

ABSTRACT OF THE PROJECT

1.	Project Code	Project No: FRC/XI/18
2.	Name of the Project	Optimization of seed germination methods and clonal multiplication area management of <i>Ailanthus excelsa</i> Roxb.
3.	Funding Agency/ Agencies	ICFRE
4.	Institute/Directorate (ICFRE Hqrs.)	Institute of Forest Biodiversity (formerly Forest Research Centre), Hyderabad
5.	Name and Designation of Principal Investigator	Sri. N.R. Raveendra Prasad Research Officer
6.	Name (s) and Designation (s) of Co-Principal Investigator (s) and Associates, if any	Dr. G.R.S. Reddy Scientist-F
7.	Division	Conservation Biology
8.	Project Discipline	Tree Improvement
9.	Objectives of the Project	<p>I. Short term objectives</p> <p>i) To standardize the seed germination methods of <i>Ailanthus excelsa</i></p> <p>ii) To study the clonal multiplication area management of <i>Ailanthus excelsa</i></p> <p>II. Long-term objectives</p> <p>To develop a package of large scale propagation methods of <i>Ailanthus</i></p>

		<i>excelsa</i> for the semi-arid conditions of Andhra Pradesh
10.	Species involved	<i>Ailanthus excelsa</i> Roxb.
11.	Experimental Work	
a)	Methods adopted	<ul style="list-style-type: none"> • Seed germination methods were tested by (i) physical and (ii) chemical scarification which involved (i) agitation of the seed with sand at 1:2 and 1:3 seed sand ration and (ii) treatment of the seeds for 3, 5, 10, 15 and 20 minutes with H₂SO₄(1N) in 5, 10 and 20% concentration • Effect of temperature, bio-pesticides, moisture, hormones, potting media and fungicides on germination of seeds of the plant were also tested by adoting standard methods. • Vegetative multiplication area management of <i>Ailanthus excelsa</i> was done by planting 120 plants per block in a RBD design with four blocks and different treatments like cutting heights (4) and irrigation schedules (3), Spacing treatments (5) and fertilizer treatments (3) were given in each block with one control (no treatments).
b)	Equipments used, if any	1. Mist Chamber

	-	2. Seed germinator
c)	Scope (States covered)	Andhra Pradesh (Institute of Forest Biodiversity Campus)
12.	Date of commencement of the Project	01.04.2010
13.	Date of completion of the Project	31.03.2013
14.	Budget outlay of the Project	Rs. 12.00 Lakhs
15.	Expenditure incurred on the Project	Rs. 8.82 Lakhs (expenditure is as per allotment)
16.	Reason for financial deviation	Expenditure is limited to allotment
17.	Manpower involved	
(a)	No. of Scientists/ officers	One-Research Officer & One-Scientist
(b)	No. of Research personnel	One-Field Assistant
(c)	No. of office staff	--
18.	Extension of findings to the User Groups	SFD, FD, NGO & Progressive Farmers
19.	Publications from the findings of the Project	Nil
20.	Patents, if any	Nil
21.	Project Summary/ Achievements/ Findings	An experiment was conducted on <i>Ailanthus excelsa</i> for improving their seed

	<p>germination per cent which is too low without treatments. A total of seven treatments with scarification (physical and chemical), temperature treatments and seed soaking treatments were tried apart from hormonal treatments. It was found that GA3 promotes germination upto 83 per cent in the experiments. GA3 was found to be superior to all other methods or treatments in promoting germination. Secondly, VMA management was attempted with Cutting heights, Spacing trials, Fertilizer application and Irrigation schedules. It was found that cutting height of 50 cm was found to be very useful in production of multiple shoots upto 30 numbers. Also, standardized the vegetative propagation technique for the multiple shoots produced on de-topped plants with great success and rooting was recorded upto a maximum of 50% in IBA 1000 ppm during summer followed by 40% in the same hormone during rainy season compared to the controls. Although IAA and NAA also recorded rooting, it was significantly lower than that of IBA in all seasons compared to the controls. However, winter (November) planted cuttings rooted in controls also (without hormonal treatment).</p>
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