Chapter 10

Irrigation Management and Crop Production as Related to Nitrate Mobility

R. J. HANKS, D. W. JAMES, AND D. W. WATTS

Much of past irrigation practice has been with little consideration to NO₃-N mobility. Nitrate mobility has been ignored because soil N losses were inexpensive to replace as well as the fact that some storage of NO₃-N occurs in the lower part of the root zone. Also, costs of irrigation equipment and water often were low enough that careful management was not required.

Traditional practices still persist in much of irrigated agriculture in spite of increased costs for energy and water as well as fertilizer. The NO₃-N pollution of groundwater has been a growing concern and certainly is an issue. Until now there has been considerable uncertainty regarding the relationship between irrigated agriculture and NO₃-N pollution of the environment. Certainly future irrigation management will need to be more concerned for both irrigation water and N fertilizer costs as well as environmental issues.

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¹Contribution from the Dep. of Soil Sci. and Biomet., Utah State Univ., and the Agricultural Eng. Dep., Univ. of Nebraska.
²Professors, Dep. of Soil Sci. and Biomet., Utah State Univ., Logan, UT 84322; and Agric. Eng. Dep., Univ. of Nebraska, Lincoln, NE 68583.

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