

## QUALITY OF ROTARY MOWER SIP RK 135 MOWING PROCESS IN MOUNTAINOUS AREA

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### Abstract

The paper presents research results of tractor rotary mowers SIP RK 135 in cutting the first swath in natural landmeadow. The average yield of green mass was 20.66 t/ha. The aim of this research was to determine the productivity, quality of work and losses using the tractor rotary mower in cutting the first cut landmeadow. In the first experiment tractor operated at an average speed of 5.89 km/h achieving performance of 0.69 ha/h. In the second experiment the tractor operated at an average speed of 9.29 km/h achieving a performance of 1.01 ha/h. At a given speed, efficiency of work operations ranged from 0.78 to 0.93, averaging 0.86 in the first version and 0.70 to 0.93, averaging 0.81 in the second version. With the increasing speed of operation it has been observed an increase in the average height of cut by 1.35 cm and also increase in total losses of 2.73 % to a maximum of 4.45 % of the total yield.

**Keywords:** rotary mower, mowing, operational productivity, cutting height, losses.

### Introduction

Mowing is the first work operation - phase in the procedure of storage of the hay, green forage and silage. Mowing is performed as a separate work operation or in combination with other work operations such as crushing or conditioning. Mowing of the biomass is performed at the time when the plant contains the most nutrients in order to preserve the value of the biomass and mowing should be done in the shortest possible time. The machines that are used for mowing grass should meet several general requirements, such as:

- universal use;
- cleanliness of the cut;
- prevention of pollution of biomass with soil;
- high operating speed - efficiency;
- easy, simple maintenance - technical and aging;
- work with minimal losses.

Almost all types of tractors and mowers meet the above requirements. In storing of hay obtained from meadowland the aim is to absorb as much biological yield of green mass, among other things, in order to reduce losses. In alfalfa in order to prevent damage to the cluster optimum cutting height is considered to be 6 to 8 cm, ie. it should not be mowed under 6 cm, while in the natural meadowland this height is somewhat lower up to 4 cm, which in turn depends on how the parcel is leveled plot and floristic composition of natural meadows. Today, in practice most commonly used are two types of tractor mower, that is oscillating and rotating. No matter what









