البحث الثالث

Bull. Fac .Agric., Cairo Univ., 64:244 -250 (2013).

ECONOMIC EVALUATION OF NITROGEN RESPONSE CURVE IN MAIZE

(Received: 20.10.2013)

By

Sh. A. Mansour, S.K. A.Ismail*I. Kh. Abbas and S. M. H. Ali Eissa****

Maize Research Department, Field Crops Research Institute, Agriculture ResearchCenter, Giza.

**Agronomy Department,Faculty ofAgriculture, Fayoum University.*

*** Center Laboratory for Design & Statistical Analysis Research, Agriculture ResearchCenter, Giza, Egypt.*

ABSTRACT

Three field experiments were carried out at Sids Agricultural Research Station, Agricultural Research Center(ARC) during the seasons 2010, 2011 and 2012. The objectives of this study were to: 1) Evaluate the nitrogen levels effects (0, 30, 60, 90, 120 and 150 Kg N/fed) on grain yield (ard/fed) of Single Cross 10 (S.C 10), 2) Determine the response of grain yield to N fertilizer, and 3) Estimate the economicof N rate in maize. The highest grain yield (ard/fed) was produced by supplying 150 Kg N/fed in the three seasons. Quadratic model was the best of the tested models for describing the relationship between grain yields of maize hybrid (S.C 10) to N fertilizer. The economic optimum N rates (121.053, 120.645 and 120.129 Kg N/fed) were produced by adding (24.77, 21.69and 25.17 ard/fed), respectively, and the net return (£.E 4780.61, 5682.78 and 6795.9/fed) in the three seasons, respectively.

Key words:*economicevaluation, nitrogen response curve, maize.*