Analysis of Operating and Quality Indices of Accord Optima E-Drive Direct Seeding Machine

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Abstract: In this paper are showed field experiments which were made by using a seeding machine designed and modified in order to use it for no-till technology. In the field were made experiments in order to analyze quality and operation indexes for no-till technology.

Keywords: no-till technology, indexes for seeding quality

SUMMARY

Direct sowing technology presents some specific features both in terms of work conditions and type of machines used in this technology. Because of these significant differences, quality of work is appreciated by the indices set out in any work of sowing and the specific indicators such as:
- The amount of plant debris on the surface of land and amount of plant debris cut by the working bodies;
- Opening and closing the row and seed cover with soil;

This paper presents the analysis of quality indicators and some specific indices of exploitation. Attempts were made in the field laboratories in Jichiş, Cluj county, using a sowing aggregate consists of tractor U 651 M and E-drive Accord Optima machine.

The distance between rows was 75 cm. The distribution device of the sewing machine was adjusted for a distance by 16 cm between seeds on the row. The working speed was 5 km/h. The seeding depth was adjusted at 5 cm. The soil moisture was 68% and temperature by 12°C.

The purpose of the experiments was to analyze the following indexes:
- seeding precision regarding distance between seeds on the row;
- seeding precision as number of seeds in each position;
- medium depth of seeds in soil;
- the cutting percent of vegetable rests on the soil;
- the opening of seeded rows;
- the closing of seeded rows;
- emergence time and degree;
- working time and fuel consumption/hectare

REFERENCE