Contribution for Improvement of Mecanization Technologies of Onion and Carrot Culture

Niculai POPANDRON1, Aurel MARINESCU1, Vasile STOIAN2, Mircea TUDORA3

1) Institute of Research-Development for Vegetable and Flowers-Vidra
2) SC Big Land Company-Constanta
3) SC Oferta Bob SRL- Tartasesti- Dambovita

Key words: onion, carrot, mechanization, specialization, modernized technology.

SUMMARY

The vegetable modernization can be realized only by specializing and centralizing the farms in the most favourable areas of the country. Several farms specialized in onion, root and potatoes cultures have been set up in the last 20 years, most of them being located in the south-east part of the country, because this area is the most favourable for these species. These farms stretch on an area between 50 ha and 350 ha.

Aiming to help farmers who are specialized in onion and carrot culture, the authors of this study intend to present, based on their researches made both at ICLF Vidra and on the most performing farms, the agricultural machinery system for the totally mechanization of the works already specified in the technology of cultivating onion directly sown in the field and also in the carrot technology.

In order to establish the machinery system the agrotechnical and technological necessities have been taken into consideration. The most modern machines, the majority of them imported are presented: from systems for preparing the nursery-bed, high preciseness sowing machines, harvesting combines, the farmers having the opportunity to choose the right machinery which fits precisely with their necessities for their crop on the farm.

There have also been determined the quality and economic efficiency of the harvesting mechanized works comparatively to the labour harvest, as well as the efficiency of the harvesting machines and the specific consumes both per machine and per tone, analysis of the harvested product both mechanically and manual work; at the same time the losses at mechanical and labour harvesting were estimated; further on there have been established the cultivars which respond best to the harvesting, sorting, mechanical balanced, and also the mechanical and labour weeding were eliminated.

By mechanizing the works (especially the weeded and harvesting ones) a reduction (from 500h/man/ha to 75h/man/ha) of 85% labour work force has been realized. The scarifying of the soil, ploughing at 25-30cm, modeling of the soil before seeding period are agricultural works which the success of the culture depends on. The level of the production depends very much on the moment (period/the density and the scheme used in setting up the culture). As a result of the researches performed, sowing machines and seeds of high quality and precision have been used, based on the most appropriate seeding scheme and density of 0.8 – 1.0 million plants/ha and crops of 80-100t/ha with superior quality parameters have been obtained.

REFERENCES