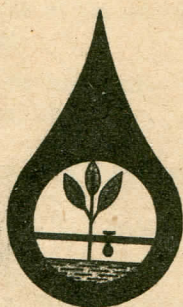


**PROCEEDINGS OF THE SYMPOSIUM ON DRIP IRRIGATION IN
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ANALYSIS OF HYDRAULIC METHODS FOR DRIP IRRIGATION LINES

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The aim of this paper is an analysis of the hydraulic methods for drip irrigation lines. Formulae of Darcy-Weisbach, Hazen-Williams, Lamont and formulae which derived from the Petrov and Konovalov equations are examined here.

By using these methods the results of the calculations are compared to the results of field and laboratory measurements.

Darcy-Weisbach formula is in agreement with the measurements when a higher pressure of water in drip irrigation lines is used. When applying pressure less than 0.5 atm the results obtained from this formula are smaller than the measured ones.

Formulae obtained from the Petrov and Konovalov equations give higher results than the experimental ones. These formulae are more complicated and require a longer time for accounts than others.

The results obtained from the Lamont formula are in agreement with the measured ones. The difference between these values is less than 10 %.

Hazen-Williams formula appeared to be the most accurate one. The difference between the formula results and experimental results is less than 5 %. Because of it's simplicity, Hazen-Williams equation can be widely used in designing drip irrigation systems.

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