

Environmental Friendly Seedling Nursery Balls from Cow Dung

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Melientha suavis Pierre (MSP) an indigenous wild plant grown from seeds with slow growth rate and high mortality, but high consumption demand leading to relative high price. In general, plastic bags were used by farmers for cultivation of seeds. However, ineffective translocation of the seedling can cause damage of roots which resulted in death of seedling and tearing the plastic bags to remove it cause damage to the seedlings roots. The objective of this study is to solve the problems of seed germination, reduce plastic use and increase survival rate of MSP's seedling in order to increase the products for commercial purpose and avoid environmental pollution of plastic bags. From observation of nursery balls made by dung beetles for their larvae, we designed natural derived container for MSP's seedling to replace plastic bags by using cow dung balls for cultivation of MSP seedlings. Cow dung and clay was molded into a ball containing fibers from the core of Cassava stem and *T. harzianum*, the fungus which is the compositions enhancing MSP growth. The dung ball was covered with crushed leaves of medicinal plants for protection against termites. We have set the growth conditions for both laboratory and forest areas which resulted in high percentage of germination and high percentage survival rate. Thus, our cow dung nursery balls are ideal for increasing MSP production and reduce plastic use.

Awards Won:

Third Award of \$1,000

Sigma Xi, The Scientific Research Honor Society: Second Life Science Award of \$1,000