

High Nitrate Levels Can Harm Infants and Livestock

We have received a number of reports about the high levels of nitrates in water from farm wells

and springs, according to Max Smith, Lancaster County agent.

The consumption of such water may be poisonous or even fatal to infants and there is some indication that high nitrates may be affecting the health of both poultry and livestock.

The primary concern about this contaminant seems to be for unborn babies and infants up to six months old. For humans over six months of age it does not have any detrimental effect.

There are mixed opinions concerning nitrates in livestock water and, in the absence of more conclusive evidence, we believe the standards set for humans should be observed for livestock.

The U.S. Public Health Service Standards indicates that the nitrate (NO₃) concentration in water for human consumption should not exceed 45 parts per million (ppm) or milligrams per liter (mg-1). This is the equivalent of 10 ppm of nitrogen (N).

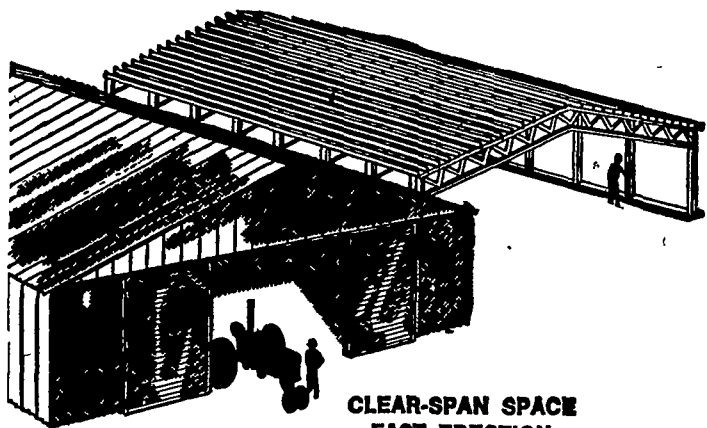
The practice of expressing concentrations of nitrogen as N or nitrates as NO₃ has created some confusion. When one is talking, whether giving advice or making public statements, about nitrate pollution we must be careful to use the correct terminology.

We usually associate nitrates in well water with bacterial contamination. Whenever a laboratory test indicates a high nitrate level, a sample of the water should be tested for coliform bacteria to determine if it is safe to drink, says Smith.

In most instances, the nitrates in farm wells can be traced to contaminants entering the well through surface drainage, a porous stone lining in the well, or a leaking well casing.

High levels of nitrates are found more often in shallow wells near the barnyard than in deep wells in protected aquifers.

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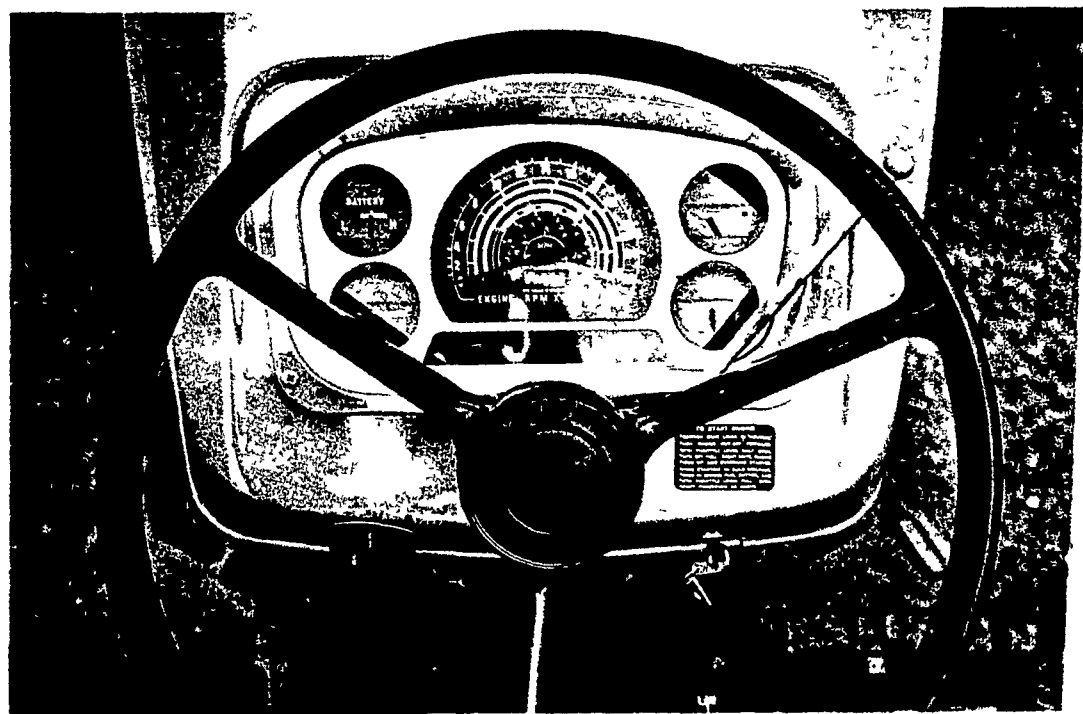
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Occasionally the pollution can be attributed to septic tanks, abandoned wells left unsealed, and silo drainage.

There is no evidence to support the popular belief that nitrogen is leached from commercial fertilizers spread on farm land to produce better crops.

There is no simple or inexpensive method of reducing or removing nitrates from domestic water supplies. The best solution is to abandon and seal off a polluted well and drill a new one into a different aquifer or look for an alternate source of supply.

At least one company is producing a reverse osmosis unit that will remove nitrates and produce a small quantity of potable water for a farm home, but it does not have enough capacity to provide drinking water for a livestock operation. There is a great need for further research in this area.

Atomic Age

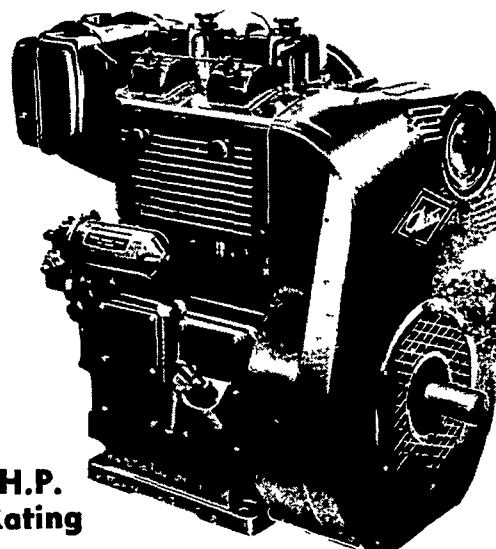
The atomic age is generally regarded as having been ushered in on July 16, 1945, when the first man-made atomic explosion occurred in the New Mexico desert



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