

Agricultural Dust Explosions in 2025*

There were 7 grain dust explosions reported in the U.S. in 2025 according to Kingsly Ambrose, Professor, Purdue University. This compares to 9 in 2024 and a ten-year average of 8.5 explosions.

There were 4 fatalities and 10 injuries.

The explosions were in 1 feed mill, 2 grain elevators, 1 seed processing plant, 1 biofuel plant, 1 flour milling plant, and 1 farm operated grain elevator.

The **probable ignition sources** were identified in 1 case as smoldering grain, 1 as equipment maintenance work, 1 as overheated bearing, 1 as dust fire, and 3 unknowns.

Fuel sources were identified as 5 from grain dusts, 1 as wood dust, and 1 unknown.

Dust explosions occurred in 5 different states: 2 each in Texas and Ohio, and 1 each in Minnesota, North Dakota, and Nebraska.

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* This report subject to revision as additional information is received.

REPORTED DUST EXPLOSIONS IN U.S. 2025

<u>No</u>	<u>DATE</u>	<u>COMPANY</u>	<u>ADDRESS</u>	<u>FACILITY</u>	<u>FATALITIES</u>	<u>INJURED</u>
1	2/26/2025	SJS Farms GP	Alpha, Minnesota	Grain elevator	0	1
2	3/28/2025	Skyland Grain	8027 Cemetery Rd., Sunray, Texas	Grain elevator	0	5
3	4/23/2025	Red River Commodities	300 40th St N., Fargo, North Dakota	Seed processing	0	1
4	4/6/2025	Pettisville Grain Co	600 Providence St., Delta, Ohio	Animal feed	0	0
5	7/23/2025	Panhandle Milling	4805 FM809, Dawn, Texas	Flour milling	1	3
6	7/29/2025	Horizon Biofuels	950 S Union St., Fremont, Nebraska	Biofuel	3	0
7	11/5/2025	Heimerl Farms	3891 Mink St., Johnstown, Ohio	Farm elevator	0	0

TABLE 1. U.S. AGRICULTURAL DUST EXPLOSION STATISTICS

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	TEN YEAR TOTAL
Number	5	7	12	11	8	7	10	9	9	7	85
Fatalities	3	5	1	1	1	1	0	0	0	4	16
Injured	8	12	2	8	6	5	18	12	2	10	83
Type of Facility											
Grain Elevator	2	5	8	4	4	4	2	2	3	3	37
Feed Mill	1	0	2	4	1	1	2	0	4	1	16
Flour Mill	2	0	0	0	0	0	0	1	0	1	4
Other:											
Corn Milling, Dry	0	1	0	1	0	0	2	2	0	0	6
Corn Milling, Wet	0	0	0	0	1	1	0	1	1	0	4
Rice Mill	0	0	0	0	1	0	2	0	0	0	3
Other	0	1	2	2	1	1	2	3	1	2	15

Source: Dr. Kingsly Ambrose, Purdue University

TABLE 2. AGRICULTURAL DUST EXPLOSIONS BY COMMODITY HANDLED AT TIME OF EXPLOSION 2016-2025

<u>COMMODITY</u>	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	TEN YEAR TOTAL
Corn	1	6	6	5	2	3	2	5	5	3	38
Soybeans	0	0	0	1	0	0	1	2	0	0	4
Wheat	0	0	0	0	1	0	0	1	0	1	3
Barley (malted)	0	0	0	0	0	0	0	0	0	0	0
Oats	0	0	0	0	0	0	0	0	0	0	0
Beet pulp	0	0	0	0	0	0	0	0	0	0	0
Corn starch	0	0	0	0	0	0	0	0	0	0	0
Sugar	0	0	0	0	0	0	0	0	0	0	0
Mixed feed	1	0	4	3	3	3	1	0	1	1	17
Rice (Bran)(Flour)(Hulls)	0	0	0	0	1	0	2	0	0	0	3
Wheat Flour	0	0	0	0	0	0	0	0	0	0	0
Wheat (Starch)(Gluten)	1	0	0	0	0	0	0	0	0	0	1
Other	2	1	2	2	1	1	4	1	3	2	19
TOTAL EXPLOSIONS	5	7	12	11	8	7	10	9	9	7	85

Source: Dr. Kingsly Ambrose, Purdue University

TABLE 3. U. S. AGRICULTURAL DUST EXPLOSIONS LEADING STATES - 1958 to Date

<u>STATE</u>	1958-2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	10-YEAR TOTAL	1958-2025
Iowa	87	1	1	2	3	1	1	1	2	1	0	13	100
Illinois	79	0	0	2	1	1	0	1	3	1	0	9	88
Nebraska	77	0	1	1	1	1	0	1	0	1	1	7	84
Minnesota	60	0	1	2	1	0	2	0	3	1	1	11	71
Kansas	55	1	0	1	0	1	0	1	0	1	0	5	60
Texas	46	0	0	1	0	1	0	0	0	0	2	4	50
Ohio	36	0	0	0	1	1	0	1	0	0	2	5	41
Missouri	36	0	0	0	0	1	0	0	0	0	0	1	37
Indiana	29	1	1	1	1	0	1	0	1	0	0	6	35
Louisiana	18	0	0	1	0	0	0	2	0	0	0	3	21
South Dakota	16	0	0	0	0	0	0	0	0	0	0	0	16
Wisconsin	8	1	2	1	1	0	0	0	0	1	0	6	14