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Los Alamos Conference on Livestock Losses

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Damage to the skin of animals from radioactive fall-out has been recognized in horses during the last series of tests at the Nevada Proving Grounds and in cattle during the Spring of 1952 tests. In both cases the animals were located within a few miles from the site of detonation and in areas of relatively heavy fall-out. About the first of June, there were reported incidents of sheep, originally grazing in Nevada, showing lesions and also about 1400 ewes and 2900 lambs had died within the preceding few months. The question was raised as to the possibility of radiation damage causing or contributing to the lesions or deaths.

The same lesions were noted on sheep in areas of little or no fall-out with approximately the same incidence as in areas of relatively heavy fall-out. The general amounts of fall-out in the areas under question have been determined. These quantities of radiation dosage are not known to be sufficient to produce the lesions noted.

Evidence has been gleaned from microscopic examinations and comparisons of tissues both from the sheep in fall-out areas and some sheep on which skin beta burns were produced experimentally.

All of these data present a preponderance of evidence to support the conclusion that the lesions were not produced by radioactive fall-out. However, due to some anomalies in the evidence, it is recommended that studies be continued in order to determine the causative agent and to explain its isolated occurrence.

In considering radiation damage to the internal organs, the most critical is the thyroid, due to the uptake of radioactive iodine from the fall-out material. The amount of highest radiation dosage to the thyroid has been calculated to be far below the quantity necessary to produce detectable injury.

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- Joe B. Sanders
- M. A. Holmes
- Arthur H. Wolff
- F. F. Lushbaugh
- R. E. Thompson
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