

عنوان مقاله:

Finite Element Analysis of Small-scale Head of Combine Harvester for Harvesting Fine-Grain Products

محل انتشار:

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خلاصه مقاله:

Brasica napus L. is one of the most important crops in the world, but every year during mechanized harvesting with conventional combines large quantities of the seeds fall to the ground and thus result in a decrease in yield. Therefore, designing and manufacturing a head specific for harvesting this crop is a high priority. In this study, the head of a combine for harvesting fine-grained products were designed, manufactured and evaluated. Initially, different designs were modeled in Solidworks 2018 software and analyzed in Ansys workbench 2019 software. The best scheme was selected between different designs and a prototype was developed. The results of the analysis indicated that the fabricated apparatus has sufficient strength and stability. The results of field tests indicate that the generalization of the proposed scheme on the scale of a real combine harvester can help to decrease the grain loss .for fine-grained products

کلمات کلیدی:

Header, design, and manufacturing, Finite element, fine-grained products

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