



Deviation from cutting height at different type of cutting devices

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Two types of cutting devices are known in the practice among the gathering machines – for support and non-support cutting. There is a distinction between them in the very principle of work and in their speed modes. These distinctions determine also the deviations from the determined cutting height among the types of cutting devices. The aim of the present work is to determine the size of deviation from the determined cutting height of the stem from grassy, forage crops at mowing. There are knife-finger, double-knife and disc cutting devices. A three-factor experiment is carried out in order to achieve the aim put forth. The independent variables are: the determined cutting height, the gradual speed of the machine and the number of cuts of the plants per unit time. By increasing the speed increase of the deviation from the specified cutting height could be ascertained. The increase of the cutting height influences negatively the deviation of the specified one. By increasing the number of cuts per unit time the traced indicator is reduced. Apart from this within the knife-finger and double-knife cutting devices there is also a cross incline of the plant till the moment of cutting, which causes also greater deviation from the specified height. From the factor analysis it could be seen that the biggest influence on the deviation from the cutting height has the variation of the number of cuts per unit time.