NEW RESULTS FOR MAIZE CROPS CULTIVATED IN THE NO-TILLAGE SYSTEM AT THE NATIONAL INSTITUTE FOR AGRICULTURAL MECHANIZATION FROM BĂNEASA- BUCHAREST

Nicolae ȘARPE[1] , Ion PIRNEA[2], Eugen MARIN[2], Gheorghe NITU3[3]
Email: saicuconstantin@yahoo.com

Abstract
In Romania, maize is the main cultivated plant and maize crops are extremely important from an economic point of view. Research with the no-tillage system applied to maize crops were made in the Romanian Plain, Șarpe (1968, 1987, 2000, 2008, 2009), in Banat, Moțiu (2004) and in the Flood Plain of the Danube River, Șarpe (2004, 2005, 2007, 2008). The results obtained in Romania confirm the results of the research made in other countries: Philips and Young (1973), Köller (1999), Derpsch (2001).
In the conventional system, under the weather conditions of the year 2011, the grain yield recorded from the maize crops amounted to 6,200 kg/ha, while in the no-tillage system a grain yield of 6,500 kg/ha was recorded – so the yields obtained in the two technological systems were practically equal. However, there were significant differences in terms of Diesel fuel consumption. For example, in the conventional system, a 78 litres/ha Diesel fuel consumption was recorded, while in the no-tillage system this amounted to only 25 litres/ha. Big differences were also recorded as regards the expenses in the conventional and no-tillage systems. In the conventional system, the expenses incurred for all the mechanical works performed from the sowing stage to the harvesting stage amounted to RON 2,350.00 per hectare, while in the no-tillage system, they amounted to only RON 610,00 per hectare.

Key words: conventional system, no-tillage system, Gaspardo, Regina model

[1] Academy of Agricultural and Forestry Sciences, Bucharest
[2] National Institute for Agricultural Mechanization, Băneasa- Bucharest
[3] S.A. "Agrozootehnica" Mihailesti, Giurgiu County