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## **Evaluation of Water Distribution Uniformity Under a Traveling Gun Irrigation System**

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The water distribution uniformity under a traveling gun irrigation system where evaluated using three type of sprinkler (Komet, Nelson 100 and Nelson 150) under two operation managements; the sprinklers moving with an constant speed during the irrigation (T1) and the sprinklers was stopped in different position along the travel direction based on the water distribution pattern (T2). The sprinklers were tested with 270o operation angle and 3 working pressures of 7, 8, and 9 bar under T1 and that was 360o, 5, 7, 8 bar for sprinklers under T2. Distribution pattern were simulated for different operation angles of 180o, 225o, 270o, and 315o, travel lines distance, and moving speed of sprinkler. According to the results, 180o operation angle showed highest distribution uniformity in most of the travel lines distance. The maximum distribution uniformity was measured when travel line distance was about 75-80% of distribution diameter. The impact of sprinkler operation angle on distribution uniformity was not considerable when travel line distance was optimum. Increase in working pressure, increased the distribution diameter and induce the maximum distribution uniformity under higher travel line distance.

See more of [Agriculture: Advances in Sprinkler and Center Pivot Technologies](#)

See more of [The 28th Annual International Irrigation Show \(December 9-11, 2007\)](#)