



**KANSAS
STATE
UNIVERSITY**

Cooperative Extension Service

Extension Grain Science and Industry
Shellenberger Hall
Manhattan, Kansas 66506
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REVISED

GRAIN DUST EXPLOSIONS IN U.S. DECLINE AGAIN IN 1983 WITH NO FATALITIES

A further decline in grain dust explosions occurred in the U.S. in 1983 Based on explosions reported to USDA, FGIS Safety Director Ralph Regan and Robert W. Schoeff, Extension Marketing & Safety Specialist, Kansas State University.

There were 13 reported explosions in 1983 compared to 14 injured. Property Damage estimates ranged from minor to \$1.2 million.

Welding, bearing failure and spontaneous combustion were the major probable causes. The cause was still undetermined in 5 cases at the time this report was prepared.

Corn was being handled in seven of the 12 explosions, sorghum in two, grain screenings & soybeans in one each, and the mill was shut down in one case.

The continued low incidence level and moderate damage from secondary explosions can be attributed to several factors:

- A. Improved maintenance and housekeeping,
- B. Increased use of safety devices such as motion sensors, hot bearing detection systems, and explosion suppression systems,
- C. Increased educational effort by trade associations, insurance companies, trade unions and State Extension Service Personnel, and
- D. Improved design of new facilities.

Texas was the leading state in 1983 with 3 followed by Indiana, Illinois and Minnesota each with 2.

“The cooperation of everyone throughout the industry and government has been very helpful,” said Schoeff, “in building a more accurate database on dust explosions that will provide insight and direction for educational and research programs and assist insurance firms in more accurately assessing the risks involved and insurance premiums required.”

Robert W. Schoeff
Extension State Leader
February 6, 1984



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REPORTED GRAIN DUST EXPLOSIONS, U.S. - 1983

NUMBER	DATE	FIRM AND LOCATION	FACILITY	DAMAGE*	KILLED	INJURED
1	Jan. 8	Parr Grain Co. Parr, IN	Elevator	Severe	0	1
2	Jan. 14	Indian Head Grain Lubbock, TX	Elevator	Severe	0	1
3	Mar. 19	Lyford Gen. & Grain Assn. Lyford, TX	Elevator	Moderate	0	3
4	April 18	Hutton Grain Co. Vincennes, IN	Elevator	Severe	0	1
5	April 28	Franklin Grain Co. Franklin, IL	Elevator	Moderate	0	1
6	May 26	Tenco O'Kean, AR	Elevator	Moderate	0	1
7	July 7	Cooksville Grain Co. Cooksville, IL	Elevator	Moderate	0	1
8	Aug. 27	Ralston Purina Shreveport, LA	Feed Mill	Minor	0	1
9	Sept. 1	Underwood Farms Feedlot Fullerton, NE	Feed Mill	Minor	0	0
10	Nov. 2	Bob Poitz, Inc. Yuma, CO	Feed Mill	Moderate	0	0
11	Nov. 28	Prairie Grain Co. East Bernard, TX	Elevator	Minor	0	0
12	Nov. 30	Rivards Quality Seed Inc. Argyle, MN	Feed Mill	Minor	0	2
13	Dec. 28	Darwin Farmers Elevator Darwin, MN	Elevator	Moderate	0	2
1983: 13 Incidents					0	14
1982: 14 Incidents					6	34
1981: 21 Incidents					13	62

KSU, County Extension Concils and U.S. Department of Agriculture Cooperating.
All educational programs and materials available without discrimination on the basis of race, color, national origin, sex, or handicap.

*Minor - Less than \$50,000
Moderate - 50,000 - \$500,000
Severe - Over \$500,000

Robert W. Schoeff
in cooperation with
Ralph Regan, FGIS - USDA
Washington, D.C.
February 6, 1984