 30 miles. Where funnel touched the ground, destruction was complete.



Rope-like appearance of tornado that was observed near Eagle Grove, Iowa, in 1937. This one did very little damage.

When Do We Have Tornadoes?

In North Dakota, nearly all occur in late spring and early summer. In the past 50 years 17 percent of the reported tornadoes in North Dakota occurred in May, 40 percent in June, 34 percent in July, 8 percent in August and 1 percent in September.

Most tornadoes occur late in the afternoon or early in the evening. Relatively few occur after midnight and before noon.

When To Look For A Tornado

Sticky, sultry and oppressive weather, generally with southerly winds, is typical "tornado weather".

An hour or two before the tornado, topsy-turvy clouds appear to be approaching. The towering thunderclouds have a threatening appearance; their color is often described as a sickly, greenish-black and the lower clouds generally are visible in rapid, confused motion.

Out of the base of this dark thundercloud the funnel of the tornado reaches toward the earth, spinning counter-clockwise.

The tornado funnel varies greatly in appearance. Often it is sort of thin, like a dangling rope. Sometimes it looks like a huge elephant's trunk. Sometimes it appears as a fairly wide and solid-looking funnel.

The dark areas formed by rain showers which extend from cloud to ground and other cloud forms which tend to be somewhat similar should not be confused with the funnel of a tornado. Only the tornado will have the characteristic twisting motion.

There's noise, too. The air-whirl around the funnel gives out a roaring sound, often compared with the sound of many airplanes, or freight trains going through a tunnel.

Listen For Tornado Forecasts.

The U.S. Weather Bureau issues forecasts of possible tornado activity at times when conditions are likely to produce tornadoes. Listen for these on radio or television and then be especially watchful of cloud formations from which a tornado might develop.

What To Do When Tornadoes are Forecast For Your Area.

1. Keep alert but calm. Keep tuned to your local radio or television station.
2. Decide on action to be taken if an actual tornado is sighted or reported moving in your direction.

What To Do When An Actual Tornado Is Sighted Or Reported To Be Headed Your Way.

1. Seek shelter in a storm cellar, an underground excavation, the southwest corner of the basement of a frame house, or the lower floor of a reinforced building.
2. Protect yourself from flying and falling debris by staying away from windows, and by lying under a table or similar object. Stay under archways or other supports and away from large rooms.
3. In open country, move at right angles (to the left or right) to the approaching tornado's path. If there is no time to escape, lie flat in the nearest ditch or depression. In an automobile you can easily outrun or escape a tornado by driving at right angles (to left or right) to its path.

Additional Safety Suggestions.

1. Turn off gas and electricity in your home or building before the storm strikes.
2. In cities, a steel-reinforced building offers the best tornado shelter. Brick or stone buildings without this reinforcement may collapse.
3. Don't race your car wildly when driving out of a tornado's path. Normal speed will easily take you to safety--but speeding may lead to an accident. Remember, cars kill more people than do tornadoes!

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