Dust Blamed For Many Explosions On Farms Of U.S.

Danger Can Be Overcome By Taking Proper Precautions As Told By USDA Expert

By Our Washington Correspondent)

Here is a man that is trying to make dust as harmless as an old shoe. His name is David J. Prince of the Department of Agriculture. He is reputed to know more about dust than anybody in the world.

D. J. PRINCE

The average person perhaps believes that dust is not dangerous but only offensive in smell and in clouding the windshield of one's auto. But half an hour's consecration with Mr. Prince will practically convince one that the fine powdery particles are as dangerous as the black plague.

He will tell you that since 1916 there have been more than 400 dust explosions in factories in this country causing approximately $35,000,000 damage.

And, as for the farmers, Mr. Prince can relate how thousands of threshing machines, barns and silos have been blown to smithereens by the ingenious work of dust.

"Dust," said the expert, "is one of the farmer's most deadly enemies."

Flour Mill Blew Up

The first known explosion from dust occurred in Italy in 1785. Several persons were killed. In 1878, the first one occurred in this country when the Washburn flour mill blew up in Minneapolis and killed 18 persons.

Mr. Prince became a friend of the farmer for life in 1914. Threshing machines were blowing up at the rate of 50 a day in Washington state, killing farmers right and left. The I. W. W. were said to be placing bombs in the machines. They gladly took the credit but it was later found to be falsely claimed.

Zane Grey later wrote a novel concerning it called "Desert of Wheat" but pro-Germans were substituted for the I. W. W.'s.

Prince, then a young man in his late 20's, discovered this on investigation. The temperature was high, the humidity low and the wheat badly rusted. The rust would fall off inside the machine by the chopping cylinders, forming a great cloud. The revolving cylinders would create electricity and finally the pressure would become so great that a spark would ignite the dust and—bang!

Blamed I. W. W.s

Young Prince had a terrible time convincing the Washingtonians that nature was to blame and not the I. W. W.'s Fans were installed in the threshers to blow the dust out, and strong wires to ground the electricity. From then on everything was fine.

Today silos and elevators are not built of solid concrete as they once were in the boom periods of 1916-17. Some of the worst explosions have occurred in this type of building where there were few windows as an outlet for the generating pressure. This was one of Prince's recommendations to farmers.

He also recommends that factories and storage plants first of all be kept exceedingly clean, and second, that windows be installed that will fly open with the slightest pressure. Solid panes of glass may be cut from the outside to reduce the pressure so when the blast comes, the windows will drop out and nobody will be hurt.

Anything that will burn will explode when made into dust, Mr. Prince warns. Such things as flour, sugar, coco, soap, powdered milk and cork are all possible explosives when reduced to dust. There's no use worrying about a cake of soap exploding in your face, but take Mr. Prince's word for it—it will explode in a factory when the dust begins floating around.

Prince knows lots more about combustion. Such as why wet coal explodes in a cellar and why wet hay in a barn combusts.

1935 Is Fortunate Year For Carolina On Harvest Yields

For North Carolina 1935 is "a most fortunate year so far as crop yields are concerned," according to the report of the Federal-State crop reporting service which announced increased production of many farm commodities and then stated:

"In fact, this state is looked upon by outsiders as practically 'recovered' from depression conditions.

"Very good yields have been made with corn, small grains, cotton, tobacco, sorghum early Irish potatoes, sweet potatoes and hays," the report said.

Indicated production of tobacco was 562,998,000 pounds an increase of four per cent of the report of the preceding month.

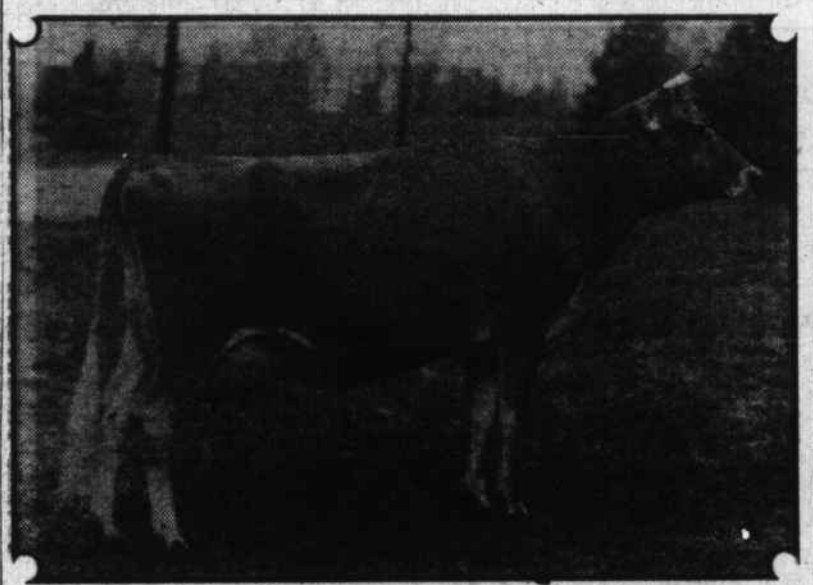
Corn production is estimated at 49,528,000 bushels, an increase of three per cent over the preceding month, and peanuts are up five per cent to 285,750,000 pounds, and pecans are up 12 per cent to 900,000 pounds.

"The November 1 crop yields for North Carolina are 15 per cent better than the ten-year average," the summary said. "While prices received in most cases are not up to a parity with the products the farmers have to buy, yet they are much better than they have been."

The report described North Carolina's 1935 tobacco crop as a sensation. "This year," it said, "growers not only increased the acreage heavily, but planted in both narrower rows and hills in the row. More fertilizer was used. More leaves were left on the plants. In fact, many fields were not 'topped' at all. The increase of 41 per cent over the 1934 production of flue-cured tobacco is thus not surprising.

DAIRYING

National Dairy Show Champion



Simply Sybil's Fulina, grand champion Jersey female at the National Dairy Show in St. Louis. This cow has all the attributes of the ideal dairy matron. She was judged by Prof. H. H. Kildee of the state college at Ames, Iowa and is owned by Hugh Bonnell, Youngstown, Ohio.

Carolina Breeders Hold Fall Sale Of Purebred Guernseys

Sales of purebred Guernseys have been held in both North and South Carolina since our last issue. A Guernsey bull sale was staged at Chester, S. C., on Nov. 12, and a heifer sale took place at Newberry on November 14. A sale of mixed Guernseys was held at Wilson, N. C., on December 7th.

The bull sale at Chester, a cooperative effort the South Carolina Guernsey Cattle Club and the Chester County Guernsey Breeders Association, offered breeders a choice lot of young animals from the leading breeding herds in the Southeast.

The Newberry County Guernsey Breeders Association sponsored the heifer sale, where 35 heifers ranging in age from 6 to 22 months selected from purebred herds from within the state were sold at auction. Consignments to both sales came from such outstanding herds as Butler Island Plantation, Brunswick, Ga., Quail Roost Farms, Rougemont, N. C., Dr. J. F. Rawlings, Sandersonville, Ga., R. B. Caldwell, Chester, S. C., Clemson College, Gippy Plantation, Moncks Corner, S. C. and Ware Shoals Farms, Ware Shoals, S. C.

"The sale was a reflection of the steadily growing demand for dairy foundation stock, a demand which has been stimulated by the strengthening of prices for dairy products in recent months," said C. G. Cushman, South Carolina extension dairy specialist.

The sale at Wilson, N. C. consisted of three bulls, 17 cows and 20 heifers, carefully selected from leading Guernsey herds and representing the best blood in the state. The North Carolina Guernsey Breeders Association held a banquet the evening before the sale.

Ice Wells On Dairy Farms Make Profit

The ice well method of cooling and holding cream on dairy farms has proved a good investment according to the U. S. Bureau of Dairy Industry.

Prices for sour-cream butterfat averaged 22 cents a pound from May to September, but prices for No. 1 sweet-cream butterfat were 5 to 10 cents a pound higher. Dairymen obtaining the premium prices for sweet cream increased their returns 22 to 45 per cent.

In the Northern Great Plains area, where the ice well first came into common use, this simply constructed and comparatively inexpensive refrigerating system enabled farmers to hold cream for several days and still market it in first class condition.

The first ice well built in the United States under the supervision of the Department of Agriculture was constructed at the Bureau of Dairy Industry Experiment Station, Mandon, North Dakota, in the fall of 1928. This well has been used for the last 7 summers with very good results. The well is opened in May as a rule, and the ice has always lasted until late in September. This year there was ice in the well until October 6.

The construction of this well is described in Circular 155, "The Ice Well for the Dairy Farm," a copy of which may be obtained from the Bureau of Dairy Industry, Washington, D. C.

GOOD DAIRY BULLS IN DEMAND

Recent sales of purebred dairy breeding stock have emphasized the fact that in the long run scrub bulls are always expensive. "If dairymen are going to pay, one way or another, for a good bull," said John A. Arey, N. C. dairy specialist, "there is no valid reason why they should not have one. If you have a good one, profits from the herd enable you to pay for him. If you keep a scrub, the lowered efficiency of the herd will cost you more than a good bull."

Dairy Cow Numbers Will Be Increased On American Farms

More farmers are planning to increase their dairy herds next year than in any year since 1932. The number of milk cows increased steadily from early 1928 until the spring of 1934, when the drought and general shortage of feed caused a rapid decline until the past spring.

No marked change in the number of dairy cows will be apparent for the next two years, however, says the bureau of agricultural economics.

Stocks of dairy products are larger than a year ago, and with prospects for higher production during the late winter than a year previously, total supplies of dairy products during the winter of 1935-36 will be larger than in the winter of 1934-35.

Receipts of milk and cream in the large cities indicate that city consumption of fresh milk and cream has ceased to decline. Milk production during the 1936 season will depend largely on pastures and other conditions which cannot be foreseen. Unusually favorable weather conditions this year enabled pastures to recover from the 1934 drought.

Storage Stocks Heavier

Stocks of butter and cheese, condensed and evaported milk, in terms of milk equivalents were 18 per cent heavier than a year ago, on October 1. Stocks of butter in cold storage on the same date amounted to 148,666,000 pounds, compared with a five-year average (1930-34) of 120,178,000 pounds.

The heavier into-storage movement in 1935 was partly due to heavier production in the flush period and partly to lighter consumption. There has been an active movement out of storage since September 1, and with a continuation of the present rate and the lowered rate of butter production since the late summer, it may be expected that storage stocks of butter will approach average toward the close of the present storage season in the spring of 1936.

Through the purchase of dairy products and distribution through relief channels, the government has diverted substantial quantities of these products from commercial channels at times when supplies were large and appeared to be exerting a price-depression influence. The government began purchasing dairy products in August, 1933, and up to May 1, 1934 had bought 51,589,000 pounds of butter, and 6,846,000 pounds of cheese. Further purchases were made this year.

FIRE BLIGHT COSTLY DISEASE

Apple and pear growers lose many millions yearly through ravages of fire blight. The disease first appears in the spring, on new growth and leaf and blossom buds, though in some years it may not become evident until the flowers open. The disease is hard to control. In winter all blighted twigs and cankers should be pruned out and destroyed. Trees should also be fertilized so their growth will be moderate rather than rapid in the summer. Spraying with a solution of one pound of copper sulphate and three pounds of lime to 50 gallons of water also helps. Spray should be applied as soon as blossoms open.

CHEESE IN THE MENU

Cheese, 90 to 99 per cent digestible, is considered one of the most nearly universal foods known to man. For 3,500 years it has been one of the staple diets of the human race, and is now eaten in every country of the world, said W. L. Clevenger, dairy manufacturing specialist, at N. C. State College.

Cheese fits into thousands of menus, Clevenger pointed out. With rice, bread, macaroni, or potatoes, for instance, it adds proteins to their carbohydrates to make balanced and appetizing combinations. Vegetables and cheese in casserole dishes, cheese souffles, cheese pudding, cheese with eggs, with fish, with salads, with deserts—all make tempting and nourishing dishes.

Research Policy Points To Better Dairying Methods

Dr. Reed Outlines Bureau's Work In Aiding Dairy Efficiency—Progress Encouraging

New information developed by research in the bureau of dairy industry, if put to work generally, would greatly improve the economic position of various branches of dairying, says O. E. Reed, chief of the bureau in his annual report.

MR. REED

"The farmer's opportunities," Mr. Reed says, "lie largely in adopting practices to reduce his costs in producing milk and to improve the quality of his product." Opportunities to reduce costs are largely in the development of efficient herds and in following more efficient farming and feeding practices. Producing a high-quality product affords an opportunity for obtaining premium prices as well as indirect benefits that come from the increased consumption associated with high-quality products."

The year in review witnessed some encouraging progress in the wider application of a number of good dairy practices suggested by research information, Mr. Reed says.

"The noticeable trend toward more acreage in grass and forage crops and less in cultivated crops is in line with good dairy practice. Bureau studies a few years ago suggested that dairy farmers in many instances would increase the profits from the farm as a whole if they grew most of the feed for milk production in the form of roughage crops rather than in the form of grain crops. Roughage crops as a rule produce the nutrients required for milk production at less cost than the grain crops. To gain the maximum benefits, of course, the shift to grass and forage crops must be accompanied by attention to quality of the roughage as well as to quantity. Research has explained the importance of certain nutritive essentials that are best supplied by high-quality roughage. It has also suggested practical methods for harvesting curing, and storing to preserve the nutritive properties of grasses and other roughages.

"The cream-quality-improvement campaign inaugurated by the creamery-butter industry, which became national in scope last year, can be attributed to the efforts of dairy research workers who have long pointed out the essential sanitary practices for improving quality, to the efforts of extension forces and other educational workers who demonstrated the practicability of the methods, and to the efforts of Department regulatory officers in seizing and dumping cream and butter found unfit for food. The far-reaching effects of the campaign can hardly be overemphasized.

The value of a sanitary food product was never more strikingly demonstrated than by the increase in consumption of milk as its quality improved; the same favorable consumer reaction can reasonably be expected as the quality of the general butter supply is improved. Quality of the butter, of course, depends largely on the quality of the cream. Farmers everywhere are taking increased interest in producing high-quality cream, not only because of the difficulty of disposing of poor-quality cream but because of the premium prices paid for the better quality.

"More than 98 farmers out of 100 who milk cows keep no records of production on their individual cows. Without such records, the average dairyman can make little or no progress in improving the producing capacity of his cows. Improvement in the great mass of our milk-cow population, therefore, will depend on the development of breeding herds from which the average dairyman can obtain the right kind of herd sires. The Bureau has demonstrated the possibility of developing strains or herds of cattle with such a high degree of genetic purity that all the young bulls bred in the herd can be counted on to transmit a high level of production. Progressive dairy farmers and commercial breeders who develop such pure-line production herds will be the ones to furnish the right kind of sires for improving the farm herds.