SEED COATING MACHINE

A Project Report
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Submitted by

KOUSTUBHA BADKUNDRI	2GI05ME037
DHANANJAY DESAI	2GI05ME021
BHASKAR BOGAR	2GI05ME017
PRAJWAL KAMMAR	2GI04ME043

Under The Guidance Of
SHRI S. H. KULKARNI

DEPARTMENT OF MECHANICAL ENGINEERING

KARNATAK LAW SOCIETY'S
GOGTE INSTITUTE OF TECHNOLOGY
UDYAMBAG, BELGAUM - 590 008

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM
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ABSTRACT

Everyone agrees that the real value of a seed is the genetic material that it hides inside. But there's a reason these days to look at what's on the outside of a seed as well. Seeds are remarkably robust as a propagation mechanism for plants but seedlings can be susceptible to attack from pests and diseases and also lack symbiotic microbes. Seedling protection, increased germination rate and symbiont inoculation can be provided by coatings of live bacterial cells. The effectiveness of this process can be limited by failure to obtain uniform coating of the seed, by poor survival of the microbes on the seed during transport and sowing and poor competitive behaviour of the microbes once placed in the soil. Scientists have developed a number of new coating compounds that protect seeds from a variety of hazards, from pests to cold soil temperatures. But all this comes at a remarkable price, which is essentially not affordable to the Indian farmer even though he can reap rich benefits from the yields obtained. So he sticks to hand coating and other rudimentary methods to achieve increased yield which have not yet given any substantial results. Our project's primary objectives deals with eliminating these constraints and provide the farmers with an indigenously built simple, portable and an affordable "Seed Coating Machine". The design has been worked and reworked remarkably during its design phase, so as to fulfill all the stated objectives. As engineers an attempt is being made through this project to ensure welfare of the agricultural community, by providing an impetus to the Indian farmer w.r.t. the coating machine, so that his coated seeds will fit smartly into today's hi-tech crop production systems and obtain the intended yields.