

Title: Effect of soil surface unevenness, clod size and its travel speed on field performance maize planters

Isham Alzoubi
School of Surveying Geospatial Engineering
Department of Surveying and Geomatics Engineering
Tehran

Abstract:

By correct management of agricultural implement application can perform seeding operation faster and more precisely. In order to study the effects of tillage methods and soil evenness, planter types, and their speeds on maize seeding precision, an experiment was performed. It was carried out in a split-plot in basis of a randomized complete block design with 3 replications. Main plots were tillage methods and soil evenness including: moldboard plow + two-pass disk plow + leveler (T_1), moldboard plow + two pass disk plow (T_2), and moldboard plow + one pass disk plow (T_3). Subplots were planter types including: pneumatic planter (P_1) and mechanical planter (P_2). Sub-sub plots were included of planter speeds including: 4 $km.h^{-1}$ (S_1), 5.5 $km.h^{-1}$ (S_2) and 7 $km.h^{-1}$ (S_3). Measured parameters was consist of means of seeding distance and their standard deviation, skip index, quality feed index, multiple index, and seeding C.V. (coefficient of variance). The results of analysis of variance showed that tillage methods and soil evenness the same as planter type treatments have no significant effects on total parameters however planter speed treatments and their interaction with planter type treatments have a significant effect on all measured parameters. Comparison of means showed that the best planter speed was 5.5 $km.h^{-1}$. At higher speed (7 $km.h^{-1}$), mean of seeding distance, standard deviation of seeds and skip index increased, and quality feed index, multiple index and seeding C.V. decreased significantly. In view point of quality feed index, P_1 treatment had more sensitive than P_2 and it is necessary to its engaging with soil will increased to this index is increased.

Biography

Alzoubi has completed his Ph.D. at the age of 40 years Tehran University and postdoctoral studies from Tehran University School of Surveying Geospatial Engineering-Department of Surveying and Geomatics Engineering. He is the director at the Directorate of Engineering and Transportation, a premier service organization. He has published more than 15 papers in reputed journals and has been serving as an editorial board member of repute. He Opening and studying the financial offers and the organization of the fundamental record, supervising the efficiency of electrical generators at Nseeb border center, and Supervising the efficiency of agricultural machinery at the ministry of agriculture.

Presenting author details
Full name: Isham Alzoubi
Contact number: 00963940188041
Twitter account:
Linked In account:
Session name/ number:
Category: (Poster presentation)