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LINING OF IRRIGATION CHANNELS

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The object of canal lining is to substantially reduce the loss of irrigation water through absorption and percolation. The experiments conducted on Upper Bari Doab Canal, thirty years ago, indicate that the total loss of irrigation water in the main canal, branches, distributaries and water courses including wastage in the fields, is about 72% of the canal supplies. The use of administrative control to regulate irrigation supplies to the fields has resulted in reduction of losses in the watercourses and on field. The estimated percolation losses in a canal system, after some period of working, are about twenty five percent of the water entering at the head of the main channel. In the past, canal lining was aimed at preventing only a portion of total loss. However shortage of water in rivers, especially during winter, require that lining should aim at hundred percent efficiency in preventing all leakage from the channel. With the opening up of new canals in Punjab, whch has a limited sources of irrigation water, it is essential to make optimal use of available water. Another advantage of canal lining is the prevention of waterlogging, while the maintenance expenses would also be reduced.

There are some major construction problems related with the lining of existing operating canals. The construction activity could start only during a canal closure which lasts for ten to fourteen days. The working days get further reduced because almost one third of the closure period is lost while water is "running off". In the case of a main canal, lining can only be done during a general canal closure whereas irrigation demand does not permit closure of the main canal every year for a period of exceeding 10 days. The non availability of skilled labour