A simple SSM model for predicting the performance of maize crop in Khash region

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ABSTRACT:
Models are being used to figure out the response of plants to possible changes in plant characteristics. The experiment was conducted at the Khash region in 2016. For the coefficient estimate and to evaluate the SSM model, the field trial data for corn single cross 704 was used. Corn seed varieties used include single cross 704 with 120 to 135 day growing period in agro-industrial company located in Mashhad Kaveh. In order to simulate the growth and yield of corn with SSM model in the field, climate data was used for comparison. The experimental design was a randomized complete block with four replications. After measuring the leaf area and the number of leaves on the main stem, in order to measure the dry weight of each sample (10 days) green and yellow leaves were shed, stems and seeds were dried at 70 ° C to achieve constant weight in the oven. Then dry weight was measured. Leaf area was determined using a leaf area meter Delta T. In the model, correlation coefficient was 0.99 to simulate the leaf dry weight, ear dry weight and leaf area index, which indicates good accuracy of the model to simulate all the characteristics

Keywords:
Corn, Crop models, Simulations, SSM Models.