Water comsumption under drip irrigation in Egypt. (S06-elnaggar163804-Oral)

Authors:

- E.M.El-Naggar* - *University of Illinois*
- M.T.Almaghraby - *University of Ain Shams*
- E.M.ELtony - *University of Ain Shams*
- M.S.Omar - *National Research Center*

Abstract:

Actual water consumption ET, crop coefficient KC and water economy analysis for drip irrigated potatoes and tomatoes grown under Egyptian conditions were evaluated. Three irrigation water levels (400, 300 and 200 mm) and (600, 450 and 300 mm) were applied during the potato and tomato growing seasons respectively. Actual ET was measured using the soil moisture depletion method gravimetrically and with neutron probes. Modified Penman and pan evaporation methods were used to calculate reference evaporation Eo. KC of potato and tomato plants were calculated using measured ET and Eo data at different periods of the growing season. Seasonal potato ET under the three irrigation levels was 306, 272 and 192 mm as measured gravimetrically while it was 286, 265 and 200 mm as measured using neutron probs. The tomato seasonal ET was 548, 435 and 299 mm as measured gravimetrically while it was 538, 437 and 303 mm using neutron probs. Slight differences were noted between calculated KC during the same growth period. The yield and vegetative growth parameters were significantly different under the studied irrigation regimes for potato and tomato crops.

Corresponding Author Information:

Essam El-Naggar
University of Illinois, Dept of NRES
S-208 Turner Hall, 1102 S Goodwin Ave.
Urbana, IL 61801

phone: 217-265-8405
fax: 217-244-3219
e-mail: elnaggar@uiuc.edu

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