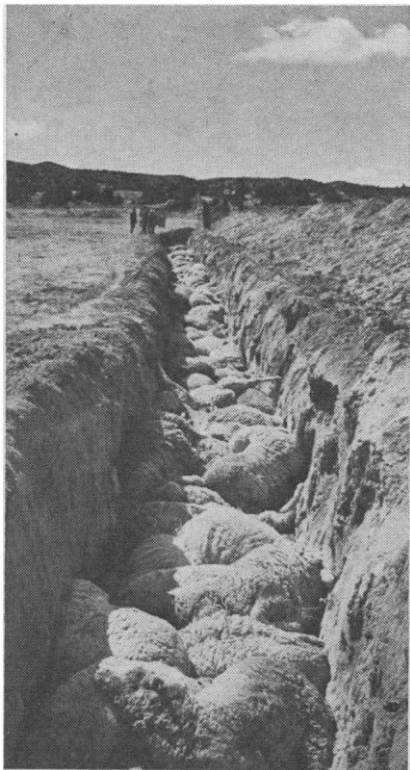


Dead Sheep Show Signs of Nerve Gas



A mass grave for some 1200 of the dead sheep in Skull Valley, Utah.

The Public Health Service has identified a compound "identical to" an Army nerve agent in some of the thousands of sheep that died in Utah last month near a test site for chemical and biological weapons (*Science*, 29 March), but as of last week the Army was not quite prepared to accept full responsibility for the deaths of the sheep.

The PHS's National Communicable Disease Center in Atlanta announced in a progress report on 12 April that it had isolated the compound in the liver, blood, and stomach contents of dead sheep and in samples of snow, water, and grass from the affected area. The PHS said the compound was shown by means of gas chromatography, infrared spectroscopy, and mass spectrometry to be "identical to" a sample of the nerve agent that was being tested at the Dugway Proving Ground shortly before the sheep died.

However, on 18 April the Defense Department issued a "status report" asserting that the Army's "findings

to date have not been conclusive as to the specific cause for the death of the sheep." The report cited considerable evidence "pointing to Army involvement," but it said there are "many questions still unanswered."

The report acknowledged that the PHS seems to have isolated a compound that is "related to the nerve agent samples," but it pointed out that tests conducted by the U.S. Department of Agriculture "have not confirmed these findings."

The Army said that initially several hundred samples of water, soil, snow, vegetation, and wool were analyzed for traces of nerve agent—all with negative results. More recently, Army scientists have analyzed "very large samples of vegetation" and have concluded it is "possible that traces of a nerve agent or a similar organic compound were present in two extracts of samples." This indicates, the Army acknowledged, "that the agent could be present in an area where sheep died." Further tests on large samples are being conducted by the Army's Edgewood (Maryland) Arsenal and by the PHS.

The Army also said that researchers have been able to reproduce some of the symptoms of the affected sheep by feeding the nerve agent to healthy sheep.

The investigation may continue for a few more weeks, or it might end abruptly, depending on the success of the laboratories involved in pinning down the cause of the sheep deaths. The Army speculates that ultimately the deaths might be attributed to "a combination of factors, of which the [nerve] agent is only one." The Army speculates that the sheep may have become "highly sensitized" to the nerve agent through "some as yet unknown mechanism." Meanwhile, acknowledging that the evidence points strongly to a nerve agent as the cause of the sheep deaths, the Army has proposed that a committee composed of representatives of various federal, state, and private agencies be established to review the existing safety procedures at the Dugway Proving Ground.

—P.M.B.

can do the Indian war dances better than she can. While at Norman, Mrs. Harris worked full time to help support her husband's university studies.

Majoring in political science, Harris was elected to Phi Beta Kappa in his junior year. In law school he led his class each year and was editor of the law review, working meanwhile for the university press and serving as research assistant to the dean of the law school. Not long after graduating from law school in 1954, Harris established his own law firm in Lawton, a city of about 75,000 in southwestern Oklahoma, not far from his birthplace. Before being elected to the State Senate in 1956 he was defeated for the Oklahoma House of Representatives. "His rule has been, if you're defeated for one office, try for the next higher one," one associate comments.

In 1962 Harris lost a bid for the Democratic nomination for governor, but during the campaign he managed to visit every area in the state, and he made a surprisingly strong showing. This statewide exposure proved useful in 1964, when Harris defeated senatorial incumbent J. Howard Edmondson in the primary and went on to polish off his popular Republican opponent, Oklahoma football coach Bud Wilkinson, in the general election, being elected to a special 2-year term. Harris was reelected to the Senate by a sizable margin in 1966.

Most of those who have watched Harris believe he has come along so fast primarily because he works so hard. However, he has other qualities which have helped him politically—a lively sense of humor, a highly developed ability to recall facts and ideas, and a disciplined and highly inquisitive mind.

One associate recalls that he once mentioned Aristotle in a conversation with Harris: "Tell me about Aristotle, he said, and then we were off on an exhausting hour's conversation about Aristotle." After being appointed to the Senate Finance Committee, Harris invited several scholars to give him individual 2-hour tutorials on aspects of foreign trade.

From all accounts, Harris is a voracious and rapid reader. "I read *Science*, *Scientific American*, *Foreign Affairs*, and about any popular magazine you can think of. I even read the backs of cereal boxes," he notes. Harris says he averages about three books a week, but only reads "about two novels a year."

If he is ever defeated for the Senate,