

Eco-friendly paper & zinc fertilizer using pumpkin seed shells

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The environment becomes worse; everything is damaged, so it's the time to start solving these problems. Firstly, this project aims to decrease the wood being cut and use more zinc fertilizer. Using pumpkin seed shells to make paper, also in alternative it can be used as fertilizer if we didn't get enough amount of shells to make papers, this paper can be thrown in the soil or even in the ocean. Secondly, the methodology is, collecting the shells of pumpkin seeds then soak the shells in a water alcohol solution for 2 days after that change the water & alcohol with boiled water and let it for 1 day then mix the shells using the mixer and put the mixture in the sieve, finally dry the mixture to have a paper. As a result 4 papers can be released using 200g of pumpkin seed shells, so it can produce 20000 papers using 1 ton of pumpkin seed shells, in addition when the shells had analyzed we found out that shells contain a suitable amount of zinc that the plant needs. Finally, we found out that we can use the pumpkin seed shell to make a biodegradable paper which is healthy for the environment.